

添 付 資 料

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1. 収集資料並びに参考資料リスト

收 集 資 料

英 語

1. INDUSTRIAL RESTRUCTURING STUDY FOR THE NATIONAL ECONOMIC & SOCIAL DEVELOPMENT

BOARD, 1985 BY THE INDUSTRIAL MANAGEMENT CO., LTD.

- SUMMARY (P216 A4版)
- Volume I Tax System for Industrial Restructuring (P264 A4版)
- Volume II Financial Strategies for Industrial Restructuring (P237 A4版)
- Volume III Promotion of Manufactured Exports (P225 A4版)
- Volume IV Technology Development and Promotion for the Engineering Industries (P289 A4版)
- Volume V Policy and Program for the Promotion of Small Scale and Regional Industries (P381 A4版)

2. GROSS REGIONAL AND PROVINCIAL PRODUCT

2528 (P179 A4版)

3. PROCEDURE FOR THE IMPLEMENTATION OF PROMOTED PROJECTS BY OFFICE OF THE PRIME

MINISTER (P61 A4 版)

4. INVESTMENT PROMOTION ACT BY BOARD OF INVESTMENT, OFFICE OF THE PRIME MINISTER

(P20 A5 版)

5. YOUR GATEWAY TO A MEMORABLE HOLIDAY (P100 A5 版)

6. SUPPORTING INDUSTRIAL DEVELOPMENT FOR 15 YEARS, THE INDUSTRIAL ESTATE

AUTHORITY OF THAILAND (P15 A4 版)

7. THE SIXTH ECONOMIC AND SOCIAL DEVELOPMENT PLAN

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7. タイ国経済概況 (1986～87年版) 主要統計図表改訂版 (P31 B5 版)
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13. タイの産業 (その1) No. 174 " (P119 B5 版)
14. タイの産業 (その2) No. 157 " (P104 B5 版)
15. タイ国税法 No. 160 " (P169 B5 版)
16. 1987年下半期景気動向調査結果 (要約)
17. タイ国経済投資関係法規集 No. 146 " (P290 B5 版)
18. 賃金労務実体調査報告書 No. 173 " (P166 A4 版)
19. 投資奨励地域にかかる基準の見直し
20. 投資委員会主要申請書式および手続き (P31 A4 版)
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21. 日本からの投資動向、1987年10月 ジェトロ・バンコク・センター (P15 A4 版)
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28. タイ観光案内
29. ロブブリ観光開発計画
30. 中央タイ地域開発計画 内務省 (日本語訳完了) (P300 A4 版)
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2. Scope of Work



SCOPE OF WORK
FOR
THE UPPER CENTRAL REGION STUDY

AGREED UPON BETWEEN
NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT BOARD
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

BANGKOK, THAILAND

JULY 26 th, 1988

Mr. Vithya SIRIPONGSE
Assistant Secretary-General
National Economic and Social
Development Board

Mr. Kouichi MIYOSHI
Leader of the Japanese
Preliminary Survey Team
JAPAN INTERNATIONAL
COOPERATION AGENCY



1. INTRODUCTION

In response to the request of the Government of the Kingdom of Thailand, the Government of Japan decided to conduct the Study on the Regional Development Plan for the Upper Central Region in the Kingdom of Thailand (hereinafter referred to as "the Study"), within the general framework of technical cooperation between Japan and Thailand, which is set forth in the Agreement on the Technical Cooperation between the Government of Japan and the Government of the Kingdom of Thailand signed on November 5, 1981.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will undertake the Study in accordance with the relevant laws and regulations in force in Japan and in close cooperation with the authorities of the Kingdom of Thailand.

The National Economic and Social Development Board (hereinafter referred to as "NESDB"), shall act as counterpart agency to the Japanese study team (hereinafter referred to as "the Team") and also as coordinating body in relation with other relevant organizations for the smooth implementation of the Study.

The present document sets forth the Scope of Work for the Study.

2. OBJECTIVE OF THE STUDY

The objectives of the Study are to prepare a regional development master plan for the Upper Central Region with particular emphasis on restructuring the existing agro-based economy into a well integrated economy of agriculture, and secondary and tertiary industries making maximum use



of natural resource endowments and locational advantage, especially the excellent linkages between this region and the neighbouring regions.

The following policy issues are the essential features of the study:

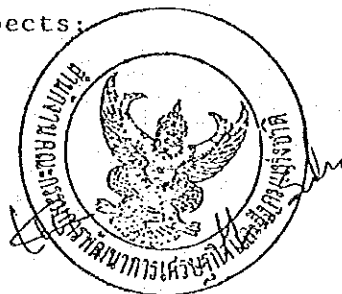
- 1) To formulate a comprehensive plan for agricultural diversification and agro-industries development.
- 2) To strengthen the regional industrialization and service sectors development via desirable locations and strategies in order to become more competitive in the world market. The environmental and land use aspects should be brought into accounts.
- 3) To program for an adequate regional infrastructure network to increase the inter- and intra-regional accessibilities.
- 4) To promote better co-ordination of urban and rural patterns, with adequate social amenities that can effectively serves regional agriculture and industrial development.
- 5) To establish guidelines for development management, taking into consideration public and private co-operations and local needs.

3. SCOPE OF THE STUDY

3.1 Study Area

The study area consists of the six provinces of Ayuthaya, Sara Buri, Lop Buri, Angthong, Sing Buri and Chainat (The Upper Central Region of Thailand).

The Study will concentrate primarily on matters in the above study area, but other related studies will be conducted particularly on the following aspects:



- analysis of the demand and supply of agricultural products;
- future possible trends for industrial location in the BMR and its surrounding areas;
- comparative advantages between regions; and
- transportational linkages between the region and the BMR.

3.2 Target Year

The target year of the master plan is the year 2006.

3.3 Item of the Study

In order to achieve the above-mentioned objective, the Study shall cover the followings:

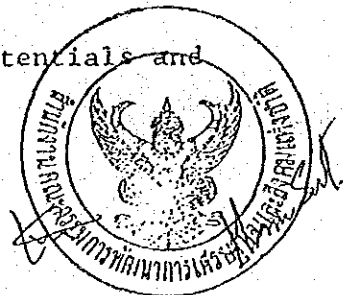
3.3.1 Analysis of the Present Situation for Development

Collection and analysis of data of the following items; (The results of available study reports will be fully used.)

- 1) Basic natural/physical conditions of climate, land, water resources, etc.
- 2) Socio-economic situations of the Region at present,
- 3) Present situation of development of sectors, such as agricultural, fisheries, industry etc.
- 4) Land use and human settlement patterns,
- 5) Transportation and communication networks and their influence on sub-regional development,
- 6) Infrastructure, public utilities, housing, public services, education facilities, and environmental conservation, and
- 7) On-going and proposed development projects.

3.3.2 Identification of Development Potentials and Constraints

Identification of development potentials and constraints of following sectors;



- 1) Agriculture Fishery and Livestock
- 2) Industry
- 3) Infrastructure
 - Transportation
 - Communication
 - Water supply and drainage
 - Electrification
- 4) Marketing and distribution
- 5) Banking

3.3.3 Preparation of Alternative Development Scenarios

Preparation of alternative development scenarios through following procedure:

- 1) Setting of development objectives,
- 2) Preparation of socio-economic framework,
- 3) General land use plan,
- 4) Settlement and urban structural plan, and
- 5) Planning of infrastructure and public facilities.

The alternatives must be consistent with the basic national policy of the Government of Thailand, and should incorporate sub-regional development concepts, taking account of not only intra-regional but also inter-regional comparative advantages and linkages of the Region.

The alternatives should include, but not be limited to, followings;

- 1) An alternative with an emphasis on local resource development, particularly agricultural diversification,
- 2) An alternative with an emphasis on industrial as well as urban development based on the locational advantage of the region,
- 3) Alternatives within the range between the above two alternatives.



3.3.4 Preparation of Regional Development Master Plan

- 1) Establishment of sectoral development plans,
- 2) Adjustment of the sectoral development plans, in order to implement the integrated and balanced development of the region in terms of primary, secondary and tertiary sector composition.
- 3) Preparation of the Regional development master plan.

3.3.5 Identification of Priority Programmes and Projects

- 1) Listing development projects and programmes,
- 2) Identifying priority programmes and projects.

3.3.6 Preparation of Implementation Plan for High Priority Projects

Preparation of implementation plan for high priority projects identified above through following procedure:

- 1) Optimizing projects from the viewpoint of project benefit and implementation stage,
- 2) Estimating of project cost,
- 3) Project implementation planning,
- 4) Planning the institutional framework for project implementation, and
- 5) Evaluation of priority projects.

4. STUDY SCHEDULE

The Study shall be conducted in accordance with the attached tentative schedule.

5. REPORT

JICA shall prepare and submit the following reports in English to the Government of the Kingdom of Thailand.



1) Inception Report

Fifty (50) copies within three (3) months after commencement of the Study.

2) Interim Report

Fifty (50) copies within nine (9) months after commencement of the Study.

3) Draft Final Report

One hundred and fifty (150) copies within fifteen (15) months after commencement of the Study.

NESDB will provide JICA with its comments within one (1) month after the receipt of the Draft Final Report.

4) Final Report

Two hundred (200) copies within two (2) months after receipt of the comments.

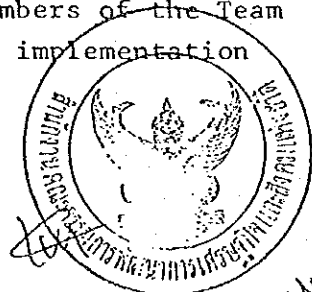
6. UNDERTAKINGS OF THE GOVERNMENT OF THE KINGDOM OF THAILAND

1) In accordance with the Agreement on Technical Cooperation between the Government of Japan and the Government of the Kingdom of Thailand dated november 5, 1981, the Government of the Kingdom of Thailand shall accord benefits to the Team as follows:

(1) To permit the members of the Team to enter, leave and sojourn in Thailand for the duration of their assignment therein and exempt them from allien registration requirement and consular fees.

(2) to exempt the members of the Team from taxes, duties and any other charges on equipment, machinery and other materials brought into Thailand for the conduct of the Study.

(3) to exempt the members of the Team from income taxes and charges of any kind imposed on or in connection with any emolument or allowance paid to the members of the Team for their services in connection with the implementation of the Study.



(4) to bear claims, if any arises against the members of the Team resulting from, accruing in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Team.

2) To facilitate smooth conduct of the Study, NESDB shall take necessary measures in cooperation with other relevant organizations:

(1) to secure permission for entry into private properties or restricted areas for the conduct of the Study,

(2) to secure permission, as deemed appropriate, for the Team to take necessary data and documents including photograph out of the country for the purpose of the Study,

(3) to provide the medical services as needed (its expenses will be chargeable on members of the Team), and

(4) to ensure the safety of the members of the Team when and as it is required in the course of the Study.

3) NESDB shall, at its own expense, provide the Team with the followings:

(1) available data and informations related to the Study,

(2) counterpart personnel,

(3) credentials or identification cards.

7. UNDERTAKINGS OF JICA

For the implementation of the Study, JICA shall take the following measures;

1) To dispatch, at its own expense, the Study team to Thailand.



2) To pursue technology transfer to the Thai counterpart personnel in the course of the Study.

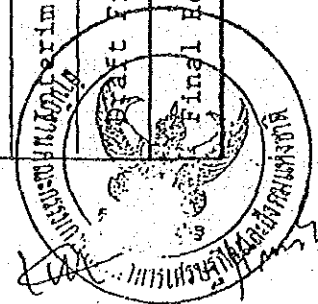
8. CONSULTATION

JICA and NESDB shall consult each other in respect of any matter that may arise from or in connection with the Study.



TENTATIVE STUDY SCHEDULE

SCOPE OF WORK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Preparation of Study																		
Study and Analysis																		
Development Potential and Constraints																		
Development Scenario																		
Master Plan																		
Identification of Priority Projects																		
Implementation Plan for Priority Projects																		
Preparation of Final Report																		
Inception Report																		
Progress Report																		
Interim Report																		
Draft Final Report/Seminar																		
Final Report																		



3. Minutes of Discussions of Scope of Work



MINUTES OF DISCUSSIONS
OF
THE SCOPE OF WORK
FOR
THE UPPER CENTRAL REGION STUDY

AGREED UPON BETWEEN
NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT BOARD
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

BANGKOK, THAILAND

JULY 26 th, 1988

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Assistant Secretary-General
National Economic and Social
Development Board

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Leader of the Japanese
Preliminary Survey Team
JAPAN INTERNATIONAL
COOPERATION AGENCY



Minutes of Discussions of the Scope of Work
for the Upper Central Region Study

1. The Japanese Mission (hereinafter referred to as "the Mission") organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and led by Mr. Kouichi MIYOSHI visited Thailand during July 18-27, 1988.

The objective of the Mission was to work out the Scope of Work for Master Plan Study (hereinafter referred to as "the Study") on the captioned project.

During the Mission's stay in Thailand, the Mission held discussions with representatives of National Economic and Social Development Board (hereinafter referred to as "NESDB").

In the course of discussions, the Mission and the representative of NESDB agreed upon the "Scope of Work" of the Upper Central Region Study.

2. The followings are the major points raised for discussion and agreed upon by both parties, on the Scope of Work of the Study.

- 1) Overall Concern

The economic structure in the planning area experiences a gradual change from agricultural into industrial activities. However, the region has extremely fertile land and relatively well-endowed irrigation system suitable for agricultural development and diversification. Furthermore, this region is strategically located between Bangkok Metropolitan and



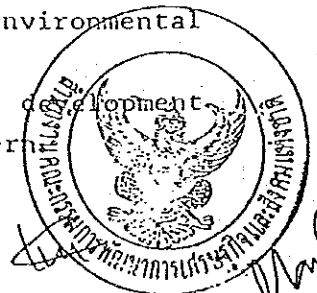
the Northern and Northeastern regions. This dictates needs to provide co-ordinated infrastructure development to cope with changing trend of economic activities within the region as well as needs to link the region with the rest of the country. Therefore the main concern is to find a balanced development approach that will increase regional income and employment via maximization of resource uses as well as increased efficiency of productive system of the region.

This balanced development approach should be action-oriented recommendations in terms of policies and programmes that can be readily implemented in the Seventh National Plan (1992-1996).

2) Focus of the Study

(a) The overall development analysis This analytical task is aimed to understand the overall socio-economic, spatial and environmental conditions of the region. International economic study should be reviewed and analyzed wherever the regional commodities development is in question. The regional macro or integrated pattern of development and the sectoral development direction should be organized and identified in this stage of work. The constraint and potential for each identified area and commodities are discussed here. The task also highlights the important issues for policy and planning formulation. Analysis will look into the following areas/aspects:

- Inter-intra national and region commodity and marketing development analysis
- Geographical and regional resources endowment
- Population and human settlements
- Regional economic and agricultural development structure
- Regional industrialization and environmental change
- Macro and other related sectoral development
- Land capacity and land use pattern



- Regional socio-economic infrastructure network and its impact
- Impact from the past implemented policies and planning work.

(b) The agricultural sector analysis The main regional economic base has been rice cultivation. This explains why the majority of population are farmers. However, the cultivation is without proper techniques, the land has deteriorated, production has decreased. Consequently, livelihood has become more difficult for the farmers and unless the region could develop its agricultural sector, the majority will face more suffering. The development plan must consist of guidelines for agricultural management, land development and land use strategies and techniques. The study must find ways to diversify agricultural bases and the expansion of agro-industries. This would have to take into concern the improvement of marketing techniques both intra- and inter-regional market.

(c) The industrial sectoral analysis The recent economic growth has caused regional growth in industry in the Upper Central Region, especially in Ayuthaya and Sara Buri provinces. The regional advantages in terms of location, labour and regional resources endowment and surplus should be carefully analyzed. The additional incentives that have economic impacts towards industrial investment should be investigated to establish incentives in accordance with the government policy of industrial promotion in regional cities. The regional tourism industry should be further promoted together with the linked industries and related tourism infrastructure. The industrial development plan should take into concern the strategy to improve local skills and technical knowledge. Industrial innovations and transfer of management experience should be seriously discussed in this study to ensure further industrial development.



(d) The urban and human settlement analysis The regional human settlement pattern and regional urban centers that service and support the growth of industrial and agricultural development must be planned. The job opportunities in regional urban center, must be increased to a certain level to absorb surplus labour from the agricultural sector. The urban economic roles that increase regional incomes, services and productions must be promoted and strengthened. The role of the center on human resources improvement for industrial and agricultural development also needs to be strengthened with promotion programmes.

(e) The regional infrastructure and urban center activities analysis The transportation networks that link the region with the metropolis must be thoroughly studied with recommendations identifying the project. Regional traffic can be improved. Urban amenities that maintain the urban area as market and transportation centers must be analysed and the demand projection forecasted. The required urban amenities must be identified and the priority project will be proposed together with prefeasibility studies. Examination of the socio-economic infrastructure will lead to suggested investment programmes with emphasis on self-financed programmes.

(f) The regional environment analysis The regional land and natural resources must be utilized via proper techniques, respecting the balance of nature and maintaining the living atmosphere at the best conditions. The agricultural and industrial projects must be developed in parallel with the investment in pollution and waste facilities. The basic strategy and project ideas to maintain and improve the natural resources base must be identified by this study.



(g) The institutional and financial management analysis The local institution capacity must be improved to service the growth, and a commodate development operation according to the recommended plans and programmes. Moreover, financial management must be discussed in terms of a close cooperation between the public and private sector.

3. The representative of NESDB are strongly of the opinion that the study team should primarily consist of Japanese experts; at the same time collaborative efforts of Thai expertise in at least two aspects of the study namely, institutional and social aspects are indispensably needed in order to facilitate in-depth analysis of certain components of Terms of Reference and to further enhance continuity of this project from planning to implementation stages. This mixed team is extremely desirable because intimate understanding and close liaison with officials both at national and local levels are much needed.

The Mission and representative of NESDB concurred that the study period should be 18 months in order to allow times for close consultation and consensus with line-agencies concerned in every stage of planning process as envisaged by JICA in item 3 of the scope or work. This 18 months of study period is highly desirable in order to achieve harmonized objective of planning "with" rather than "for" the line-agencies concerned of the Royal Thai Government.

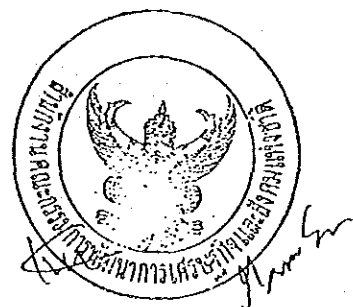
Representative of NESDB strongly proposed that the number of man-month of specialist inputs should be suitably sufficient to accommodate the comprehensive nature of the study and the expected high quality of the proposed recommendations to be incorporated in the Seventh Plan (1992-1996).

Consequently, the study should be undertaken in Thailand for the whole length of the study's time span with exception of printing and production of final report.



TECHNICAL INPUTSSpecialists

- (1) Regional Planner
- (2) Regional Economist
- (3) Land Use Specialist
- (4) Agricultural Economist
- (5) Agronomist
- (6) Industrial Economist
- (7) International Trade Economist
- (8) Marketing and Distribution Specialist
- (9) Urban Planner
- (10) Transportation and Communication Planner
- (11) Institutional Specialist
- (12) Water Resource Engineer
- (13) Environmentalist
- (14) Demographer
- (15) Social Planner
- (16) Financial Specialist



4. The representative of NESDB requested that the JICA should provide the following office equipments for this study project:

- Micro-computer (inclusive word processor)
- Photo-copy machine

The representative of NESDB also requested that JICA should provide the transportation for the study team.

Due to serious constraints on part of NESDB's office facilities, adequate office space for the study will be provided at two locations; namely, in a province within the project area and in Bangkok.

5. The Thai side requested that a seminar on outcome of the study be conducted to solicit consensus among potential operating agencies as well as technical circles. JICA is requested to cover part of seminar expenses.
6. NESDB will serve as the coordinating agency of the Study and will establish a Policy Coordinating Committee and a Technical Committee. Assistant Secretary-General of NESDB is the Project Director, the Director of Central Region Development Center, NESDB is the Project Manager and Expert of Urban Co-ordination Development Division, NESDB is project advisor.
7. Training/technical assistance for the overall project development is required in the form of counterpart training for middle level staff. Emphasis should be on urban and regional planning.



4. Terms of Reference

Terms of Reference

for

The Upper Central Region
Planning Study Project

Request for Technical Assistances
to
Japanese Government

Central Regional Development Center
NESDB

June 1988

TERMS OF REFERENCE
FOR
THE UPPER CENTRAL REGION DEVELOPMENT STUDY

1. Regional Profiles and Study's Justifications.

The Upper Central Region covers an area from the lower central Chao Phraya River Basin (See Figure I). It consists of 6 provinces, namely, Ayuthaya, Sara Buri, Lop Buri, Angthong, Sing Buri, and Chainat, with an area of 16,450 square kilometers, and population of 2.7 million (in 1986). The region has extremely fertile land for agricultural development due to its natural water resources available and its geographical structure. At least half of the region's cultivatable land is irrigated. This irrigated land, about 4.3 millions rais, in the western, central and lower parts of the region, is 90% paddy fields. The remainder of the eastern region, about 5.4 million rais, is a mixture of flat and undulated land, mainly (42%) used for cash crops cultivation together with paddy.

This region is regarded as the land bridge between the Bangkok Metropolis Administration Area (BMA) and the Northern and Northeastern Regions. This strategic area is equipped with major land and water transportation networks and stations. Altogether the networks have served to link the region with the rest of the country, especially with BMA and an international airport. The national railway, connecting the Eastern Sea Board sub-region (ESB)* with the rest of the country, passes by this region at Sara Buri Province.

* ESB is considered to be a sub-region developed under the national industrialization policy.

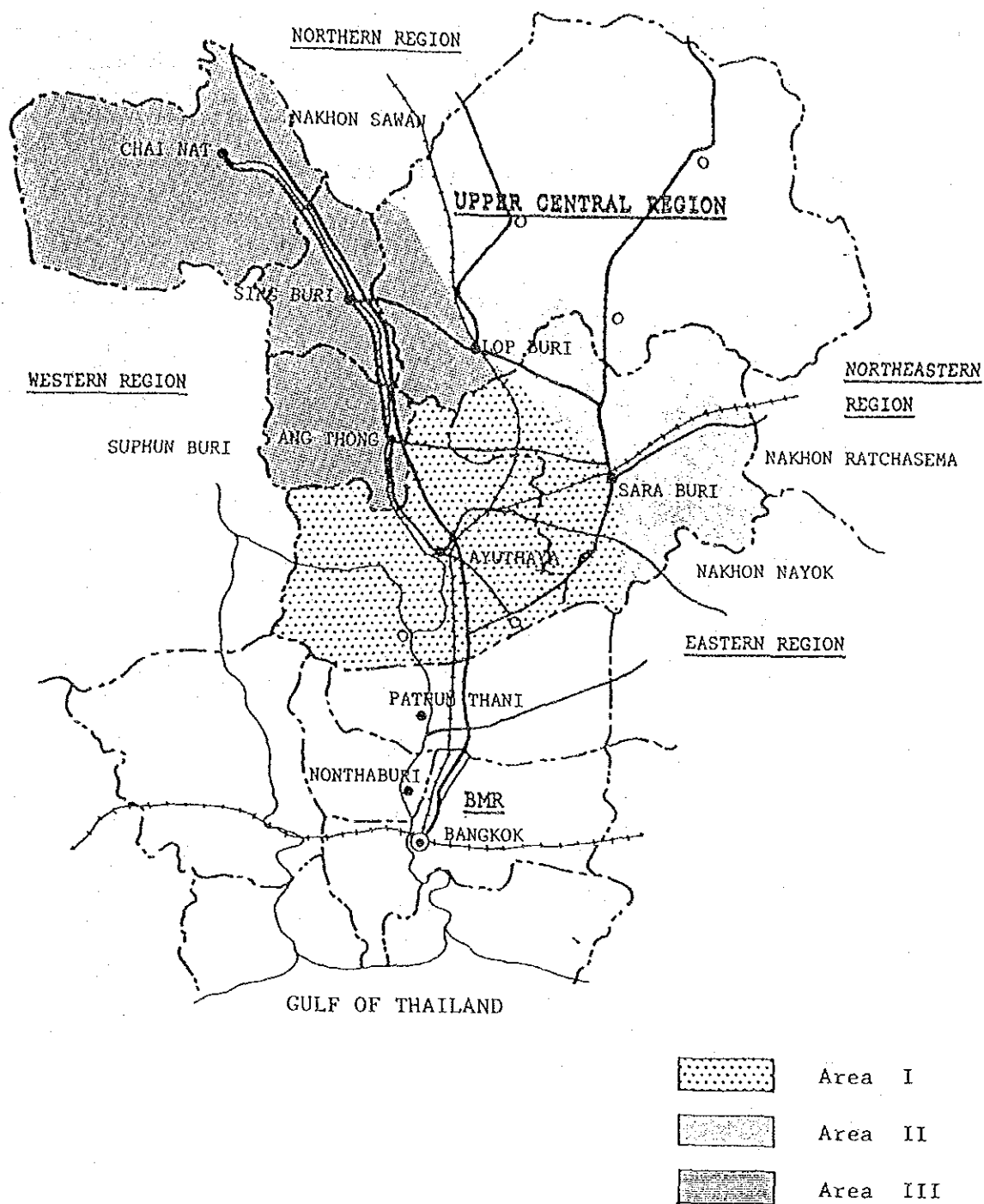


FIGURE I : Upper Central Region Maps
Geographical & Administration Boundary

However, the recent increase in the regional traffic has been extremely rapid. As such the two main highways (from the northern and northeastern region) that lead to BMA are quite congested. Traffic jams occur particularly at the interjunctions before entering into BMA (at Bang Pa In and Pathumtanee areas). It is therefore necessary that land and water transportation improvements be included in this study.

The regional gross production in 1975 was 16,770 million baht (at 1972 prices), or about 5% of the total gross national product (See Table I). It is notable that the agricultural sector has dominated the regional production, generating incomes of 10,000 million baht or about 25% of the total gross regional product. It has increased at the rate of 6.8% yearly as compared to only 3.8% of the national agricultural

Table I : Distribution of gross regional product by sectors.

	gross product (1000 million)	%	growth rate
Total Gross Regional Product	16.7	4.4*	5.6
Agriculture	5.6	33	6.8
Industry	2.3	24	3.8
Trade	2.7	16	6.2
Services	1.2	7	4.3

* with comparison to total gross national product

Source : National Account Division, NESDB (1985)

increase rate. However, this sector has a very narrow base concentrating on a few crops, especially the paddy cultivation. At present the sector suffers from world market pressures that keep the commodity price low. This continuation resulted from the fluctuation of prices throughout the 5th plan which affected the majority of regional population. A number of farmers gave up their livelihood and migrated to other regions, causing a decrease in labour forces (See Table II).

Table II : Regional In and Out-Migrations

YEAR	BANGKOK		BMR		UPPER CENTRAL REGION	
	Male	Female	Male	Female	Male	Female
2523 - 2528	84,439	130,998	137,113	186,432	-25,194	-34,465
2528 - 2533	92,728	143,857	150,573	204,733	-27,667	-37,848
2533 - 2538	100,332	155,654	162,921	221,521	-29,936	-40,952
2538 - 2543	107,258	166,400	174,168	236,814	-32,003	-43,779

Source : Human Resources Planning Division, NESDB

Note : -xxxxxx = out migration

The industrial sector in this region increased at a low rate (3.8% yearly) as compared with that of the country's rate (5.3% yearly). The sector's labour absorption capacity could not cope with the increase in the regional labour surplus.

The above mentioned makes it necessary to conduct a study to suggest better alternatives: for example, a more diversified agriculture and the development of agro-industries. At the same time, it is necessary to find a way to strengthen the regional industries and the services' development in order to increase job opportunities and national competitive capacity in the world market.

It is expected that the area adjacent to the metropolis will be able to absorb new investments, especially manufacturing dispersed from the metropolis. The high cost of land and congestion in the metropolis is unsuitable for most industries. The dispersed manufacturers would receive advantages in terms of transportation cutting those land and labour rates mentioned above. The area can also benefit from the industrial promotion scheme which does not apply in the metropolis. However, there is a need for additional incentive in order to attract private investments from the metropolis. This should include the basic infrastructures needed for industries, as well as a proper promotion scheme that preserves the regional environmental resources.

Given the above circumstances, there is a need for a study of a regional development framework. It is expected that the study will analyze the regional circumstances, both constraints and potentialities, and suggest alternatives for future economic development in this area.

2. Study Area

The Upper Central Region can be divided into 3 areas (See Figure I) according to their socio-economic and physical characteristics as follows:

2.1 Ayuthaya Area

2.2 Sara Buri and Lop Buri Area

2.3 Angthong Sing Buri and Chainat Area

The summary of the salient characteristic issues of each respective area are as follows:

Area I

It is characterized as easy access to Bangkok and inferior soil fertility compared with the other cultivatable areas of the region. In the recent year, agricultural production has been decreasing. The regional labour force, age between 11 and 59, has been sharply depleted as many of them have migrated to the metropolis in order to find employment. The cultivated land has gradually been converted to other uses, such as factories and other urban demands. This tendency has led the area to become a promising location that could attract the expanding industrial activities, especially those dispersed from the metropolis. Given these facts, it is possible to slow down future expansion of the Bangkok Metropolis by introducing industrial investment into this region. In fact, this sub-region is not only close to Bangkok, but it is also equipped with good transportation networks and retains ample low wage labour. These advantages could be attractive for labour intensive industries, as well as those industries that require large amounts of land. Ayuthaya, a city in this area, was once the capital city of Thailand. This historical city remains one of the most important tourism spots in the country. Thus the tourism and cottage industries that produce souvenirs should retain central place in the area's development scheme.

Area II

This is a plateau near the eastern bank of the Chao Phraya River. Its basin covers Lop Buri and Sara Buri provinces. The area's main crops are maize, millet, upland paddy and livestock. Although part of this area is irrigated, shortage of water persists, especially when one excludes the rainy season; soil, in these parts, is considered poor. However, this area has a number of small reservoirs, that provide water

for dairy farms and some cash crops. Within this area, Sara Buri province has various types of mineral deposits, gypsum, lime and granite, etc., geographical structures which provide raw materials that supply the local cement factories. The area also hosts a ceramic factory. The situation indicates that there is certain potential for the development of future industries. Since gas is available in this area through the gas pipeline laid from the ESB, the coming industries would have a reliable assurance regarding gas supply.

Area III

This is an irrigated plateau, in the west of the region that includes the Chainat, Sing Buri and Angthong provinces, as well as certain parts of Lop Buri and Sara Buri. Agricultural development in this area is of high potential, as the land is very fertile. The future development program for this area should take into consideration the agricultural diversification, land management and increasing efficiency of the water supply and use. Industry development in this area should emphasize the agro-industry in addition to the service industry that relates to agricultural marketing and transportation.

3. The Study's Objectives

The regional economic structure acknowledges the gradual change of the leading sector from agricultural to industrial. This reflects the country's development patterns, and this gears it toward the industrialization of the nation in parallel with more intensive agricultural development. The study must realize this phenomenon and place the upper central region development into the national development frame. Specifically this study should aim to:

3.1 To formulate development and management programmes that co-ordinate agricultural promotion with its marketing. The study should provide comprehensive guidelines for agricultural diversification and agro-industries development. It should aim to increase regional value added and exportation, as well as increasing local jobs opportunity.

3.2 To strengthen the regional industry and service sector in order to increase their efficiencies up to a more competitive level in the world market. The study will analyze regional socio-economic structures to understand constraints, potentialities and alternatives for development in each sector. These include agriculture, industry, services and tourism, urban and human settlement. The environmental aspect and land use planning technique should be brought into concern in the formulation of regional development frameworks.

3.3 To program and formulate an improved regional transportation network in order to increase the inter- and intra-regional accessibilities. The study must also suggest a program or project that is adequate to absorb and control the heavy traffic that flows into the metropolis.

3.4 To establish and co-ordinate regional settlement patterns with urban development programmes in order to organize an urbanization scheme that effectively serves regional agriculture and industrial development. The suggestions must also guide to increase urban jobs opportunity as well as the welfare and education and other needs of people in these centers as well as its hinterland.

3.5 To establish regional organizations and co-ordination frameworks that link planning both in urban and rural development. The

framework should also provide alternative models that transfer town and regional planning into action programmes. It is necessary that the framework should respond with serious concern to private and public sectors co-ordination and cooperation and it should reflect the locally felt needs as well.

4. Scope of the Study

4.1 Overall Concern

This is a comprehensive regional study that provides the framework to co-ordinate urban and rural socio-economic development. Further analysis of the functional dualism existing between the agricultural and industrial sectors, to develop the region must be continued. The main concern is to find a balanced developmental approach that, at the end, increases regional income and employment. This study should become a vital reference and central suggestion in formulating regional development policies and projects. The study will provide detailed statistics and analyse (of the constraints and potentialities) as well as highlighting the salient issues and recommending suggestions. These will facilitate not only planning and implementing a regional long-term (20 years) development plan, but also the intermediate operational development programmes. The regional development policy and programmes will be included in the Seventh National Economic and Social Development Plan (1992 - 1997).

The study will invoke Demographic Spatial and Socio-Economic analytical methods, together with engineering and management studies for the policy issues and identification of priority programmes.

It will also suggest alternative reorganizational structures to strengthen public and private sector co-ordination.

In short this study will cover the analytical technic of all disciplines including social, economic, physical and environmental aspects. The study will identify the problems and practical solutions for planning and the implementation throughout every stage of regional development.

4.2 Focus of the Study

4.2.1 The overall development analysis This analytical task is aimed to understand the overall socio-economic, spatial and environmental conditions of the region. The regional macro or integrated pattern of development and the sectoral development direction should be organized and identified this stage of work. The constraint and potential for each identical area is discussed here. The task also highlights the important issues for policy and planning formulation. The analysis will look into the following areas/aspects:

- (A) Geographical and regional resources endowment
- (B) Population and human settlement
- (C) Regional economic and agricultural development structure
- (D) Regional industrialization and environmental change
- (E) Macro and other related sectoral development
- (F) Land capacity and land used pattern
- (G) Regional socio-economic infrastructure network and its' impact
- (H) Impact from the part implementing policy and planning work.

4.2.2 The agricultural sector analysis The main regional economic base has been rice cultivation. This explains why the majority of population are farmers. However, the cultivation is without proper techniques, the land has deteriorated production has decreased. Consequently, livelihood has become more difficult for the farmers and unless the region could develop its agricultural sector, the majority will face more suffering. The development plan must consist of guidelines for agricultural management, land development and land use strategies and techniques. The study must find ways to diversify agricultural bases and the expansion of agro-industries. This would have to take into concern the improvement of marketing techniques both intra- and inter-regional market.

4.2.3 The industrial sectoral analysis The recent economic growth has caused regional growth in industry in the Upper Central Region, especially in Ayuthaya and Sara Buri provinces. The regional advantages in terms of location, labour and national resources endowment and surplus should be carefully analyzed. The additional incentives that have economic impacts towards industrial investment should be investigated to establish incentives. The regional tourism industry should be further promoted together with the linked industries and related tourism infrastructure. The industrial development plan should take into concern the strategy to improve local skills and technical knowledge. Industrial innovations and transfer of management experience should be seriously discussed in this study to ensure further industrial development.

4.2.4 The urban and human settlement analysis The regional human settlement pattern and regional urban centers that service and support the growth of industrial and agricultural development must be

planned. The job opportunities in regional urban centers, must be increased to a certain level to absorb surplus labour from the agricultural sector. The urban economic roles that increase regional incomes, services and productions must be promoted and strengthened. The role of the center on human resources improvement for industrial and agricultural development also needs to be recognized with promotion programmes. The local administration capacity must be improved to service the growth, decentralization of administration function, and financial management must be discussed with details of operational guidelines.

4.2.5 The regional infrastructure and urban centers' activities analysis The transportation networks that link the region with the metropolis must be thoroughly studied with recommendations identifying projects. Regional traffic can be improved. Urban amenities that maintain the urban area as market and transportation centers must be analysed and the demand projection is forecasted, the require urban amenities must be identified and the previous project will be suggested together with prefeasibility studies. Examination of the socio-economic infrastructure will lead to suggested investment programmes with an emphasis on self-financed programmes.

4.2.6 The regional environment analysis The regional land and natural resources must be utilized via proper techniques, respecting the balance of nature and maintaining the living atmosphere at the best conditions. The agricultural and industrial projects must be developed parallel with the investment in treatment facilities. Chao Phraya River and other water ways must be checked and the project's programmes to maintain and improve the water condition must be identified in the study.

5. REPORT

The following reports in English (and also in Thai at the completion of Final Report) are required in the course of the Study.

1) Inception Report

- 100 copies
- within four months after the commencement of the Study

2) Interim Report

- 100 copies
- at the end of the tenth month

3) Draft Final Report

- 200 copies
- at the end of the fourteenth month
- Seminar on Draft Final Report
- The Royal Thai Government will provide JICA with its comments within two months after the receipt of the Draft Final Report

4) Final Report

- 300 copies and Thai version...200.....copies
- within two months after receipt of the comments on the Draft Final Report

6. STUDY PROJECT MANAGEMENT

NESDB of the Royal Thai Government will serve as the coordinating agency of the Study and will establish a Policy Coordinating Committee and a Technical Committee. Assistant Secretary-General of NESDB is the Project Director and the Director of Central Development Center, NESDB is the Project Manager.

7. PERIOD OF THE STUDY

The period of the Study will be 18 months, starting from
to

8. LOCATION OF PROJECT OFFICE

Project main office will be located in Bangkok and local office located in Chainat or Saraburi.

9. EXPERTS

The following specialists for technical inputs are suggested.

- 1) Regional Planner.....(Team Leader)
- 2) Regional Economist.....(Deputy Team Leader)
- 3) Land Use Specialist
- 4) Agriculturist
- 5) Industrial Economist
- 6) Marketing and Distribution Specialist
- 7) Urban Planner
- 8) Transportation and Communication Planner
- 9) Development Administration Specialist
- 10) Water Resource Engineer
- 11) Environmentalist

10. TRAINING

In order to strengthen the capability of Thai personnel in regional planning and development management, various kinds of training programmes are needed

- | | |
|---|---|
| 1) Doctorate programme | 1 |
| 2) Master programme | 1 |
| 3) Training session 3-6 months | 2 |
| 4) Short term training and study tour 2 weeks - 1 month | 2 |

11. EQUIPMENT

- | | |
|---------------------------------------|---|
| 1) Vehicle for project area transport | 2 |
| 2) Micro-computer system | 1 |
| 3) Photo-copier | 1 |
| 4) Miscellaneous expenses | |

12. STAFF

- | | |
|---------------------------|---|
| 1) First class Secretary | 1 |
| 2) Second class Secretary | 1 |
| 3) Computer programmer | 1 |
| 4) Draftman | 1 |

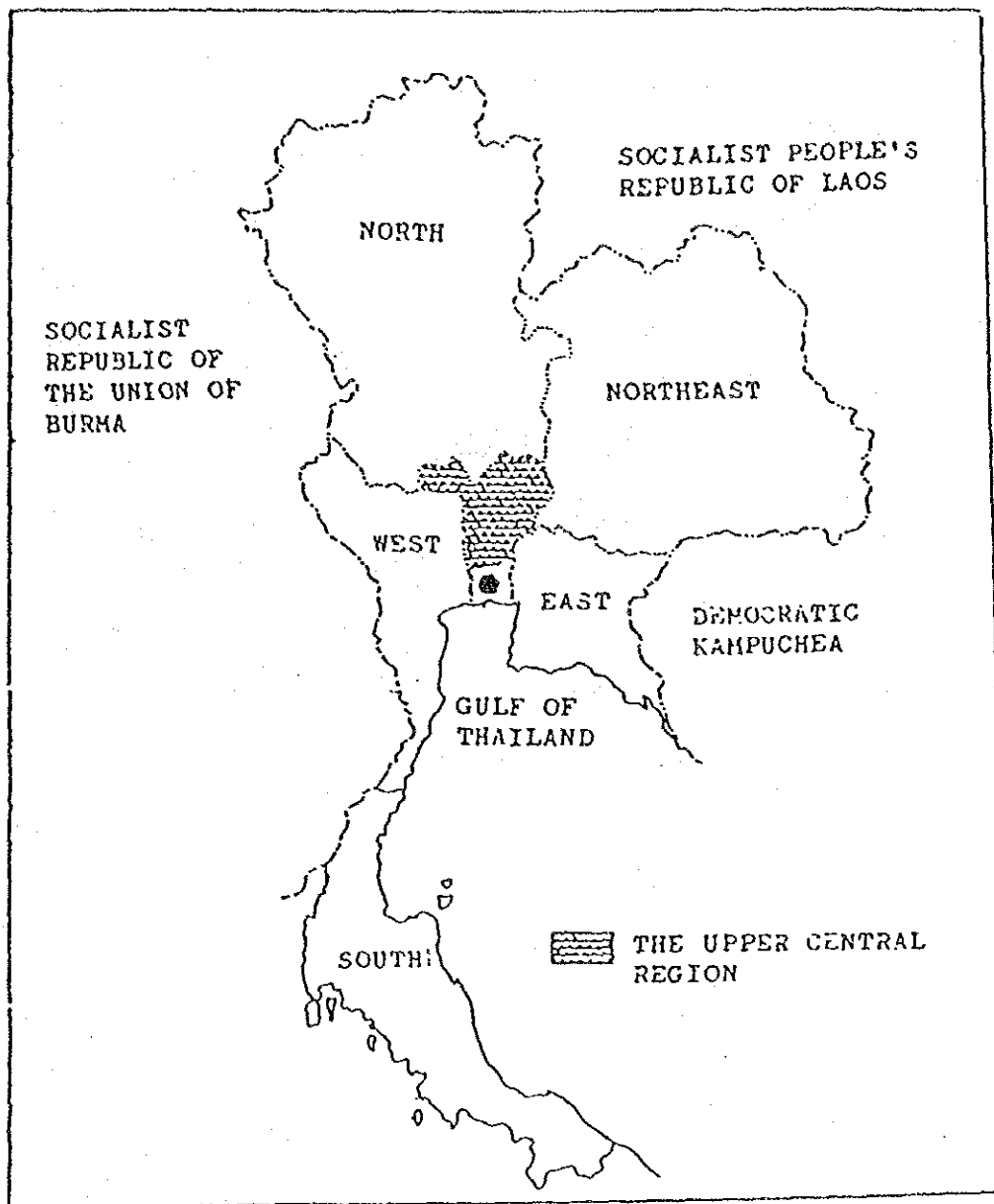
13. CONTRIBUTION OF THE ROYAL THAI GOVERNMENT

The Royal Thai Government shall accord privileges, immunities and other benefits to the Study team and take necessary measures to facilitate smooth conduct of the Study through the collaboration of the authorities concerned:

- 1) to furnish the Study team with available relevant data, information and materials for the execution of the Study,
- 2) to arrange for the Study team appropriate office space, office equipment, materials and clerical Services for the execution of the Study,
- 3) to provide the local staff necessary for the performance of the duties of the Study team,
- 4) to provide the security for the Study team, and
- 5) to assist the Study team to obtain other facilities and conveniences deemed necessary for the conduct of the Study.

14. CONTRIBUTION REQUESTED TO JICA

- 1) to dispatch a full scale Study team to the Kingdom of Thailand to conduct the Study
- 2) to bear travel expenses and fares and those necessary for travelling within the country as well as charges of lodging and living expenditures for the members of the Study team and the items 10 - 12.



THE UPPER CENTRAL REGION

