



GOVERNMENT OF THAILAND

**THE SIXTH NATIONAL ECONOMIC
AND
SOCIAL DEVELOPMENT PLAN
(1987 ~ 1991)**

**National Economic and Social Development Board
Office of The Prime Minister
Bangkok, Thailand**

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FOREWORD

The principal objective of the Sixth National Economic and Social Development Plan is to restructure the process of national development in order that the Thai economy may grow at a higher rate than during the period of the Fifth Plan. The pursuit of economic growth should not be at the expense of economic security and stability: the loss of national economic independence would create hardship for the Thai people in the future. It should rather be directed towards finding solutions to the balance of trade deficit, fiscal problems, employment conditions, the deterioration of the country's natural resources and environment and the declining economic condition of the farmers.

The guidelines and methodology for development, which will ensure that problems are solved without new ones being created, involve increased investment, particularly by the private sector. The main emphasis is on motivating and encouraging Thai civil servants, farmers, industrialists, vendors of services and the population in general to provide goods and services of high quality and efficiency and at low cost. The goods and services should be attractive to the domestic market and capable of penetrating foreign markets in order to bring more revenue into the country, which would benefit both suppliers and the people as a whole.

The success of the Sixth Plan's objectives, guidelines and methodology will depend on: the degree of cooperation between the government, the private sector and the public; the ability to make firm decisions; improvements in managerial and administrative efficiency; and the development of the quality of human resources within a fully integrated production, technology and marketing system. The foregoing will be accomplished by:

- 1) reviewing the government's role to ensure that it remains within the framework of intrinsic government duties, especially in formulating clear and practicable economic and social policy and regulations;

- 2) providing data to and coordinating government agencies and coordinating the government with the private sector;

- 3) revising and rescinding rules and regulations that are unjust and hinder the development of the country according to the guidelines and methodology defined in the Sixth Plan;

- 4) promoting and encouraging the private sector, including farmers, industrialists, people providing service and the Thai people, who are still an untapped resource, to participate fully in national economic and social development;

- 5) developing the quality of human resources in order that society may progress towards peace and justice, which would contribute to the country's overall development while maintaining the national identity, culture and system of values and raising the quality of life in accordance with the guidelines and methodology stipulated in the Sixth Plan.

If the guidelines and methodology proposed in the Sixth Plan are implemented, it is anticipated that the Thai people will enjoy a higher standard of living. Thailand's economy and society will be able to develop and advance to the level of a newly industrialized country based on firm and steady foundations, and will be more capable of competing in the world economic and social arena. Improvements will become visible during the Sixth Plan period and more apparent during the Seventh.

Finally, in drafting the Sixth National Economic and Social Development Plan, limitations and opportunities for development were conceived in the light of the current situation. Since the world economy, society or political condition are liable to sudden change, targets and work plans may have to be adjusted on an annual basis to bring them into line with the prevailing conditions.

PART 1

CHAPTER 1

SUMMARY OF THE SIXTH NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT PLAN

INTRODUCTION

1. The principal goals of the Sixth Plan are to raise national development to a level that will enable the country to progress and prosper in the future and to solve the economic and social problems that have accumulated over the past. The achievement of these goals will allow the Thai people to enjoy improvements in income, quality of life and state of mind. The main issue of the Sixth Plan, therefore, is to raise the level of national development in order that the economic growth rate may be higher than that achieved during the period of the Fifth Plan. Development will have to take into account both the rate and the characteristics of economic growth; it must not jeopardize the security and stability of the country's fiscal and monetary condition. Furthermore there has to be an increase in employment and in appropriate distribution of income. The deterioration of natural resources and the environment, strengthening of justice and development of the quality of life of the Thai people in general will also have to be taken into consideration.

RESULTS OF PREVIOUS NATIONAL DEVELOPMENT PLANS

2. National Development under the previous 5 national development plans, covering a period of 25 years, has clearly improved both the country's economy and the people's standard of living. The gross national product (GNP), for example, increased 18 times, from approximately 58,900 million baht in 1961 to 1,041,920 million baht in 1985; meanwhile the average annual per capita income increased about 10 times, from 2,150 baht in 1961 to 20,420 baht in 1985. In the field of social development, both education and public welfare services have been upgraded and distributed more widely, and the quality of life of the Thai people has improved correspondingly. In the field of education, for instance, there are now secondary schools in all districts in the country, and in the field of public welfare 92 per cent of all districts now boast a hospital 98 per cent of all subdistricts contain health centres while primary health care services are available in no less than 90 per cent of all villages in the country.

3. Although the country's overall economic and social development has been quite successful, problems and obstacles have arisen from time to time, especially during the Fourth Plan and Fifth Plan periods, with the result that during the Fifth Plan period the national economy grew at an average annual rate of only 4.4 per cent, a low figure when compared to the 7 per cent average annual growth rate achieved during the previous plans, and falling well below the 6.6 per cent target set in the Fifth Plan. The reason for this performance was the generally depressed state of the world economy during the period. Increased competition and protectionism in international trade plunged the average growth rate of the world economy to only 2.5 per cent. Thailand's economic growth rate was almost double the world average during the period.

4. During the period of the Fifth Plan, Thailand had to confront economic problems that had been building up for a long time in many areas, such as problems in income distribution and the poverty problem as well as the problems mentioned above arising from fluctuations in the world economy. Economic measures had to be employed in many areas to untangle such problems. For example, at a time when Thailand should have been increasing exports, strong restrictions were imposed. Many problems could be rectified only with a great deal of hardship. Nevertheless during the latter part of the Fifth Plan period, Thailand's earnest efforts to solve her economic problems, combined with changing international economic conditions — including falling oil prices and interest rates in the world market — started to achieve results in many important areas, such as inflation and the trade deficit. In 1986, for example, the trade deficit fell from the 1985 level of 61,600 million baht to 22,500 million baht.

5. Although Thailand has been able to alleviate many of her problems in spite of extremely adverse conditions in the international economy, many serious problems remain, among them the fiscal deficit, poverty, unemployment and the accumulated national debt, all of which will have to be solved in the future. However, it is anticipated that during the period of the Sixth Plan international economic conditions will give Thailand an opportunity to solve these problems with an increased degree of efficiency, and at the same time the country will try to achieve a rate of economic growth higher than that attained during the Fifth Plan.

6. An important opportunity for the Thai economy during the Sixth Plan is in exports, which will arise from maintaining a suitable policy on currency valuation. In addition, countries that constitute important markets in the world trade network have begun to more seriously adopt restrictive measures on exports from Japan and the newly industrialized countries. Such a situation gives Thailand the chance to compete in the world market more effectively than was the case during the Fifth Plan. However, it is not easy to be competitive in the world market. The Sixth Plan will need to emphasize improvements to the efficiency and quality of development in order to realize the important target of increasing Thailand's competitiveness in foreign markets.

OBJECTIVES AND TARGETS OF THE SIXTH PLAN

7. In view of the problems and limitations on the one hand and the development opportunities falling within Thailand's province in the near future on the other, the Sixth Plan defines its 2 major objectives as follows:

Economic: Maintain an average rate of growth at a level not below 5 per cent in order to absorb the minimum of 3.9 million persons who will be entering the labour market. Growth should be accomplished in such a way that economic stability is strengthened and the economic problems that arose during the Fifth Plan period are solved.

Social: Develop the quality of the population so that social development can progress, peace and justice be attained and development of the country as a whole supported. The national identity, culture and system of values will be maintained and the quality of life of the Thai people will be raised in both rural and urban areas.

DEVELOPMENT GUIDELINES IN THE SIXTH PLAN

8. In order to attain the principal economic and social objectives and targets cited above, clear guidelines for development need to be defined which can be used as the basis for formulating appropriate work plans and operational plans in the future. An important issue that all parties should be aware of is that despite the less critical conditions and the increased development opportunities, it will not be easy to exploit the full potential of these opportunities. The task must be approached with conviction and dedication; cooperation and coordinated hard work are necessary in compliance with the following key guidelines:

(1) **Increase the efficiency of national development** in regard to human resources, science and technology, natural resources and the formation of integrated systems of administration and management. Especially important is the need to review the state's role to ensure that its duties consist only of those appropriate to the state and its monetary and fiscal capabilities. On the other hand the role of the private sector in national development should be enhanced both in production and in the provision of infrastructure services hitherto provided by the government.

(2) **Improve the production system and marketing and raise the quality of the basic economic factors** to reduce the cost of goods, diversify into more types of goods together with market expansion. This will enable Thai goods to be far more competitive in the world market while simultaneously emphasizing the development of the marketing system within the country.

(3) Increase the distribution of income and prosperity into provincial regions and rural areas by focusing on the low income population in these areas as the main target group for receiving the benefits of national development efforts.

MAIN PROGRAMMES

9. Based on the foregoing objectives and guidelines for development, the Sixth Plan specifies 10 programmes divided into 3 major categories as the operating framework for the government and private sector, as follows:

Improving the efficiency of development

The programmes in this category are primarily concerned with increasing the efficiency of the various instruments and mechanisms used in development. Programmes that can be carried out immediately despite financial and resource limitations cover: improving the quality of the population, utilization of science and technology and improving the administrative and managerial efficiency of the government and state enterprises, etc. The problems in finance and resources, however, require clearly defined policies and measures. The following economic programmes are included in this category:

- (1) Overall Economic Development;
- (2) Population, Social and Cultural Development;
- (3) Development of Natural Resources and the Environment;
- (4) Development of Science and Technology
- (5) Improving the Administration and Reviewing the Role of the Government in National Development; and
- (6) Development of State Enterprises.

Restructuring production and improving the quality of infrastructure services

The programmes in this category aim at restructuring the country's production and services and making them more appropriate. This will be accomplished by diversifying the structure of production in order to reduce risks and production costs while improving the quality of

goods and services to increase Thailand's competitiveness in foreign markets. These undertakings, to be effected as prescribed in this group of programmes, will also create jobs to absorb more of the labour force. The two programmes included in this group are:

- (7) Development of the Production System, Marketing and Employment; and
- (8) Development of Infrastructure Services.

Distributing prosperity and creating justice

Increasing the efficiency of national development, as described in the first group of programmes, and restructuring production and infrastructure services to help create jobs will enable the country to raise its overall level of development. But another important objective of national development is the distribution of prosperity throughout the provincial regions and the establishment of social justice. It is therefore necessary that there be programmes for urban development, both in Bangkok and in provincial regions, and for rural and specific areas development. The last group of programmes focuses on these areas. The fact that the Programme for Rural Development is placed last does not mean that the Sixth Plan assigns a lower priority to rural development. On the contrary, rural development is the heart and primary target of national development. Furthermore it can be seen that the 8 programmes included in the first 2 groups all aim to benefit the rural population. The 2 programmes included in this final group are:

- (9) Development of Urban and Specific Areas; and
- (10) Rural Development.

KEY ISSUES OF THE MAIN PROGRAMMES

10. The 10 main programmes grouped in the 3 categories delineated above have the following key issues:

(1) Overall Economic Development

The Programme for Overall Economic DEvelopment aims to achieve: an average of 5 per cent annual economic growth during the Sixth Plan period; employment for an additional 3.9 million people; a reduction in the various types of unemployment, especially seasonal and underemployment; and a reduction in the problems of poverty, the trade deficit, the current account deficit and the fiscal deficit. The following main features are included:

– *Improve various aspects of the production system in order to increase the rate of growth to an average of 5 per cent per year.* This would absorb the anticipated increase in the labour force while also ensuring national economic stability.

– *Accelerate savings mobilization, especially in the public sector.* Government expenditure should be minimized and carefully monitored because savings have not been increased and export problems remain. Economic growth and stability will be maintained by limiting growth in public sector investment to an average of one per cent per annum and in other operations of the public sector, including the development of efficiency in public administration, to an average of 5.3 per cent per annum (at constant prices).

– *Encourage the private sector to play a larger role in development.* The role of the government will be reduced by increasing private investment by an average of 8.1 per cent per annum and consumption by an average of 3.7 per cent per annum (at constant prices). The government will assume a supporting role by coordinating, recommending and assisting in private sector activities.

– *Institute monetary, fiscal and other measures.* These will support development in such high-priority sectors as production for export, tourism, etc.

– *Adjust the tax structure to make the system more comprehensible, rates more appropriate and the base wider.* This will increase government revenues, create fairness and encourage investment that will improve competitiveness with foreign countries.

– *Make allocations from the development budget to activities in line with the guidelines of the Sixth Plan.* Allocations will be made to activities that help solve the problems of employment, trade deficit and current account balance; for example, in rural development, agriculture, agro-industry, rural industry, marketing and various services.

(2) Population, Social and Cultural Development

During the periods of implementation of the previous plans, emphasis was given to social development by increasing such social services as education and public welfare. Although much has been accomplished, there remain social problems which have become more critical and complex. Therefore the Sixth Plan has shifted the emphasis of social development from providing basic social services to increasing the development of the basic components of society: individuals, families and communities. The aim is to achieve an appropriate population size and structure and to help individuals develop themselves into good, capable members of society who can contribute to national development. The following guidelines are adopted:

— *Implement various measures to ensure that the size and structure of the population will be viable in the long run.* The population growth rate will be reduced to 1.3 per cent by 1991. At the same time a more desirable population distribution will be sought by emphasizing the development of urban centres in provincial regions and other specific areas while developing Bangkok and its environs. An effort will also be made to speed up rural development in order to develop economic and employment bases. The quality of life of the low-income group in urban slums will also be improved.

— *Develop the quality of the population.* Support will be given to education and training that instils correct attitudes and values and the ability to carry out an occupation by, for example, developing the system of vocational counseling at educational institutions, expanding the apprenticeship system and encouraging the people to take a more active role in safeguarding their own health. In developing the quality of the population, economic principles will be used to create efficiency and fairness in the government's provision of social services. The policy on fee collection for public health and education services will be reviewed so that sufficient resources are acquired for further development of these services.

— *Promote peace in society and protect society against crime and accidents.* Community relations efforts will be increased to encourage the general public, families and communities to play a role in crime and narcotic drug prevention and suppression. There should also be a system for coordinating the public and private sectors to prevent accidents.

— *Alleviate unemployment problems.* The development of an information system on human resources and jobs will be accelerated. This will be used in formulating manpower plans, developing labour information systems and regional labour centres, developing the domestic and overseas markets for Thai labour and establishing a system of education that conforms to labour market requirements.

— *Attend to labour problems.* In particular, attention will be given to the problem of protecting child labour by enforcing compulsory education up to Grade 6 and encouraging improvements in welfare and working conditions for children. Discrimination against female workers, in terms of wages, working conditions and training for skill development, will be eliminated.

— *Encourage private organizations, communities and families to take a greater role in preventing and solving social problems.* Private organizations will be encouraged to coordinate with the government and public relations campaigns will be conducted on the subject of the duties, roles and responsibilities of the family in society. Support will be given to the formation of community organizations which will cooperate in solving social problems in individual communities and serve as an axis for coordination with the government.

(3) Development of Natural Resources and the Environment

Unsystematic use of natural resources in the past has resulted in severe deterioration. Occasionally there have been serious conflicts between the use of resources and environmental concerns. Therefore, in order to make the most efficient use of the country's depleted natural resources in a way that corresponds to environmental conditions while at the same time looking for as yet untapped natural resources for use in national development in the future, the following key operational guidelines are defined:

— *Improve the use of natural resources in generating employment.* In particular the private sector will be encouraged to use land for growing trees for economic purposes, resources in Thai territorial waters will be conserved to ensure continued and consistent economic use and water resources will be used with increased efficiency.

— *Establish various and appropriate types of land ownership.* This will be implemented within the period of the Sixth Plan. In addition, it is necessary to improve the system of agricultural production according to the productivity of the land and to solve problems which arise from soil depletion and other types of soil problem.

— *Locate and continuously develop additional natural resources.* In particular an aerial geophysical survey of the entire country and exploratory drilling will be undertaken at various points where data indicate the existence of energy resources and economically valuable minerals. For water resources, support will be given to efforts to use underground water sources wherever feasible; elsewhere support will be given to the construction of small water resources for household consumption and agricultural use.

— *Provide instruments in the form of master plans and maps.* These will be used in natural resource and environmental planning; for example, standardized land maps will be made for use by various government units; master plans will be formulated for the country's national parks and wild-life sanctuaries and for developing the economic potential of natural resources in coastal areas; and studies will be undertaken to solve the problems of toxic substances.

— *Complete and standardize the system of management of natural resources and the environment.* Local organizations will be encouraged to set up near the location of natural resources in order to participate more in the administration and management of these resources and the environment.

(4) Development of Science and Technology

In the past, national development placed little emphasis on the role of science and technology. It was only during the period of the Fifth Plan that some attention began to be paid

to this area. The Sixth Plan, however, assigns high priority to this topic in recognition of the growing importance of science and technology in national development. Foundations will be laid for developing production and processing capabilities in order to elevate the country's status to a level equal to or higher than that of the newly industrialized countries. This development would lead to an improved standard of living for the Thai people in general and also help make Thailand more competitive in the world market. Employment, the efficiency of the labour force in export activities and the domestic economy would all be improved. Implementation of science and technology development will operate as follows:

– *Support systematic management of science and technology in order that they may play an increasing role in national development.* Development will concentrate on those branches of science and technology which are of primary importance for future national development and on developing manpower in science and technology, in corresponding to future economic needs.

– *Develop a basic structure for science and technology.* This includes the development of appropriate organizations and the revision of the various laws, rules and regulations that have hindered previous developments in science and technology in such a way that they support development.

– *Develop manpower in science and technology.* Increase efficiency by emphasizing qualitative improvement and maximizing benefits from employment. Support will also be given to the production of manpower in areas where there remains a shortage of personnel and a high demand.

– *Promote national research and development.* Efficiency will be increased by formulating appropriate policies and by attempting to allocate the budget to areas of research in need of immediate assistance; for example, genetic engineering and biotechnology, metallurgy and material sciences and electronics.

– *Increase the effectiveness of technology transfer from abroad.* This should benefit the economic and technological development of the country.

– *Develop data and information systems for science and technology.* In particular, an information network will be set up that will include science and technology indices to be used in determining appropriate policies and plans for science.

– *Promote the role of the private sector in developing and using technology.* Tax incentives will be given to the private sector to invest in the development of science and technology.

(5) Improving the administration and Reviewing the Role of the Government in National Development

The system of administration plays an extremely important role in national development. When national resources face constraint, as they do now, administrative operations become especially important and must be conducted with increased efficiency. Consequently, since the key objectives of the Sixth Plan are to accomplish national development with efficiency, to attain the overall targets and to achieve an integrated system for government operations, the programme for improving the administration adopts the following major guidelines for solving the problems of duplication and lack of coordination within the public sector and for improving the efficiency of existing development instruments, the quality of government services and cooperation between the public and private sectors:

– *Develop the government administrative system to facilitate various aspects of development.* The programme system will be supported with operational plans, plan coordination and manpower plans.

– *Improve 2 types of development-supporting instruments.* These are development communications to generate participation and promote cooperation; and improved rules and regulations as well as other government orders to give the private sector greater flexibility and remove obstacles to its participation in national development.

– *Ensure that the public receives a higher quality of service from the government.* This will help reduce the expenses of the general public and the production costs of the private sector.

– *Improve mechanisms for coordinating cooperation between the public and private sectors.* The importance of cooperation between the public and private sectors will be emphasized.

(6) Development of State Enterprises

The operations of state enterprises during the period of the Fifth Plan followed the principal policy of increasing the self-reliance of state enterprises by reducing government subsidies and adjusting the prices of goods and services. This was done in an attempt to obtain returns on investments at least equaling the interest on government bonds and to make their management more business-like. As a result the operations of state enterprises tended to improve in the areas of both management and finance. To be specific, the 59 state enterprises which had to comply with the 1979 investment budget regulations earned profits of 57,717 million baht during the period of the Fifth Plan, which represents a return on investment of approximately 4.2 per cent of the total assets of these enterprises. Furthermore the number of state enterprises that were operating at a loss dropped from almost 20 at the outset of the Fifth Plan to only 11.

It is interesting to note, however, that the size and growth rate of investment by state enterprises, especially in the fields of energy and transport, doubled during the period of the Fifth Plan to 169,889 million baht from 89,000 million baht during the Fourth Plan. Without any increase in capital, it was necessary for the state enterprises to depend on financing from both foreign and domestic borrowing for as much as 60 per cent of their investment budgets. Investments from self-generated revenues remained quite low. Moreover the continuing problem of large accumulated debts between the state enterprises themselves caused a chain reaction of liquidity problems. If this problem remains unchecked, it could definitely have an impact on government financial stability and on the management of foreign debt.

The administration of manpower in state enterprises is another issue that requires improvement. At present state enterprises employ approximately 250,000 people. During the period of the Fifth Plan, state enterprise manpower expanded at a rate of about 3 per cent per year, compared to a 2.5 per cent growth rate for the government sector during the same period. Salary and compensation rates are high compared to those of civil servants and private sector employees: the average for middle-ranking and low-level personnel in state enterprises is about 55 per cent higher than civil servants' income. This has caused personnel expenses to increase much more than other expenses and has become a main problem in managing state enterprise costs. Therefore, the Sixth Plan lays down the following guidelines for the development of state enterprises:

— *Increase efficiency in the operations of state enterprises by making them more business-like.* The quality of service will be raised to international standards while maintaining appropriate pricing. Ways will be found to increase revenues and reduce production costs so that returns on investment in proportion to total assets will be increased to equal the interest rate on government bonds; thus investments should only be made in projects that bring suitable returns. At the same time it is necessary to limit the size of investments by state enterprises in general in accordance with the state of the country's economy and finances in each year. This can be achieved by reducing investments or joint ventures in extension activities that would be better operated by the private sector, which will result in a reduction in the financial burden of the government sector, especially foreign borrowings. The proportion of investment coming from the revenue of state enterprises will be increased, and the enterprises will be encouraged to increase capital by selling shares to the public.

— *Formulate a pricing policy for state enterprise goods and services to cover cost and promote self-reliance.* Both direct and indirect subsidies will be discontinued, except in cases specified by government policy. At the same time the prices of goods and services of certain monopolistic state enterprises will be compatible with international standards, especially for power and international telecommunications charges.

— *Formulate policy guidelines for personnel management by including manpower plans in state enterprise plans.* Clear personnel targets will be established in proportion to production. Overtime payments and combined welfare benefits will be limited to, respectively, 15 and 10 per cent of salary. In addition, promotion will be given to the hiring of private sector services and to the participation of the private sector in management.

– *Formulate a privatization policy for state enterprises.* The policy of the Fifth Plan will be continued by considering joint investments with the private sector and the sale or liquidation of enterprises that have been operating at an unreasonable loss for some time.

– *Review the role of and improve the system for supervising state enterprises.* This will be carried out at the national and ministerial levels to achieve the objectives specified in the plans for each state enterprise. The boards of directors of state enterprises will be restructured to improve management efficiency. Laws and regulations need to be revised to permit a more business-like approach to state enterprise management.

(7) Development of the Production System, Marketing and Employment

The Programme for Development of the Production System, Marketing and Employment is conceived as a way of restructuring production and marketing in Thailand in order to facilitate adjustments to meet the present and future changes in world trade and economic conditions. It is projected to bring about a lower growth rate in traditional agricultural commodities, which will affect foreign exchange earnings and farmers' income. Furthermore, world trading conditions, being dominated by protectionism on the part of the industrial nations, will make it increasingly difficult to increase exports of industrial products to Thailand's major markets. The Programme for Development of the Production System, Marketing and Employment also aims at reducing unemployment, increasing revenues and alleviating rural poverty during the period of the Sixth Plan by adopting the following guidelines:

– *Reduce the trade and current account deficits.* Revenues from the export of goods and services will increase at an average rate of 9.9 per cent per year while revenues from tourism and related services will grow at the rate of 7.4 per cent per year.

– *Create jobs for 3.9 million people to reduce the problems of urban and rural unemployment.* The proportion of employment in the agricultural sector will be reduced from 70 per cent to 65 per cent by the last year of the Sixth Plan. This is to be accomplished by changing the system of production and supporting the wider distribution of industry and services so that they can absorb more labour. The programme also aims at increasing production and farmers' income and solving the problem of rural poverty.

– *Increase exports by diversifying agricultural production, agro-industry and industrial goods for export.* Basic government services and facilities will be improved in order to reduce costs and increase the capabilities of exporters. Assistance in marketing expenditure and information systems will be given to small and medium-scale exporters.

– *Increase foreign exchange earnings and employment opportunities for the educated urban population.* This can be done by diversifying tourism services, and increasing the marketing of Thailand in foreign countries, conserving and developing tourist attractions, developing facilities for tourists and improving the design of local handicrafts and souvenirs at tourist sites.

– *Create employment and increase the income of farmers.* This can be accomplished by diversifying agricultural and industrial production. Farmers' household income can be increased by diversifying crop cultivation for local sale and by combining crop cultivation with the raising of livestock and the planting of forests and fast-growing trees.

– *Diversify industrial production.* Agro-industries, small and provincial industries and engineering industries will be developed to increase income and create jobs for both rural and urban populations.

(8) Development of Infrastructure Services

The development of infrastructure services — covering public utilities and amenities, transport and communications and energy services — has been heavily supported by government finance since the First Plan period. About two-thirds of the government's development budget has been spent on improving and expanding infrastructure services throughout the country, and this has played an important part in developing the country's production system, marketing and exports. It has also contributed to decentralizing growth to provincial regions and rural areas. In addition the development of infrastructure has been instrumental in increasing income and creating employment in many sectors of the national economy.

The development of infrastructure services during the period of the Fifth Plan was quite successful, especially in the field of energy, the provision of various public utilities, the country's network of roads and airline services. But the land and sea transport services and telephone services are still inadequate and of poor quality; they may even be considered major obstacles to the successful conduct of domestic and international businesses. The issues that need to be addressed during the Sixth Plan period are as follows:

– The quality of many infrastructure services is below international standards and the services are themselves inadequate.

– There are gaps in the service network and some services are not being fully utilized.

– The price structure of many infrastructure services is distorted and cannot cover costs. Such services cannot be self-reliant and they rely heavily on government subsidy. At the same time the charges for many services monopolized by state enterprises are higher than in-

ternational standards. This affects the costs of user industries and the competitive ability of the country.

– Investment in some services has grown at such a high rate that installed capacity exceeds demand. These investments rely on foreign loans, thus creating alarming amounts of debt, while the share of investment coming from self-generated revenues or increases in capital is low.

– The administrative mechanisms of many infrastructure services are still inefficient, not business-oriented and tend to be overly monopolized. The absence of competition prevents them from achieving an international standard of quality. Administration is limited by obsolete rules and regulations and the scope of authority is not clearly defined. Coordination with the private sector is also lacking.

The Sixth Plan therefore formulates policy guidelines for developing the country's infrastructure services in the areas of public utilities and amenities, energy and transport and communications in order to increase efficiency in the development of the production system, marketing and exports. This will lead to increased competitiveness for the country, strengthened urban economic bases and expanded development in rural and provincial regions. The policy guidelines are:

– *Upgrade infrastructure services to international standard to ensure fast, reliable and consistent services.* Services should accommodate the restructuring of the economy, trade and tourism and the growth of urban and rural communities and new important economic areas. This will be achieved by improving the quality, maintenance and network links of infrastructure services to comply with town planning services and, most importantly, by stimulating decentralization of economic activities and growth to provincial regions and rural areas.

– *Adjust the price structure and fees for infrastructure services on the basis of cost-recovery and self-reliance.* Direct beneficiaries are to shoulder the heaviest burden of investment and operating costs. The government will avoid giving direct subsidies for public utilities and amenities, especially in urban areas; however, such subsidies will be given in rural areas stipulated by government policy. Restructuring the price of infrastructure services and energy should promote efficient and economical use, taking into account service costs. In addition, tolls will be imposed on vehicles using main thoroughfares.

– *Expand investment in infrastructure services by revising the policy on investment-sharing between the government, state enterprises, local authorities and the private sector.* The burden on the government will be lessened and participation by local authorities, state enterprises and the private sector will be increased. This is in line with the effort to modify infrastructure services to be more business-like and promote the role of the private sector in investment by increasing joint investments in infrastructure services. This will relieve the burden on the government, which face financial constraints, and encourage competition in the provision of quality ser-

vices. To accomplish this it will be necessary to revise certain laws, conditions and procedures to permit the private sector to participate more actively.

– *Unify the administration of infrastructure services.* Policies, work plans and operations will be efficiently coordinated in order to reduce conflicts in the provision of services. Coordination between the public and private sectors will be fostered to encourage joint investments and cooperation in the development of various infrastructure service systems.

(9) Development of Urban and Specific Areas

Developing the economic base within communities in cities and major towns in provincial regions and initiating the development of new economic areas are important development strategies to accommodate the increasing population and need for employment in urban areas, which are inevitable consequences of the economic restructuring of the country into a newly industrialized country whose economy is principally based on the industrial and service sectors. Otherwise, growth will be limited to Bangkok and its environs and this will create congestion and great economic loss for the country.

The Sixth Plan therefore lays down guidelines for distributing urban development and creating new economic areas in various parts of the country. At the same time solutions will be found to the problem of congestion. Because it is not possible to slow down the growth of Bangkok immediately, administration of Bangkok and the vicinity provinces will aim to make them more orderly. It is anticipated that during the period of the Sixth Plan the population of Bangkok and its environs will increase by one million, bringing the total to 9.3 million by 1991 and making it one of the 15 most populous cities in the world.

Therefore, in developing urban and specific areas, operational guidelines are as follows:

– *Specify 3 target areas for development.* Bangkok and its environs will be developed with a network of connecting infrastructure services and land use will be more orderly; the development of urban growth centres in provincial regions will continue from the 5 urban centres with 19 new urban growth centres to be developed; and the Eastern Seaboard and other new economic areas will be developed to serve as alternatives to Bangkok in the future.

– *Coordinate investment plans for the expansion of infrastructure service networks with town planning measures.* This will influence the direction of urban growth and stimulate more efficient land use in order to reduce congestion and create orderliness in cities, urban centres and new communities. Investments will also be made to improve the network of basic services to cover transport services, traffic problems, flood protection, expansion of waterworks and other public utilities, housing projects and slum-upgrading.

– *Formulate policy guidelines for investing in the expansion of infrastructure service networks so that the burden will be divided more appropriately between the government, local authorities, state enterprises and the private sector.* This will be accomplished by increasing the roles of local authorities and the private sector. Additionally the collection of public service fees in urban areas will cover costs with the beneficiaries shouldering the burden. Clearer policy guidelines and development plans for urban low-income groups and slum communities will be laid down.

– *Determine measures to encourage and promote private sector investment in new economic areas, especially in large-scale industries.* Efficient infrastructure services will be provided and environmental control assured while speeding up promotion for industrial investment, tourism and an urban marketing system capable of absorbing labour transferred from the agricultural sector.

– *Improve the financial position of local authorities.* This will be achieved by accelerating the creation and use of tax collection maps, adjusting methods of assessing annual land values, updating the median land price, collecting residential taxes and restructuring vehicle registration fees to find new sources of revenue for local authorities.

(10) Rural Development

The Programme for Rural Development is an important programme that should continue the achievements of the Fifth Plan period when both public and private sectors made vigorous efforts that resulted in substantial progress in rural poverty alleviation. The problem is by no means completely solved, however, and development of rural areas must still be rigorously pursued to ensure that higher incomes, social services and a better standard of living are provided to the rural population. Therefore the Sixth Plan has formulated the following major policy guidelines and targets for developing rural areas:

– *Base development strategies on the problems of each locality.* The aim is to solve economic, social and security problems in accordance with the actual situation and needs of the people. This can be done by delegating authority to the provinces for determining target areas.

– *Improve the living conditions of the people in all areas.* Backward areas (5,787 villages), middle-level areas (35,514 villages) and progressive areas (11,621 villages) will be developed. The government will concentrate its resources on the backward and middle-level areas, and encourage the private sector to invest more in progressive areas.

– *Emphasize cooperation among government agencies and between the government, the private sector and the general public.* Joint efforts will be made to solve basic problems in rural communities while promoting production and increasing income and employment through the use of appropriate technology.

– *Support the roles of people's organizations and of the general public.* The people will achieve more self-reliance by making the decisions to solve their own problems and those of the community.

– *Establish economic targets for rural development.* In continuation of the Fifth Plan, the main economic target is to solve the problem of poverty among the rural population. In particular, agricultural production will be made more efficient in backward areas in order to meet local consumption needs, increase incomes and reduce seasonal unemployment in rural areas.

– *Establish social targets for rural development.* Social targets aim at giving rural people access to the basic social services necessary for life and work, safety in life and property and the ability to be self-reliant. The rural people will also participate in developing their living conditions and deciding on their own course of life in accordance with the basic minimum needs.

– *Establish security targets for rural development.* The Programme for Rural Development aims at eliminating conditions that cause security problems in rural areas by coordinating economic and social development systems and procedures with national security policy.

GUIDELINES FOR IMPLEMENTING THE SIXTH PLAN

11. In order to implement the plan as efficiently as possible, and to be able to achieve the objectives and targets identified, it is necessary to clearly define the scope and methods of implementation. Guidelines for implementing the Sixth Plan are as follows:

(1) Matters concerned with short-term policies, such as pricing policies and annual budget policies, are not within the scope of this plan because they require annual revision based on prevailing conditions and thus cannot be defined clearly in advance. Such matters are the responsibility of the government agencies or committees concerned, who are empowered to submit their recommendations for the consideration of the Cabinet.

(2) For medium-term and long-term policies covered by this plan, emphasis is placed on formulating annual plans and annual operational plans.

(3) In formulating operational plans, emphasis is placed on the roles of the ministries concerned. The Office of the National Economic and Social Development Board will cooperate with the ministries in a supporting capacity in order to bring about coordination within the framework of the Sixth Plan.

CHAPTER 2

SUMMARY OF THE RESULTS OF THE FIFTH PLAN

1. During the period of the Fifth Plan the world economic recession was more severe than anticipated. This was the case with regard to world economic growth, international trade, trade barriers, high real interest rates and falling prices for agricultural commodities. As a result growth of exports and GNP fell below target. The average economic growth during the Fifth Plan was 4.4 per cent per year (compared to the target of 6.6 per cent per year): in 1982, 1985 and 1986, the growth rate was about 3.6 per cent, and in the remaining 2 years it was about 5.7 per cent. Most of this expansion resulted from unusually high growth in domestic demand, which greatly increased the trade deficit.

2. The growth rate in the agricultural sector was 2.1 per cent per year, compared to the target of 4.4 per cent per year. In the same period the rate of growth of industry was below target — only 5.1 per cent per year, compared to the target of 7.6 per cent — mainly as a result of the decline in exports of industrial products, which had been projected to grow at 25 per cent per year in the Fifth Plan.

Table 1
Economic indicators

	Fourth Plan (average) 1977–1981	1982	1983	1984	1985	1986	Fifth Plan trend (average)	Fifth Plan target (average)
1. Economic growth rate (% per annum)	7.1	4.1	5.8	5.6	3.2	3.5	4.4	6.6
— Agriculture	3.5	1.0	3.8	3.3	3.2	-0.7	2.1	4.4
— Non-agriculture	8.5	5.2	6.5	6.3	3.2	4.7	5.2	—
— Industry	8.7	4.4	7.3	6.3	0.8	6.7	5.1	7.6
— Mining	10.1	-4.2	-0.4	22.7	10.8	1.4	6.1	16.5
— Natural gas/crude oil	—	328.8	45.1	56.4	53.7	2.6	97.3	—
— Electricity and water	11.7	6.7	8.8	10.1	10.2	6.9	8.5	—
— Construction	9.5	-2.6	5.5	11.0	0.6	0.7	3.0	—
— Services	8.2	6.5	6.3	5.3	4.0	4.3	5.3	—

	Fourth Plan (average) 1977-1981	1982	1983	1984	1985	1986	Fifth Plan trend (average)	Fifth Plan target (average)
2. Growth rate (% per annum)								
— Consumption	6.3	2.6	7.2	5.0	3.2	2.4	4.1	5.3
— Private sector	5.5	2.5	8.3	5.0	2.9	2.6	4.3	4.8
— Public sector	10.2	3.1	2.2	4.8	4.8	1.5	3.3	7.9
— Investment	10.0	-10.8	10.7	7.4	-3.8	-3.2	0.1	6.4
— Private sector	8.6	-11.1	12.8	6.0	-9.6	-2.0	-0.8	6.9
— Public sector	12.9	-10.1	6.6	10.1	7.4	-5.2	1.8	4.9
3. Inflation (% per annum)								
— Consumer price index	10.6	5.3	3.7	0.9	2.4	2.1	2.9	10.6
4. Balance of trade								
— Value (billion baht)	-45.0	-36.1	-89.2	-68.8	-61.6	-22.5	-55.6	78.4
— Trade balance/GNP (%)	-7.7	-4.3	-9.7	-6.9	-5.9	-2.0	-5.8	5.9
5. Current account balance								
— Value (billion baht)	-37.4	-23.1	-66.1	-49.5	-41.9	-0.7	-36.0	53.0
— Current account/GNP (%)	-6.4	-2.7	-7.2	-5.0	-4.0	0.1	3.8	-4.1
6. Export of goods								
— Value growth rate (%)	20.0	4.7	-7.7	19.6	10.5	14.8	8.4	22.3
— Volume growth rate (%)	10.3	12.7	-8.9	20.6	7.8	9.3	8.3	11.3
— Value (billion baht)	108.4	157.2	145.1	173.5	191.7	220.0	177.5	309.4
7. Import of goods								
— Value growth rate (%)	24.8	-10.5	21.2	3.4	4.5	-4.3	2.9	18.1
— Volume growth rate (%)	12.6	-12.7	28.4	2.7	-4.6	0.8	2.9	7.3
— Value (billion baht)	153.4	193.3	234.3	242.3	253.3	242.5	233.1	387.8
8. Public finance (budget year, billion baht)								
— Government revenue	78.3	114.0	137.7	149.2	163.0	166.2	146.0	—
— Government expenditure	93.6	152.2	165.1	177.4	197.5	204.6	179.4	—
— Budget balance	-15.3	-38.2	-27.4	-28.2	-34.5	-38.4	-33.3	—
— Cash balance	-12.6	-42.4	-25.4	-33.5	-30.5	-44.7	-35.3	—
— Revenue/GNP (%)	14.2	13.5	14.9	15.0	15.6	15.1	14.8	—
Exchange rates (baht/US\$)	—	22.9	22.99	23.60	27.12	26.5	24.62	—
GNP at current prices (million baht)	—	846,136.0	924,254.0	991,559.0	1,041,920.0	1,100,215.0	980,816.8	—

INFLATION

3. Although economic growth was well below target and the current account deficit was slightly above target, the rate of inflation dropped to a satisfactorily low level. During the period of the Fifth Plan the average annual rate of inflation was only 2.9 per cent, compared to the targeted annual rate of 10.6 per cent.

4. The major cause of the drop in the inflation rate was the slowing down of global inflation, particularly in those countries that constitute Thailand's trading partners. Moreover the domestic rate of inflation fell even further as a result of substantial reductions in the prices of agricultural products and such raw materials as oil.

FINANCIAL POSITION OF THE GOVERNMENT

5. Despite the government's thrift policy and strict financial discipline, the government's fiscal deficit has increased from the first year of the Fifth Plan because tax collection fell short of target while government expenditures could not be sufficiently contained. After 1982, when the government cash deficit amounted to 42,400 million baht, attempts were made to reduce expenditures, especially non-budgetary, and adjust taxation. Subsequently the fiscal deficit began to decrease, although it still stands at an average level of 35,000 million baht per year. While this high deficit may have helped lessen the impact of world economic conditions on Thailand's economic growth, it was also a major cause of the increased trade and current account deficits, which exceeded their targets during the period of the Fifth Plan. Government revenue was still below the stipulated target. (According to the original plan, government taxes and other revenues were to amount to 18 per cent of GNP in 1986. Subsequently the target was reduced to 16 per cent. But in fact government revenues came to only 15.1 per cent of GNP in 1986).

6. The widening gap between government savings and investment has clearly been an important reason for the large increase in the current account deficit in the past. Even though the ceiling on public sector foreign loans has been reduced, the fiscal deficit and the increased number of loans from the domestic money market by the government have forced the private sector to become increasingly dependent on foreign sources of funds. Foreign debt in the private sector has increased rapidly from \$880 million in 1977 to \$4,014 in 1982 and \$5,646 in 1986.

Savings and investment gap^{1/}

Unit: billion baht

	1977	1979	1981	1982	1983	1984	1985
Government sector	-18.0	-34.4	-61.7	-70.2	-60.8	-71.0	-76.3
Private sector	-4.1	-7.3	6.8	48.3	-4.9	23.8	33.1
Current account deficit	-22.1	-41.7	-54.9	-21.9	-65.7	-47.2	-43.2

1/ Estimated figures

EMPLOYMENT

7: During the period of the Fifth Plan the labour force increased at an average rate of 3.0 per cent per year, with the educated labour force increasing sharply.

**Labour force
by level of education^{1/}**

Unit: thousand persons

	1981	1986	Growth rate (% per annum)
< Primary education	22,272	23,906	1.4
Secondary education	1,192	1,778	8.3
Vocational education	470	993	16.1
Teacher training	419	586	6.9
University education	224	359	9.9
Total	24,577	27,622	3.0

^{1/} < includes 'others'

8. Meanwhile the economic growth rate was slower than in the Fourth Plan. Employment was estimated to have increased at the rate of only 2.2 per cent annually during the period of the Fifth Plan. The rate of employment for those with primary education or less increased at the rate of 1.3 per cent, while for people with secondary or higher education the rate increased by 9.6 per cent, which was still below the growth rate of the labour force. Open unemployment increased sharply from 273,000 persons in 1981 (1.1 per cent of the work force) to 572,000 persons in 1986 (2.1 per cent).

**Employment and unemployment
by level of education**

Unit: thousand persons

	1981	1986	Growth rate (% per annum)
Employment	24,304	27,050	2.2
< Primary education	22,108	23,579	1.3
Secondary education +	2,196	3,471	9.6

Unit: thousand persons

	1981	1986	Growth rate (% per annum)
Unemployment	273	572	—
< Primary education	164	327	—
Secondary education +	109	245	—
Unemployment rate ^{1/}	1.1	2.1	—
< Primary education	0.7	1.4	—
Secondary education +	4.7	6.6	—

^{1/} Excluding those not seeking employment but available for work

BALANCE OF TRADE AND BALANCE OF PAYMENT

9. The recession in the world economy, the strengthened US dollar, trade barriers and falling prices for agricultural products have all caused a substantial slowdown in exports. During the period of the Fifth Plan, exports were estimated to have grown by 8.4 per cent per year, with export volume increasing at the rate of 8.3 per cent per year (compared to the annual targets of a 22.3 per cent increase in value and an 11.3 per cent in volume). In 1986, the estimated value of exports was 220,000 million baht, compared to the Fifth Plan target of 309,400 million baht.

10. Imports also slowed down. The estimated value of imports increased only 2.9 per cent per year, largely because of lower import prices, especially for fuel oil.

11. As exports and imports declined, the trade and current account deficits were not much lower than projected. On the average the trade deficit was estimated to amount to 55,600 million baht per year, or 5.8 per cent of GNP, which is equal to the target of the Fifth Plan. The estimated current account deficit totaled 36,000 million baht per year, or 3.8 per cent of GNP, which is lower than the 4.1 per cent target of the Fifth Plan. This was the result of substantial improvements in the trade and current account deficits in 1986.

FOREIGN DEBT

12. The decline of exports and the greatly increased real interest rates in the international money market, especially during the first 4 years of the Fifth Plan, caused Thailand's foreign debt burden to rise sharply in comparison with income from exports. Most of the increase came from foreign debts in the private sector (because increased government borrowing from domestic sources and high local interest rates forced the private sector to turn to foreign loan sources). The government's attempt to keep external borrowings within the specified limit led to a marginal increase in the foreign debt of the public sector.

MAJOR RESULTS OF DEVELOPMENT IN VARIOUS FIELDS

Infrastructure services

13. During the period of the Fifth Plan the government considerably improved and expanded infrastructure services. Two-thirds of total government investment was spent on infrastructure services and more than half of total foreign debt was attributed to government borrowing for these undertakings.

(1) *Energy.* This area of development was quite successful. The commercial production of energy increased to 1,440 million litres of crude oil per year during the period of the Fifth Plan. As a result of increased production of natural gas, crude oil and lignite, imports of petroleum decreased by an average of 1.6 per cent per year, compared to the 3.0 per cent specified in the Fifth Plan. Dependence on imported energy therefore dropped from 90 per cent in 1981 to only 58 per cent in 1986.

(2) *Provision of public utilities, especially water supplies.* Tap water has been supplied to 67 per cent of the population living in Bangkok areas and 52 per cent of the urban and rural people in provincial regions within the waterworks system. In addition, the number of villages with access to electricity has been increased: 76 per cent of all villages in the country now have electricity.

However, there remain problems in the provision of other infrastructure services. Urban development and expansion, with 25 per cent of the country's population now living in urban areas, have led to the need for housing and slum-upgrading. The government was able to alleviate part of this problem, especially for low-income and middle-income groups. The restructuring of the transport system has not been successful because the alternatives, such as waterways and railways, were not compatible with road transport. As for telecommunications, telephone services have increased to 1.4 lines per 100 population in 1986 from 0.29 lines per 100 population in 1981.

(3) *Development of the Eastern Seaboard.* Two infrastructure projects have been completed: the construction of a water pipeline from Dok Krai to Map Ta Phut and of a railway line from Chachoengsao to Sattahip. The construction of a natural gas separation plant has also been completed. Other planned projects are in progress, especially in the area of Laem Chabang.

Social and welfare development

14. Several satisfactory results were achieved in the field of social development during the period of the Fifth Plan, even though some problems must still be solved.

(1) *Population.* Family planning services have been provided to an additional one million people each year. This has helped reduce the rate of population growth from about 2.1 per cent during the final year of the Fourth Plan to 1.7 per cent in the final year of the Fifth Plan.

(2) *Education.* Success in reducing the population growth rate has had an impact on the size of school-age population; this reduction has enabled the government to provide compulsory education to 96 per cent of the school-age population. Furthermore the national literacy campaign has helped 56 per cent of the more than 500,000 participants to become literate.

(3) *Public Health.* As a result of the acceleration of public health development in continuation of the Fourth Plan, there has been a rapid increase in the number of hospitals and health centres. By the end of the Fifth Plan health services had been provided to the population in 92 per cent of all districts and minor districts and in 98 per cent of all sub-districts throughout the country. Moreover villagers had been trained to serve as Village Health Volunteers in 91 per cent of the country's villages. Furthermore the government has increased the provision of free medical services to the low-income group by 9 per cent per year and helped reduce the rate of increase in the number of cases of third-degree malnutrition among children to only 0.7 per cent by the end of the Fifth Plan.

(4) *Safety of life and property and social welfare.* Assistance was given to over a million people who were unable to fend for themselves due to special problems or disasters. Assistance was provided to 3.42 million people in 1982; the number reduced to 2.31 million in 1984. In regard to safety of life and property, the number of offences involving life, physical injury, sex and liberty was reduced to 55.8 per 100,000 population in 1983. In the same year, deaths caused by accidents fell to 31.8 per 100,000.

Development of rural areas

15. In solving the problems of rural poverty in accordance with the Rural Poverty Alleviation Programme, which was one of the main programmes of the Fifth Plan, the government allocated 4,458 million baht for 32 projects in 12,562 villages during the first 4 years of the Fifth Plan period. The government distributed the projects to 102,584 operational sites, or an average of 8 projects per poor village. About 45 per cent of these activities were concerned with solving problems of production or the depletion of natural resources; another 40 per cent directly addressed health problems while 10 per cent dealt with the lack of basic services, promotion of production and vocational development and the remaining 5 per cent were directed towards education of the rural poor. The Rural Poverty Alleviation Programme also aimed at creating employment during the dry season. As a result in 1984, 470,000 people in the poverty areas had jobs during the dry season; the number had risen to 600,000 in 1985 and to 860,000 in 1986. Meanwhile there were clear improvements in the condition of many poor villages. Based on an analysis

of primary data, infrastructure had improved in 32.2 per cent of the sample villages between 1981 and 1983. The same period saw 31.6 per cent of the villages improved in terms of occupations and production and 45.6 per cent improved in the areas of education and knowledge. Such improvements were better than those in villages outside the poverty areas, which improved at lower rate: 15.4 per cent for infrastructure, 28.6 per cent for occupation and 27.5 per cent for education.

(Detailed results of development are included in the various programmes)

PART 2
IMPROVING THE EFFICIENCY OF DEVELOPMENT

PROGRAMME 1
OVERALL ECONOMIC DEVELOPMENT

OVERALL ECONOMIC DEVELOPMENT

CHAPTER 1

INTRODUCTION

1. The government has been using national development plans to establish the framework and guidelines for national development since 1961. The plans include the allocation and management of economic, natural, human and financial resources and governmental administrative machinery in order to improve people's livelihood, their quality of life and society. National economic development work has expanded and encompassed various development sectors. It has led to increased production capacity, job creation, national revenue and economic growth. During the Fifth Plan, however, there were unexpected problems due to fluctuations in the world economy, ranging from the economic recession caused by the oil crisis to the restructuring of the international economy as a consequence of recession in the developed countries. These problems have to be corrected and must be taken into consideration in adjusting the direction of national development.

2. Evaluation of developments during the Fifth Plan indicates that there has been a decline in economic growth. Concurrently commodity prices decreased and protectionism caused substantial trade and current account deficits as well as rapidly increasing foreign debts. Added to these were the problems of government fiscal deficits and the collapse of financial institutions, informal money markets and private enterprises, due to the failure of the public and private sectors to adjust themselves to the fluctuating situation. Problems and constraints that have been taken into consideration in the national development process of the Sixth Plan can be summarized as follows:

2.1 The country's economic stability and financial situation is now a serious concern at the international and government levels.

2.2 Decreased savings in the public and private sectors are the main causes of trade and current account deficits.

2.3 The fragile structure of production is not sufficiently flexible to adjust in terms of product diversification and product quality in order to accommodate the changing overseas markets, which are becoming more competitive.

2.4 Deterioration of natural and environmental resources together with ecological problems will become more serious.

2.5 The number of new entrants into the labour market will rise while government employment will be on the decline. Agricultural employment will become more restricted while non-agricultural employment will increase slowly. All this will lead to unemployment problems.

3. The Thai economy, therefore, has to achieve not less than 5 per cent growth during the Sixth Plan in order to maintain economic stability and employment. As regards economic restructuring, the Sixth Plan will be a continuation of the Fifth Plan, especially in regard to reduction of import dependence and promotion of exports and tourism. The government has to adjust its role from that of an investor to that of a promoter of development activities. Economic distortions must be reduced and responsibilities must be appropriately distributed between the central government, local authorities, state enterprises and the private sector.

4. The Programme for Overall Economic Development, based on the economic conditions and directions described above, serves as a basis for establishing guidelines and targets for the economy with a view to attaining the crucial objective of maintaining economic growth and stability. Related details are presented in the following chapters.

CHAPTER 2

OVERALL ECONOMIC DIRECTIONS OF THE SIXTH PLAN

CONSTRAINTS ON DEVELOPMENT

1. Evaluation of the various developments during the Fifth National Economic and Social Development Plan indicates that the following constraints are of relevance to the present and the future:

1.1 Concern over economic stability and the financial condition. This has arisen at the international and government levels, especially as a result of large balance of trade and budgetary deficits throughout most of the Fifth Plan period and the foreign debt burden, which has increased rapidly.

(1) At the international level. The country's overspending is clearly reflected in the trade deficit, which rose from an annual average of 45,000 million baht during the Fourth Plan period to 55,600 million baht during the Fifth Plan. Over the same period of time the current account deficit went from an annual average of 37,400 million baht to 36,000 million baht.

(2) At the government level. The Fifth Plan aimed to increase government revenue from 14 per cent to 18 per cent of GDP by its final year. However, tax collection was below target causing the fiscal deficit to increase from an average of 15,300 million baht per year during the Fourth Plan to an average of 33,300 million baht per year during the Fifth Plan. The proportion of revenue to GDP was only 15.1 per cent per year in the final year of the plan. (The adjusted target was 16 per cent of GDP.)

(3) Nevertheless the Thai economy began to show signs of improvement and greater competitive ability in foreign markets in 1986. This was a result of the recovery in the world economy and the government's efforts to solve the economic problems and stimulate investment through such means as reductions in electricity prices, oil prices, interest rates, etc. The result in 1986 was an average growth rate of 6.7 per cent in industry and 0.7 per cent in construction while private investment fell to only 2.0 per cent following the 1985 decrease of 9.6 per cent. Exports increased by 14.8 per cent while imports fell by 4.3 per cent, bringing the country's trade deficit down to 22,500 million baht with a current account surplus of 700 million baht. (In 1985 the trade deficit was 61,600 million baht and the current account deficit 41,900 million baht.)

Table 1.1
Economic and financial indicators of the country during
the Fourth and Fifth Plan periods.

	1977	1981	Average 4th Plan	1982	1984	1986	Average 5th Plan
1. Trade balance (billion baht)	-25.6	-65.8	-45.0	-36.1	-68.8	-22.5	-57.3
- Export increase (%)	16.7	13.8	20.0	4.7	19.6	14.8	7.6
- Import increase (%)	34.5	13.7	24.8	-10.5	3.4	-4.3	2.9
2. Current account balance (billion baht)	-22.1	-54.9	-37.4	-23.1	-49.5	0.7	-36.0
3. Current account/GDP balance	-5.7	-7.1	-5.5	-2.7	-5.0	-0.1	-3.8
4. Budgetary cash balance (billion baht)	-11.3	-19.5	-15.3	-38.2	-28.2	-38.4	-33.3
5. Budgetary cash balance/GDP balance (%)	-2.9	-2.5	-2.7	-4.5	-2.8	-3.5	-3.4

1.2 Decreased savings in the public and private sectors. The rate of savings on the part of the population and of the government was on a gradual decline, especially towards the end of the Fourth Plan period and during the Fifth Plan period. The savings to GDP ratio plunged rapidly causing fiscal and current account deficits.

Table 1.2
Discrepancy between savings and investment^{1/}

Unit: billion baht

	1977	1979	1981	1982	1983	1984	1985
Government	-18.0	-34.4	-61.7	-70.2	-60.8	-71.0	-76.3
Private	-4.1	-7.3	6.8	48.3	-4.9	23.8	33.1
Current account balance	-22.1	-41.7	-54.9	-21.9	-65.7	-47.2	-43.2

^{1/} Estimated figures

1.3 Weakness in the structure of production. It is anticipated that the price of agricultural and primary commodities will remain on the decline due to the economic policies of several countries, changes in technology and consumption structures and the preferences of consumers. Under these circumstances the country's structure of production, in both the agricultural and the industrial sectors, is not flexible enough to allow for product diversification and quality adjustments to accommodate changes in the increasingly competitive overseas markets. In addition

the current structure of industrial production is still largely dependent on imports of capital goods and raw materials.

1.4 More serious deterioration of natural and environmental resources and ecological problems. The rapid increase of agricultural land in various parts of the country has caused forest land to decrease to less than 30 per cent of total land area. Low yield-per-rai land use has also led to a declining rate of expansion in agricultural production. Over the next 5 years it will become more difficult to increase agricultural land. Adjustments must be made instead to the structure of agricultural production and land use in order to achieve greater efficiency and higher outputs; otherwise the growth rate of agricultural production during the next 5-10 years will be so low that the social stability of Thai people in rural areas will be affected in many ways.

1.5 Increase of new entrants into the labour market. It is projected that 0.8 million people will enter the labour market each year during the Sixth Plan period while government employment declines, agricultural employment becomes more restricted and non-agricultural employment rises slowly. All this points to increasing unemployment, which is expected to grow from 389,700, or 1.5 per cent of the labour force, in 1984 to 800,000, or 2.5 per cent, during the final period of the Sixth Plan. In particular the number of educated unemployed will be critically high, rising from 117,400 in 1984 to about 240,000 in 1991.

DEVELOPMENT OPPORTUNITIES DURING THE SIXTH PLAN

2. Although Thailand is still facing all the foregoing economic problems and national development is still greatly constrained, changes in the world economy towards the end of the Fifth Plan, especially the decrease in oil prices, will make it easier to develop the country and adjust its economic structure during the Sixth Plan period. Important internal and external factors and the major favourable changes can be summarized as follows:

2.1 Anticipated recovery of the world economy. Towards the end of the Fifth Plan period, oil prices began to decrease, and they show a tendency of weakening even further during the next 3-4 years. The reduced oil prices, in the short run, will greatly alleviate balance of payments problems and will be an important incentive for expansion of the world economy. It is true that Thailand will lose some of its market due to the loss of revenue of oil exporting countries; however, the effects will be minimal. It is expected that this recovery in the world economy may preclude protectionism in industrial countries from becoming worse than it was during the period of the Fifth Plan. Foreign markets are generally expected to expand more than during the Fifth Plan period making it possible to fully promote more exports. Reform of tax rules and regulations which obstruct exports, investment in production and marketing system adjustments and improvements in the quality of basic services will reduce export costs and enhance the quality of Thai products, making them more competitive in international markets.

2.2 Greater possibilities for production diversification. Recently the production and export structures have expanded rapidly within both the agricultural and industrial sectors of the

country. Although many of the country's major commodities are facing low prices, overseas protectionism and market constraints, there are still many possibilities for diversifying into the production of import-substitution commodities, export goods and products to serve domestic needs, which are expected to change drastically over the next 10 years. In addition, there are indications that protectionism directed against Japan and the newly industrialized countries will increase in developed countries such as the United States and members of the European Economic Community. If the production structure of the country can be adjusted through diversification and quality improvements to meet the needs of these countries, it is possible that production and exports, especially of industrial commodities, will have a better chance of penetrating foreign markets.

2.3 Anticipated expansion of the domestic market for industrial goods and modern services. Although the rate of population growth has been declining, the urban population will continue to expand at a higher rate than the rural population. Moreover the labour force will increase by over 800,000 per year. This growth pattern in the population and the labour force will alter the country's structure of consumption greatly. The consumption of industrial products, modern services and processed foods will increase markedly leading to more expansion in domestic markets and greater opportunities to utilize modern and appropriate technology.

2.4 Opportunities to develop human resources and technology. Although such natural resources as land, forests and minerals have deteriorated, it is still possible for Thailand to develop and use existing resources, particularly human resources, and apply science and technology for production and marketing purposes. Moreover the country can develop its mineral resources, especially such domestic energy resources as natural gas, lignite and oil, while further exploration can lead to the discovery of more resource bases.

DEVELOPMENT GUIDELINES

3. Based on the foregoing analysis of the results of and constraints on development, and bearing in mind the opportunities and possibilities for future development, guidelines for the Programme for Overall Economic Development are aimed at a higher rate of economic growth than that of the Fifth Plan. The objectives are to improve employment generation and income distribution, solve the problem of rural poverty and maintain the economic equilibrium of the country in order to ensure that there exist opportunities for steady development in the years to come.

OVERALL DEVELOPMENT TARGETS

4. In line with the above guidelines, the principal targets of the Programme for Overall Economic Development are as follows:

4.1 Expand employment. Employment for an additional 3.9 million people will be generated through:

- At least 5 per cent annual average increase in total economic growth;
- 2.9 per cent annual average increase in agricultural production;
- 6.6 per cent annual average increase in industrial production;
- 6.4 per cent annual average increase in mineral production;
- At least 720 million cubic feet per day natural gas production in 1991.

Details of employment generation are included in the Programme for Development of the Production System, Marketing and Employment.

4.2 Maintain the country's monetary and fiscal stability.

- Foreign trade deficit not to exceed an annual average of 35,900 million baht, or 2.7 per cent of GDP;
- Current account deficit not to exceed an annual average of 11,800 million baht;
- Fiscal deficit not to exceed an annual average of 36,200 million baht, or 2.6 per cent of GDP, with fiscal revenue to increase by 8.7 per cent per annum and fiscal expenditure to increase by 6.0 per cent per annum.

Table 1.3
Overall economic targets in the Sixth Plan.

Category	Fifth Plan Actual trends (1982-1986)	Sixth Plan Targets (1987-1991)
1. Trade deficit (current prices)		
1.1 Average value per year (million baht)	55,600	35,900
1.2 Trade deficit/GDP (%)	5.8	2.7
2. Current account deficit (current prices)		
2.1 Average value per year (million baht)	36,000	11,800
2.2 Current account deficit/GDP	3.8	0.9
3. Export of goods and services		
3.1 Value growth rate (%)	9.8	9.9
3.2 Volume growth rate (%)	8.4	7.4
4. Export of goods		
4.1 Value growth rate (%)	8.4	10.7
4.2 Volume growth rate (%)	8.3	8.1
4.3 Average value per year (million baht)	177,500	290,700
5. Income from tourism (current prices)		
5.1 Value growth rate (%)	12.2	7.4
6. Import of goods and services		
6.1 Value growth rate (%)	3.7	9.3
6.2 Volume growth rate (%)	2.0	4.5
7. Import of goods		
7.1 Value growth rate (%)	2.9	9.5
7.2 Volume growth rate (%)	2.9	4.6
7.3 Average value per year (million baht)	233,100	326,700
8. Economic growth (%/yr at constant prices)		
8.1 Agriculture	2.1	2.9
8.2 Manufacturing	5.1	6.6
8.3 Mining	6.1	6.4
8.4 Natural gas (million cu ft/day)	320 ^{1/}	720 ^{2/}
8.5 GDP	4.4	5.0

Category	Fifth Plan Actual trends (1982–1986)	Sixth Plan Targets (1987–1991)
9. Expenditure growth (%/yr at constant prices)		
9.1 Private sector		
- Consumption	4.3	3.7
- Investment	0.8	8.1
9.2 Public sector		
- Consumption	3.3	5.3
- Investment	1.8	1.0
10. Government revenue/GDP (%)	14.8	15.8
11. Population growth rate (%)	1.7 ^{1/}	1.3 ^{2/}
- Municipal districts	(2.7)	(2.5)
- Sanitary districts	(2.1)	(2.4)
- Villages	(1.4)	(0.8)
12. Inflation rate (%)	2.9	2.3
13. Per capita income (baht)	21,395 ^{1/}	27,783 ^{2/}

^{1/} In 1986

^{2/} In 1991

CHAPTER 3

RESTORATION OF NATIONAL MONETARY AND FISCAL CONDITION

In order to achieve the objectives and overall targets of the Sixth Plan and to support efforts to maintain the country's economic and fiscal stability, which were major problems during the Fifth Plan period, specific monetary and fiscal objectives, targets, strategies, guidelines and measures are specified, as follows:

PRINCIPLES OF THE PLAN

1. Objectives

1.1 To restructure the country's financial system in the area of long-term savings mobilization of both the public and private sectors in order to facilitate national economic and social development.

1.2 To accelerate restoration of the country's economic stability and financial position with emphasis on the problems of savings and investment, fiscal balance in the public sector, balance of trade and current account balance.

1.3 To modify the role of the government in national development by promoting the participation of the private sector and local authorities and by reducing the burden of the central government and of state enterprises.

2. Targets

The following monetary and fiscal targets are adopted for the period of the Sixth Plan:

2.1 National gross savings. An average of 23.7 per cent of GDP, or 1,627,437 million baht, with 1,471,670 million baht (21.4 per cent of GDP) coming from the private sector and 155,767 million baht (2.3 per cent of GDP) from the public sector.

2.2 National aggregate investment. An average of 24.9 per cent of GDP, or 1,706,784 million baht, with 1,202,058 million baht (17.5 per cent of GDP) coming from the private sector and 504,726 million baht (7.4 per cent of GDP) from the public sector.

2.3 Discrepancy between savings and investment: An average of 1.2 per cent of GDP, or 79,347 million baht, with the public sector gap decreasing from the Fifth Plan level of 7.9 per cent of GDP to 5.1 per cent of GDP during the Sixth Plan.

2.4 Expenditure on consumption. An average increase of 4.0 per cent per annum with annual average increases of 3.7 per cent in the private sector and 5.3 per cent in the public sector (constant prices).

2.5 Expenditure on investment. An average increase of 5.8 per cent per annum with annual average increases of 8.1 per cent in the private sector and 1.0 per cent in the public sector (constant prices).

GUIDELINES

3. To reach the preceding targets, monetary and fiscal policy will follow these 3 guidelines:

3.1 Emphasize mobilization of long-term savings. Savings in the public sector (central government, local authorities and state enterprises) must increase. In the private sector, development of capital markets and financial institutions will be given priority in order to mobilize and allocate local savings as a substitute for foreign borrowing. The external debt ceiling and policy will be in line with earnings from the export of goods and services.

3.2 Emphasize economy and efficiency in government spending. Government spending must contribute to national development and economic stability. Monetary and fiscal policy and measures will be used to promote exports and production for export.

3.3 Emphasize increased private sector participation in development activities. In order to reduce its burden, the government's function must be confined to policy-making, coordination, advice and facilitation for the private sector. It will initiate and carry out important and essential projects only.

MEASURES

4. Important monetary and fiscal measures in the Sixth Plan:

4.1 Develop and stabilize long-term savings institutions. These institutions will become increasingly important in channelling savings into major investments in line with the direction of the Sixth Plan.

4.2 Accelerate the operations of the Investment Development Fund. The fund will help solve the capital shortage problem and stimulate investment and employment.

4.3 Promote investment in high priority sectors. Monetary and fiscal measures will be implemented for such sectors as production for export.

4.4 Support private sector participation in development. The private sector will be encouraged to invest in areas prioritized in the Sixth Plan and to play a more active role in government and state enterprise activities.

4.5 Mobilize funds from domestic and foreign private sector sources. Equity capital will be emphasized rather than borrowings.

4.6 Prepare consolidated accounts to present fully the monetary and fiscal status of the government. The accounts will be used for planning allocation of responsibility to the central government, state enterprises and local authorities.

4.7 Strengthen the role of the agencies responsible for the planning and coordination of tax collection. The efficiency of tax collection will be improved and earnings from government services and property will be increased.

4.8 Increase government revenue from business tax and corporate income tax collection and from the remittance of state enterprise revenues. Fair competition and efficient use of resources will be encouraged.

4.9 Continue to pursue restrictive fiscal policies. The role of the government in state enterprises should be reduced while a policy will be established to cancel, delay or reduce annual budgets.

4.10 Seek measures to ease or delay debt servicing in the government's annual budgets. This would minimize the negative impact on investment and development budgets.

4.11 Establish a budget for new projects to be launched in each year. The budget ceiling for 1987 and 1988 will be no less than 900 million baht per annum.

4.12 Emphasize development of rural areas, agriculture, agro-industry and in rural industries. Rather than increasing production of those goods facing export problems, the emphasis will be on diversification into goods with export potential in order to alleviate balance of trade and unemployment problems and to increase the income of the farmers.

In relation to large-scale modern industries, only projects which can help improve the structure of production through reducing imports and increasing exports and employment will be supported.

4.13 Ensure that the consideration of defence budget allocations are coordinated in order that they may be commensurate with the degree of threat and the country's economic capability in each year.

4.14 Establish annual and triennial fiscal and development plans in order to cope with the rapid economic changes that affect revenue and expenditure in the public sector.

Details on the objectives, targets, guidelines and measures for savings mobilization, the role of the private sector in development and public finance appear in Chapters 4 and 5.

CHAPTER 4

SAVINGS MOBILIZATION

AND THE ROLE OF THE PRIVATE SECTOR IN DEVELOPMENT

SAVINGS MOBILIZATION

1. Facts

1.1 Overspending in the public and private sectors led to a low level of savings in the past and a continual decline, especially during the period of the Fifth Plan. In 1980 gross national savings stood at 157,223 million baht, or 23.0 per cent of GDP. The rate fell to 20.6 per cent in 1981, 18.0 per cent in 1983 and only 17.9 per cent in 1985.

1.2 The low rate of savings has been principally due to the government. In 1981 savings in the public sector were 0.9 per cent of GDP. By 1982 the rate had become negative: -0.4 per cent of GDP. In 1985 the rate was 0.8 per cent. In the central government and local authorities, savings have been particularly low and negative in some years, such as 1982 and 1985.

Table 1.4
National savings ^{1/}

Unit: million baht

	1980	1981	1982	1983	1984	1985
1. Net savings	106,583	102,753	93,912	92,954	97,409	97,427
— Private sector	101,359	95,846	97,592	80,875	86,888	88,857
— Public sector	5,224	6,907	-3,680	12,079	10,521	8,570
2. Depreciation	50,640	59,259	65,649	73,386	81,773	89,679
3. Gross savings	157,223	162,012	159,561	166,340	179,182	187,106
Gross savings/GDP rate (%)	23.0	20.6	18.9	18.0	18.1	17.9

^{1/} Estimated figures

Statistical discrepancies included

1.3 Savings and investment gap

The gap between savings and investment has been a constant problem for the country because of the need to spend on investment in the face of the declining rate of savings. The gap stood at 21,900 million baht in 1982, 65,700 million baht in 1983, 47,200 million baht in 1984 and 43,200 million baht in 1985. This situation inevitably led to current account deficits, especially in 1983 when the deficit reached 7.2 per cent of GDP. With interest rates in the country higher than world market rates during the Fifth Plan period, the private sector was prompted to borrow from foreign sources (especially for short-term loans which carry higher interest rates). Consequently the foreign debt burden of the private sector grew very rapidly and had an impact on the overall financial condition of the country.

2. Public sector savings

2.1 During the Fifth Plan period, government savings were only 21,821 million baht while government investments amounted to 392,533 million baht, resulting in a gap of 370,732 million baht, equivalent to 7.5 per cent of GDP. The gap between savings and investment on the part of the central and local governments was as high as 255,640 million baht, or 5.19 per cent of GDP. This was particularly responsible for the trade deficit, current account deficit and national debt burden.

2.2 The main cause of low public sector savings was the failure of tax collection (due to the economic recession causing a decline in people's earnings; the narrow tax base; low elasticity in the tax/GDP rate; excessive exemptions; etc). At the same time, various obligations, especially the budget and debt servicing, forced the government to increase its spending.

— The revenue target from taxes and other earnings originally set in the Fifth Plan was 18 per cent of GDP by 1986. This was adjusted to only 16 per cent. According to the original target, the government should have collected 179,000 million baht in 1986, but in fact it could only collect 166,169 million baht, or 15.1 per cent of GDP. Throughout the Fifth Plan period, the government's average income was only 14.8 per cent of GDP.

— Besides failing to reach the overall revenue target of the Fifth Plan, the government also failed to reach the revenue targets of each annual budget. The anticipated revenues of the Fifth Plan were 814,000 million baht but actual revenues collected amounted to only 730,070 million baht, or 83,930 million baht (10.3 per cent) lower than the target. This caused the fiscal deficit to go beyond the target and affected public sector savings.

Table 1.5
Comparison of projected and actual revenues

Unit: Million baht

	1982	1983	1984	1985	1986	Total
Projected revenues	140,000	151,000	160,000	178,000	185,000	814,000
Actual revenues	114,037	137,685	149,173	163,006	166,169	730,070
Budget shortfall	25,963	13,315	10,827	14,994	18,831	83,930

Consequently it is imperative for the government to increase public sector savings, especially through revenue from taxes and other earnings. Details are given in Chapter 5: Public Finance.

3. Private sector savings

3.1 Facts

The decline in private savings, and especially household savings, has been due to the following economic and social factors:

3.1.1 Lower growth rate of household income. Between 1967 and 1976 the growth rate averaged 7.2 per cent per year, but from 1982 to 1986 the annual increase was only 5 per cent.

3.1.2 Increasing household expenditure, which leads to diminished savings, is due to the following factors:

(1) Increase in the number of households leading to growing consumption expenditure.

(2) Increase in the number of middle-income households resulting in growing consumption expenditure.

(3) Changes in the population age structure. With more school age population, educational expenditure has grown.

(4) Urban expansion affecting consumption expenditure especially on transportation, electricity, public health and recreation.

3.2 To avoid further decrease in private savings, especially household savings, which will affect investment and create disparity between savings and investment and the debt problem, certain guidelines will be determined. The aim is to solve the problems mentioned previously by increasing private earnings, preventing the rate of consumption expenditure from exceeding 3.7 per cent per annum (the rate of increase during the Fifth Plan period was 4.6 per cent per annum) and mobilizing private sector savings. Relevant details are set out in the section on the development of financial and savings institutions.

ROLE OF THE PRIVATE SECTOR IN DEVELOPMENT

4. Guidelines

One of the main policies of the Sixth Plan is to transform the role of the public sector (comprising the central government, local authorities and state enterprises) into that of a planner, supporter and facilitator of private sector participation. The government will withdraw from activities which can be carried out better and more efficiently by the private sector and will allow more privatization of some parts of its operation. Based on this policy, the role of the private sector is defined as follows:

4.1 Encourage the private sector to assume a more active economic role especially in investment. Private investment is expected to increase at an average rate of 8.1 per cent per year compared to the decrease of 0.8 per cent per year of the Fifth Plan. Government investment is to increase by only 1.0 per cent per year (the increase in the Fifth Plan was 1.8 per cent).

4.2 Encourage the private sector to increase its investment in such areas as transportation, agriculture, water resource development, energy, education and public health in order to reduce the burden of the government. Pricing policy will be used as an incentive while government aid and subsidies are to be minimized.

4.3 Encourage the private sector to participate more in the activities of the government and state enterprises through the following means:

4.3.1 State enterprises will mobilize funds from local and foreign private sectors through joint ventures rather than through loans as has been the case in the past.

4.3.2 The private sector will be encouraged to participate more by investing in and managing activities of the government and state enterprises.

5. Important measures

5.1 Encourage the private sector to invest in sectors and activities which contribute to the restoration of economic stability such as export-oriented production, exports, agro-industries, tourism, etc. Emphasis will be placed on diversification into the production of goods with export potential rather than increasing the production of primary goods. Relevant details are to be found in the Programme for Development of the Production System, Marketing and Employment.

5.2 Encourage the formation of producers' groups and the close coordination of production and marketing in order to achieve efficient levels of production and distribution in line with market demand.

5.3 Restructure the tax system and adjust the rates of corporate income tax, business tax, customs duty and excise tax to support export-oriented production and exports. The aim is to improve competitiveness with other countries, ensure fairness to producers and exporters and achieve efficient use of resources.

5.4 Develop new financial mechanisms and instruments to provide efficient support to export-oriented production and exports. Commercial banks could, for example, assume a role in facilitating exports in a comprehensive and integrated manner, discounting financial instruments and extending credit.

5.5 Consider adjusting domestic interest rates to appropriate levels. International market rates will be taken into consideration, and thus enable competition with foreign countries.

5.6 Emphasize mobilizing local and foreign private sector funds by encouraging investment in shares as a form of capital expansion, rather than borrowing to finance investments as has been done in the past.

5.7 Provide incentives to the private sector by emphasizing the improvement of monetary and fiscal measures and devices as well as pricing policy.

6. Targets for private investment

6.1 In accordance with the guidelines in the Sixth Plan to increase participation of the private sector in economic activities, the size of private investment is projected to be 1,202,058 million baht, or 70.43 per cent of total investment.

6.2 Sources of investment

Unit: million baht

	Amount	Per cent
6.2.1 Local juristic persons and individuals	713,570	59.36
6.2.2 Securities Exchange of Thailand	15,000	1.75
6.2.3 Foreign sources (loans, joint ventures)	160,000	13.31
6.2.4 Financial institutions	313,488	26.08
– Commercial banks and other	280,488	23.33
– Bank of Agriculture and Agricultural Cooperatives	14,000	1.16
– Government Housing Bank	8,000	0.67
– Industrial Finance Corporation of Thailand	8,000	0.67
– Life and other insurance businesses	3,000	0.25
Total	1,202,058	100.00

DEVELOPMENT OF FINANCIAL AND SAVINGS INSTITUTIONS

7. To enable financial institutions to channel savings from informal into formal markets and to allocate these savings to sectors and activities with maximum advantages for the country, the following guidelines and measures are adopted for the development of financial institutions:

7.1 Commercial banks

7.1.1 Loan interest rates of commercial banks should be competitive with interest rates in the world market in order to increase domestic borrowing.

7.1.2 Expand the role of commercial banks in promoting production for export and export activities. Commercial banks could provide, for example, marketing support and financial and export assistance.

7.1.3 Encourage the commercial banks to increase the medium-term and long-term loans to reduce risk in respect of promising projects with long-term returns.

7.2 Finance companies

7.2.1 Expand the operation of finance companies, especially in businesses that yield commission.

7.2.2 Allow finance companies to assume a greater role in medium-term and long-term lending.

7.2.3 Develop the management structure and methods of finance companies to achieve more security and efficiency.

7.3 Bank of Agriculture and Agricultural Cooperatives

7.3.1 Expand the credit services of the Bank of Agriculture and Agricultural Cooperatives, especially short-term credit for farmers and farmers' institutions. A target of 2.75 million farmers' households and members of farmers' institutions is set for 1989 (the number in 1984 was 2.214 million households). A target of 32,000 million baht in credit for farmers is also set for 1989 (the amount in 1984 was 14,944 million baht).

7.3.2 Develop and set credit management to support government policies and measures which aim to assist farmers and adjust the structure of export-oriented agricultural production. Assistance will be provided in increasing production, marketing and maintaining prices of agricultural produce, mainly through farmers' groups.

7.3.3 Expand credit services to comprehensive agricultural development projects through cooperation with government agencies, commercial banks and the private sector in order to promote the application of modern agricultural technology as well as provide agricultural credit. The focus will be on making these services available to all small farmers.

7.3.4 Accelerate mobilization of rural savings as an additional source of operating capital for the Bank of Agriculture and Agricultural Cooperatives, and promote savings and the habit of economizing among farmers.

7.3.5 Improve the management efficiency of the Bank of Agriculture and Agricultural cooperatives, especially in collecting unpaid loans and supervising farmers' use of loans according to the stated objectives.

7.3.6 Increase support for farmers' institutions by providing credit and assisting in the formation of producers' groups and coordination between producers' and buyers' groups to achieve complete coordination between production and marketing.

7.4 Government Housing Bank

7.4.1 The Government Housing Bank will be the main government organization providing long-term housing credit to the National Housing Authority and the private sector.

7.4.2 Provide long-term loans to help people acquire their own homes, especially buyers of land and houses in National Housing Authority projects.

7.4.3 Seek cooperation from other financial institutions, including life insurance companies and provident funds, to provide financial support to the Government Housing Bank by, for example, investing in Government Housing Bank bonds and fixed deposits.

7.4.4 Maintain Government Housing Bank loan interest rates as low as possible in conformity with market interest rates.

7.4.5 Strengthen public relations work to persuade the public to save or invest with the Government Housing Bank as a strategy to mobilize long-term savings.

7.5 The Industrial Finance Corporation of Thailand

Expand the capital base and operations of the Industrial Finance Corporation of Thailand in order to broaden its services to the industrial sector.

7.6 Insurance institutions

7.6.1 Strengthen the security and stability of insurance companies to create public confidence, which would help in the mobilization of long-term savings.

7.6.2 Increase control measures to ensure that the amount insured is in line with the financial standing of each insurance company.

7.6.3 Consider setting up regulations to promote reinsurance with local insurance companies in accordance with a predetermined amount or ratio in order to prevent savings from being drained out of the country.

7.7 Provident funds

7.7.1 Expand provident funds to cover businesses other than the limited companies and juristic partnerships specified in the ministerial regulations.

7.7.2 The Ministry of Finance should consider income tax exemption on earnings from employers' contributions and tax privileges for a limited period of time for employers and employees who participate in provident funds.

7.8 Money market

Develop more flexibility in the money market through additional facilities and financial instruments. The tax system could be revised to facilitate development of money market instruments.

7.9 Capital market

7.9.1 Restructure the securities exchange by separating the supervisory authority from the regular administration.

7.9.2 Set up a unit within the Ministry of Finance to be directly responsible for continuous and comprehensive development of the capital market.

7.9.3 Create confidence among investors in investing in the common stock market through the following measures:

- Set up measures to prevent unfair pricing which takes advantage of investors.
- Amend regulations to allow investors easier and more timely access to necessary information.
- Campaign to create a correct understanding of securities exchanges and stock-broker companies.
- Promote basic knowledge of securities markets among youth and the general public.

7.9.4 Amend laws that obstruct the mobilization of medium-term and long-term savings.

7.9.5 Promote and develop the operation of the securities exchange as a major source of savings by granting reasonable tax incentives to businesses that are registered with the securities exchange and to investors in these businesses.

7.9.6 Increase the number of institutional investors and encourage existing institutional investors to participate in the securities exchange.

7.9.7 Encourage profitable and stable state enterprises to issue loan stocks and register them in the securities exchange.

7.9.8 Promote ethics and standards among broker companies.

CHAPTER 5

PUBLIC FINANCE

To alleviate the chronic problems of fiscal balance and disparity between savings and investment, and to stimulate the country's economy and investment towards the desired aims, the following monetary and fiscal guidelines, targets and measures for the public sector are adopted.

1. Guidelines

1.1 Accelerate public sector revenue growth, especially tax revenue.

1.2 Adopt a restrained fiscal policy, at least during the early part of the Sixth Plan period, and determine ways to allocate government resources efficiently and in accordance with the directions of the plan.

1.3 Use monetary and fiscal policy, measures and machinery to promote export-oriented production and exports and to resolve the problems of the fiscal balance, savings and investment disparity, trade balance and current account balance.

1.4 Limit the role of the public sector (central government, local authorities and state enterprises) to policy-making, coordinating, advising and facilitating the work of the private sector. The public sector will be selective and initiate or carry out only essential projects.

2. Targets

2.1 Government savings and investment

(1) Government savings during the Sixth Plan to be 155,767 million baht (an average of 2.3 per cent of GDP).

(2) Investment to be 504,726 million baht (an average of 7.4 per cent of GDP).

(3) The gap between government savings and investment to average 5.09 per cent of GDP (7.9 per cent during the Fifth Plan). The deficit in 1991 is projected at 4.3 per cent of GDP.

2.2 Government expenditure

(1) Consumption expenditure to increase by an average of 5.3 per cent per year (constant prices).

(2) Investment expenditure to increase by an average of 1.0 per cent per year (constant prices).

2.3 Revenue from taxes and other earnings to be at least 15.8 per cent of GDP on the average and reach a minimum of 16.1 per cent in 1991.

2.4 The fiscal deficit during the Sixth Plan to be approximately 181,000 million baht, averaging 36,200 million baht per year (2.6 per cent of GDP).

3. Measures

3.1 Mobilization of government savings

Objectives

- To solve the problems of fiscal deficit and disparity between savings and investment.
- To reduce the effect of tax distortion on resource allocation and business operations.
- To reduce the tax burden on exports and to develop domestic production.
- To promote justice.
- To cut the cost of tax collection and enforce tax laws.

The following guidelines and measures are specified:

3.1.1 Central government revenues

(1) Taxes

a. Income taxes

Personal income tax

- Consider restructuring the tax rate by taking into account the effect on government income, work incentives and tax avoidance.

- Consider ways to broaden the tax base by minimizing tax deductible income and improving tax collection and checking systems.

- Consider ways to reduce the effect of tax distortions on resource allocations by ensuring impartiality in the tax collection system, especially in regard to various industries, types of business and financial instruments.

- Reform tax laws and regulations and payment procedures to expedite compliance and tax auditing and reduce the cost to the government of collecting taxes and the cost to the public of observing tax laws.

Corporate income tax

- Consider adjusting the rate of corporate income tax to facilitate local production and investment. The effect on the cost of capital should be considered as should its effect on the Thai tax system in relation to those of neighbouring countries, competitors and trading partners.

- Revise policy on tax privileges for promoted investment activities by bearing in mind the fiscal cost, the benefits of the promoted activities to the country's economy in general, the need to grant such privileges and the privileges granted by competing countries.

- Consider ways to broaden the tax base, especially for state enterprises.

b. Taxes on resources

- Consider initiating the collection of property, inheritance and gift taxes based on a consideration of government revenues, social justice and the impact of these taxes on work incentives, savings and investment in the private sector.

c. Taxes on goods and services produced and consumed locally

Business and value added taxes

- Consider replacing business tax with value added tax in order to reduce obstacles to developing local production caused by a multiplicity of business taxes and economic distortions caused by the multiple rates of business tax. This would help eliminate obstacles to

export caused by inaccurate business tax refunds to exporters and difficulties in adhering to existing complex business tax laws. Value added tax will levy the same rate on all kinds of goods and services with a zero rate for exports. Should there be any merchandise which, for economic reasons, needs to be taxed at a higher rate, excise tax will be collected in addition to value added tax.

Excise taxes

– Consider ways to eliminate excise taxes which are not worth the expense of collecting.

– Consider levying excise tax on some items of merchandise which are not charged excise tax at present, especially merchandise which should be subject to a higher rate than the value added tax that is projected to replace the existing business tax. (See the section on business and value added taxes.)

– Consider adjusting the structure of excise tax to respond to actual economic conditions based on a consideration of government revenue and the effect of the tax on domestic production and consumption.

d. International trade taxes

Import and export taxes

– Adjust the structure and rate of customs duty by considering effective protection rates and the effect on domestic production and consumption. Customs duty should serve as both a source of revenue and a protective instrument in the short run, but in the long run it should serve mainly protective purposes.

– Make customs tariff rates more consistent and easier to apply. Create an information base that would facilitate economic analysis by increasing customs codes from 4 to 6 digits and replacing the current classification system (CCCN) with the Harmonized System.

– Improve the tax rebate system to cover as closely as possible the amount of tax hidden in the value of export merchandise by constructing input-output coefficients to be used in the formula for calculating tax rebates.

– Expand bonded warehouse and import services, according to Article 19 bis of the 1926 Customs Act, to promote exports by reducing unnecessary production costs for exports.

– Improve customs processes and procedures to enable speedier and more convenient imports and exports.

– Consider eliminating certain export taxes that hinder exports. Ways to improve the export tax system will be considered in order to facilitate adjustment to the conditions and prices of the world market.

(2) Other earnings

– Collect fees for government services, such as toll fees and land title deed issuance fees, at rates that cover the costs of providing such services.

– Determine rents for government land and property in accordance with general market rates. For those who are adversely affected by the new rates, subsidies or financial support should be provided in cases where the government considers it appropriate. This will facilitate fiscal policy analysis while ensuring fairness to non-users of government assets.

– Consider ways of requiring state enterprises that do not pay corporate income tax to submit more earnings to the government. (Details on collecting taxes from state enterprises and submission of earnings are included in the Programme for Development of State Enterprises.)

(3) Projected revenue and expenditure budget during the Sixth Plan

(3.1) Based on the foregoing policy guidelines and targets, it is estimated that during the Sixth Plan period the government will receive about 1,085,000 million baht in revenue from taxes and other earnings with average annual increases of 8.7 per cent. (During the Fifth Plan period, revenue was 730,070 million baht with annual increases averaging 8.7 per cent.) Revenue in 1991 will be about 16.1 per cent of GDP. (In 1986 it was 14.7 per cent.)

Expenditure during the Sixth Plan period is projected to be about 1,266,000 million baht with average increases of 6.0 per cent per year. (During the Fifth Plan period, expenditure was 950,650 million baht with average annual increases of 8.6 per cent per year.) Fiscal deficit during the Sixth Plan is expected to be 181,000 million baht, or an average of 36,200 million baht per year. During the Fifth Plan, the fiscal deficit was 222,049 million baht, an average of 44,410 million baht per year. It is anticipated that the fiscal deficit in 1991 will be reduced to only 2.0 per cent of GDP. (In 1986 it was 4.8 per cent.) Reduction in the fiscal deficit will not only alleviate the debt burden in the long run and support the restrictive fiscal policy, but it will also enable the private sector and state enterprises to find more local sources of funds.

Table 1.6
Projected revenue and expenditure budget

Unit: million baht

Items	Fifth Plan		Sixth Plan	
	Amount	% increase per year	Amount	% increase per year
Projected revenue	730,070	+8.7	1,085,000	+8.9
Fiscal balance	-220,580	-	-181,000	-
Projected expenditure	950,650	+8.6	1,266,000	+6.0

(3.2) Of the projected expenditure of 1,266,000 million baht, it is recommended that 815,000 million baht, or 64.4 per cent (62.8 per cent during the Fifth Plan), be allocated to the administration budget and 451,000 million baht, or 35.6 per cent (37.2 per cent during the Fifth Plan), to the development budget. Alternatively it could be divided as follows: 1,074,300 million, or 84.9 per cent, for the current budget and 191,700 million baht, or 15.2 per cent, for the investment budget.

(3.3) Since the government is bound by many obligations to spend a large sum of both the current and the development budgets, the following measures will be adopted in order to ensure that government spending will be economical and efficient and that adequate budget will be provided for essential projects.

- Prevent excessive growth in the administration budget. Public sector growth in consumption should not to be more than 5.3 per cent per annum.

- Consider easing or delaying repayment of debts to keep annual repayments at an appropriate level in line with the expenditure budget and the country's ability to earn foreign exchange each year. Thus the effect on the investment and development budgets will be minimized.

- Set the budget allocation for new projects on an annual basis. In 1987 and 1988 the budget should not be less than 900 million baht per annum.

- Consider whether to cancel, delay or reduce the budget for projects that are unnecessary, inefficient or incompatible with the directions of the Sixth Plan.

- Ensure that there is a balance between national development and national defence by considering whether a system for coordinating projects and allocating budgets should be set up. Such a system would ensure a suitable level of national defence bearing in mind the degree of threat and economic capability in each year.

— Annual and triennial fiscal plans for the public sector will be drawn up to accommodate the impact which sudden changes in the economic situation can have on government revenue and expenditure.

3.1.2 Local authority revenue

(1) Encourage and assist local authorities to earn more revenue through extending the local tax base and adjusting the tax rates.

(Details on local authority revenues are in the Programme for Development of Urban and Specific Areas.)

(2) Revenue and expenditure targets

(2.1) During the Sixth Plan period, revenue of local authorities is estimated to amount to 99,000 million baht, an average increase of 12 per cent per year (during the Fifth Plan period, revenue was 49,532.8 million baht and the average annual increase was 11.5 per cent) with 85,000 million baht coming from taxes and 14,000 million baht from other earnings. In addition to this, there is the government subsidy of about 21,000 million baht (during the Fifth Plan period, government subsidy was 14,424.8 million baht), which will bring total revenues to about 120,000 million baht, or double the revenues during the period of the Fifth Plan.

Expenditure of local authorities during the Sixth Plan period is projected to be approximately 113,000 million baht, an average increase of 10.4 per cent per year (the Fifth Plan increase was 11.3 per cent per year) with about 73,000 million baht going on the administration budget and about 40,000 million baht on the investment budget. About 26,000 million baht, or 65 per cent (52.7 per cent during the Fifth Plan), will come from the local authorities' own revenues and 14,000 million, or 35.0 per cent, from subsidies (during the Fifth Plan period, 47.3 per cent was from subsidies and loans).

(2.2) The foregoing projections of revenue and expenditure indicate increased self-reliance of local governments in development work during the period of the Sixth Plan. They will be able to spend about 26,000 million baht of their revenue on investment, accounting for 26.3 per cent of total expenditure (24.5 per cent during the Fifth Plan). Government subsidies will decrease accordingly, an achievement consonant with the policy and directions of the Sixth Plan.

Table 1.7
Finance of local authorities during the
Fifth and Sixth Plans

Unit: million baht

	Fifth Plan		Sixth Plan	
	Amount	Increase (%)	Amount	Increase (%)
1. Regular revenue	49,532.8	11.5	99,000	12.0
1.1 Taxes	41,697.0		85,000	
— locally collected	(8,244.8)		(16,000)	
— collected by the government	(21,515.9)		(50,000)	
— shared by the government	(11,936.3)		(19,000)	
1.2 Other earnings	7,835.8		14,000	
2. Special revenue	17,599.9		21,000	
2.1 Subsidy	14,424.8		21,000	
2.2 Accumulated funds/loans	3,175.1		—	
3. Total revenue	67,132.7		120,000	
4. Expenditure	60,448.6	11.3	113,000	10.4
4.1 Administrative expenditure	37,385.2		73,000	
4.2 Investment expenditure	23,063.4		40,000	
5. Local financial capability				
Regular revenue	49,532.8		99,000	
Less administrative expenditure	37,385.2		73,000	
Regular revenue for investment	12,147.6		26,000	

3.1.3 State enterprise revenue

a. The Sixth Plan aims to institute policies for improving the operational efficiency of state enterprises and determining the appropriate rate of return on investment in order to increase revenue and self-reliance. The Sixth Plan also encourages the private sector to invest in or manage state enterprises and change their structure in order to reduce the burden of the government sector.

(Detailed guidelines for the development and restructuring of state enterprises are included in the Programme for Development of State Enterprises.)

b. Revenue and expenditure targets

(1) State enterprise revenues during the Sixth Plan period are projected at 1,446,808 million baht (561,328 million baht during the Fifth Plan). Regular expenditures are anticipated to be 1,343,454 million baht (515,691 million baht during the Fifth Plan). Net profit is projected to be 103,354 million baht, or twice that of the Fifth Plan period, due to the policy to revise service fees and reduce unnecessary spending.

(2) The investment budget is projected at 242,767 million baht (an increase of 72,882 million baht from the Fifth Plan), 31.3 per cent of which will come from increased revenues. Investment funds obtained from government subsidies and foreign loans will be reduced to comply with the overall policy to reduce foreign loans.

(3) To implement the policy of increasing private sector participation, the investment budget and sources of funds will be as follows:

Table 1.8
State enterprise investment budget and sources of funds

Unit: million baht

	Fifth Plan		Sixth Plan	
	Amount	Per cent	Amount	Per cent
Total investment budget	169,885	100.0	242,767	100.0
Sources				
Revenue of state enterprises	54,793	32.3	76,031	31.3
Government subsidy	11,470	6.7	3,791	1.6
– government budget	(3,810)		(1,195)	
Loans and others	103,620	61.1	162,945	67.1
– local	(27,426)	(16.1)	(62,977)	(25.9)
– foreign	(76,194)	(44.9)	(99,968)	(41.2)

Of the 162,945 million baht from loans and other sources, one part will come from joint investments and capital increases from the local or foreign private sector. At the initial stage, the target for this is 10,000 million baht, or 6 per cent of the loans and other sources category. This will be in line with the Sixth Plan policy to mobilize more private sector funds.

3.2 Mobilization of external funds in the government sector

3.2.1 Foreign loans

(1) On 29 October 1985 the Cabinet passed a resolution to set the ceiling on foreign loans at US\$ 1,000 million per year (as a consequence of the analysis and recommendations of the National Debt Policy Committee) in order not to exceed 9 per cent of the country's foreign currency earnings. (If the need arises, a 2 per cent increase may be granted in the 1986 – 1988 period.) The ceiling can, however, be adjusted depending on the country's capacity to earn foreign currency through the export of goods and services in each year.

(2) The ceiling on new loan obligations during the Sixth Plan period is set at US\$ 5,600 million. This includes US\$ 100 million per year in military loans, thus leaving US\$ 5,100 million for new projects and financial institutions, of which 91,000 million baht is to be spent during the period of the Sixth Plan.

(3) The following measures for foreign borrowing and debt management will be adopted to maximize the general economic benefit of loans to the country.

– Consider drawing up annual and triennial plans for loans. Loans for 1986-1987 are set at US\$1,000 million. Projects derived from these loans must be relevant to the direction of the Sixth Plan, and sources of loans should be carefully selected on the basis of flexible conditions and compatibility with the nature of the projects and the agencies.

– Consider managing foreign debts according to the 1985 Foreign Loans Restructuring Act by prolonging debt payment periods or reducing the debt burden and by lowering the cost of borrowing. This measure will keep the structure of foreign loans at a consistent level without overburdening the budget in any particular year, and will also be in accordance with the floating rate foreign exchange system.

– Consider foreign debt management policies to distribute the debt burden among various currencies to minimize risks which can result from fluctuations in foreign exchange rates, especially in borrowed currencies, and changes in interest rates. This measure complies with the government's policy to restructure foreign debts along the lines of the current basket of currencies implemented by the Exchange Equalization Fund.

– Consider charging commission fees to state enterprises for government guarantees of loans (from local and foreign sources) so that the cost of production of state enterprise goods and services will be more realistic and the burden of the government will be reduced.

3.2.2 Foreign aid

(1) In the past, foreign aid has been given directly on an individual project basis to various government agencies. There has been inadequate coordination or prioritization based on an overview which takes into account budget allocation and foreign loan policy. Therefore measures need to be taken to increase the benefit of foreign aid to the country's economy.

(2) During the period of the Sixth Plan, it is projected that US\$ 743 million, or about 20,060 million baht, of foreign aid can be mobilized, which is relatively close to the aid of US\$ 745.4 million, about 18,335 million baht, during the Fifth Plan period. The main sources of aid are countries in the Colombo Group and the European Economic Community, private organizations, the United Nations and the United States.

(3) To maximize the benefits of foreign aid and to comply with the direction of the Sixth Plan, the budget allocation guidelines and the foreign loan plan, the following measures will be adopted:

- Consider improving the mechanism for planning, supervising and monitoring foreign aid.

- Draw up annual and triennial foreign aid plans to comply with the plan for foreign loans and the budgetary plan for annual expenditure.

- Support projects with practical objectives. Requests for aid for feasibility studies should be restricted to essential high-priority projects which are endorsed in the national plan guidelines.

- Give first priority to projects specified in the Sixth Plan. Projects in ministerial plans will be given second priority.

- Consider ways of modifying the guidelines on cooperation linked to trade obligations by the grantor. Projects that promote technology transfer and guide the economic and social structure towards self-reliance in the long run will be emphasized.

4. Development expenditure and sources of funds

4.1 Development expenditure

The economic and social development expenditure for the Sixth Plan period is set at 664,090 million baht, an increase from the (adjusted) Fifth Plan budget of 91,462 million baht or 13.8 per cent. This will be spent on achieving the overriding objectives of the Sixth Plan, in

particular the expansion of economic growth and restoration of the country's economic and financial stability, which are aimed at resolving the issues of the fiscal balance, the disparity between savings and investment, the trade balance, the current account balance and the debt burden.

Of this development expenditure, 83.28 per cent, or 553,030 million baht, will come from local sources and 16.72 per cent, or 111,060 million baht, will come from foreign sources. (The Fifth Plan targeted 80.23 per cent of development expenditure to come from local sources, but preliminary figures show that only 78.26 per cent came from local sources.)

Table 1.9
Projected development expenditure and sources of funds in the Sixth Plan

Unit: million baht

	Fifth Plan		Sixth Plan	
	Adjusted amount	Per cent	Amount	Per cent
Development expenditure	572,628	100.00	664,090	100.00
1. Domestic sources	448,143	78.26	553,030	83.28
— Revenue from taxes and other earnings	221,875	38.74	270,000	40.66
— Loans	162,104	28.31	181,000	27.26
— Bank of Thailand	(37,219)	(6.50)	(36,200)	(5.45)
— Government Savings Bank	(37,993)	(6.63)	(54,300)	(8.18)
— Commercial banks/private sector	(86,891)	(15.17)	(90,500)	(13.63)
— Treasury cash balance	2,000	0.35	—	—
— Revenue of local authorities	12,482	2.18	26,000	3.92
— Revenue of state enterprises	49,682	8.68	76,030	11.45
2. Foreign sources	124,485	21.74	111,060	16.72
— Loans	106,150	18.54	91,000	13.70
— Aid	18,335	3.20	20,060	3.02
3. Private joint investment* (local and foreign)				
4. Govt self-reliance in development	284,039	49.60	372,030	56.02

*Note: For the Sixth Plan, the initial target for private joint investment (local and foreign) in state enterprises is set at 10,000 million baht.

4.2 Public sector self-reliance in development

The Sixth Plan emphasizes self-reliance of the public sector in development not only to reduce its local and foreign debt burden in the future and increase local sources of funds,

but also to reduce the discrepancy between savings and investments and to reduce imports. During the Sixth Plan period, 372,030 million baht, or 56.02 per cent of development expenditure, is projected to be derived from revenue from taxes and other earnings. (69.33 per cent was projected for the Fifth Plan period, but preliminary figures indicate that the government sector only spent 49.60 per cent from revenues.)

4.3 Sources of funds and allocation guidelines for development expenditure

Sources of funds for the 664,090 million baht development budget are projected as follows:

4.3.1 Government budget: 451,000 million baht to be derived from:

(1) Taxes and other revenues. This source should supply a total of 270,000 million baht, or 40.66 per cent of the development budget (38.75 per cent during the Fifth Plan). Not less than 35 per cent of the government budget will be used for development expenditure.

(2) Domestic loans. This source should supply 181,000 million baht, or 27.26 per cent of the development budget (28.31 per cent during the Fifth Plan).

Allocation guidelines

As Thailand will continue to face fiscal, export and unemployment problems during the first 2 years of the Sixth Plan, the budget will be allocated according to the following guidelines:

(1) Give priority to rural and agricultural development, emphasizing diversification into goods with export potential rather than increasing the production of goods facing export problems.

(2) Emphasize projects with immediate returns and the potential to generate employment.

(3) Emphasize improvements in the quality of life of the urban and rural poor.

4.3.2 Local authority revenues: 26,000 million baht, or 3.92 per cent of the development budget (2.18 per cent during the Fifth Plan). This will be derived from accelerated tax and service fee collection at the local level. The policy on central government subsidies will be reviewed to relieve the burden of the government in the long run.

Allocation guidelines

Emphasize infrastructure and public services, especially in Bangkok and other principal cities, through coordination with the central government and state enterprises.

4.3.3 State enterprise revenues: about 76,030 million baht, or 11.45 per cent of development budget (8.67 per cent during the Fifth Plan). The policy is to increase the self-reliance of state enterprises, improve their pricing policies and reduce unnecessary spending. It is also intended to increase managerial efficiency and participation of the private sector.

Allocation guidelines

(1) Accord priority to development of communications and telecommunications, air transport and necessary infrastructure.

(2) Slow down investment in energy.

(3) Encourage increase in private sector participation. The National State Enterprise Board and the Investment Development Fund Commission will determine regulations, procedures and details on this subject.

4.3.4 Foreign loans: about 91,000 million baht, or 13.70 per cent of development budget (18.5 per cent during the Fifth Plan). This will be in line with the policy to reduce the government's debt burden. However, in order to maintain long-term development potential, the ceiling on foreign loans during the first 2 years of the plan is to be US\$1,000 million per annum, to be increased to US\$ 1,200 million per annum during the last 3 years.

Allocation guidelines

(1) Emphasize increase in the allocation for the development of urban and specific areas and for the development of infrastructure (to alleviate the burden of the central government).

(2) Emphasize allocation of loans for the development of telecommunications and air transport in order to reinforce the promotion of private investment and increase competitiveness in international markets.

(3) Emphasize allocation of loans to projects which have high returns, create savings, bring in a lot of foreign exchange or establish a strong foundation for efficient competition in international trade.

(4) Allocate loans to projects which need to buy goods and services from abroad.

4.3.5 Foreign aid: about 20,000 million baht, or 3.02 per cent of development expenditure. This is almost the same level as in the Fifth Plan. The main sources will be countries in the Colombo Group, European Economic Community and private organizations.

Allocation guidelines

Prioritize projects which contribute to solving basic economic and social problems. Such projects would entail developments in the fields of social and human resources, rural areas, mineral resources, science and technology, research and the administration of development.

Formulation of annual plan

Since development needs far exceed the development budget of the Sixth Plan, and since the economy both inside and outside the country fluctuates rapidly, it is necessary to formulate annual and triennial plans according to the principal guidelines of the Sixth Plan. These would allocate the development budget effectively, being able to reflect the actual conditions of the country.

PROGRAMME 2
POPULATION, SOCIAL AND CULTURAL DEVELOPMENT

POPULATION, SOCIAL AND CULTURAL DEVELOPMENT

CHAPTER 1

INTRODUCTION

1. Scarcity of resources and financial constraints have been increasing with the passage of time and have had a severe impact on both social and economic development. This situation has made it necessary to promote and accelerate more efficient development activities. Therefore the Sixth Plan emphasizes the importance of increasing efficiency through using technology, upgrading quality and improving administrative systems to better facilitate development.

2. The first five plans placed importance on social development through an emphasis on the provision of basic services. Close examination, however, reveals that the past direction of social development has not been coordinated nor has it been in harmony with economic development. The lack of interaction in the implementation of social and economic development has meant that their common targets have not been reached. Furthermore, even after social development programmes have been fully implemented, certain social problems have become more serious and more complex. It is therefore necessary to reexamine the direction of social development.

3. Consequently the Sixth Plan has shifted the emphasis of social development away from planning at the macro level to planning at the basic level; that is, individuals, families, communities, all of which constitute society. It is generally accepted that people are valuable national resources and that if the quality of the population is improved the quality of the community and society as a whole will be improved as a consequence. Therefore the Sixth Plan has placed greater emphasis on human resource development than did previous plans. The direction for developing the quality of the population will be more in line with the direction for developing the economy of the country.

The Programme for Population, Social and Cultural Development includes plans related to the size and distribution of the population, the development of quality in the population and the labour force, the promotion of community peace and improvements in the mechanisms for social development.

4. The Sixth Plan specifies the following objective, target, guidelines and strategies for the development of the population, society and culture:

4.1 Objective

To enable the people to enhance the quality of their lives, participate effectively in economic and social development activities and adapt to the changing economic and social environment.

4.2 Target

Develop virtue and capability in the population. The people should play a meaningful role in the development of society to ensure social progress, peace and justice, and to support national development efforts, preserve the national identity and values and raise the quality of life of the people in rural and urban areas to a level at which the basic minimum needs are satisfied.

4.3 Guidelines

(1) Develop the quality of the population. The people should have the knowledge and ability to develop their own lives and occupations and a self-reliant, participatory society.

(2) Coordinate social development activities with occupational and economic development activities.

(3) Promote order, discipline and obedience to the law, and develop morality, ethics and culture.

(4) Support the formation of self-help groups which will be responsible for preventing and solving social problems and promoting thrift and savings.

4.4 Strategies

To implement social development activities in line with the stated target and guidelines, the following strategies are specified:

(1) To develop quality in the population and labour force: Keep the population size and distribution at a suitable level to enable improvements in the quality of health, occupation-oriented education and training, spiritual development and the development of labour.

(2) To promote peace in society: Prevent crimes and accidents and improve the efficiency of legal procedures and social welfare.

(3) *To improve social development mechanisms:* Adjust the role of government administrative agencies. The private sector, communities and families should be encouraged to participate more in development activities. The Programme for Population, Social and Cultural Development will be used as an instrument for coordinating the direction of all activities.

4.5 Major work plans

Based on the foregoing social development strategies, the Programme for Population, Social and Cultural Development in the Sixth Plan shall comprise the following 10 work plans arranged in 4 groups:

(1) Population size and distribution consists of 2 major work plans:

- (1.1) Work Plan for Reducing Population Growth
- (1.2) Work Plan for Population Distribution

(2) Development of the quality of the population and labour force consists of 4 major work plans:

- (2.1) Work Plan for Education and Training Development
- (2.2) Work Plan for Health Promotion
- (2.3) Work Plan for Spiritual and Cultural Development
- (2.4) Work Plan for Labour Administration and Development

(3) Promotion of peace consists of 2 major work plans:

- (3.1) Work Plan for Safety of Life and Property
- (3.2) Work Plan for Social Welfare

(4) Improvement of social development mechanisms consists of 2 major work plans:

- (4.1) Work Plan for Adjusting the Role of the Government
- (4.2) Work Plan for Promoting Public Participation

CHAPTER 2

POPULATION SIZE AND DISTRIBUTION

RATIONALE

1. The development of quality in the population is a sensitive issue related to many other matters. Financial constraints make it especially necessary to consider population size and distribution in conjunction with population development guidelines. Given the present circumstances, it is essential to keep the population size and distribution at a suitable level. In order to achieve effective population development, it is necessary to establish plans for reducing the size of the population and for population distribution.

WORK PLAN FOR REDUCING POPULATION GROWTH

2. Details of the Work Plan for Reducing Population Growth are as follows:

2.1 Objective

To reduce fertility and the population growth rate, and consequently facilitate economic and social development and enable each family to improve the quality of life of its members.

2.2 Target

Reduce the population growth rate to 1.3 per cent in 1991. It is projected that the population will number 57 million people with the birth rate at 19.1 per 1,000 persons and the death rate at 5.7 per 1,000.

2.3 Guideline

Promote and accelerate family planning programmes. The emphasis will be placed on groups with high birth rates both in urban and rural areas. At the same time, other programmes will be implemented in addition to family planning which will facilitate the target of reducing the population growth rate.

2.4 Measures

To achieve the foregoing objective, target and guideline, the following measures are specified:

(1) Promote and accelerate family planning programmes

(1.1) Expand and increase the efficiency of family planning services. Areas with socio-economic problems and low rates of contraception, whether in urban or rural areas, will be stressed. Special target groups will include hilltribes people, adolescents, slum residents and factory workers. This measure will be extended to both males and females. The following methods will be employed:

- Enable volunteers from government and private organizations, village health volunteers, health communicators and traditional midwives to distribute birth control pills and condoms.

- Improve the quality of family planning services. Participants in family planning programmes will be tested for cancer of the uterus.

- Integrate family planning services with maternal and child health care and other public health promotion activities, especially in the border provinces in the south, among hilltribes and in urban slums.

- Provide counselling services on family life, education and family planning, and provide family planning services to adolescents.

- Encourage the relevant agencies to establish policies promoting family planning and to specify clearly the roles of responsible units at all levels. This will enable the agencies to find common operational guidelines.

- Promote community participation in family planning programmes. Employer and employee organizations will be encouraged to provide family planning services and programmes to improve the quality of life of workers and their families.

(1.2) Improve the development and capability of personnel.

– Improve educational curricula and training standards. The capability of officers in all areas of public health should be raised for them to work more effectively in the community.

– Provide training for personnel from the Ministry of Public Health and other concerned ministries to enable them to provide more appropriate services.

(1.3) Increase efforts on information, education and communication (IEC). Emphasis will be placed on areas experiencing social and economic problems and low rates of birth control including special target groups:

– Increase and improve IEC through a variety of media with the emphasis on disseminating information and motivating people to adopt efficient family planning methods.

– Encourage cooperation between the Ministry of Public Health and other ministries in promoting family planning programmes from the provincial to the village level.

– Encourage private organizations, communities and localities to participate more in the IEC activities. Religious and community leaders as well as rural groups will be encouraged to initiate community activities that accelerate the acceptance of family planning practices and improve the quality of life.

(1.4) Research and evaluation.

– Promote research on suitable family planning methods.

– Identify the types of service and campaign suitable for specific target groups.

– Identify motivation patterns and the integration of family planning activities with other public health development programmes.

– Evaluate the results of family planning activities and their administration. The aim of population policy will also be evaluated with a view to improving and modifying the implementation and policy determination of future plans.

(2) Promote and implement the following measures, in addition to family planning:

(2.1) Promote population education. Enable people to understand the importance of population change in relation to qualitative improvements in the life of individuals, families, societies and the nation through the following means:

- Encourage administrators and government personnel to recognize the importance and usefulness of population education in order that they may understand the concepts and guidelines involved in its implementation and improve the quality of life of the people.

- Support the provision of media for studying, teaching and disseminating population education to target groups both sufficiently and efficiently. The exchange of media among various organizations will also be encouraged.

- Improve the syllabus and teaching strategy of population education and its inclusion in other programmes as suitable and relevant to each target group.

- Include education on family life (sex education) in the promotion of population studies both in formal and non-formal education systems.

- Encourage government, private and community organizations to play a role in disseminating population education through mass media, local media, etc.

- Closely coordinate the preparation of operational plans by concerned government and private organizations.

- Encourage research which will help in the implementation of population education, and support systematic and continual evaluation of the results of population studies' implementation.

(2.2) Improve and revise laws and regulations to correspond with and support national population policies, as follows:

- Revise the labour law on leave of absence to entitle private sector employees to take leave for sterilization and recuperation with full pay.

- Revise the income tax law to allow for deductions on expenses and welfare only for the first two living children.

- Revise welfare regulations to promote the establishment of pre-school child care centres by government and private organizations, which would help improve the quality of people's lives and increase work efficiency.

– Allow income tax deductions for donations to activities related to the promotion of population policy. Eligible activities would include providing family planning services to employees, providing food to poor school children and establishing pre-school child care centres.

(2.3) Offer incentives to encourage the private sector to take a role in population activities and to encourage the practice of family planning.

– Offer incentives to campaigners for and recipients of permanent family planning methods.

– Provide incentives for communities to establish pre-school child care centres.

WORK PLAN FOR POPULATION DISTRIBUTION

3. Details of the Work Plan for Population Distribution are as follows:

3.1 Objective

To promote the distribution of the population to correspond to the economic base and to past employment trends which indicate a transition from rural to urban conditions.

3.2 Guidelines

(1) Continue to emphasize the development of Bangkok Metropolis and its vicinity towns which remain the largest economic and employment base of the country. The stress will be placed on improving the quality of life for low-income people living in slums.

(2) Develop urban growth centres in provincial regions as the social and economic focus of each region. They will be able to support the activities decentralized from Bangkok and its vicinity towns, accommodate people migrating from rural areas and, in the future, serve as regional government administration centres.

(3) Develop the Eastern Seaboard Sub-region and other areas, such as the Upper South and Songkhla Lake Basin, into new economic zones for future population distribution.

(4) Extend development to rural areas and improve the quality of life there through the acceleration of rural development activities. Local identity will be promoted to inculcate a sense of pride and belonging in the people and motivate them to try to develop their own locality.

3.3 Measures

Detailed measures conforming to the guidelines on population distribution are included in the Programme for Development of Urban and Specific Areas and in the Programme for Rural Development.

CHAPTER 3

DEVELOPMENT PLAN FOR THE QUALITY OF THE POPULATION AND LABOUR FORCE

RATIONALE

1. It is essential to enhance the quality of human resources in the areas of physical and mental development and in regard to knowledge, thought, ability, ethics and culture. In particular, occupational and spiritual development need to be stressed in order to improve the quality of life and enable people to participate effectively in national development within the context of a rapidly changing economy and society.

2. Furthermore development of the quality of the population will have to conform to the needs of different age groups; for example, children, youth, those of working age and the elderly.

For children up to 5 years old:

- The emphasis will be on physical, spiritual, emotional, social and intellectual development. Immunization and malnutrition eradication programmes and social and intellectual development are activities to be promoted.

For the 6 to 14 year-old group:

- The emphasis will be on improving the quality of formal education, immunization and health care and promoting basic nutrition requirements.
- Suitable education and training will be provided to support intelligent and talented children and enable them to develop their full potential.
- Children finishing compulsory education will be encouraged to continue with secondary education in formal or other higher education programmes.
- All child labour will be protected by the Labour Act.

For the 15 to 25 year-old group:

- The emphasis will be on improving the quality of both formal and non-formal education and solving the problems of the unemployment and underemployment of both rural and urban youth who are not in the formal education system.

For the 26 to 59 year-old group:

- The emphasis will be on attaining full employment and encouraging self-employment.
- The skills and capabilities of the labour force will be increased in accordance with technological developments.

For people 60 years old and over:

- The emphasis will be on the role of the government in creating awareness of the problems of the elderly. People will be encouraged to plan to rely on themselves during their old age.

DEVELOPMENT PLAN FOR THE QUALITY OF THE POPULATION AND LABOUR FORCE

3. In accordance with the foregoing rationale and guidelines, development for the quality of the population and the labour force will consist of 4 major work plans: Work Plan for Education and Training Development, Work Plan for Health Promotion, Work Plan for Spiritual and Cultural Development and Work Plan for Labour Administration and Development. The objectives and activities of the 4 work plans are as follows:

3.1 Work Plan for Education and Training Development

(1) Objective

To develop the population as a contributing force in the economic and social development of the country by improving the levels of knowledge, intelligence, rationality, ethics and culture besides health, occupational skills, self-sufficiency, competence in appropriate technology and capability to be responsible members of society.

(2) Targets

(2.1) Provide formal and non-formal education and training to students and the general public to inculcate a sense of righteousness, responsibility, discipline, honesty, diligence and self-sufficiency besides a knowledge of a vocation and the determination for self-development to enable the people to lead a decent life, carry out their work and contribute to society.

(2.2) Improve the quality of education at all levels in order that youth and the general public can develop themselves, their families and their communities, and thus improve their standard of living. Vocational education will be directed towards labour market requirements, both in-country and abroad, and towards increasing the capability of the workforce for self-employment.

(3) Guideline

Make more efficient use of the education and training budget. Emphasis will be placed on sharing and coordinating resources to minimize wastage and ensure quality development and appropriate quantity expansion.

(4) Measures

To meet the objective, targets and policy guideline outlined above and continue activities of the Fifth Plan, the following measures are specified:

(4.1) Make more efficient use of the education and training budget by emphasizing resource sharing.

(4.1.1) Transfer educational resources from levels and areas which are close to saturation to others which need development.

(a) Use the excess resources of primary education in pre-primary and lower-secondary levels in rural areas.

(b) Assign teachers' colleges to produce personnel with alternative vocational skills which may lead to self-employment suitable for local conditions. The educational system of community colleges should be encouraged.

(c) Group education institutions higher than upper secondary level together according to their field of expertise and readiness. Educational management will be coordinated in each geographical area to create resource sharing and reduce resource duplication.

(4.1.2) Expand and establish universities, faculties, departments, fields of study and new units bearing in mind academic and national development requirements and the degree of readiness in terms of location, budget and manpower.

(a) Expand and establish universities to increase the opportunities for further education and attain a fair distribution to provincial regions. The following criteria will be met:

- Merge existing educational institutions to create universities, or upgrade colleges of existing universities which are already equipped with academic competence, personnel, educational equipment and premises. Private higher education institutions with the capability will be given the opportunity to upgrade into universities.

- Mobilize resources and funds from all sources for establishing universities. Long-term financial plans should clearly indicate the capability for self-reliance. Tuition and fees should cover break-even level and be sufficient to pay for expenses and improvements.

(b) Expand and establish faculties, departments, subjects and units. The following criteria will be met:

- Avoid fields facing severe unemployment. Institutions will be equipped and motivated to establish desirable fields, including those needed to solve the current problems of the country.

- Conduct detailed feasibility studies on investments in new universities. These will consider cost effectiveness and ways to minimize expenditure, optimize resource utilization and avoid duplication.

- Support suitably competent and equipped private higher education institutions in order to relieve the burden of the government.

(4.1.3) Support self-reliance in educational institutions by adjusting tuition fees. Scholarships should be made available for the poor. Educational institutions will be encouraged to derive income from their properties and as a result of the following activities:

(a) Accelerate the implementation of the policy review on tuition and fees. Priority will be given to tuition and fees policy in government higher education institutions, thus facilitating adjustments in tuition fees at lower level educational institutions.

(b) Revise the role of the Subcommittee to Review Policy on Tuition and Fees in Government Institutions under the jurisdiction of the Ministry of University Affairs. The subcommittee should study the extent of self-sufficiency of the universities at the present time.

(c) Permit educational institutions to take up employment, provide services and produce for sale according to their own capabilities. Rules and regulations will be amended to enable universities to generate income from their assets.

(d) Establish a foundation that will campaign for donations to be used for educational purposes.

(e) Encourage higher education institutions to offer non-formal education courses on occupational and quality of life development. Students will be responsible for the cost which will enable the institutions to support themselves.

(4.1.4) Support short-course vocational training by developing a system for coordinating non-formal education in order that both government and private agencies may serve the youth and general public effectively.

(a) Target groups will include unskilled labourers who are unemployed, the unemployed whose skills do not meet the requirements of the labour market, the underemployed and those wanting to upgrade their skills.

(b) Promote and support government and private institutions in developing flexible curricula which can be adapted to meet the demands of the labour market.

(c) Coordinate at the national level to determine policy and the coordination of short-course training for all units in order to facilitate resource sharing and maximize benefits.

(d) Support vocational education and short-course vocational training that encourages the aptitude for self-employment. This will be carried out with other agencies and enterprises on a joint basis and in an integrated manner.

(4.1.5) Improve policies, regulations and measures for supporting, promoting and facilitating the management of private institutions to ensure flexibility in administration and implementation. This will include a review of the rules and regulations, such as the ceiling on tuition fees, which obstruct improvement in the quality of education in private institutions.

(4.1.6) Improve the administration, planning, budgetary, monitoring, evaluation and inspection systems to encourage decentralization to rural areas and facilitate efficient administration of education at all levels. Support educational zoning in urban areas and enable students to attend schools close to their homes or residences.

(4.2) Coordinate resource sharing to minimize wastage and ensure quality development and appropriate quantity expansion.

(4.2.1) Give pre-school children physical, mental, emotional, spiritual and cultural preparation by providing appropriate services for each locality and coordinating the relevant agencies.

(4.2.2) Improve the quality of compulsory education by developing personnel and curricula and by providing the teaching aids necessary for improvements in efficiency and quality.

(4.2.3) Aim at developing and supporting children in rural areas in order that they may attain an education beyond the compulsory level, especially in areas where the rate of attendance for secondary education is low. Feasibility studies should be conducted on extending secondary education in areas with low attendance rates.

(4.2.4) Develop middle-level and high-level manpower in such fields as electricity, electronics, metallurgy and modern business services, which are undersupplied despite high market demand. Cooperation between the main agencies and occupational organizations will stress planning of medium-term to long-term personnel development bearing in mind labour supply and demand in such fields as medicine, engineering and agriculture.

(4.2.5) Develop personnel in training teachers by producing teachers of quality and with ethical standards who set a good example to the students and society.

(4.2.6) Set up education and training programmes that emphasize skills development, and establish standards applicable in testing labour skills.

(a) Speed up the process of establishing standards and methods for testing labour skills.

(b) Encourage students to take up employment at their educational institutions during their period of education in order to increase their occupational skills while studying.

(c) Consider a cooperative structure and procedures to enable the Ministry of Education, Ministry of University Affairs, Department of Labour and private sector to suggest controls and standards for vocational skills.

(4.2.7) Encourage cooperation between the government and private sectors in occupational training by emphasizing on-the-job training, apprenticeships and highly skilled labour. Implementation of the National Occupational Training Act will be accelerated.

(4.2.8) Set up fully integrated occupational education and training in marketing, management, investment, finance and accounting to promote job creation, self-employment and the grouping together of individuals into small businesses including tourism businesses.

(4.2.9) Provide career counseling, graduate surveys and job placement services in educational institutions.

(a) Emphasize close and continuous cooperation between educational institutions and business enterprises.

(b) Improve data systems and information on the labour market, and speed up dissemination of up-to-date information.

(c) Establish job placement services in educational institutions and regular surveys of graduate employment.

(4.2.10) Accelerate education and arrange activities in science and technology at all levels.

(a) Coordinate science, mathematics and technology curricula, teaching materials and methods, teachers' training and evaluation methods at all levels in line with the Programme for Development of Science and Technology.

(b) Support academic activities in science and technology such as seminars and exhibitions on technological innovations concerning educational techniques.

(c) Design curricula with the flexibility to adapt to changes in science and technology.

(4.2.11) Encourage both government and private organizations in the community, such as associations, foundations, temples and families, to support education and training institutions.

3.2 Work Plan for Health Promotion

(1) Objective

To promote and support the physical and mental health of the rural and urban population in order to improve the quality of human resources and their ability to contribute effectively to national economic and social development.

(2) Targets

(2.1) Promote long-term goal of health for all through basic minimum needs approach with the following targets:

– Provide nutritious and sufficient food to satisfy basic physical needs and ensure that the people do not suffer from malnutrition and dysentery.

– Provide dwellings and an amenable environment with clean houses, water and latrines.

– Provide access to basic services for disease control and medical care. All children and pregnant women will be immunized and looked after by trained government health personnel or trained traditional midwives.

(2.2) Reduce the rates of infant and child mortality and morbidity of important diseases which are still serious problems.

(3) Guidelines

(3.1) Promote the implementation of primary health care, health promotion, disease prevention and control in continuation of the Fifth Plan policy.

(3.2) Emphasize improvement in the quality and efficiency of public health services rather than building and expanding public health centres.

(3.3) Promote an educational system for health and recreational development.

(3.4) Improve the systems and mechanisms for administering development work to facilitate health promotion.

(4) Measures

To achieve the foregoing objective, targets and guidelines, the following measures will be implemented:

(4.1) Continue to implement measures initiated in the Fifth Plan with the emphasis on:

(4.1.1) Primary health care

(a) Integrate activities with the process for developing the quality of life. Targets and the concept of basic minimum needs will be followed to prepare the communities and coordinate the different sectors.

(b) Improve the quality of primary health care in rural areas and expand implementation in urban areas. Emphasis will be placed on developing self-reliance among the people in problem identification, decision-making, problem-solving and resource management.

(c) Develop existing funds into multi-purpose or village development funds which will be used to support the implementation of primary health care and quality of life development projects.

(d) Encourage the private sector already involved in primary health care work through either public welfare projects or business interests to take a more active role in development organizations in the community.

(4.1.2) Health promotion and disease control: To solve the problems of human illness at the roots and reduce health care costs, the Sixth Plan period will continue the work of the Fifth Plan, as follows:

(a) Provide health promotion services continuously in regard to nutrition, maternal and child health, environmental sanitation, clean water supply, occupational health, dental health and mental health.

(b) Encourage the public, especially children and youth, to take part in sports and to exercise regularly and correctly. Information will be disseminated, personnel trained and developed and sports facilities built and maintained throughout the provincial regions.

(c) Promote the prevention and control of communicable and non-communicable diseases and of illnesses of the elderly by continuous epidemiological surveillance while research and technology transfer relevant to disease prevention and control will be used in support.

(d) Disseminate information extensively and continually to change the attitudes and values of the general public. Children in particular should be taught to recognize the importance of health promotion and disease prevention and control instead of seeking costly remedies which fail to reach the cause of the problem.

(4.1.3) Development of applications for technology and technology transfer:

To improve the quality and efficiency of health promotion, disease prevention and control and health care, the Sixth Plan places importance on research, development and technology transfer necessary for solving health problems in rural and urban communities. The following activities continue those implemented in the Fifth Plan period:

(a) Support technological research, development and applications and appropriate technology transfer in the fields of health promotion, prevention and control of communicable and non-communicable diseases and curative care.

(b) Support research and development in the fields of drug production, procurement, distribution and utilization according to the National List of Essential Drugs. In particular, support will be given to research and development on medicinal plants for primary health care, traditional and modern drugs industries and the production of drugs for export.

(c) Protect consumers from the dangers that may arise from the consumption of food, drugs, cosmetics, toxic materials and chemical products by monitoring the dangers and regularly disseminating information to the general public.

(4.2) Improve the quality and efficiency of public health services. During the Fifth Plan period, health service centres were increased in number and dispersed widely with community hospitals and extended OPD established in 92 per cent of all districts and sub-districts. Health centres are now available in all sub-districts. The Sixth Plan therefore emphasizes improving the quality and efficiency of public health services. Measures for implementation are:

(4.2.1) Develop a referral system for transferring patients from lower-level to higher-level service units. Minor cases will be treated at the local health centres and community hospitals while serious cases requiring high technology treatment will be transferred to urban hospitals and large medical centres.

(4.2.2) Expand the health card programme in rural areas and initiate it in urban areas. This would lead to the development of health insurance and, consequently, self-reliance. Patients will be given medical care services based on the referral system.

(4.2.3) Improve the quality and efficiency of medical care services in community hospitals and health centres. Public confidence will increase if the institutions are provided with more manpower, essential facilities and personnel development.

(4.2.4) Increase the capability of hospitals to support themselves. The policy on setting fees for medical care in government hospitals will be reviewed in accordance with the realities of actual costs and increasing expenses.

(4.2.5) Expand public health services to reach more people in more rural areas. Community hospitals will be constructed where necessary, and to save on cost they will be in the form of extended OPD, etc.

(4.2.6) The government will continue to provide free medical care to low-income people, but operations will be made more efficient. For the sake of social justice, the government will provide health services only to people who are unable to fend for themselves.

(4.2.7) Establish criteria for nominating and selecting administrators, and provide management training programmes to public health and hospital administrators. It is particularly necessary to develop the personal capabilities and teamwork of hospital administrators.

(4.2.8) Encourage private business enterprises to take a role in the public health services, especially by producing personnel in specific branches of public health. Rules and regulations that hinder participation by private organizations will be reviewed.

(4.3) Improve the administrative mechanisms and systems of development to facilitate health promotion, as follows:

(4.3.1) Establish a central organization or national public health committee to ensure that different government agencies and both government and private agencies implement programmes along compatible lines.

(4.3.2) Revise laws, rules and regulations on the development of public health whether they are the direct responsibility of the Ministry of Public Health or the joint responsibility of the Ministry of Public Health and other ministries. The revisions will ensure conformity with health promotion policies and measures in the Sixth Plan, for example, laws and regulations on occupational health and the environment.

(4.3.3) Formulate a master plan and annual implementation plans for activities which involve several implementing agencies. This will clarify the role and responsibility of each agency and avoid duplicating work in, for instance, occupational health, medicinal plants development, clean water supplies, sanitation and the medical services system for Bangkok and the vicinity provinces.

(4.3.4) Establish a training centre and network for developing administrative and operational personnel especially at the district and sub-district levels.

(4.3.5) Develop technology and systems for collecting, analysing and interpreting data and using public health and drug information for planning, management, monitoring and evaluation work.

3.3 Work Plan for Spiritual and Cultural Development

(1) Objective

To promote the participation of all parties in society in spiritual development and raise the level of awareness of communal responsibility, diligence, self-reliance with dignity, work cooperation and cultivation and conservation of the national identity and culture. These are the foundations for the preservation of unity, love, patriotism, peace and progress for the people, society and the nation.

(2) Targets

(2.1) Use religious teaching as the main foundation for spiritual development. The 4 ethical principles of His Majesty the King, the 5 basic values and the subduing of vices will be stressed as guidelines for living and working efficiently, which will lead towards improvement in the quality of life.

(2.2) Promote villages free of vice, peaceful and prosperous in material and spiritual terms in urban and rural areas.

(2.3) Conserve, restore and renovate important ancient monuments as well as revive Thai traditions, culture, and identity at the national and local levels.

(3) Guidelines

(3.1) Emphasize teaching morals, ethics and Thai values which will facilitate national development.

(3.2) Promote the study, dissemination and practice of religion.

(3.3) Revive, conserve and develop national traditions and culture in order to maintain the Thai way of life.

(4) Measures

To achieve the foregoing targets and policy, the following measures are specified:

(4.1) Organize workshops, and incorporate in all formal and non-formal training curricula, including curricula for training education administrators, topics on ethics and values related to spiritual development. Ethics and values to be emphasized are frugality, economy, patriotism, self-reliance, diligence, the sense of responsibility, discipline, obedience to the law and the sense of duty to the nation, the religion and the monarchy.

(4.2) Relevant government and private agencies will provide services in spiritual development to families, including the elderly, to promote warmth and security within the families.

(4.3) Government agencies, social institutions, concerned agencies and the leaders of various groups will cooperate in disseminating information on spiritual and cultural development through all kinds of media.

(4.4) Encourage religious centres to become centres for the spiritual and cultural development of the communities. Monks, priests and other religious leaders will lead training activities. Improvement and decentralization of the administration of Buddhist monks will be encouraged to allow for flexibility and facilitate education and the dissemination of religious teachings and their practice by the monks. Religious education for monks and novices will be promoted at all levels and the activities of Buddhist preaching monks will be expanded. Close cooperation between homes, religious centres and schools will also be promoted.

(4.5) Concerned agencies, for example, the Ministry of Education, Civil Service Commission, National Council of Social Welfare and National Council of Women, will produce more personnel and monks specializing in spiritual and moral development.

(4.6) All ministries, departments and state enterprises will implement training programmes on spiritual development for employees at all levels, especially for administrators and those who are in direct contact with the public, by coordinating with government agencies specializing in the preparation of curricula, techniques and training personnel. Ways of rewarding institutions and individuals practising spiritual development in accordance with religious teachings will be identified.

(4.7) The government and private sectors, communities and families will coordinate and share responsibility in promoting spiritual development, providing religious teaching and preserving and developing cultural objects.

(4.8) Improve and expand national cultural education in provincial regions. Training opportunities will be given to the out-of-school population.

(4.9) Preserve and maintain ancient monuments, art objects and antiquities.

(4.10) Relevant agencies and higher education institutions will organize cultural exchange programmes between different regions in the country and with other countries to increase the understanding of people in the various regions and localities.

(4.11) Formulate a spiritual and cultural development plan linking long-term, short-term, national and local plans in a systematic manner. The administration of spiritual and cultural development will be decentralized to the provincial regions and manpower and other resources of the government and international agencies will be mobilized.

(4.12) Strengthen and cultivate respect for the wisdom and experience of elders which can be used to benefit the family and the society.

3.4 Work Plan for Labour Administration and Development

(1) Objectives

(1.1) To reduce the problems of unemployment and the discrepancy between labour force supply and the requirements of the labour market.

(1.2) To improve the skills of the labour force in line with the requirements of the labour market, and increase productivity and the opportunities for career progress.

(1.3) To promote job security in the employment system, safety in working conditions and the health of the labour force; to improve and develop efficiency in the labour administration and mechanisms; and to promote and develop the activities of professional groups.

(2) Targets

(2.1) Help workers seeking employment or a change of employment find jobs suitable to their knowledge, competence and interest.

(2.2) Promote exports of the Thai labour force, but at the same time ensure their security and avoid shortages of high calibre personnel.

(2.3) Teach knowledge and skills that correspond to labour market demand and improve productivity.

(2.4) Provide security in the employment system, proper working conditions and safety, and promote the health of the labour force. Understanding and cooperation between employers and employees will be promoted in all economic sectors.

(2.5) Review the minimum wage periodically and adjust it according to changes in socio-economic conditions and the cost of living.

(3) Guidelines

(3.1) Promote self-employment, improve efficiency in the domestic labour market and widen the international market for Thai labour.

(3.2) Develop labour skills that correspond to labour market demand and improve productivity.

(3.3) Develop the employment system to ensure security and safe working conditions that support economic and social development and facilitate more employment. Working conditions, the health of the labour force and policy on salaries, wages and compensation will be adjusted in line with labour productivity improvements, economic conditions and the cost of living.

(3.4) Promote and develop the activities of occupational groups and professional associations to enable them to extend the dissemination of technology related to their occupations and upgrade professional service capabilities to the standard of international firms.

(4) Measures

(4.1) To promote self-employment in an integrated manner:

- Provide vocational education and training as required by the labour market and the economy. Practical skills and essential supporting courses will be emphasized. Financial support and marketing assistance will be sought from financial institutions.

- Campaign for a change in attitudes and values that would recognize the need for and importance of self-employment.

- Eliminate the problems and obstacles by improving laws, measures and operational guidelines in order to facilitate self-employment.

- Promote subcontracting to labour in the urban and rural areas.

(4.2) To encourage the international employment of Thai labour:

- Implement diplomatic policy and strengthen relations, understanding and cooperation with countries that do or could employ Thai labour.

- Improve the system for managing Thai labour abroad in order that assistance and immediate solutions to problems may be provided. Information and analyses of changes in the labour market will be distributed efficiently.

- Support the expansion of the labour market to regions other than the Middle East, for example, to Europe, America and Asia.

- Promote the labour and language skills necessary to respond to changes in the labour market.

- Test and certify skill levels and register skilled labour to facilitate labour exports.

- Facilitate the export of labour and eliminate or minimize obstacles to such exports.

- Reduce the cost of exporting labour and the expenses to be absorbed by the labour force. For instance, brokerage fees exceeding those stipulated by law will be reduced and loans will be provided through the organized instead of through the unorganized money market.

- Monitor placement services, and arrest and punish those found to be in breach of the Employment and Labour Protection Act.

- Disseminate information on the international labour market, including news, warnings of deceptive practices and lists of legitimate firms, to villages where labourers are being employed abroad.

- Formulate plans to provide for workers who will return once the demand for labour outside the country decreases.

(4.3) To develop a more efficient labour information system and labour recruitment system:

- Improve the efficiency of labour recruitment in Bangkok and in other regions.

- Improve the labour information system to ensure efficient and extensive dissemination of information on, for instance, sources of employment, positions, qualifications, skills, salaries and wages.

- Expand occupational training and testing, and establish skill standards and labour registration.

(4.4) To prevent foreigners from replacing Thai workers:

- Prevent and eliminate the unnecessary employment of foreigners in all companies whether or not granted investment promotion.

- Increase the monitoring of foreigners working in Thailand, and arrest and punish those found to be working without permission.

- Require and ensure that foreign companies operating in Thailand transfer technology to the Thai labour force effectively.

(4.5) To promote a labour relations system:

– Revise the Labour Act to correspond more to the changing economic and social conditions. Agreements on operational guidelines for the promotion of labour relations will be adjusted.

– Promote the development of a bi-partite system at the work place. Peaceful coexistence and security will be emphasized through the promotion of understanding, cooperation and mutual respect.

– Support the establishment of employer and employee organizations which aim to promote good labour relations.

– Encourage both employer and employee organizations to retain professional and experienced labour relations specialists as consultants. In the event of disputes and conflicts between employers and employees, each party will then designate professional labour relations specialists as their representatives at the negotiations.

– Establish regional labour courts in the north and south.

– Provide training, public relations and information to strengthen organizations, positive attitudes, creativity, efficiency in administration, legal knowledge and compliance and understanding of economic and social conditions and national security.

– Disseminate information through various mass media on labour relations and the negative impact of a deficient labour relations system.

(4.6) To promote effective protection of the labour force:

– Examine, review, improve and revise the laws, regulations and practice of protection and safety for the whole labour force, including children and women, in keeping with the economic and social condition of the country.

– Improve the system and efficiency of inspection so that labour protection will be conducted with greater flexibility and wider coverage. Those who fail to comply with the laws and regulations will be punished.

– Use medical and other knowledge to safeguard the health of the labour force and improve the working environment. Campaign to stimulate awareness and a sense of responsibility among all parties about aspects of work safety including the dangers, preventive measures, laws and regulations involved.

(4.7) To improve the employment conditions of child and female labour:

— Ensure that children receive an education up to Grade 6 in accordance with the law on compulsory education. The minimum working age for children will be raised and more occupations prohibited to children will be identified. Welfare, housing, working hours, education and training opportunities for child labour all need to be improved.

— Eliminate inequality of opportunity and the problems and obstacles to employment. Eradicate discrimination against female labour in terms of wages, working conditions, training and skills development. Improve assistance to females who are forced or misled into working against their will.

(4.8) To promote and develop occupational knowledge and standards:

— Accelerate the development of knowledge, occupational technology and technology transfer through occupational groups, professional associations and educational institutions in order to improve efficiency in occupations and self-employment.

— Professional committees and associations will together provide information on increased prospects for occupations, set up standards for each occupational group, promote occupational ethics, establish a system to certify occupational standards and provide certificates for different types and levels of occupation accordingly.

(4.9) Expand the Workmen's Compensation Fund to cover more localities, more types of business and more forms of assistance.

(4.10) Develop an information system on human resources and employment for the purpose of planning both long-term and short-term development policy on human resources and labour and for international cooperation and coordination. To accomplish this, a central information data coordinating unit should be set up within a suitable organization.

CHAPTER 4

PLAN FOR PROMOTING PEACE IN SOCIETY

RATIONALE

1. Peace in society has an impact on national development. A country will never prosper without safety and security of life and property and a degree of social consciousness where people help each other.

2. Thai society has become increasingly materialistic. With the gap between the incomes of different groups widening and urbanization continuing, personal attachments within the community slacken and the structure of the family is changed. Everybody is engaged in the struggle for a higher standard of living. The migration from rural to urban areas is evidence of this and itself leads to other social problems such as slums, narcotics and more serious crime. In addition, technological developments bring an increase in accidental deaths and injuries. Assistance needs to be given to people who suffer from the disadvantage of earning insufficient income for everyday life, to the disabled and to victims of public disasters.

3. The foregoing problems result from changes in the way of life and in social institutions. To bring about peace in society, there is a need to develop a sense of security with the emphasis on the safety of life and property. A system for preventing accidents in coordination with other developments, more efficient operation of legal processes and suitable social welfare systems should all be developed.

PLAN FOR PROMOTING PEACE IN SOCIETY

4. Two work plans are specified for solving the foregoing problems in accordance with the desire to promote peace. They are the Work Plan for Safety of Life and Property and the Work Plan for Social Welfare.

4.1 Work Plan for Safety of Life and Property

(1) Objective

To promote the security of life and property by emphasizing crime and accident prevention and increasing efficiency in the legal process.

(2) Targets

(2.1) Reduce the crime rate.

(2.2) Reduce the length of time taken by each stage of the legal process.

(2.3) Reduce the rate of crime committed by former prisoners.

(2.4) Reduce the frequency of deaths and injuries caused by accidents on road and waterways, traffic at home, at work and in public places to a rate that would not hamper social and economic development efforts.

(3) Guideline

Increase the efficiency of crime reduction, accident prevention and legal processes. Emphasis will be placed on crime prevention and suppression, the coordination of all parties to prevent accidents and improvements in the administration of the judicial system.

(4) Measures

(4.1) Use community relations as an instrument in crime prevention and in establishing contacts between the police and the people. This two-way relationship will create understanding in matters of crime prevention and suppression and cooperation in solving crime problems. Personnel will be developed to facilitate this measure.

(4.2) Seek community and private sector cooperation in educating the public and creating mutual understanding and cooperation in crime prevention and suppression and self-defence. In addition, people will be encouraged to combat sexual offences, prostitution and the use of narcotics in slums, schools and government offices. Communities and families should participate in rehabilitation programmes for drug addicts.

(4.3) Seek public support to help former prisoners and criminals lead a normal life in society and avoid further crime.

(4.4) Support formal and non-formal education programmes that disseminate information on accidents. The objective is to create an awareness of safety among the people, thus enabling them to protect themselves and help others. Government agencies will be encouraged to participate.

(4.5) Support the coordination of government offices to facilitate accident prevention and continued follow-up activities. Close cooperation between the government and private sectors will also be encouraged.

(4.6) Improve efficiency in the administration of justice. Every stage in the legal process should be coordinated. Emphasis will be placed on analysing procedures to make them faster, more consistent and more just.

(4.7) Use the probation system of the Ministry of Justice and the Department of Corrections to lower density in penal institutions and reduce the government's burden in controlling criminals and prisoners. Communities and families should participate in the spiritual and behavioural reform of criminals and prisoners.

(4.8) Expand the coverage of juvenile courts to provincial regions to reform delinquent children and youth and enable them to become good citizens. The scope of work of juvenile courts will be expanded to include family crimes.

4.2 Work Plan for Social Welfare

(1) Objective

To enable people who are disadvantaged or victims of misfortune to help themselves and thus solve and prevent certain social problems, taking into account national financial constraints.

(2) Target

Increase the capability of people who are disadvantaged or victims of misfortune to support themselves.

(3) Guidelines

(3.1) Accelerate improvements in the social welfare system emphasizing participation by all concerned parties including families, communities and private organizations.

(3.2) Organize a system for coordinating the government and private sectors to facilitate the work.

(4) Measures

(4.1) Develop and promote lasting and sustained family security. Concerned agencies, such as the Office of the Prime Minister, Ministry of Interior and Ministry of Education, should coordinate and organize activities which will promote family security. Campaigns and public relations efforts will focus on parental duties, roles and responsibilities to the family and to the elderly and in marriage counselling. Schools, youth centres, community centres and parent-teacher associations should organize activities for parents to meet teachers regularly so that close relations can be established between the home, the school and the community.

(4.2) Develop the foundations of social security by endeavouring to provide an assurance of security of life for the people. At present there are some social security programmes such as the Workmen's Compensation Fund of the Department of Labour for protecting labour from accidents at work and the health cards and free medical care of the Ministry of Public Health. As only a certain sector of the population benefit from these programmes, services should be expanded by the Department of Labour, Public Relations Department, Ministry of Interior, Ministry of Public Health and other agencies. Initially, feasible and essential programmes will be instituted with all concerned parties participating by sharing expenses.

(4.3) Assist disadvantaged people in occupational training in line with labour market requirements to enable them to lead a reasonable life. Loans may be provided to facilitate occupations and marketing.

(4.4) Provide information that gives individuals, communities and institutions a correct understanding of social welfare concepts.

(4.5) Improve coordination between the government sector and private organizations by establishing the National Commission of Social Welfare. The commission will have the responsibility to institute policy and to coordinate and control activities in accordance with national economic and social development plan.

(4.6) Support the consolidation of private organizations working on similar social welfare activities. This will enable joint government and private sector committees, especially the National Commission of Social Welfare, to operate efficiently.

CHAPTER 5

PLAN FOR IMPROVING SOCIAL DEVELOPMENT MECHANISMS

RATIONALE

1. At present the government has prime responsibility for providing social services and solving social problems. The role and level of involvement of the private sector and the general public is limited. During the Sixth Plan period, it is expected that the national monetary and fiscal condition will prevent the government from continuing its previous policy of increasing the budget allocation for expanding social services and solving social problems. At the same time, growth in per capita income and population size will give rise to increased demand for social services. Consequently, if the quality and efficiency of social services are to be improved and the needs of the growing population are to be met, it is necessary to improve social development systems and mechanisms. Rather than taking sole responsibility for providing and administering social services, the government should take a supporting role. As much as possible, the private sector, communities and individuals should participate in and implement social service activities. The participation of women in social development activities will be taken into consideration. Two work plans are specified: the Work Plan for Adjusting the Role of the Government and the Work Plan for Promoting Public Participation.

WORK PLAN FOR ADJUSTING THE ROLE OF THE GOVERNMENT

2. Details of the Work Plan for Adjusting the Role of the Government are as follows:

2.1 Objective

To adjust the government's role to conform with the capability and financial condition of the country; and to clarify the division of responsibility between the government and private sectors and their roles in social development activities.

2.2 Guideline

Adjust the government's role from that of sole provider and administrator of social service activities to that of supporter of private sector, community and individual implementation. The government will undertake implementation only when necessary.

2.3 Measures

To achieve the stated objective, the following measures will be implemented:

(1) Review and clarify the role of the government. The government's role as a provider of social services will be reduced and the following roles will be stressed: enforcing the law, regulations and justice; expediting and providing public safety; and providing technical know-how and improving the quality and efficiency of existing services.

(2) Support increased private enterprise involvement in the provision of such social services as education, health and sports. This will supplement government involvement, which will be withdrawn gradually, and satisfy the needs of the increasing population. Appropriate investment policies and measures and pricing policy will be used as incentives, while the existing units for government and private sector cooperation will play a more active role.

(3) Increase the capability of government health and educational units to be self-reliant especially at the higher education level. The policy on setting service fees will be revised to ensure fairness and that costs are covered. Such measures will encourage private sector investment in the long run.

(4) Review and revise laws and regulations which hinder private sector participation in the fields of education and health in particular.

(5) Support private sector groupings which will ensure coordination with the government and among members of the groupings so that all parties will work towards the same targets.

(6) Support the foundation of a central organization for population, social and cultural development. This organization will consist of a coordinating committee responsible for planning policy and monitoring and evaluating implemented activities.

WORK PLAN FOR PROMOTING PUBLIC PARTICIPATION

3. Details of the Work Plan for Promoting Public Participation are as follows:

3.1 Objective

To promote participation by the people, especially at the community and family levels, in order to prevent and solve social problems and encourage self-reliance in the long run.

3.2 Guideline

Promote greater participation by the people, especially at the community and family levels, in preventing and solving the social problems of the country.

3.3 Measures

To achieve the above objective and guideline, the following measures will be implemented:

(1) Conduct widespread and continuous campaigns to persuade and convince government agencies and the public of their responsibility in helping to prevent and solve social problems relating to such issues as the safety of life and property. If the responsibility was left solely with the government, it would not be possible to solve these problems.

(2) Improve the quality and efficiency of local organizations in rural areas. Self-initiated community organizations in urban areas, especially slums, will be encouraged. These organizations will harness communal support to prevent and solve social problems within each community and act as the core for coordination with government agencies.

(3) Encourage social institutions, especially families, to recognize their role and responsibility in preventing and solving social problems by teaching children morality and discipline, providing health care for the elderly and other family members, etc.

(4) Promote the participatory role of women in decision-making at the family, community and national levels.

(5) Improve the systems and mechanisms for administering development work in rural areas in particular, as specified in the Programme for Rural Development.

PROGRAMME 3
DEVELOPMENT OF NATURAL RESOURCES AND THE ENVIRONMENT

DEVELOPMENT OF NATURAL RESOURCES AND THE ENVIRONMENT

CHAPTER 1

INTRODUCTION

1. Thailand used to have abundant natural resources which were used extensively to increase productivity and alleviate poverty. Further demands on the country's natural resources resulted from the rapid growth of the population from 26.4 million in 1961 to 51.7 million in 1985. The bulk of the natural resources is now depleted or deteriorated, and environmental problems have emerged. There is consequently less prospect of economic development being based on natural resources than was once the case. In the future, economic development will need to concentrate on improving and increasing efficiency in the use of the remaining natural resources for the greatest benefit. The conflict between utilizing and conserving national resources must be contained in order to facilitate both further use and future conservation of the environment. The Sixth Plan, therefore, needs to lay out a systematic plan for developing natural resources and the environment.

FEWER OPPORTUNITIES IN ECONOMIC DEVELOPMENT BASED ON NATURAL RESOURCES

2. The acceleration of economic expansion evident from previous national development plans was the result of several factors: one of the most important was that the basis and main production input of past development were the abundant natural resources available at that time. Sectors of the economy directly based on natural resources — that is, agriculture, mining and quarrying — accounted for approximately 25 per cent of gross national product and 49 per cent of total export value in 1985 and 70 per cent of total employment in the country in 1984.

3. Throughout the period, however, the structure and role of these sectors have been growing at reduced rates. The agriculture, mining and quarrying sectors have decreased from a 39.5 per cent share of GNP in the First Plan period to a 25.1 per cent share during the Fifth Plan. Although employment in these sectors increased by 4 million from 13 million in 1971 to 17 million in 1984, the proportion of employment accounted for by agriculture, mining and quarrying decreased from 79 per cent to 70 per cent.

4. The country's abundant natural resources have been extensively applied to national development. While accelerating economic growth on the one hand, a decrease in natural resources has resulted on the other. What is now left offers fewer prospects for economic development. Deriving benefits from natural resources without considering their limited availability as has been done up to now, has led not only to the depletion of various kinds of natural resources, but also to the problems of conflict and pollution. These problems can be seen in the following summaries. Details and key facts are presented in Chapter 2.

4.1 Land and forests. Use of land for agriculture has expanded rapidly because of attempts to increase agricultural production by trespassing or opening up new land. This has given rise to the problem of forest land encroachment and the problem of land ownership. At present 33 million rai of national reserve area has been encroached upon, representing 25.8 per cent of total reserves. There are no title deeds for approximately 50 per cent of agricultural land, which creates uncertainty regarding ownership on the part of the farmers. This ownership problem has also impeded the growth of efficiency in land use because there is no incentive for farmers to improve and maintain the land. As a result, the crop yield tends to decrease. These factors, together with an increase in population, contribute to additional encroachment on forest land for cultivation purposes, which, in turn, leads to further destruction of forest areas and more land ownership problems.

4.2 Water resources. There have been extensive investments in the development of large water resources in major river basins, including construction of general-purpose reservoirs for water supply, irrigation and electricity generation. At present there are altogether 12 large dams in the vicinity of important rivers throughout the country. Further investments in the construction of large general-purpose dams appear less feasible because all the river basins suitable for large dam development have already been explored and developed. Moreover, the declining trend in the prices of agricultural produce may cancel out returns on investment from developing large water resources for irrigation. The opportunity for developing water resources for agricultural purposes in the Sixth Plan period, therefore, lies in promoting small surface and underground water resources to be used both for agriculture and consumption. It will also be necessary to consider using these water resources for other purposes, including flood prevention.

4.3 Mineral resources. Large and abundant mineral deposits have been widely developed for domestic use and for export. Major developments have been in tin in the south, tungsten at Doi Ngom in Phrae province and Khao Soon in Nakhon Si Thammarat province, zinc in Tak province and natural gas in the Gulf of Thailand. Such large and abundant mineral resources are now scarce. In addition, mining of those deposits which remain is itself destroying the mineral resources; for example, in the case of offshore tin mining in the south, only 30 per cent of the deposits can be mined, but the process creates marine pollution problems.

4.4 Fisheries. There have been increases in recent years in the development of large machinery and equipment. The number of trawlers has increased five-fold from 1,872 in 1967 to 9,390 in 1983. As a result, marine resources are caught at a faster rate than they can be replenished by natural propagation, while their natural habitat in the sea is being destroyed. The im-

position of 200-nautical-mile economic territorial waters has reduced fishing grounds which has meant further difficulties in increasing fishery production.

4.5 Environment. Natural resources and the elements which surround us, such as the forests, water sources and air, are subjected to use by the people; and they are also misused by people as receptacles for waste. Use of such resources at a higher rate than natural replenishment, non-integration of resource use with the common benefit and disposal of waste in quantities greater than the environment's absorption capacity all lead to a general deterioration of natural resources and the environment and the creation of pollution. For instance, waste disposal into the Chao Phraya River has reduced the level of dissolved oxygen in the water in and around the Bangkok port area to almost 0 milligram per litre, which is lower than the consumption standard.

RELATION BETWEEN NATURAL RESOURCES AND IMPORTANT ECONOMIC INDICATORS

5. Natural resources are related to economic indicators in 3 ways: the level of production, the problem of poverty and the size of the population. Natural resources are important in increasing production output and alleviating poverty. At the same time, the rate of use of natural resources increases in response to the pressure of population growth.

PRODUCTION EFFICIENCY

6. In the past, the abundant natural resources were used to expand production output by increasing the efficiency of production. The development of water resources for irrigation is evidence of this. Thailand invested about 146,416 million baht up to 1983 in developing large-scale and medium-scale water resources. These can be classified by project size as follows:

Table 3.1
Water resource development projects for irrigation

Size of project	Number of projects
Large-scale projects (investment more than 200 million baht)	62
Medium-scale projects (investment less than 200 million baht)	508
Small-scale projects (investment less than 4 million baht)	3,417

7. The result of such water resource development has been a substantial increase in agricultural productivity. Farmers have been able to increase yields from rice and other crops in irrigated areas, which cover 21.656 million rai, or 17 per cent, of all cultivated land. In some areas with complete irrigation systems, rice and other crops have been produced more than once per year with increased yields per rai. It can be said that since 1975 the increased rice yield has, in practice, come primarily from irrigated land.

Table 3.2
Average rice yield per rai

	Yield per rai (bushels)
Rice yield in farming season outside irrigated area	16
Rice yield in farming season within irrigated area	64
Rice yield outside farming season within irrigated area	68

Apart from increasing the rice yield, as shown above, irrigation systems also give opportunities to diversify crop types in more irrigated areas. Such diversification, however, has not been well monitored, and it will be necessary to address this shortcoming.

NATURAL RESOURCES AND THE ALLEVIATION OF POVERTY

8. In the past natural resources were abundant, and the opportunities for people to utilize natural resources to earn a living or increase their income were plentiful. Hence, the standard of living of most of the population gradually increased. Today, with the depletion and deterioration of all kinds of natural resources, the opportunities to alleviate poverty are not the same as they once were. An example can be seen in the case of the people encroaching on the 740,000-rai national forest reserve of Khao Phu Luang in Pak Chong and Pak Thong Chai districts, Nakhon Ratchasima province. At first these people were reasonably well off due to the richness of the soil in that area. After several years of constant use, however, the land's fertility is now rapidly diminishing. Without any replenishment the top soil has been eroded and yield per rai has steadily declined. Environmental, social and economic problems soon follow. Thus not only is the opportunity to alleviate poverty through natural resources lessened, but in some areas natural resource deterioration may lead to more acute poverty problems for the people.

PRESSURES FROM INCREASED POPULATION

9. Over the past 25 years, the population has almost doubled from 26.4 million in 1961 to 51.7 million in 1985, representing an average growth rate of 2.7 per cent per annum. This rapid increase has placed a higher demand on those natural resources that are basic to livelihood. While natural resource supply was still sufficient to satisfy demand, the problem was not so evident; but now that natural resources are more scarce, in a deteriorating condition and affected by pollution, many aspects of the problem are more evident: in particular, the competition for access to natural resources by various groups, conservation of natural resources for future use, etc. These issues have to be tackled quickly to pave the way for a plan that will develop natural resources seriously and systematically.

SUMMARY

10. In summary, recent years have seen natural resources used extensively in economic development but without proper management and without adequate consideration of long-term repercussions. Natural resources have thus been left in a degenerate and deteriorating state, which has become an issue in current economic development. The Sixth Plan is the first plan to provide for developing and managing the remaining natural resources by taking into account the type of each resource and economic development in various other areas. However before the important matter of guidelines for developing natural resources over the next 5 years is considered, Chapters 2 and 3 describe and analyse the problems.

CHAPTER 2

DESCRIPTION OF THE PROBLEMS

1. In order that the right guidelines are laid down for developing national resources and the environment over the next 5 years, Chapter 2 describes the problems faced by each type of natural resource. Some of these problems are common to all resources while others are specific to certain kinds.

LAND RESOURCES

Facts

2. The total land area of Thailand is 320.7 million rai which can be classified according to suitability for agriculture as follows:

Table 3.3
Thailand land area
classified by suitability for agriculture

Classification of land	Million rai
Land suitable for agriculture	168.6
Land not suitable for agriculture unless appropriate measures for specific crop cultivation are provided	49.8
Land not suitable for agriculture	99.8
Land for water resources	2.5
Total	320.7

3. Land policy has been in existence since the period of the First Plan. The government of that time announced a policy on land use and land ownership in 1961. Land types were classified broadly by dividing the total area of the country into 2 zones:

Zone 1: Agricultural, residential and other areas of about 160.35 million rai, or 50 per cent of total area;

Zone 2: Forest area of about 160.35 million rai, or 50 per cent of total area. About 128 million rai have already been proclaimed national reserves, national parks, wild-life sanctuaries and so on, by the Royal Forestry Department. The 30 million rai or so which have not been proclaimed national reserve are known as designated forest reserve.

4. In Zone 1, the area for agricultural, residential and other purposes, the 1961 policy allotted about 125 million rai for private holdings and 35.35 million rai for public property, state enterprises, religious organizations, crown property and military purposes. If the situation of land use in the country as a whole is considered, however, it will be seen that about 146.9 million rai, or 45.8 per cent of the total area, is being used for agricultural purposes. Of this, 84 million rai is used for paddy fields, 48 million rai for field crops, 0.9 million rai for horticulture and 14 million rai for orchards and plantations. This indicates that much more land is being used for agriculture than was allowed for in the 1961 policy, with the extra share taken up by agriculture coming from the portion assigned to forests and public use.

5. In Zone 2, the area for forests, the 1961 policy set aside 160.35 million rai, but surveys by the Office of Agricultural Economics on the state of total land holdings in Thailand revealed that the forest area had decreased from 131 million rai, or 40.8 per cent of total area, in 1975 to 96 million rai, or 29.9 per cent, in 1984. Part of the forest land used for agricultural purposes came from the 128 million rai of national reserves. It is estimated that 33 million rai, or 25.8 per cent of the total national reserve area, has been encroached upon and cultivated by people. The 30 million rai of designated forest reserve has been similarly occupied, but a survey on the actual extent of land encroachment in this sector has yet to be undertaken.

DESCRIPTION OF THE PROBLEMS

6. In Zone 1 (agricultural, residential and other areas), there are 2 main problems in developing land resources:

6.1 Problem of land ownership. At present the amount of agricultural land with title deeds already issued is very small. There are thus 2 different types of land ownership problems: cases with ownership documents which are not as complete as title deeds; and, secondly, cases where no documents exist at all. The facts are as follows:

(1) An area of about 65.6 million rai has been legitimately acquired by private parties, but their ownership documents are only types of land use certificate (Nor Sor 3 or Nor Sor 3 Gor). Such ownership documents are not as complete and secure as title deeds, and it is difficult for the farmers to use them as collateral for loans.

(2) There are no ownership documents at all for an area of about 66.3 million rai. This includes state as well as privately occupied land with documents which are only notifications of land possession (Sor Gor 1). In view of this prevailing situation, there is no incentive for the people occupying the land to improve and nurture the soil. In some cases where there has been notification of land ownership, the land has been left unattended and is not being used at all.

6.2 Problem of inefficient land use. There are 2 principal ways in which land is used inefficiently. First, of the 146.9 million rai of agricultural land, about 33.7 million rai, or 22.9 per cent, is being used for unsuitable purposes. The details are as follows:

Table 3.4
Unsuitable land use

Land use	Million rai
Rice farming on unsuitable land	13.48
Crop farming on unsuitable land	14.58
Plantations on unsuitable land	1.7
Crop farming on a 35 degree gradient	3.9

Secondly, in some cases, land suitable for agriculture is used for other purposes, such as residences and industry.

7. In addition, there are problems concerning renting land and the extent of individual holdings; however, these problems are less critical than the preceding problems of land ownership and inefficient land use. The government has been trying to solve the problems since the First Plan by allotting subsistence land to people. Altogether 32.9 million rai of forest land have been set aside for this purpose, of which 16.7 million rai, or 50.8 per cent, have already been assigned. Land reform has also been organized. Zones for land reform covering 9.8 million rai were designated between 1975 and 1985. To date 2 million rai, or 28.7 per cent of the total land reform area, have been allotted to 90,649 farming families.

8. In Zone 2 (forest area), people encroaching upon national forest reserve seeking to earn a living have neither ownership nor security in possessing the land. These people are mostly poor and are unable or lack the incentive to improve or develop the land. This has led to deterioration in the condition of the land and to different types of soil problem, such as the spread of brackish soil and so forth. Encroachment on steep slopes has caused soil erosion and considerable loss of top soil.

RESULTS OF PAST PERFORMANCE

9. Guidelines for solving the basic problems were laid down in previous plans, especially the Fifth Plan. Activities to be undertaken were thus aimed at completing or continuing work that had already been started. Important government projects presently being implemented are as follows:

(1) A 20-year project to develop the Department of Lands and accelerate the issue of title deeds throughout the country, scheduled to last from 1985 to 2004.

(2) A project to formulate a national land use plan to ensure that land resources are developed, used efficiently, improved and conserved.

(3) A land reform project to enable landless and tenant farmers to have their own land for earning their living.

(4) A project to accelerate land allocation to self-help settlements and cooperatives, scheduled for completion in 1991.

(5) A project to issue temporary possession documents to people encroaching upon national reserve areas, started in 1982.

FOREST RESOURCES

Facts

10. Forest areas used to constitute half of the total area of the country. Forestry legislation defines a forest as a piece of land which has not been claimed legally by any person. According to such legislation, forest areas are the sole property of the state; it is the government's responsibility to manage all forests. However, the total area involved is too large for the government to cope, and supervision of forest concessionaires is not sufficiently strict. Encroachment on forest land cannot be prevented effectively. In the recent past, the development of forest resources has adhered to the foregoing guidelines with the emphasis on control and prevention measures for forest areas. As a result, the economic role of forests has been neglected, and the people have had no chance to participate in forest development.

Description of the problems

11. The forest area has depleted rapidly from 171 million rai, representing 53 per cent the total land area of the country, in 1961 to 93.1 million rai, or 29.05 per cent, in 1985. During

this 25-year period, the forest area was decreasing at an average annual rate of 3.2 million rai. Reforestation, meanwhile, has achieved the replanting of a mere 3 million rai of land in the 79 years from 1906 to 1985, or an average of 0.04 million rai per annum.

12. The value of forest production has decreased from 1.6 per cent of the gross national product in 1973 to 0.8 per cent in 1985 — a decrease of 50 per cent in 11 years. This was due to a decline in teak and kraya-loei production in the concession areas, falling from 3.3 million cubic metres in 1977 to 1.8 million cubic metres in 1985.

13. The export and import values of wood have shifted a great deal. The export value decreased from 1,076 million baht in 1976 to 281 million baht in 1985, or to a quarter of the 1976 value in 9 years. Rubberwood exports accounted for 30 per cent of total wood export value. Import value, on the other hand, increased 23 times in 13 years: from 91 million baht in 1972 to 2,143 million baht in 1985. This was due to a 52 per cent increase in demand for all kinds of wood, from 58 million cubic metres in 1970 to 88 million cubic metres in 1985, while concession area products could supply only 3.1 per cent of total demand.

Results of past performance

14. In the First Plan a target was set to preserve 50 per cent of the total land area as forest land. The target was lowered to 40 per cent in the Fourth Plan in keeping with the realities of the situation. Currently, the forest area is well below the 40 per cent figure owing to the reasons described previously.

15. The plan to encourage the private sector to undertake afforestation was formulated in the First Plan, but the results have still not been very successful. What has been accomplished by the private sector has been through voluntary work, a form of public cooperation offered gratis.

16. The government has been able to conserve 28.9 million rai of forest land, or 9 per cent of the total land area, in the form of national parks and wild-life sanctuaries.

WATER RESOURCES

Facts

17. Water is a vital natural resource in national development, and water resource development during previous plan periods has generally concentrated on general-purpose projects. Natural conditions have been altered to allow water to be channelled for simultaneous use in agriculture, domestic consumption, electricity generation, flood control, transport and communications and salinity control.

18. Water resources used to be sufficiently abundant to satisfy the demand for them, and water resource development rendered satisfactory economic benefits. The development of water resources in Thailand was thus able to make appreciable progress. At present there are 12 large general-purpose dams around the country. A total of 21,656 million rai of land is irrigated by 570 large and medium-sized projects and 3,417 small projects. But future development of water resources for irrigation will be increasingly difficult because most of the large, high-yield water resources have already been developed and there are few left. Moreover the conflict between developing and conserving is growing while the prices of agricultural commodities are on the decline. As a result, the economic benefit derived from large irrigation projects is extremely low – so low that the government cannot support them extensively – and specific areas need to be selected. The government will place more emphasis on maintaining existing irrigation systems and developing the full agricultural cycle.

Description of the problems

19. Problems in the development of water resources at present may be summarized as follows:

19.1 Population growth has greatly increased the need to use water for human consumption as well as agriculture. Water shortages, conflicts between different types of user and conflicts between development and conservation needs have resulted. An example of the water shortage problem is found in the area of the basin of the Chao Phraya River and its tributaries which covers 23 million rai of arable land and includes a population of 18.2 million. There are four important dams: Bhumibhol, Sirikit, Kiew Lom and Mae Ngad. The capacity of these dams is 23,484 million cubic metres, but actual storage has been no more than 17,000 million cubic metres per year. About 3.5 million rai of land out of the 10.3 million rai in the irrigable area of basin of the Chao Phraya River can be irrigated during the dry season. Water allocated for irrigation is also needed for other purposes, such as electricity generation, water transport, salinity control and water supply for communities and industries. In years when there is very little water available, the problem of allocating water for different purposes arises.

19.2 Development of large water resource projects has generally been undertaken in appropriate areas, but an efficient management system and suitable extension programme are still needed. Only 15 per cent of the water set aside for agriculture from large irrigation projects can be used, although the full potential is for a 60-70 per cent rate of usage.

19.3 Small water resources have not been developed widely, and the quality of water for consumption is still unacceptable by normal standards of hygiene. It was estimated that, by 1983, 85 per cent of the rural population had benefitted from projects that developed water resources for consumption and that 15 per cent of these would have access to hygienic sources. Moreover, in Bangkok and its environs a great deal of water from artesian wells is used for domestic and industrial consumption. Consequently, the groundwater table has been falling at a rate of 2-4 metres per year, which has caused a high land subsidence rate of 10 centimetres per year in some areas.

Results of past performance

20. During the periods of the Fourth Plan and the Fifth Plan, planning of water resource development was systematic and in stages. The direction was indicated more clearly than for other natural resources. The National Water Resources Committee was set up to formulate policy, make decisions, establish priorities and coordinate the operations of the various government agencies. The Committee on National Rural Development was responsible for developing small water resources, which has helped the government allocate water for rural consumption purposefully and clearly and greatly relieved the problem of water shortages in needy areas.

21. Since the guidelines and targets for developing water resources were determined in the national development plan, and with the support of policy and budget allocations, the development of large-scale water resources has progressed in most of the suitable river basins. Development of water resources in the coming period should thus concentrate on improving efficiency in the projects already invested in, with the emphasis on management and on suitable extension projects that coordinate production, marketing and job creation, and encourage consumers of water to participate in maintenance and management.

FISHERY RESOURCES

Facts

22. Important facts about fishery resources may be summarized as follows:

Table 3.5
Fishery production from 4 aquatic sources

Source of production	Production (per cent)
— Marine catch	87.6
— Coastal cultivation (aquaculture)	5.8
— Freshwater catch	4.5
— Freshwater cultivation (aquaculture)	2.1
Total	100.0

23. These are 2 marine fishery sources in Thai waters: the Gulf of Thailand and the Andaman Sea. These sources are of growing importance because sources outside Thai waters are increasingly restricted by neighbouring countries declaring economic zones.

24. Since 1961, fishing equipment has developed rapidly, especially trawl-nets which are very efficient in catching fish on the sea-bed. Increased use of such equipment raised the marine catch from 0.2 million tons in 1960 to 2.2 million tons in 1977.

25. Although freshwater fishing sources have a narrower production base than marine sources, they are also very important because they are cheap sources of protein for household consumption by the rural population.

Description of the problems

26. The marine catch peaked in 1977 at 2.2 million tons. Subsequently the figure declined gradually to 1.7 million tons in 1981. Although the catch climbed back to 2.2 million tons in 1983, this increase was the result of extending the fishing grounds beyond Thai territorial waters.

27. The fish catch has been decreasing because the natural rate of propagation cannot keep pace with the rate of depletion through fishing. A survey has revealed that the highest rate of propagation, which is found among aquatic species living on the sea-bed, is 750,000 tons per annum. The 1981 catch, however, reached 990,000 tons, or 31 per cent higher than natural reproduction. Trawling time was also found to be 82 per cent higher than is desirable, and the number of trawlers has been increasing rapidly.

28. In freshwater fish sources, production growth is slow because of the limited number of such sources and their poorly maintained condition which leads to further deterioration, shallowness, pollution, etc.

29. Depletion of fishery resources is accelerated by the practice of illegal fishing – using explosives, poisons or discharges of electricity, for instance – and fishing in the spawning season, spawning grounds or the habitat of the small fry.

Results of past performance

30. In fishery development to date, the government has played an important role in the areas of education, research and development, extension, training, data collection, resource administration, quality control, export promotion and the provision of loan services. Meanwhile, the private sector has played its part in expanding fishery activities, productivity and processing. The government actions referred to above were implemented by such responsible agencies as the Department of Fisheries, Fish Marketing Organization, Government Cold Storage Organization, Bank of Agriculture and Agricultural Cooperatives and Royal Irrigation Department.

31. To increase fishery production, the government has emphasized measures that increase efficiency in fishing. Research has been conducted on developing and expanding fishing grounds and disseminating news and information to fishermen, with the aim of expanding fishery produc-

tion into a major source of income. These measures have been very successful. After the 1978 decline in the catch, however, the Fifth Plan initiated certain conservation measures, such as the construction of artificial coral reefs, to provide protection for young, high-value aquatic fauna.

32. Measures for enforcing legislation to control illegal fishing are ineffective, even though more than one government agency is responsible for these enforcement activities.

MINERAL RESOURCES

Facts

33. Mineral resources in Thailand may be divided into two main types: mining-based mineral resources and energy-based mineral resources. During the first half of the Fifth Plan period (1982–1983), the actual rate of growth of mineral resources as a whole slowed to 2.31 per cent per annum for a growth rate of 9.52 per cent per annum during the Fourth Plan period.

34. During the first half of the Fifth Plan period, the actual growth of ore production fell to 6.01 per cent per annum while the growth rate during the Fourth Plan was as high as 9.34 per cent per annum, a decrease which resulted in more than 20,000 people losing their jobs at the mines. At the same time, imports of ores and metal alloys amounted to more than 20,000 million baht each year, and the upward trend indicated continued growth. In the Fourth Plan period, imports of ores exceeded exports by an average of 7,824.95 million baht per annum. The deficit had risen to approximately 12,300 million baht per annum during the first half of the Fifth Plan period, an upward trend which will continue.

35. In regard to energy resources in the form of natural gas and crude oil deposits, exploration activities were expanded during the first half of the Fifth Plan. On the production side, natural gas increased from 130 million cubic feet per day in 1982 to 350 million cubic feet per day in 1985 while crude oil grew from 11,000 barrels per day in the first half of 1984 to 20,000 barrels per day in 1985. But natural gas and crude oil reserves are currently low in proportion to the total energy requirement of the country. If production of natural gas and crude oil is at full capacity in 1991, only 21.36 per cent of the total energy requirement will be satisfied. Moreover unless further successful exploration is carried out, natural gas production will decrease rapidly after 1997. Similarly, crude oil production from current reserves will start to decrease in 1987.

36. As for coal deposits, exploration has discovered more than 1,400 million tons of lignite reserves. This is expected to become the country's largest energy-based mineral resource in the future. Lignite is not only lower in price than oil and natural gas, it is also less costly to develop. Furthermore, the technology required for such development is locally available. Lignite use, however, has been limited to electricity generation; it has yet to be used widely in industry.

Description of the problems

37. From the preceding facts, the problems in developing mineral resources during the Sixth Plan period may be divided into 2 parts: those concerning mining-based mineral resources and those concerning energy-based mineral resources.

37.1 Problems in developing mining-based mineral resources

(1) Low production and exports prevail, and the trend indicates further decline because of the following:

(1.1) Minerals are produced in unprocessed form for export. When the world economy, especially the economies of the industrial countries using minerals as raw materials, becomes stagnant, production in Thailand is directly affected.

(1.2) The structure of mineral resources in Thailand is heavily dependent on a few key minerals, such as tin, tungsten, fluorite, and so on. Whenever there is a change in the trading situation of these minerals, entire mineral resource sectors are affected in the areas of production value, exports and employment.

(1.3) The export market for mineral resources is not diversified and is dependent on a few principal countries, such as the USA, Japan and some European countries.

(1.4) Production of mineral resources has not progressed beyond traditional lines; that is, ores are produced without the intermediate processing that would enable them to become raw materials for local industry or higher-value export items.

(2) Apart from the problems in the structure of production, consumption and export, previous development of mineral resources often led to conflicts with other sectors, especially forest development and conservation of the environment. These conflicts stemmed from the expanded use of natural resources to serve the needs of the increased population. Such problems will become more serious if they are not dealt with urgently.

37.2 Problems in developing deposits of energy-based mineral resources

(1) The problems in developing deposits of energy-based mineral resources can be divided into 3 major areas:

(1.1) The current Petroleum Act is unsuitable to the prevailing and anticipated conditions, and the following articles are in particular need of revision: distribution of benefits to the state and investors; time obligations for exploration and development; and measures on technology transfer, Thai personnel development and the replacement of foreign nationals with Thai staff within a suitable period of time.

(1.2) The current Petroleum Income Tax Act does not stimulate investment, especially large-scale investment from abroad.

(1.3) Lack of a policy and master plan on developing and using lignite has led to unsystematic development of this resource. Its use is restricted to electricity generation and has not expanded into industry.

Results of past performance

38. Investment in exploration for new mineral deposits has been continuous and consistent in the past. Several large and important mineral deposits have been found: zinc, tungsten and potash, for instance. Explorations have provided important basic data for subsequent mining investments.

39. Since there is still potential for discovering new mineral deposits, the government invested in an aerial survey of the country's physical geology in 1983, during the Fifth Plan. The survey was conducted throughout the country as part of the Mineral Resource Development Project financed by an Asian Development Bank loan in order to determine potential mineral deposits.

40. In regard to the development of energy-based mineral resources, natural gas and crude oil exploration has been conducted continuously on land and in the Gulf of Thailand and Andaman Sea, and will be continued in the future. Concerning lignite, various locations have been surveyed for deposits. What is still lacking is a plan for expanding the use of lignite.

ENVIRONMENT

Facts

41. Environment may be considered in 2 aspects: in relation to natural resources, and in relation to pollution. Previous economic development has stressed economic growth rates, drawing on natural resources without formulating an adequate management plan. Most of the remaining natural resources are in a debased condition. Moreover inadequate knowledge and inappropriate control measures have meant that economic development in Thailand has caused widespread pollution.

Description of the problems

42. *Problems arising from the deterioration of natural resources.* Examples of some of the more apparent problems are as follows:

(1) Deterioration of forest resources has led to soil erosion and consequent silting of major rivers. In the Chao Phraya River in Nakhon Sawan, for example, the silt load has increased from 7 million tons per year between 1972 and 1976 to 10 million tons per year between 1977 and 1981.

(2) The area of high-salinity soil in the northeast has now expanded to 17.8 million rai, but this could increase further to 19.4 million rai. There are also 5.3 million rai of highly acidic soils in the central plains.

(3) Mangrove forests cover 1.7 million rai of land throughout the country and are expected to decrease at an average annual rate of 40,000 rai per year. Coral reefs are being destroyed by the use of explosives in offshore mining activities which destroy the feeding and breeding grounds of larvae.

43. Problems concerning pollution. Important problems are as follows:

(1) In certain areas the water quality in the principal rivers is below standard for consumption, industry and fishing, as the following table indicates:

Table 3.6
Quality of principal rivers

Unit: mg/litre

Principal rivers	Quantity of dissolved oxygen
Chao Phraya	
– Delta to Nonthaburi	less than 2
– Bangkok Port area	nearly 0
Tha Chin	
– Samut Sakhon to Nakhon Pathom	less than 2
Mae Klong	
– Certain areas	4

The normal quantity of dissolved oxygen in natural water resources is 6-8 mg per litre.

(2) There is still no systematic management plan for the use of toxic substances in agriculture, industry and public health. These substances which pollute the environment, foodstuffs and agricultural produce are transferred to the public through the food chain. It has been found that, for instance, the proportion of DDT in the milk of women working in the agricultural sector is 3.12 to one million which exceeds the FAO/WHO permitted level of 1.25 to one million.

Results of past performance

44. Development plans on the environment were formulated for the first time in the Fourth Plan (1977–1981), which only laid down broad guidelines for solving environmental problems.

45. In the Fifth Plan (1982–1986), the policies and measures on environmental development that had been drawn up in the Fourth Plan (1977–1981) were used as guidelines in preparing work plans and projects directed at clearer targets. One important measure was to define the standard of environmental quality. A system for analysing environmental impacts was one method used for controlling or solving environmental problems at the project level. In addition, planning for environmental management was begun along with the economic development of specific areas, such as Songkhla Lake Basin. Such measures show that ecological concerns have been applied to social and economic development together with environmental development.

Conclusion

46. Having studied the facts and described the problems concerning each type of natural resource, the following major issues emerge:

(1) Each type of natural resources has deteriorated in quality and diminished in quantity. Certain types of resource which were abundant at one time have now been significantly depleted and eroded. In many cases, such as timber, there is insufficient supply to satisfy domestic use. In some cases, such as various minerals, imports exceed exports.

(2) There is a tendency for increased conflict in the use of each type of natural resource: water is used for many purposes; forest land is used for agriculture and mining, which impairs the fertility of the soil.

(3) There are no operational plans for using the many types of natural resources. Such plans that do exist usually run into implementation difficulties arising from problems within the organizations and in their coordination, especially at the local level, over use of land, forests, and so on.

CHAPTER 3

DEVELOPMENT ISSUES

1. The problems described in Chapters 1 and 2 indicate that the hope for natural resources to play a similar role to that in the past is not likely to be realized. It is thus essential for the Sixth Plan to formulate a plan for natural resources and the environment that follows a direction suitable to the prevailing conditions. Guidelines for development should correspond to the major problems, which may be summarized as follows:

- (1) Problem of inefficient use of each type of natural resource.
- (2) Problem of conflicting use of various natural resources.
- (3) Problem of organization and implementation.

PROBLEM OF INEFFICIENT USE OF EACH TYPE OF NATURAL RESOURCE

2. The problem arises from the lack of a continuous and serious management plan which would effectively control the development and use of each type of natural resource. For example:

(1) Large-scale water resource projects have been developed without either efficient management or suitable extension projects. As a result, only 15 per cent of the water in large-scale irrigation projects can be used in agriculture, as opposed to a full potential of 60-70 per cent for this purpose. At the same time, the projects for developing small-scale water resources cannot completely meet demand from all areas.

(2) Fishing volume in natural water resources, especially in the Gulf of Thailand and the Andaman Sea, began to decline in 1978 because of a lack of planning for developing marine life sources and using fishery resources efficiently.

3. In order to increase efficiency in the use of each type of natural resource, there is a need for a master plan for using and managing each natural resource which can be implemented

effectively and continuously. An administrative system and cooperation between the agencies involved with each type of natural resource should be established. Other than cooperation between the agencies involved, existing projects should be coordinated with future projects to ensure that the development plans for each natural resource are complete and practicable. Greater efficiency in the use of natural resources will become a more important issue in the years to come because of increases in the size of the population and in the use of natural resources. As long as technological capabilities remain limited, it will be difficult to overcome the problems of deteriorating and depleting natural resources. The master plan is therefore necessary for increasing efficiency in the use of natural resources.

PROBLEM OF CONFLICTING USE OF VARIOUS NATURAL RESOURCES

4. Conflicting use of different natural resources arises from a lack of planning which would link the uses of each resource systematically. Previous plans on the use of natural resources have been drawn up separately and independently. Examples of resulting conflicts are as follows:

(1) Use of forest resources creates the problems of erosion, loss of top soil and silting of river basins, all of which hinder the development of agriculture.

(2) Logging in mangrove areas, which are the feeding grounds of young aquatic species, leads to a decline in the fish population.

(3) Deforestation in hard or sandy soil areas where salinity is high results in a loss of trees able to absorb excess rain water. Salt is then washed away to lower ground, giving rise to heavily saline soil and hampering crop cultivation.

(4) Expansion of arable land entails the destruction of more forests.

(5) Mining leads to erosion of top soil containing nutrients and the land does become infertile.

(6) Offshore mining creates pollution and affects fishery resources.

5. It is evident from the problems of conflicting use that the development of natural resources and the environment should be linked with other sectors and that various types of resources should be developed in concert. This idea was initiated in the Fifth Plan, in which specific areas were targeted for development, such as Songkhla Lake Basin and Tung Kula Rong Hai. These are examples of initial plans that systematically integrate several types of natural resources. Such development strategies are still, however, mainly confined to small areas, and the extent of integration has been limited. During the period of the Sixth Plan, natural resource and environmental development that aims at reducing the conflicting uses described will necessarily depend on the foregoing strategy. At the same time, efforts will be made to expand the geographic area covered by this strategy.

PROBLEM OF ORGANIZATION AND IMPLEMENTATION

6. Development plans for natural resources have tended to consider the general state of affairs, and central organizations being the decision makers in the planning process, participation by organizations at the provincial region and local levels has not been as extensive as it should have been. In addition, at the central level there are many participating agencies. For example, there are 5 agencies involved in developing land resources (the Department of Lands, Land Development Department, Royal Forestry Department, Land Management Office and Agricultural Land Reform Office), and then there are 3 agencies responsible for developing water resources (the Royal Irrigation Department, Department of Mineral Resources and Office of Accelerated Rural Development). Even when there is only one agency, as in the case of forest resources where the Royal Forestry Department is responsible, local organizations do not participate sufficiently in the development process. Moreover there is as yet no master plan to link forests with other resources, in particular water and land. Apart from the organizational problem, there is still a need for a system and basic instruments for managing natural resources and implementing the plans; for example, information systems, knowhow and practical skills, standardized maps and master plans are all required to coordinate the use of natural resources and the environment in a systematic manner.

These problems reveal the need to establish guidelines to remedy the situation in general and in specific areas. The following chapter describes these guidelines.

CHAPTER 4

GUIDELINES FOR DEVELOPING NATURAL RESOURCES AND THE ENVIRONMENT

1. The analysis of the problems of natural resources and the environment in Chapter 3 reveals 3 main issues: first, specific natural resources are used inefficiently; secondly, conflicts arise from the use of various natural resources; and thirdly, natural resources are poorly maintained which leads to their deterioration. The following key principles, therefore, need to be adhered to during the period of the Sixth Plan:

(1) Basic plans should be formulated to manage each kind of natural resource comprehensively.

(2) Systematic and integrated planning should be emphasized.

(3) Plans should be put into practice for the benefit of the local people.

2. Coordinating systems and instruments will be required if the mechanisms for managing natural resources and the environment are to conform to the preceding principles. These instruments, such as information systems, maps and master plans, should be organized into complete and compatible systems for each locality of the country. Local organizations, being closer to natural resources, should be encouraged to participate more in natural resource management by using the instruments created specifically for the purpose.

OBJECTIVES AND OVERALL DEVELOPMENT GUIDELINES

3. To solve the 3 problems already referred to, and to establish a clearer direction in natural resource and environmental development, the objectives and guidelines for developing natural resources and the environment in the Sixth Plan contain the following main points:

3.1 Objectives in developing natural resources and the environment consist of the following 3 points:

(1) To increase efficiency in the use of each type of natural resource.

(2) To reduce conflicts in the use of natural resources.

(3) To promote conservation of the environment and natural resources for future use.

3.2 Guidelines for developing natural resources and the environment during the Sixth Plan period contain 4 key points:

(1) Encourage greater efficiency in the use of each type of natural resource.

(2) Encourage complete integration and systematic coordination in the development of natural resources and the environment.

(3) Encourage maximum participation by regional and local organizations in the management of natural resources and the environment through the administrative system for rural development. (Details in Chart 1)

(4) Encourage the provision and standardization of such instruments as information and maps to facilitate the management of natural resources and the environment at the local level.

3.3 Targets for developing natural resources and the environment during the period of the Sixth Plan are as follows:

(1) Establish work plans and projects for each natural resource. Projects will cover mineral resource development, pond development as a complementary water source for agriculture, and so on.

(2) Establish work plans and projects that emphasize coordinated management of the entire natural resource/environmental complex in each geographical area. Master plans will be set up for managing national parks, wild-life sanctuaries, coastal areas, and so on.

(3) Establish support plans and projects to be used in coordinating management of natural resources and the environment. For instance, there will be a project to set up information systems and information centres for each type of natural resource, a project to improve relevant natural resource legislation, and so on.

GUIDELINES FOR DEVELOPING SPECIFIC NATURAL RESOURCES AND THE ENVIRONMENT

4. The preceding comprehensive guidelines concern development of the entire complex of natural resources and the environment. But since each natural resource possesses its own charac-

teristic problems, the following policies and measures are needed to give a clearer direction to the development of specific natural resources and the environment:

4.1 Guidelines for developing land resources

(1) During the period of the Fifth Plan, suitable guidelines and foundations for developing land resources were formulated. To continue in this direction, development guidelines for the Sixth Plan period are as follows:

(1.1) Accelerate the implementation of the on-going projects continued from the Fifth Plan, and to be completed within the period of the Sixth Plan.

(1.2) Accelerate the implementation of supplementary measures to solve the problems and overcome the obstacles encountered during the Fifth Plan.

(1.3) Improve the efficiency of land use through coordination with other natural resources.

(2) The Sixth Plan consists of the following policies and measures for developing land resources:

(2.1) Encourage increased efficiency of land use by preparing plans on land use and land resource development, organizing a complete land information system and dividing development zones into irrigated areas and rain-fed agricultural land. These measures will be used to help farmers improve the use of their land and as a basis for coordination between the government agencies concerned.

(2.2) Accelerate the distribution of land ownership through agricultural land reform, and support the land bank and land reform fund.

(2.3) Improve the system for collecting land taxes by improving the standard of appraising land values.

(2.4) Accelerate the separation of land suitable for agriculture from forest land.

(2.5) Accelerate land allocation and the issuance of ownership documents to legalize land possession where people are living off the land.

4.2 Guidelines for developing forest resources

(1) Previously, development of forest resources has emphasized conservation through preventive and controlling measures, while the economic role of forests and the roles of

the general public and local organizations have been neglected. Such development has not been completely successful, and forest area has been rapidly decreasing. Thus the scope of forest resource development during the coming period will be expanded to include economic as well as conservational aspects. The established long-term target is to have forest areas, including privately owned forests, covering not less than 40 per cent of the total land area of the country.

(2) Guidelines

(2.1) Encourage local people and organizations to take as large a role as possible in developing forest resources.

(2.2) Amend laws, rules and regulations to reduce the obstacles to developing forest resources and the problem of conflicting uses.

(2.3) Improve the management of forest resources by providing a complete set of basic instruments.

(3) Measures. In order to define clearly the scope, roles and responsibilities of the government, private sector and general public in developing forest resources, and to organize plans and projects in accordance with the characteristics and problems of each forest area, forest land has been divided into 2 types as follows:

(3.1) Conservation forests. These are forests, national parks, wild-life sanctuaries and high-grade watersheds. Conservation forests are designated to occupy 15 per cent of the total land area of the country.

(3.1.1) The government will take earnest steps to protect and maintain conservation forests.

(3.1.2) The government will arrange private sector participation in developing some conservation forests, while ensuring that there will not be any negative effect on forest conservation.

(3.2) Economic forests. These are forests for economic use that lie outside the forest conservation areas. To ensure sufficient timber supply for domestic consumption, 25 per cent of the total land area will be designated economic forest.

(3.2.1) The government will classify economic forests into those that have been encroached upon and left in a state of deterioration on the one hand and those that are fertile on the other. Deteriorated forests that are still suitable for agriculture will be made available to the private sector for agriculture in conjunction with reforestation. Deteriorated forests

that are not suitable for agriculture will be made available to the private sector for reforestation which will improve the condition of the soil, revive the forests and generate more income.

(3.2.2) The private sector and local people will be encouraged to participate effectively, efficiently and economically in managing and developing forest resources. Support will be given to three types of reforestation.

(a) Fast-growing timber and orchards. Two factors will be used as criteria in providing support: type of plant and location. The plant should have economic potential, corresponding to market demand, and be beneficial to conservation of the soil and water. The planting location should be considered in terms of the suitability of its soil and the benefits to the locality.

(b) Timber of high economic value. The private and government sectors will be encouraged to grow teak wood in order that the country may maintain its position as a leading exporter of high-quality teak.

(c) Community forests. Organizations of local people will be encouraged to cooperate and share the benefits derived from reforestation. The emphasis will be placed on general-purpose types of timber, and economical use of the wood will also be encouraged.

4.3 Guidelines for developing water resources

(1) In the past, investments have been made in developing many of the large water resources in the principal river basins of the country. The Committee on Water Resource Policy has coordinated the development of all national water resources. Management of large water resources in the future will be carried out only after studies on suitability have been completed. Emphasis will be placed on improving the management of important river basins and the efficiency of water use, and on developing small-scale water resources in all areas with potential.

(2) Policies and measures consist of the following:

(2.1) Encourage coordination of water resource development plans by using the river basin system.

(2.2) Improve efficiency in existing large and medium-scale water resource projects. More economic benefits will be derived from an emphasis on managing water use in extension activities.

(2.3) Encourage the equal distribution of small-scale developments in water resources, especially the development of underground water in potential areas, to satisfy basic living requirements.

(2.4) Encourage the development of water resources in areas where such resources have deteriorated.

(2.5) Encourage people's organizations to participate more in managing and maintaining water resource development projects.

(2.6) Develop information systems on water resources which follow the same standard in each agency concerned. In this way data can be exchanged and be mutually beneficial in planning and project management.

4.4 Guidelines for developing fishery resources

4.4.1 Fishery resources inside territorial waters. To develop the fishery resources located in territorial waters effectively, the following 5 measures will be implemented.

(1) *Legal measures.* Legislation on fisheries currently in use is antiquated. The 1947 Fisheries Act, for instance, will be revised to be in line with the present state of fisheries.

(2) *Conservation measures.* At present, fishery resources are being used up faster than they can be regenerated; they are also being misused. Measures and plans will be designed to correct the misuse of fishery resources, and will include a more equal and equitable distribution.

(3) *Control measures.* Fishery controls require planning and their effectiveness needs to be reinforced. For example, the number of fishing vessels, fishing equipment and industries using fishery resources as raw materials will be controlled to correspond to the supply of fishery products.

(4) *Productivity measures.* Productivity will be increased by introducing new breeding strains into natural water resources where production is declining.

(5) *Rehabilitation measures.* The habitats of aquatic species are deteriorating and will be rehabilitated.

4.4.2 Fishery resources outside territorial waters. Since fishery resources located inside territorial waters are limited and disproportionate to the number of fishing vessels operating, and since a number of these vessels have already been fishing in foreign waters, the following measures for developing fishery resources outside territorial waters are necessary:

(1) Survey fishing grounds in international waters and those of countries which have fishery cooperation agreements with Thailand.

(2) Encourage fishing joint ventures according to international laws concerning fisheries.

4.5 Guidelines for developing mineral resources. These may be divided into 2 parts: guidelines for developing mining-based mineral resources and guidelines for developing deposits of energy-based mineral resources.

(1) Guidelines for developing mining-based mineral resources

(1.1) The development of mineral resources in the Sixth Plan will increase the efficiency and value of exports that are obtained from both metallic and industrial minerals in which Thailand has a competitive advantage over other countries.

(1.2) Policies and measures on the development of the mineral resources sector during the Sixth Plan period will consist of the following:

(1.2.1) Improve the process for applying for prospecting licences and mining concessions. A service centre for issuing prospecting licences and mining concessions will be set up to support and facilitate private sector investments.

(1.2.2) Diversify into different types of export product by speeding up exploration of a wider range of mineral resources and investing in surveying projects that have definite objectives, targets and durations.

(1.2.3) Increase the range of products derived from mineral resources. Rather than unprocessed minerals, the expansion will take the form of more product types and a range of product qualities in line with market demand.

(1.2.4) Diversify export markets for mineral resources. More importance will be given to exports to socialist countries, which are significant markets that have been neglected for too long.

(1.2.5) Build up confidence for private sector investment in the production and processing of minerals to correspond to demand in the domestic and export markets, and encourage the use of ores in developing industry and agriculture in the country.

(1.2.6) Support feasibility studies, and accelerate development of ores that have proven geological potential.

(1.2.7) Accelerate private sector investments that extend the Mineral Resource Development Project – an aerial geophysical survey covering the entire country – in which the government has been investing since the Fifth Plan.

(1.2.8) Clearly classify land with ore development potential based on geological data obtained from surveying projects in which the state has invested.

(1.2.9) Improve mineral resource management systems in order to facilitate coordination with the development of other natural resources (especially forests), the environment and provincial regions.

(1.2.10) Increase the ability to produce and develop personnel in order to support future development work. To accomplish this, an advanced educational institute for geology and mining will be set up.

(2) Guidelines for developing deposits of energy-based mineral resources

(2.1) The development of energy-based mineral resources in the period of the Sixth Plan will be carried out to serve the increased need in general, and in industry.

(2.2) Policies for the development of energy-based mineral resources during the Sixth Plan period will consist of the following:

(2.2.1) Amend the stipulations of the Petroleum Act which deal with granting exploration and development rights for energy-based mineral resources in the remaining concession areas, in line with the opportunities for expanding exploration.

(2.2.2) Amend the Petroleum Income Tax Act, making it more appropriate.

(2.2.3) Accelerate negotiations with companies successful in exploring for petroleum deposits in the country so that petroleum and downstream industries can be developed and benefit the economy and the local population as quickly as possible.

(2.2.4) Accelerate negotiations enabling petroleum to be developed in joint development areas.

(2.2.5) Accelerate the preparation of policies and master plans on coal development. The plans will ensure that development is carried out efficiently, that the use of coal is distributed and that the needs of the industrial sector are served.

(2.2.6) Encourage exploration for coal deposits throughout the country in order to gain a better idea of the amount of coal reserves and ensure more efficient use of coal.

(2.2.7) Improve rules and regulations on the exploration and development of coal deposits so that they correspond to the objectives and guidelines for developing energy-based mineral resources.

(2.2.8) Prepare plans for developing other types of energy-based mineral resources such as geothermal energy and nuclear energy.

4.6 Guidelines for developing the environment

(1) To clarify the plan for environmental development, and to make it more effective in practice, the guidelines for developing the environment during the Sixth Plan comprise the following 4 main principles:

(1.1) Environmental development should support and create economic development as far as possible.

(1.2) A system should be created that will link the economic and social development plan with the environmental development plan, besides coordinating the government, private sector, local organizations and people.

(1.3) To ensure more effective implementation, guidelines for developing the environment should be defined in the form of operational plans.

(1.4) Preventive measures that anticipate environmental problems should be emphasized, rather than waiting for the problems to arise before taking action.

(2) Policies on developing the environment during the Sixth Plan period will consist of the following:

(2.1) Coordinate the environmental development plan with economic development as a whole.

(2.2) Plan and manage the environment by geographical area; for example, plans will be formulated for defining categories of river basin quality, managing the environment on the Eastern Seaboard and in Songkhla Lake Basin, and so on.

(2.3) Amend laws, rules and regulations on the environment to make them more suitable and supportive of economic development in various sectors.

(2.4) Improve the basic administrative structure for environmental work, including organizations, production of environmental personnel, follow-up and inspection, research studies and environmental information systems.

(2.5) Encourage the use of modern technology which allows natural resources to be used efficiently and without damaging the environment or causing pollution problems.

(2.6) Encourage a correct understanding and awareness of the environment among the private sector and the general public, who should participate in the promotion and protection of environmental quality as much as possible.

THREE MAJOR WORK PLANS

5. To achieve the foregoing objectives and guidelines on development, the Sixth Plan thus specifies 3 main work plans for developing natural resources and the environment:

(1) Work Plan for Increasing Efficiency in the Use of Specific Natural Resources.

(2) Work Plan for Coordinating the Use of Natural Resources and the Environment.

(3) Work Plan for Strengthening Basic Components for Managing Natural Resources and the Environment.

5.1 Work Plan for Increasing Efficiency in the Use of Specific Natural Resources

(1) *Key principle:* This work plan will support the efficient utilization of each kind of natural resource, with the emphasis on gaining optimum economic returns from using the limited available natural resources, and the exploration for and development of new natural resource sources for future use.

(2) *Objective:* To create efficient use of the remaining natural resources in coordination with other sectors of economic development, such as rural, agricultural and industrial development.

(3) *Target:* Within the period of the Sixth Plan, finish preparing work plans and basic projects for the efficient management of natural resources.

5.2 Work Plan for Coordinating the Use of Natural Resources and the Environment

(1) *Key principle:* This work plan will support the allocation of different types of natural resources for various uses in such a way that optimum benefits can be created for the economy and society as a whole, not only by developing and conserving natural resources, but also by protecting the state of the environment, which should achieve the right balance without creating pollution problems.

(2) *Objective:* To set up plans for coordinated, systematic management of natural resources and the environment, which will reduce conflicts in the use of each kind of natural resource and environmental problems.

(3) *Target:* Within the period of the Sixth Plan, finish preparing development and conservation plans for high-priority natural resources and the environment; for example, the study to define the categories of basin quality in important rivers of the country, the plan to develop and manage natural resources and the environment in coastal areas, etc.

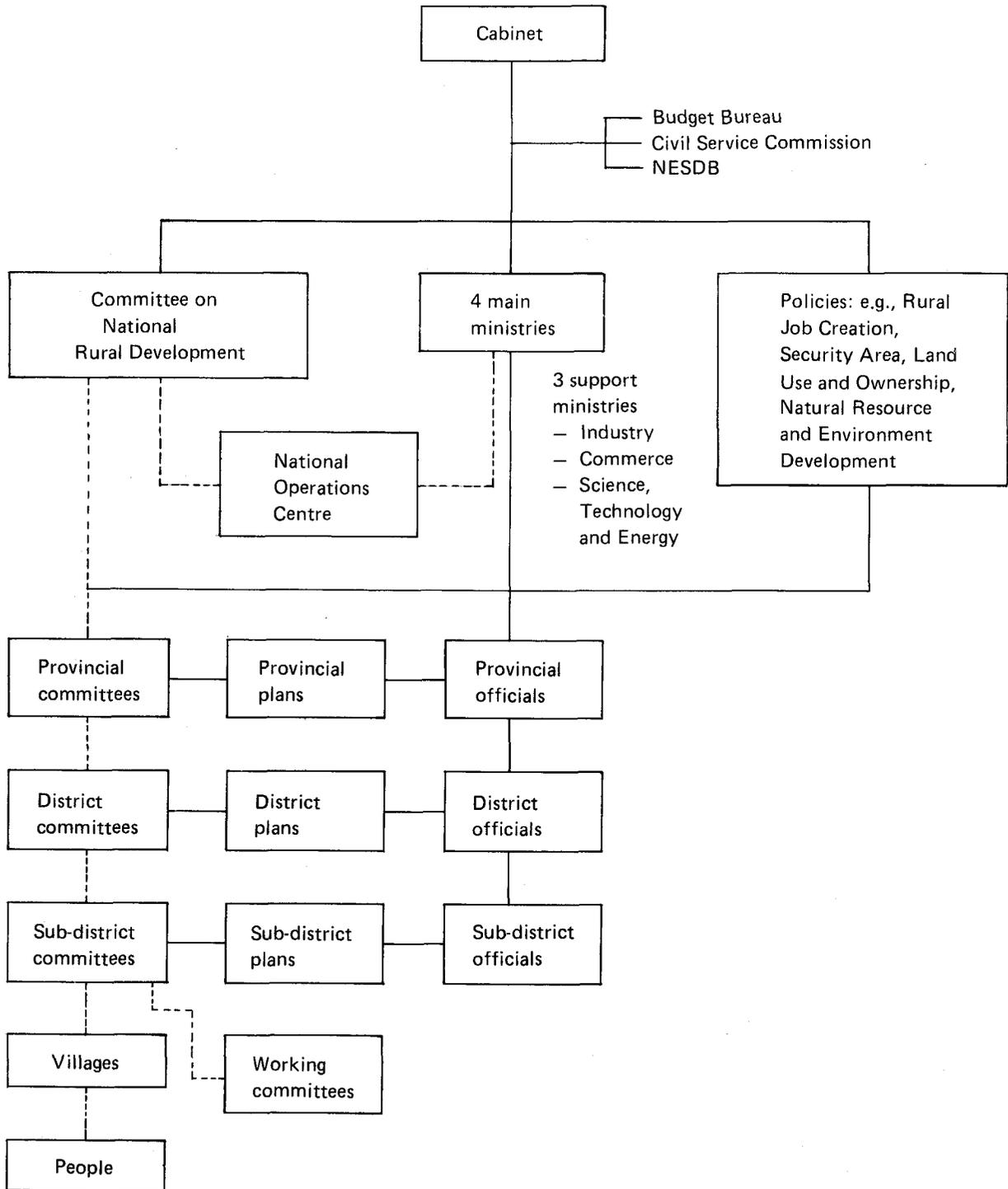
5.3 Work Plan for Strengthening Basic Components for Managing Natural Resources and the Environment

(1) *Key principle:* This work plan will support the creation of basic instruments needed in managing natural resources and the environment, with the emphasis on maximum participation in management by local organizations.

(2) *Objective:* To produce maps and various basic information systems, amend laws concerning natural resources and the environment and improve the administrative system and organizations in the field of natural resources and the environment by emphasizing the role of the local people.

(3) *Target:* Within the period of the Sixth Plan, finish preparing basic instruments, for instance, information systems, maps and law amendments that help develop and conserve natural resources and the environment.

Chart 1
Administration of natural resources and the environment
under the Administrative System for Rural Development



Note: See details in the Programme for Rural Development.

PROGRAMME 4
DEVELOPMENT OF SCIENCE AND TECHNOLOGY

DEVELOPMENT OF SCIENCE AND TECHNOLOGY

CHAPTER 1

INTRODUCTION

1. The need to accelerate the use of science in national development was realized in the Fifth Plan, which considered the integration of plans for science and technology for the first time. The Fifth Plan placed importance on the role of the government in strengthening scientific and technological organizations and institutes. It stressed the need for promoting quantitative and qualitative manpower development at high and middle levels in order to satisfy the requirements for economic and technological development. Technological research and development was encouraged, as was the creation of an awareness among the general public of the role and importance of science and technology in national development, in people's livelihood and in everyday life. The primary goal was to create an atmosphere conducive to the foundation of scientific and technological capabilities. Cooperation with foreign countries was seen as the main tool for carrying out the policy.

2. One important result has been the creation of an awareness of science and technology among the general public, and especially among top government administrators who have accepted the importance of, and increased their support for, developing science and technology. For example, budgetary support and cooperation with foreign countries were instrumental in Thailand's bid to become the location for an international genetic and biotechnological centre. The centre would have had strategic importance in transferring scientific and technological skills which would increase the potential for national development in agriculture, industry, natural resources and the environment, energy, medical sciences and public health. Even though Thailand was unsuccessful in her attempt to secure the international centre, the government continued to support the initiative and set up a national centre for these branches of science and technology. Similarly, although national budgetary constraints prevented research and development expenditure from being increased to the targeted amount, expenditures in key economic sectors were increased, with the emphasis being placed on fully integrated research and development projects whose results could be utilized immediately.

3. An unprecedented number of science and technology cooperation agreements were made with technologically advanced nations. An important example was the Science and Technology for Development Project on which agreement was reached before the end of the Fifth

Plan period. This US\$ 49 million (1,323 million baht) project between Thailand and the United States will provide support for research and development in biotechnology, material science and applied electronics. It will also give technical support to industry, help in planning policies and create a mechanism for coordinating the public and private sectors in promotion of science and technology.

4. Since the key project noted in the foregoing paragraph had yet to start by the end of the Fifth Plan period, it can be concluded that the development of science and technology to date has been limited to establishing foundations. One weakness which needs to be addressed in the Sixth Plan is the relationship of the public sector with private sector users of technology who are more familiar with its problems. Coordination will render technology more beneficial to economic development. Another problem in the development of science and technology is the lack of coordination between the various government units, which leads to incomplete development and ineffective use of technology. In addition, government activity is limited by national budgetary constraints. Consequently, a joint effort is required to ensure maximum efficiency in the use of the limited resources available.

ROLE OF SCIENCE AND TECHNOLOGY IN THE SIXTH PLAN

5. As economic and social development is expected to become increasingly difficult to achieve, it is necessary to continually improve the efficiency and quality of production in key sectors including agriculture and industry. Serious and continual development in science and technology coupled with good management and services are vital if Thailand is to increase her standing in the intensely competitive world markets which she faces today, and raise the standard of living of her people.

CHAPTER 2

DESCRIPTION OF THE PROBLEMS

1. Based on the results of previous science and technology development and anticipation of future changes, the main problems to be addressed in the Sixth Plan period can be summarized as follows:

RESEARCH AND DEVELOPMENT

2. Research budgets in developed countries are as high as 2 per cent of GNP. Less interest in research is evident in developing countries where, due to fiscal limitations and the priority of immediate problems, research budgets tend to be below 1 per cent of GNP. Thailand's expenditure on research and development has been very low: estimated at less than 0.5 per cent of GNP, almost all of which is spent within the government sector. Surveys of manpower and research and development activities in 105 companies in 1982 found research and development budgets to be as low as 0.1 per cent of total sales revenue, far behind that of counterparts in developed countries.

3. Realizing the problem, the Fifth Plan set a target for a research and development budget of 0.5 per cent of GNP. Fiscal constraints, however, prevented the government from increasing the budget to this level. Moreover the private sector, which should play an important role, still lacks interest in research and development as a means of improving production efficiency.

Table 4.1
Expenditure on research and survey
by national development sector

Unit: million baht

	1981	1982	1983	1984*	1985*
Economic sector	1,797.96	1,639.14	1,253.37	2,732.12	2,934.75
Agriculture	995.49	1,040.44	920.34	1,783.22	1,464.06
Industry & energy	238.86	154.85	127.85	717.08	782.88
Natural resources	198.16	64.65	17.38	30.79	370.48

	1981	1982	1983	1984*	1985*
Environment & conservation	77.37	62.88	53.99	16.20	108.58
Trade/services/transportation	236.22	211.85	107.16	112.18	208.75
Others	51.86	104.47	26.65	72.65	—
Social sector	389.94	566.85	290.53	496.06	404.91
Social development	113.69	108.50	86.24	280.28	99.50
Education/religion/culture	57.12	156.02	34.64	87.16	127.72
Medical science/public health	125.57	198.24	130.23	104.77	177.69
Others	93.56	104.09	39.42	23.85	—
Political & administrative sector	139.87	241.46	111.57	25.11	117.21
Security & national defence sector	221.99	824.14	0.25	41.47	15.88
Total	2,549.76	3,271.59	1,655.72	3,294.76	3,472.75
Percent of GDP	0.32	0.39	0.18	0.20	0.33
Percent of GNP	0.33	0.40	0.18	0.34	0.34

Source: National Research Council of Thailand

*Including funds from outside the budget from local and foreign sources

4. Topics specified for research and development in the past lacked a clear direction and were not in line with the guidelines laid down for national economic and social development. Although some topics were specified by the responsible agencies, the research institutes of the state did not follow them up. Consequently research and development has failed to fully satisfy the needs of the manufacturing sector while government financial support has not brought the anticipated results. The Fifth Plan saw an attempt to coordinate basic and applied research, particularly in regard to research on production technology for major industries as well as agricultural product processing and research on waste utilization. But problems in research administration and in the implementation of research and development plans prevented the effort from fulfilling expectations and becoming fully integrated. This meant that very few research results have been used in production processes.

5. Research and development in the key private sector should be promoted through government monetary and fiscal measures, such as the revolving fund. These measures would stimulate research and development and the import of technology for further adaptation. The revolving fund has yet to be used to help private sector efforts in research and development because of the government's preoccupation with issuing rules and regulations for the fund's administration. In addition, tax reduction measures are still being considered by the government agencies concerned.

6. From the foregoing, it is evident that the budget for research and development remains low. But the budget figure alone is not an adequate indicator of the nation's actual capacity in the field of science and technology; the quality, results and benefits of research projects requiring

administrative skills must also be considered. In this area, however, there are many problems still to be resolved.

TECHNOLOGY TRANSFER FROM FOREIGN COUNTRIES

7. Technology transfer is necessary for national production and development in countries lacking indigenous technological capabilities in research and development. Indeed, in view of the availability of successful and reliable technology, the import of technology is more economical in terms of time, cost and risk than developing one's own research capabilities. In order to maximize the economic and technological benefits, however, the importer must be able to select, adapt and develop imported technology in line with local production and resource advantages. This is all the more necessary because technologies originating in developed countries are naturally geared to different environments from those that exist in developing countries.

8. Fees and royalties paid to foreign countries for imported technology have increased 14-fold over the past 14 years. Most Thai industries, being medium-sized or small, lack the necessary knowledge to select appropriate technologies and are at a disadvantage when it comes to negotiating fees and contractual terms. A survey of technology purchase contracts by the Bank of Thailand revealed that there was no correlation between fees and such factors as contract duration and technological complexity. For example, the local pharmaceutical industry, including drug and cosmetic manufacturers, are simply engaged in the processing and packaging for sale of imported pharmaceutical ingredients. The technology used is not complex and technical fees range from 0.4 to 28 per cent. In cases where fees are low, the agreements have no termination dates. Where the termination date is specified, the contract period is very long. Either way, payment has to be made continuously and fees are even paid for technologies that are no longer covered by patents.

Table 4.2
Distribution of fees for imported technology
by category

(Unit: million baht)

Year	Royalty	Trademark fee	Technical fee	Commission*	Total
1972	108.05	1.33	32.63	—	142.01
1973	158.57	1.22	40.48	—	200.27
1974	196.93	1.30	28.30	—	226.53
1975	245.67	0.12	51.10	—	296.89
1976	261.52	4.82	95.86	—	362.20
1977	367.36	1.40	94.43	41.53	504.72
1978	347.34	12.82	149.28	34.43	543.87

Year	Royalty	Trademark fee	Technical fee	Commission*	Total
1979	461.28	19.20	189.21	53.50	723.19
1980	581.52	4.44	275.38	75.26	936.60
1981	812.30	3.84	429.53	85.52	1,331.19
1982	861.31	9.85	390.11	181.42	1,442.69
1983	887.10	46.52	468.55	163.67	1,565.84
1984	1,123.36	37.85	722.59	109.61	1,993.41
1985	1,202.40	35.45	723.88	83.11	2,044.84

*No data for 1972–1976.

Source: Technology Transfer Centre, Office of the Permanent Secretary, Ministry of Science, Technology and Energy

9. Additionally, technology transfer contracts often include clauses which limit the buyers' business activities and, as such, constitute an indirect fee on the technology. Contracts may, for example, prohibit the buyer from exporting the product, limit his exports to certain areas or force him to purchase raw materials and machinery from the seller. While some conditions may be necessary, those which are not should be the subject of careful negotiation if the purchaser is to benefit.

Table 4.3
Distribution of commissions, copyright fees,
and patent fees paid to various countries

(unit: per cent)

Country	1973	1974	1975	1976	1977	1978	1979	1980	Average
Japan	40.9	41.4	50.5	41.7	38.1	41.6	33.7	42.1	41.25
U.S.A.	34.4	27.0	22.3	32.6	33.9	29.6	27.4	28.1	29.42
U.K.	6.7	14.9	11.3	7.1	5.1	5.9	4.8	3.6	7.42
Hong Kong	1.5	2.6	2.7	1.6	2.6	2.0	2.5	5.3	2.60
Germany	2.4	—	1.7	3.6	1.9	3.0	3.2	2.7	2.31
Others	14.1	14.1	11.5	13.4	18.4	17.9	28.4	18.2	17.00
Total	100.0								

Source: Bank of Thailand

10. When asked, entrepreneurs paying the fees noted above were mostly aware of the disadvantageous nature of the contracts, especially those that forced buyers to purchase machinery, raw materials and spare parts from the technology supplier. But because they would not be

able to produce without the technology, the buyers have to abide by the suppliers' conditions or enter a joint venture with the supplier. These entrepreneurs have requested the government to supply them with information on technology sources and to advise them on contractual arrangements and legal matters.

11. Medium-sized and small industries have little or no opportunity to use modern technology in their production. Instead, they must sometimes resort to poor quality or outmoded technology, which yields lower quality and less competitive products. Such industries are lacking several key factors: the personnel with basic scientific and technological knowledge; the knowledge to use technology for the highest benefit; the eagerness to develop and improve production technology; the correct information to select the most appropriate technology; the capital to finance technological development; and sufficient government support to create an atmosphere conducive to investment. The lack of these factors has prevented technology transfer from improving local production efficiency as much as it should have done.

HUMAN RESOURCES IN SCIENCE AND TECHNOLOGY

12. An important problem faced by a developing country such as Thailand is in developing the human resources necessary to adopt and adapt imported scientific and technological skills to the prevailing socio-economic environment of the country. Dependence on fully fledged technology from abroad without any attempt to modify or enhance it would prevent the country from developing its own potential. Human resource development in science and technology must however be in line with capabilities inherent in the socio-economic structure so that manpower demand and supply in each production sector can be effectively balanced.

13. The changes in the Thai economic structure away from agriculture and towards industry, and the changes in the development concept away from increasing production volume towards improving efficiency and quality, require modern and more complicated production processes and management. This is especially true for new industrial projects in petrochemicals, fertilizers, electronics, etc., which require manpower with a high level of scientific and technological competence. It is clear, therefore, that human resource development in the field of science and technology is of the utmost importance.

14. The status of human resources in the country's science and technology field is as follows:

14.1 Thailand's human resources in science and technology are low compared to those of a more technologically developed country such as South Korea. In 1984 the Ministry of Science, Technology and Energy estimated Thailand's science and technology human resources, including technicians, to number 97.78 per 10,000 people, whereas a UNESCO report revealed that in 1981 South Korea's science and technology workforce for the same population base was 524.8.

14.2 The production of human resources has not followed the changes in the economic structure towards increasing production, efficiency and service. Higher education still concentrates on producing social science graduates. Moreover in the field of science and technology itself there is a lack of cooperation between entrepreneurs and academic institutes. Thus, even though there are few science and technology graduates, they have limited opportunities for employment.

The supply of human resources in the science and technology field does not match demand in the labour market. Surveys of the private and public sector show that there is a much higher demand for personnel in the engineering field than there is in the fields of science and agriculture, but the number of graduates in these 3 fields is almost equal. It is thus extremely important to study and determine forms of cooperation between manpower suppliers and users in science and technology.

Table 4.4
Number of students in state educational institutions
in various fields, 1985

Field	Number of students	Per cent
Humanities	24,270	3.6
Education	96,551	14.3
Fine Arts	1,378	0.2
Social Sciences	306,652	45.4
Law	168,242	24.9
Engineering*	13,925	2.1
Natural Sciences	23,380	3.4
Medical Science and Health Science	24,651	3.6
Agriculture	15,673	2.3
Others	1,209	0.2
Total	675,931	100.0

*Including students of Higher Certificate of Vocational Education at King Mongkut's Institute of Technology
Source: Ministry of University Affairs

14.3 Of more serious concern than the quantity of manpower is its quality, which has not met work requirements.

(1) Engineering graduates lack the skill acquired from working in an industrial plant and their basic knowledge does not keep up with industrial progress and new developments in technology.

(2) Science graduates lack the experience of conducting research in a laboratory.

(3) Agricultural personnel lack field work experience and are not familiar with basic farming methods that are practised by rural farmers.

(4) Middle-ranking personnel and technicians do not get sufficient practice to develop and continuously upgrade their skills.

The causes of the human resource quality problems in the field of science and technology are several. They include the lack of educational equipment related to modern industrial technology, inappropriate curricula and a lack of practical experience on the part of academic staff.

14.4 The use of human resources in the field of science and technology falls below its potential. Many graduates work in areas outside their field of study: in administration, sales, service and teaching. They do not work on a production process or on research, which would lead to increased production efficiency.

CAUSES OF THE PROBLEMS

15. The above problems are caused by the following 3 fundamental factors:

15.1 Lack of a policy and master plan on science and technology. With science and technology playing an important role in every field of socio-economic development, their development must cover extensive ground. Moreover a long and continuous timeframe is needed to implement and accumulate expertise in the 3 major activities mentioned above. At present there is neither a policy nor a plan for science and technology that could serve as the foundation for long-term development.

15.2 Lack of an effective central coordinating agency in science and technology. Development policies and administrative plans in science and technology are currently being implemented by a variety of government agencies. The lack of an effective central agency means that there is no coordination among the agencies, nor between the government and private sectors, to unify the country's development in science and technology.

The Ministry of Science, Technology and Energy was established in 1979 as a central coordinating agency. It combined various organizations which had their own separate structures and laws. The ministry itself lacks a well-defined structure and thus the development of science and technology faces the following problems:

(1) Policy-making in the ministry is not a unified function because most of the constituent organizations have been set up as offices with their own policy-making committees.

(2) Policy-making between the various ministries that conduct research and development and utilize science and technology, such as the Ministry of Science, Technology and Energy, is not coordinated, with each ministry having the authority to make its own policies and plans.

15.3 Lack of interest among private sector users of technology in the development of science and technology as a means of increasing production efficiency. In industries where technology is important to production, entrepreneurs of medium scale and small businesses are not interested in technological change or development. Instead they rely on commercial strategies and government tax measures to increase their competitiveness in the market. Technological development requires knowhow, capability and an understanding of science and technology, and, therefore, most work has been implemented by the state. Since there is no close cooperation and coordination in analysing the problems, the results of implementation have not solved problems nor satisfied needs, and have rarely been adopted for use.

16. To address the foregoing problems and their causes, systematic acceleration of science and technology development is necessary. This can be accomplished by uniting all the public organizations involved in technological development and linking these units to private sector users of technology. The Fifth Plan initiated the joint Thailand-US science and technology project in order to cover matters such as research and development administration and operations. The aims are: to put Thailand in a position to adopt such new technological advances as those in biotechnology, material science and applied electronics; to solve development problems; to review and formulate policies on science and technology; to give support to technology for industry; and to organize and systematize the administration of scientific and technological activities among the various institutions involved. Most of the project's details have been prepared and are scheduled to be enacted during the period of the Sixth Plan.

CHAPTER 3

OBJECTIVES, TARGETS, GUIDELINES AND DEVELOPMENT PROGRAMME

1. The following objectives, targets and guidelines for development are based on an analysis of the problems described in Chapter 2.

1.1 Objectives

(1) To enhance Thailand's capacity for developing science and technology so that the country can satisfy immediate needs for economic and social development.

(2) To lay the foundations for rapid technological development so that the country can ultimately achieve self-reliance.

1.2 Targets

In order to achieve the foregoing objectives the following targets have been set:

(1) Establish a system linking scientific and technological development to other development programmes, such as the Programme for Development of the Production System, Marketing and Employment.

(2) Increase administrative and operational efficiency in science and technology, and emphasize quality rather than quantity.

(3) Promote the role of the private sector in developing and applying science and technology.

(4) Develop a basic structure for formulating policy, to set up an organization and enact laws that would aim at increasing the efficiency of science and technology administration.

(5) Create incentives through monetary, tax, marketing and investment measures and mechanisms which stimulate the role of the private sector.

1.3 Guidelines and measures

(1) To develop the country's policy-making and planning capabilities in science and technology:

(1.1) Prepare long-term national policies and plans for science and technology as guidelines for the various agencies to follow consistently and continuously.

(1.2) Develop an indexing system for science and technology and a technology assessment system in order that policy-making and planning may be more efficient.

(2) To develop the basic organizational structure together with the laws and regulations necessary for science and technology development:

(2.1) Establish a high-level mechanism to formulate policies and plans, coordinating the various science and technology organizations and provide technical advice to government administrators. The current role and structure of the Ministry of Science, Technology and Energy should be reviewed.

(2.2) Create a mechanism for administering science and technology, which will involve collaborative projects between various units, in the style of the Science and Technology Development Board created under the Thailand-US joint Science and Technology for Development Project.

(2.3) Revise outdated laws and regulations that do not facilitate, and may even hamper, the development of science and technology, such as patent and measurement acts. Additionally, laws that directly encourage the development of science and technology, such as science and technology promotion acts and technical qualification acts, will be reviewed and enacted.

(3) To develop manpower efficiency in science and technology by improving the quality and use of manpower:

(3.1) Manpower in engineering

(3.1.1) Encourage institutions now operating in both the government and private sectors to expand production of manpower in the following fields: mechanical engineering, material sciences, electrical engineering and electronics (including computer science), industrial engineering and chemical engineering.

(3.1.2) Improve the quality of graduates by improving the institutional admissions system in order to give more opportunity to interested and appropriately skilled applicants. Equipment available for student practice will be modernized to enable the students to prepare for industry.

(3.1.3) Encourage research and development in the universities so that teachers can upgrade their knowledge and experience and consequently their teaching skills. In addition, incentives will be given to teachers in the form of rewards and job rotation opportunities that will extend their knowledge and practical experience.

(3.2) Manpower in science

(3.2.1) Improve the quality of graduates in this field by improving the admissions system, providing a better education and creating more employment opportunities to attract more scientifically skilled students.

(3.2.2) Restructure the administration of universities to better coordinate research work undertaken by teachers and the academic work of postgraduate students and to bring about more cooperation between industry and the universities.

(3.2.3) Encourage teachers to upgrade themselves by establishing such incentive schemes as work assessment systems, sponsoring participation in training courses and academic seminars and conferences and arranging further education programmes in fields necessary to their work.

(3.3) Manpower in agriculture

(3.3.1) Modify curricula to correspond more to the needs of the labour market in the private sector. More comprehensive training and better training systems will give trainees the opportunity to adapt and advance their basic knowledge to fit in with their assigned work. Universities will coordinate their curricula and the number of graduates they produce in particular fields.

(3.3.2) Develop specific educational programmes, especially the educational programme for improving the agricultural skills of farm children, to give the children of farmers an opportunity for higher education, provided they return to work in their home towns after graduation.

(3.3.3) Improve postgraduate studies to meet the needs of the country.

(3.4) Technical and vocational manpower

(3.4.1) Establish an agency to coordinate the government and private sectors and assess the demand for various qualitative and skill levels of vocational manpower. In this way, the quality and quantity of manpower production can be adjusted according to needs.

(3.4.2) Revise educational curricula to emphasize developing skills through field work. The amount of theoretical study should correspond to employment needs, and curri-

cula for studying theory should be linked to higher education in order to provide graduates who are already in the labour force with the opportunity to upgrade their qualifications.

(3.4.3) Develop theoretical and practical knowledge of vocational teachers in fields where there is a shortage of manpower, and in new fields of study. Universities and the private sector will be asked to help.

(3.5) Manpower in science and technology at the secondary education level

(3.5.1) Give science teachers regular training prior to and throughout their teaching careers in order to update and improve their understanding of science and develop their scientific skills and capabilities.

(3.5.2) Develop and produce equipment and audio-visual aids to be used in the teaching of science and technology.

(3.5.3) Develop a system and instruments for testing and evaluating the results of science education and for ensuring the capability of school leavers.

(3.6) Promote public understanding of the value of science and technology

(3.6.1) Encourage the private sector, academic associations and professional associations to hold science exhibitions and project competitions, to publish books and periodicals and to produce films. The purpose is to publicize basic scientific and technological knowhow relevant to everyday life and work.

(3.6.2) Arrange for knowledgeable people who have carried out outstanding or interesting work in science and technology to give lectures at government offices, universities and schools.

(3.6.3) Encourage the private sector and academics to hold seminars where views may be exchanged on problems and how science and technology can be used to solve them.

(3.6.4) The Ministry of Education will include more practical information on the application of science to daily life in the curricula for non-formal education.

(3.6.5) The government's mass media will cooperate in increasing the dissemination of scientific and technological knowledge and understanding to the public.

(3.7) Increase efficiency in the use of manpower in science and technology to solve national development problems

(3.7.1) Register scientists, engineers and all juristic persons engaged in scientific and technological activities so that information can be current and manpower can be mobilized easily.

(3.7.2) Seriously promote the use of human resources in science and technology for all purposes.

(4) To encourage efficiency in national research and development:

(4.1) Formulate research policies and guidelines that enable the government and state enterprises to conduct research which follows the direction of national economic and social development.

(4.2) Attempt to set the budget for research as close as possible to 2 per cent of total government annual expenditure, or total national research expenditure as close as possible to 0.5 per cent of GNP. Emphasis will be placed on research which aims at solving economic and social development problems currently facing the country rather than academic research. Special support should be given to genetic engineering and biotechnology, metallurgy and material science, and electronics and computer science, where technological progress has been rapid, because they are beneficial to national development in several areas at the same time: agriculture, industry, medicine, transport and communications, environment and ecology, and so on.

(4.3) Improve the administration of research and development in the government sector to ensure that the results of research and development work are put to use instead of being wasted. Research and development topics of national importance should be determined and users of the research results identified before any research project is supported. This can be accomplished as follows:

(4.3.1) Both researchers and users of research results will jointly propose research subjects and projects to sponsors of the research; or

(4.3.2) Users of research results will pay for part of the research and development cost.

(4.4) Establish an organization within the Office of the Permanent Secretary, Ministry of Science, Technology and Energy for promoting and coordinating research and development in the 3 national priority areas of genetic engineering and biotechnology, metallurgy and material science, and electronics and computer technology. Initially the activities of this organization should harmonize with the administrative work of the Science and Technology Development Board, which comes under the purview of the Thailand-US Science and Technology for Development Project.

(5) To encourage technology transfer from abroad and increase its effectiveness in benefitting the economic and technological development of the nation:

(5.1) Establish a national committee for administering technology transfer. The committee will consist of representatives from all the agencies concerned, including the Office of

the Board of Investment, Bank of Thailand, Ministry of Industry and Ministry of Agriculture and Cooperatives, and from the private sector. The Ministry of Science, Technology and Energy will serve as the secretariat. The committee's prime functions will be to prepare national policies for promoting technology transfer, issue laws and procedures for ensuring that technology transfer benefits the development of local technology and determine the areas of responsibility while developing the capabilities of the agencies concerned with technology transfer.

(5.2) Strengthen the technology transfer centre into the government's central agency for coordinating the transfer of foreign technology with the development of domestic technological capabilities. The centre will, for example, establish a data bank on technology transfer to serve the private sector. It will also give advice on importing technology to the agencies responsible for allowing technological imports and remittances outside the country. In addition, it will closely cooperate with scientific and technological research institutes to stimulate knowledge, adaptation and development of imported technologies, which will hasten domestic technological development.

(5.3) The Office of the Board of Investment will be encouraged to attribute importance to technology, as well as economic and environmental aspects, in considering investment promotion.

(5.4) The Bank of Thailand should revise its classification of fees on technology so that information on technology trading will be more detailed and accurate.

(6) To develop a new data and information system for science and technology:

(6.1) Establish a network of scientific and technological information as part of the national information system, and encourage the development of various scientific and technological databases.

(6.1.1) Set up a committee that will coordinate a network of scientific and technological data and information, supervise its operation, establish a format for the data and create connections for communicating within this network.

(6.1.2) Upgrade the Data and Information Centre in the Ministry of Science, Technology and Energy to be the centre of this network. By linking agencies within the network, the database system will be able to locate all types of scientific and technological information.

(6.1.3) Improve the capability of the scientific and technological information system so that it can be linked to the work system in a similar manner to systems in use abroad.

(6.2) Develop a data indicator system for science and technology which will be used for determining pertinent policies and plans.

(6.2.1) Set up an indicator agency for science and technology in the Office of the Permanent Secretary, Ministry of Science, Technology and Energy. The unit will coordinate the scientific and technological indicator systems of the government and private sectors and foreign countries.

(6.2.2) Upgrade the capability of equipment, instruments and personnel used in collecting and retrieving data, including indexed data, and in keeping the data up to date and accurate.

(6.2.3) Undertake training to raise the knowledge and ability of personnel in providing information services concerning scientific indicators and in forecasting and assessing conditions, with a view to the determination of policies and plans for developing and using scientific and technological resources.

(6.2.4) Prepare a users' manual on the data indexing system for science and technology.

(6.2.5) Encourage the use of science and technology indicators in determining operational policies and plans in fields such as agriculture and industry that rely on science and technology as an important foundation. Obstacles to the coordinated development and use of science and technology indicators will be removed.

(6.2.6) Specify levels of access for each type of user to prevent misuse of the data.

(7) To promote the role of the private sector in developing and using technology:

(7.1) Speed up operation of the research and development revolving fund which supports private industry, by providing low interest loans with long repayment periods. The money will be used in research and development and in applying research results, constructing testing laboratories and using new, high-risk technologies.

(7.2) Encourage the private sector to set aside revenues for establishing technological development funds within their own businesses and in line with the following principles:

(7.2.1) Allow the private sector to deduct the accumulated fund as expenses in calculating income taxes of juristic personnel.

(7.2.2) Allow income tax exemption for a specified period of time on revenues from goodwill, patents and trademarks derived from technological research and development.

(7.2.3) Allow import duty reductions on instruments, machinery and equipment used in implementing research and development and in developing technology.

(7.3) Establish a subcommittee on technological development to coordinate development and use of science and technology by the government and private sectors. The subcommittee will come under the joint committee of the public and private sectors.

(7.4) Encourage academic and professional associations to operate as independent institutions and play an important role in the scientific and technological development of the country.

1.4 Major work plans

To achieve the foregoing objectives and targets, the development of science and technology shall consist of the following 4 work plans:

(1) Work Plan for Developing the Basic Structure and Administrative System

Increase administrative efficiency in science and technology by establishing well-defined targets and directions and by developing basic structures which are important in policy implementation. Combined long-term policies and plans will be specified for science and technology, especially in regard to arranging priorities and assessing plans and projects. The role of the Ministry of Science, Technology and Energy will be reviewed to enable it to function efficiently as an organization for administering science and technology. Laws and regulations that obstruct the development and use of technology will be revised, while others that support a wide and determined development and use of technology, will be reviewed and promulgated if found beneficial.

(2) Work Plan for Increasing Efficiency in Scientific and Technological Activities.

(2.1) Establish organizations to promote research and development, and coordinate investment in this area in the following ways:

(a) Bring together and increase the operational efficiency of different scientific and technological activities such as research and development, technology transfer from abroad and the collection of miscellaneous information. A complete system will be formed, which will satisfy the demand for development and applicability, by establishing a national information system and network on science and technology, developing a data indexing system for science and technology and improving the system for administering research and development and transferring technologies from abroad.

(b) Develop new products and new production processes that will increase the value of manufactured products by using local raw materials. The invention of equipment, tools and instruments will also be encouraged and promoted.

(2.2) Enhance the performance of research and development in specific areas of science and technology.

(2.3) Cooperate with foreign countries and international organizations in research and development, identifying sources of funds and improving the country's capabilities in science and technology.

(2.4) Increase the efficiency of meteorological work by upgrading the quality of equipment, instruments, personnel and the public relations system will be improved so that both short-range and long-range weather forecasts will be more accurate.

(3) Work Plan for Developing Human Resources and Manpower in Science and Technology

Produce manpower in science and technology with sufficient efficiency and quality to satisfy the development needs of the national economy and society, as well as technology. In addition, the habit of logical thinking will be encouraged among the general public, as will their general acceptance and pursuit of technology. Demand forecasts and plans for manpower in science and technology will be formulated and the educational system will be improved at the university, vocational school and secondary school levels. Understanding of the role and value of science and technology will be inculcated in the general public and the use of manpower in science and technology will become more efficient.

(4) Work Plan for Increasing Efficiency in the Production System through Technology

(This work plan is included in the Programme for Development of the Production System, Marketing and Employment.)

PROGRAMME 5
IMPROVING THE ADMINISTRATION AND REVIEWING THE ROLE
OF THE GOVERNMENT IN NATIONAL DEVELOPMENT

IMPROVING THE ADMINISTRATION AND REVIEWING THE ROLE OF THE GOVERNMENT IN NATIONAL DEVELOPMENT

CHAPTER 1

INTRODUCTION

1. As a result of the past 25 years of development, the Thai economic system has advanced to the level of a middle-income developing country at which competition, especially with the newly industrialized countries, is very high. Moreover the system has become so complex that the former procedure of relying heavily on the government for the management of economic development can no longer cope with the continually increasing competition and diverse problems of development. It is therefore necessary to lay down guidelines for improving the government's role in development. The goal is for all concerned parties to be mobilized in a joint development process and for the government to continue in its supportive role with greater efficiency, thus combining strengths within the fully integrated structure of development administration. Details of the scheme to improve the government administrative system are described in specific programmes; for example, aspects concerning rural development fall under the Programme for Rural Development, while details on the improvement of the government fiscal system are included in the Programme for Overall Economic Development and in the Programme for Development of State Enterprises. The Programme for Improving the Administration and Reviewing the Role of the Government in National Development stresses the importance of government administration as a whole and aims to create efficiency in supporting the private sector and by establishing guidelines for strengthening cooperation between the public and private sectors.

2. In improving the government's function as an efficient support to the private sector, the following important issues should be addressed:

2.1 Resolve coordination problems between government agencies by implementing a programme system which allows for more synchronization in operations and greater cooperation.

2.2 Develop human resources to fit both quantitatively and qualitatively the system mentioned in Paragraph 2.1

2.3 Increase the efficiency of the administrative instruments of the government, especially public relations mechanisms for development, and reduce the barriers that arise from the rules, regulations and orders that are under the jurisdiction of the executive branch, not the legislature.

2.4 Resolve basic disputes between the government and the private sector by improving the quality of services provided by the government.

2.5 Establish guidelines for cooperation between the government and the private sector to further strengthen the cooperation in development that already existed in the Fifth Plan.

3. Application of Paragraphs 2.1 to 2.5 will strengthen development efforts and lower the barriers which have blocked development in the past. Their introduction would not require a large investment and should start immediately; the alternative is for the government bureaucracy to remain weak and inadequately coordinated, thus impeding the operations of the private sector which is considered the main source of production. Detailed operational guidelines are specified in subsequent chapters of this programme.

CHAPTER 2

DEVELOPING THE PROGRAMME SYSTEM FOR GOVERNMENT ADMINISTRATION

1. An important problem in the administration of development is the lack of cooperation between responsible agencies. As a result the government bureaucracy, apart from hindering the operations of the private sector, itself lacks strength and often fails. Major guidelines for solving the problem are as follows:

1.1 Use the programme system as a focus for the operations of various departments. This system has worked successfully in the development of several countries.

1.2 Appropriately adjust the quality and quantity of government manpower in order to support the operation of the programme system described in Paragraph 1.1.

Details of each of the 2 major guidelines follow:

GUIDELINES FOR DEVELOPING THE PROGRAMME SYSTEM

Facts and description of the problems

2. The fact that government agencies usually work in isolation from each other is known to have caused disputes, lack of strength and inefficiency, and is an increasingly evident obstacle to national development. Combined efforts by responsible agencies towards a clear and common objective are needed for the development process to succeed. As such, and as the principal guidelines of the Sixth Plan aim at improving the efficiency and quality of development operations, it is very important to find a way to solve this problem. Methods were initially laid down in the Programme for Rural Development of the Fifth Plan, and these should be expanded to cover several central issues, such as exports, employment and restructuring production, where close cooperation among many government agencies is required.

Objective

3. To promote the development process by administering development work in a synchronized, fully integrated and efficient manner.

(b) Support research and development in the fields of drug production, **Development guidelines** and utilization according to the National List of Essential Drugs. In particular, support will be given to research and development on medicinal plants for primary health care, traditional and modern drugs industries and the production of drugs for export.

4. In order to promote an efficient and fully integrated programme system, the following 9 development guidelines are specified:

(c) Protect consumers from the dangers that may arise from the consumption of food, drugs, cosmetics, toxic materials and chemical products by monitoring the dangers and regularly disseminating information to the general public.

4.1 Improve coordination between the 4 central agencies (the Office of the National Economic and Social Development Board, Budget Bureau, Civil Service Commission and Ministry of Finance) so that the various plans will work coherently together. Emphasis should be placed,

(4.2) Improve the quality and efficiency of public health services. During the Fifth Plan period, health service centres were increased in number and dispersed widely with coordination in the timing of operations.

4.2 Encourage implementation of the programme system in all government agencies. Improving the quality and efficiency of public health services. Measures for implementation are: Work plans will integrate the activities of all concerned agencies.

(4.2.1) Develop a referral system for transferring patients from lower level to higher level service units. Minor cases will be treated at the local health centres and community hospitals while serious cases requiring high technology treatment will be transferred to urban hospitals and large medical centres. Such operational plans will be used as instruments for systematically allocating manpower and budgets and for management, monitoring and reporting. At present the use of operational plans is limited to a few government agencies.

(4.2.2) Expand the health card programme in rural areas and initiate it in urban areas. 4.4 Encourage intermediate planning agencies to be efficient and capable of operating as planning centres. This will be given medicinal care services. The Office of the National Economic and Social Development Board will support plan coordination with other ministries.

(4.2.3) Improve the quality and efficiency of medical care services in community hospitals and health centres. 4.5 Give all departments a greater role in formulating operational plans to improve consistency within and between ministries. Public confidence will increase if the institutions are provided with more manpower, essential facilities and personnel development.

4.6 Set up guidelines for improving understanding between concerned agencies and re-structure plans annually. (4.2.4) Increase the capability of hospitals to support themselves. The policy on setting fees for medical care in government hospitals will be reviewed in accordance with the realities of actual costs and increasing expenses.

4.7 Encourage the Budget Bureau to analyse the operations of government agencies on the basis of the programme system for the purpose of achieving appropriate and fully synchronized budget allocations. (4.2.5) Expand public health services to reach more people in more rural areas. Community hospitals will be constructed where necessary, and to save on cost they will be in the form of extended OPD, etc.

4.8 Central organizations on personnel administration will constitute the central unit in coordinating the formulation and supervision of the manpower plans of government agencies. In coordinating manpower plans with operational and budget plans, the emphasis will be placed on the efficient use of available manpower. (4.2.6) The government will continue to provide free medical care to poor people, but operations will be made more efficient. For the sake of social justice, the government will provide health services only to people who are unable to fend for themselves.

4.9 Study and establish guidelines for developing an information system for administrative purposes. A National Information Centre will compile, disseminate, exchange and coordinate management information on public health and hospital administrators. It is particularly necessary to develop the personal capabilities and teamwork of hospital administrators.

GUIDELINES FOR IMPROVING THE GOVERNMENT MANPOWER SYSTEM

(4.2.9) Provide career counseling, graduate surveys and job placement services in educational institutions.

Facts

(a) Emphasize close and continuous cooperation between educational institutions and business enterprises.

5. During the period of the Fifth National Economic and Social Development Plan, the government studied organizational and procedural aspects of its workforce. In respect to organizational aspects, the role of the Administrative and Regulation Reform Committee was improved and manpower development committees at the ministerial level were established. As for procedures, a 3-year manpower plan, which is part of the government manpower programme, was formulated. It establishes job placement services in educational institutions and regular surveys of graduate employment.

6. While these organizational and procedural reforms may help upgrade the quality of operations at one point, there remain unsolved problems, especially the need to develop a system for manpower coordination which is compatible with the programme system, rather than fragmentary and thus inconsistent with it.

(a) Coordinate science, mathematics and technology curricula, teaching materials and methods, teachers' training and evaluation methods at all levels in line with the Programme for Development of Science and Technology.

Description of the problems

(b) Support academic activities in science and technology such as seminars and conferences on the government's manpower system, educational techniques, etc. 7. Problems in the government's manpower system are summarized in the following 2 main points:

(c) Design curricula with the flexibility to adapt to changes in science and technology.

7.9 Problem in the quantity and distribution of government officials

(1) During the Fifth Plan period, the establishment of an upper limit of 2 per cent per year on growth in government manpower helped somewhat in slowing down the increase. Nevertheless the number of government officials has still been increasing beyond the 2 per cent ceiling over the last few years. As a result total government manpower expenses (salaries, wages and compensation) have increased to 36 per cent of the total expenses, and the tendency is towards further increases. Less budget, therefore, remains for national development.

(2) The allowance of a 2 per cent maximum increase in salary quota to each government agency makes it difficult to estimate the overall need, and creates an inappropriate distribution of manpower. Some agencies have a manpower surplus while others face a manpower shortage. To promote and support the physical and mental health of the rural and urban population in order to improve the quality of human resources and their ability to contribute effectively to national economic and social development, no consideration is given to abolishing positions or transferring unwanted personnel to agencies in need, nor have measures been designed for these purposes. Additionally there is no standard by which the manpower needs of each agency may be ascertained.

(2) Targets

(3) The distribution of qualified manpower to remote rural areas is still insufficient. The mechanism or administrative system to allocate government personnel appropriately has not yet been developed. 2.11 Promote long-term goal of health for all through basic minimum needs approach with the following targets:

7.2 Problem of improving the quality of government officials

(1) There is still no clear direction or policy for developing the quality of government manpower. Manpower is still developed at the discretion of each agency. The lack of consistency and coordination between government agencies and the lack of cooperation with training agencies has made personnel development uneconomical and inappropriate to needs.

(2) The importance of training for personnel development has not been appreciated because the participants do not receive knowledge related directly to their fields. Moreover training methods and techniques are inappropriate, and there is no evaluation of the training.

Development guidelines

8. To develop government personnel effectively, the central organizations on personnel administration should improve and develop the information system on government manpower, making it more thorough, more accurate and more current to help establish planning policy and manage government manpower under the following guidelines:

8.1 Quantity and distribution of government officials

(1) Until there is a manpower plan, the central agencies, namely, the Budget Bureau, central organizations on personnel administration and Office of the National Economic and Social Development Board, will together set the annual budget ratio under the category of salaries and wages. Allocations to government agencies will be based on their necessity and importance to the programme system, rather than the policy of limiting annual growth of government manpower to 2 per cent.

(2) Procedures for allocating manpower are to be laid down by the central organizations on personnel administration as soon as possible. Ministries and departments will check their own information and allocate manpower according to the set procedures.

(3) Encourage the relocation of educated government officials to regional and rural areas by improving incomes, welfare, benefits and other incentives accordingly.

8.2 Improving the quality of government officials

(1) Central organizations on personnel administration will coordinate with government agencies at all levels to formulate systematic and continuous development plans for manpower.

(2) Central organizations on personnel administration will consider procedures that give public sector personnel the opportunity to work in the private sector for a period of time on

a secondment basis, and vice versa, in order that both sectors may improve their efficiency through exchanging experience.

(3) The Ministry of Finance, Budget Bureau, Office of the National Economic and Social Development Board and central organizations on personnel administration will conduct survey on restructuring salaries and wages, and report to the government. The Office of the Civil Service Commission will act as coordinator.

(4) Support research on the development of government officials with a view to increasing efficiency in the Thai bureaucracy. Training methods for personnel administration will be studied and developed, and research will also be conducted on the various factors affecting the quality of work of government officials. In addition curricula should be developed, and seminars attended by senior and junior executives from the public sector should be supported.

(5) Support the development of technology appropriate for training government officials. Government agencies will be encouraged to use a common curriculum in training in order to create systematic development and increase efficiency and lower costs.

(6) Develop a sense of duty, conscience and honesty among all government officials and state enterprise workers.

(4.2.1) Give pre-school children physical, mental, emotional, spiritual and cultural preparation by providing appropriate services for each locality and coordinating the relevant agencies.

(4.2.2) Improve the quality of compulsory education by developing personnel and curricula and by providing the teaching aids necessary for improvements in efficiency and quality.

(4.2.3) Aim at developing and supporting children in rural areas in order that they may attain an education beyond the compulsory level, especially in areas where the rate of attendance for secondary education is low. Feasibility studies should be conducted on extending secondary education in areas with low attendance rates.

(4.2.4) Develop middle-level and high-level manpower in such fields as electricity, electronics, metallurgy and modern business services, which are undersupplied despite high market demand. Cooperation between the main agencies and occupational organizations will stress planning of medium-term to long-term personnel development bearing in mind labour supply and demand in such fields as medicine, engineering and agriculture.

(4.2.5) Develop personnel in training teachers by producing teachers of quality and with ethical standards who set a good example to the students and society.

(4.2.6) Set up education and training programmes that emphasize skills development, and establish standards applicable in testing labour skills.

(a) Speed up the process of establishing standards and methods for testing labour skills.

(b) Encourage students to take up employment at their educational institutions during their period of education in order to increase their occupational skills while studying.

(c) Consider a cooperative structure and procedures to enable the Ministry of Education, Ministry of University Affairs, Department of Labour and private sector to suggest controls and standards for vocational skills.

(4.2.7) Encourage cooperation between the government and private sectors in occupational training by emphasizing on-the-job training, apprenticeships and highly skilled labour. Implementation of the National Occupational Training Act will be accelerated.

(4.2.8) Set up fully integrated occupational education and training in marketing, management, investment, finance and accounting to promote job creation, self-employment and the grouping together of individuals into small businesses including tourism businesses.

(2) Targets

CHAPTER 3

IMPROVING GOVERNMENT INSTRUMENTS

FOR SUPPORTING THE ADMINISTRATION OF DEVELOPMENT

(2.1) Provide formal and non-formal education and training to students and the general public to inculcate a sense of righteousness, responsibility, discipline, honesty, diligence and self-sufficiency besides a knowledge of a vocation and the determination for self-development to enable the people to lead a decent life, carry out their work and contribute to society.

1. Apart from improving the quality of education at all levels and providing vocational training to the general public, the process of national development by way of communities and their families and the system of their standards of living. Vocational education will be directed towards labour market requirements both in non-traditional areas and towards creating the capability of the workforce to be self-employed.

1.1 *Public relations for development.* This is a mechanism to convey understanding and create public participation — a major factor in joint national development efforts.

(3) Guideline

1.2 *Improvement of government rules and regulations for development.* Relations between the public and the private sector including ordinary citizens have never been so tight owing to problems arising from rules and regulations which are unfavourable to joint national development efforts. The improvement of rules and regulations shall thus become an important instrument for creating a better understanding between the government and the public during the Sixth Plan period.

(4) Measures

Details of the approach to improving the 2 foregoing factors are as follows:

To meet the objective, targets and policy guideline outlined above and continue activities of the Fifth Plan, the following measures are specified:

IMPROVING THE PUBLIC RELATIONS SYSTEM FOR DEVELOPMENT

(4.1) *Make more efficient use of the education and training budget by emphasizing resource sharing.*

Facts

(4.1.1) Transfer educational resources from levels and areas which are close to saturation to others which need development.

2. From the period of the First Plan to the present day, public relations methods have not been fully emphasized in national development. Although there is wide awareness of the importance of public relations, and several agencies concerned with public relations have been established, implementation has been piecemeal and there has been no planning for either a systematic overview of development or coordination among different agencies. As a result the general public and the private sector, which constitute a major force in national development, have not been able to understand the whole system of national policy guidelines and have not fully participated in the development process.

(c) Group education institutions higher than upper secondary level together according to their field of expertise and readiness. Educational management will be coordinated in each geographical area to create resource sharing and reduce resource duplication.

3. Consequently, in order for development to reach the objectives and targets specified for the period of the Sixth Plan, a communications strategy for the development plan should be formulated to serve as a master plan for coordinating all other development plans concerned with public relations in government and the private sector, thus creating an understanding that will encourage all parties to participate in the development plan.

Objectives

4. There are 2 main objectives in the communications strategy for the development plan:

4.1 To create a deeper understanding of the important issues and development processes of the Sixth National Economic and Social Development Plan. Existing public relations instruments will be used for persuading all parties to increase their participation in work that is compatible with the government's development plan.

4.2 To develop the quality of government public relations to give more support to the development of the country.

Target

5. Identify target recipients of information that will facilitate development. Targeted recipients will be classified into various groups such as executives, Members of Parliament, political parties, government officials, the mass media and the general public. Channels of communication will be established with each group so that information will be continually transmitted to and from the target groups, creating a two-way communication system to promote better coordination in joint efforts than in the past.

Guidelines

6. In order to achieve the preceding objectives and target, it is necessary to determine guidelines to establish a public relations system for development, especially for creating understanding of the Sixth Plan and the main development issues as follows:

6.1 Guidelines for developing the quality of public relations

Because the government's public relations system has persistently suffered from problems of quality from the past up to today, it has failed to create faith and induce the people or the various target groups to participate sufficiently in the national development process. It is therefore necessary to establish the following guidelines for developing the quality of public relations for development in the Sixth Plan:

(1) Accelerate the development of relations and understanding between government agencies, practitioners of development, the mass media and the general public by formulating a system for exchanging data, news and attitudes about development on a regular basis.

(2) The content of news releases should appeal to the interests of target groups and encourage as much participation as possible in key development activities.

6.2 Guidelines for developing instruments for public relations

The following guidelines are specified for developing various instruments:

(1) At first, plans for the maintenance of communications instruments will be formulated and state communications resources will be mobilized for the work of national public relations. The authorized government agency will request cooperation in developing government public relations from private sector mass media, who will be asked to participate in the government's public relations process for the benefit of the country.

(2) Encourage the introduction of appropriate technology and equipment into public relations work. If possible, equipment that is locally made and has been approved by the Thai Industrial Standards Institute should be given priority.

(3) Principles for developing public relations media and purchasing communications equipment follow the policy set in the Programme for Development of Infrastructure Services of the Sixth Plan.

Methods of operation

7. As the need to spread understanding of the Sixth Plan is urgent, a special subcommittee under the National Public Relations Committee should be formed to coordinate operational plans, communicate public relations information through the different media and evaluate the results of efforts to improve public relations.

8. For developing the quality of public relations (See Paragraph 6.1), the National Public Relations Committee should urgently formulate an annual operational plan for public relations for development which will emphasize transferring knowledge and understanding to government public relations personnel in order that they may become able to select useful pieces of news and information, and able to direct them to the appropriate media later on. At the same time, a system for exchanging news and attitudes between the operational side and the mass media should be organized with continual monitoring and assessment.

9. The development of instruments for public relations equipment (See Paragraph 6.2) should follow the operational principle laid down in the section of the Programme for Develop-

ment of Infrastructure Services of the Sixth Plan dealing with the development of communications. The aim stated there is for specific investments to be made, as deemed necessary and appropriate in view of the monetary and fiscal condition of the country, with the private sector participating more in such investments.

GUIDELINES FOR IMPROVING GOVERNMENT RULES AND REGULATIONS FOR DEVELOPMENT

Facts

10. The process of national development has to be continuously revised to keep pace with changing global conditions. In the period of the Sixth Plan, special emphasis will be placed on revising the government's role in development. The private sector will be encouraged to participate fully in national development in cooperation with the government sector. This will increase the efficiency of the development process. To facilitate this revised government role, rules and regulations will need to be reformed.

11. The major obstacles to changing the role of the government executive arm are existing rules and regulations. These rules, however, are promulgated through the parliamentary legislative process, which lies outside the scope of this plan. Therefore, this chapter will make recommendations on reforms to rules, regulations and orders directly related to the civil service system only.

12. To encourage the private sector to participate fully in development, the civil service will have to start dispensing fast and efficient services to the public. Improvements to the structure of the government will be in line with development of the economy and society; for example, overlapping of government agency responsibilities will be eradicated, administrative power will be distributed to regional authorities and self-reliance among local authorities will be properly encouraged.

Description of the problems

13. Current rules, regulations and orders contain the following major shortcomings:

13.1 They are partly responsible for duplications in responsibility. Agencies issuing rules and regulations tend to consider their own needs to the exclusion of more general purposes.

13.2 Some rules and regulations are difficult to understand. The lack of clarity and consistency creates inconvenience and obstacles for the public.

13.3 They increase operating costs and create certain unnecessary private sector outlays.

13.4 Revisions to keep up with changing economic and social conditions are not carried out.

13.5 They do not sufficiently accord with general needs because certain rules and regulations address overly specific subjects.

Objectives

14. The 3 main objectives in improving government rules and regulations for development are as follows:

14.1 To eliminate duplication in responsibilities and operational procedures in government agencies, and thus create rules, regulations and orders that are easy to understand, have a clear scope, are flexible and agree with actual economic and social conditions.

14.2 To increase efficiency in national development.

14.3 To bring about equality, convenience and justice in the provision of government services.

Development guidelines

15. In order to fulfill the objectives stated in Paragraph 14, the following development guidelines are specified:

15.1 The Office of the Juridical Council will serve as a core agency in forming a committee representing the law faculties of various universities to undertake studies and recommend to the government improvements and amendments to laws for economic and social development.

15.2 The Office of the Juridical Council will establish a system and an organization for studying how to restructure rules, regulations and orders to conform with development objectives.

15.3 The Office of the Juridical Council will be encouraged to undertake a research project to identify laws that are no longer applicable to current conditions.

CHAPTER 4

GUIDELINES FOR IMPROVING THE PROVISION OF GOVERNMENT SERVICES

Facts

1. During the period of the Fifth Plan, attempts were made to promote cooperation between the public and private sectors in national economic and social development. In the past, however, one of the major obstacles to joint efforts between the public and private sectors has been the quality of government services provided to the private sector. At the root of this problem is a basic conflict between the method of operation of the public sector and that of the private sector, with the private sector demanding fast and efficient services from the government while the government sees the need to cautiously follow normal regulations and procedures. This basic conflict is very important in view of the following facts:

1.1 Private sector demand for services from the government is very high and comes from people engaged in all walks of life.

1.2 Some government services are directly related to the operational costs and efficiency of the private sector. This has an effect on the competitiveness of the private sector.

2. Government services have a great impact on both the private sector and the economic system, as was mentioned before. If no solutions were found to the foregoing problem, attempts by the government to promote relations, understanding and cooperation between the government and the private sectors would always be in vain.

Analysis of the problems

3. During the Fifth Plan period, the government had already begun to improve mechanisms for providing government services. Success has been achieved in some areas, such as in the procedures for passport application and vehicle registration. Analysis of guidelines used during the Fifth Plan period indicates that the following 3 guidelines were successful in improving the quality of government administration:

3.1 Improve service mechanisms and adjust fees in order to serve the public more efficiently, and employ more staff to facilitate the work. Under this guideline, for example, passport fees were adjusted, thus increasing the speed and fairness of the service.

3.2 Improve service procedures to increase speed and efficiency within individual agencies, and combine the services of several agencies into one organization and system. Examples can be seen in vehicle registration procedures and the setting up of a one-stop service centre for exporters within the Ministry of Commerce.

3.3 Encourage the private sector to participate in providing services in certain business sectors in order to provide convenience and flexibility to beneficiaries by, for example, paying such public utility fees as electricity, water and telephone through commercial banks and inspecting or certifying the quality of goods.

Development guidelines

4. In order to improve the efficiency of government services and thus increase the nation's competitive potential and to reduce the conflicts between the public and private sectors, in the Sixth Plan period it is necessary to expand government operations in conformity with the 3 guidelines already mentioned. The guidelines for promoting implementation are as follows:

4.1 The Office of the Prime Minister will issue regulations to define methods and procedures for improving the provision of government services. The regulations will follow the guidelines for improving mechanisms, adjusting service fees, changing procedures for providing services and giving the private sector a role in several government service businesses. Each government agency should select appropriate guidelines for its own needs and develop its own operational plan.

4.2 Central organizations, such as the Administrative Reform Committee, will monitor the formation and results of operational plans for improving quality in the provision of services.

4.3 Central agencies will support agencies that have operational plans in order to increase their efficiency in providing services to the public. Such plans will be regarded as a high priority.

CHAPTER 5

COOPERATION BETWEEN THE PUBLIC AND PRIVATE SECTORS

Facts

1. The role of the private sector in the economic development process of Thailand is not limited to that of an investor and an operator of business activities; it is also an important participant with the government in promoting and accelerating the process and progress of economic development. Cooperation between the public and private sectors has expanded a great deal in both the work itself and the awareness of a common responsibility in the development process, as is evident from the increased representation and participation of the private sector in solving the problems and developing the economy of the country. To benefit localities and the general public, many joint activities have been undertaken; joint negotiations on economic, trade and investment matters with foreign countries, for example, are cooperative activities which have given the public and private sectors the opportunity to improve mutual understanding and attitudes, develop an atmosphere of joint responsibility in the development of the country, and at the same time remove all obstacles and together lay down appropriate guidelines for strengthening the Thai economic system for the future.

2. The government is well aware of the importance of mobilizing private sector participation in the process of national economic development. In the Fifth National Economic and Social Development Plan, government policy guidelines specified promotion and support for private sector participation in problem solving and in such development activities as investing in projects in irrigated areas, exploring foreign markets and conserving energy. In addition a coordinating system, in the form of a high-level joint committee, was encouraged, as was the upgrading of private sector business institutions and the revision of rules and regulations hindering business operations in the private sector. Moreover support was given to the effort to disseminate knowledge and understanding within the private sector of its important role in the country's rural development as, for example, an extension of the role of voluntary and private business organizations in rural development.

3. The period of the Fifth National Economic and Social Development Plan may be regarded as an important turning point for cooperation between the public and private sectors. A high-level coordination organization called the Joint Public/Private Sector Consultative Committee has been formed with the principal objective of supporting and creating the impetus to fulfil

the Fifth Plan's policies and measures for mobilizing private sector participation. Moreover the process of cooperation has spread into all kinds of activities and expanded into rural areas. Cooperation between the public and private sectors has started to be organized in a systematic manner, which can be summarized as follows:

3.1 For developing exports, procedures have been rationalized to save time and export costs and thus contribute to competitiveness with other exporting countries. Cooperation has been extended to solving international trade problems and finding overseas markets for increasing exports.

3.2 In investment promotion and industrial development, the procedures for obtaining permission to establish factories have been reduced for the convenience of investors. Foreign investors have been persuaded to invest and develop joint ventures in agro-industry and in agricultural projects in irrigated areas. As for industrial development, a credit extension fund for small-scale industries and an industrial energy-saving centre have been established.

3.3 In regard to tax problems, tax rebates have been accelerated, tax rates have been adjusted and many problems arising from the tax collection system have been solved.

3.4 A joint effort for solving rural economic problems in agriculture, industry, mineral resources and tourism is regarded as the first cooperative venture between the public and private sectors in the provincial regions.

3.5 Cooperation between the public and private sectors has been extended into various fields including the development of education, agriculture and mining, and the setting up of coordinating organizations at the provincial level.

Description of the problems

4. While the process of cooperation between the government and private sector has developed reasonably well over the past 5 years, the cooperative structure lacks stability because of its newness and because of the following problems:

4.1 Little has been done to create awareness and understanding of the cooperative roles of the government and the private sector, except at the central policy level; at the operational and local levels there is still a negative attitude towards and little understanding of the process of cooperation, thus causing confusion and sometimes a feeling that the purpose of such cooperation is to benefit some specific groups only.

4.2 Although relations between the government and the private sector have developed in a positive manner, misunderstanding and mistrust remain: most of the private sector still consider the civil service and rules and regulations, though revised, to be important barriers to their

business undertakings; at the same time, problems arising from the irresponsible social actions on the part of some private sector elements and such economic crimes as those committed during the Fifth Plan period have made the government more cautious in its dealings with the private sector.

4.3 Capabilities are limited in some of the organizations involved in the cooperative process; for example, the Provincial Chambers of Commerce and the Provincial Joint Public/Private Sector Consultative Committees. As a result the process of cooperation suffers from inefficiency, which leads to lack of trust.

Guidelines

5. In order to mobilize private sector cooperation in solving the problems and developing the economy of the country, the government has to reform its own mechanisms to enable the private business sector to expand more rapidly, as mentioned in previous chapters. Concurrently the government will reduce its role in investment and stimulate more private investment in accordance with the principles of free trade and social justice. The private sector, however, will have to have more sense of responsibility towards society. Cooperation between the public and private sectors should be regarded as part of the national development effort, having as its main objectives solutions to the problems of the balance of trade, unemployment and the distribution of income. In order to achieve these objectives, the following basic guidelines for expanding cooperation between the public and private sectors need to be established:

5.1 The government will continue to follow the Fifth Plan guidelines already mentioned by placing importance on support rather than control of private enterprise and revising all outdated rules and regulations, as described in Chapter 3.

5.2 The government will promote more participation by private sector organizations in the process of economic administration. For instance, certain duties and responsibilities will be assigned to private sector organizations and the private sector will be given a part in the investment and management of state enterprises in line with the Programme for Development of State Enterprises.

5.3 The government will develop the system for exchanging information with the private sector in order to generate knowledge, understanding and a sense of collective responsibility. This will create a more solid foundation for developing coordinating procedures for the public and private sectors.

5.4 The government will promote and strengthen organizations in the private sector to enable each private group to take care of its activities and members more efficiently and participate in economic development at the central and local levels.

5.5 The government will encourage cooperation between the public and private sectors to spread systematically into various fields of development, both at the central and local levels.

Measures

6. In accordance with the guidelines, the following measures will be executed in addition to those already mentioned:

6.1 Enlarge the scope of projects undertaken jointly by the public and private sectors in agriculture and agro-industry: for example, projects for developing irrigated areas, seeds and agricultural produce for industry, and so on.

6.2 Establish work plans and joint projects between the public and private sectors which will improve production quality and efficiency by supporting plans for restructuring production and developing technology in the production process.

6.3 Set up work plans and joint projects for supporting exports by developing the public/private sector information system, increasing the role of commercial banks in the field of exports and encouraging the private sector to take part in trade negotiations and represent Thailand's commercial sector abroad.

6.4 Support improvements in local capabilities and the organizing of private institutions in localities. For instance, the Provincial Chambers of Commerce should effectively represent the private sector in cooperating with the government while the Ministry of Commerce and the Thai Chamber of Commerce would fulfil implementing and coordinating roles.

6.5 Encourage the establishment of an organization for coordinating the public and private sectors at local levels in the manner of the Provincial Joint Public/Private Sector Consultative Committees. The ability and the aptitude of both sides will be taken into consideration, with the Ministry of Interior acting as coordinator.

PROGRAMME 6
DEVELOPMENT OF STATE ENTERPRISES

DEVELOPMENT OF STATE ENTERPRISES

CHAPTER 1

INTRODUCTION

The following major changes have been taking place in the operation of state enterprises in Thailand since the period of the First Plan up to the Fifth Plan; that is, from 1961 – 1986.

Firstly, the number of state enterprises in Thailand has been reduced from more than 100 to less than 70 at the present time. This is contrary to the trend in most developing countries, where the number has continued to increase.

Secondly, although the number of state enterprises has decreased, their operating and investment expenses have rapidly increased: from 72 per cent of the government budget in 1977 to 109 per cent in 1986. The investment budget of the state enterprises has been increasing by an average of 20 per cent per annum over the last 8 years.

Thirdly, the major part (60 per cent) of the public sector's foreign debts have been incurred by state enterprises. Moreover almost 90 per cent of state enterprise debt has been borrowed from foreign sources, the balance coming from domestic sources.

Fourthly, state enterprise earnings remitted to the government dropped from 73 per cent of net profits during the period of the Fourth Plan to only 42 per cent in the Fifth Plan. This is because the allocation of profits for project investments by state enterprises increased from 10 to 20 per cent over the same period of time.

Fifthly, the labour force in the state enterprises has now reached a total of approximately 250,000. In the Fifth Plan period, manpower was increasing at a rate of over 3 per cent a year, whereas the maximum growth rate for public sector manpower recruitment was set at 2 per cent per year for the period.

Lastly, half of the 70 state enterprises are currently operating as 'big businesses', employing over 1,000 people each. Efficient use of the labour force, therefore, is an important issue in the general efficiency of state enterprises, and it needs to be closely monitored.

CHAPTER 2

RESULTS OF PAST PERFORMANCE AND DEVELOPMENT ISSUES

1. Policy guidelines in the Fifth Plan

The Fifth Plan laid down the following policy guidelines for improving efficiency in the operations of state enterprises:

1.1 Reduce subsidies from the government budget and promote self-reliance in state enterprises.

1.2 Adjust the prices of goods produced and service fees to ensure that net income (as a percentage of shareholders' equity) will not be lower than the interest rate on government bonds and that the debt-to-equity ratio of state enterprises will be maintained at an appropriate level.

1.3 Draw up corporate plans for each state enterprise that clarify plans on production, marketing, revenue generation and expense reduction.

1.4 Make state enterprise management more business-oriented and liquidate or sell state enterprises which are not operating successfully or have been suffering unreasonable losses for several consecutive years.

In addition, the Fifth Plan also required an assessment of the impact of state enterprise expenditures and investments on the maintenance of fiscal and monetary stability as well as careful monitoring of government borrowing.

2. Results of state enterprise development during the Fifth Plan period and development issues

2.1 Operations and financial status. Most of the 59 state enterprises which submitted investment budgets to the Office of the National Economic and Social Development Board, in accordance with the 1979 Capital Budget Regulations of the State Enterprises, had succeeded in making a profit. Total profits generated during the period of the Fifth Plan were 57,717 million baht, equivalent to 4.2 per cent of their total assets. During the same period of time the rate of return in large Thai corporations in the private sector was 9 per cent of total assets.

2.2 Fewer state enterprises operating at a loss. The number of state enterprises operating at a loss decreased during the period of the Fifth Plan. At the beginning of the period, 18 state enterprises were operating at a loss, totalling 2,292 million baht; however, at the end of the period only 11 were still running at a loss that totalled only 2,117 million baht. The losses were caused by the failure of these enterprises to adjust prices for their services and goods, by the need to compete with the private sector and by inefficient management. Two state enterprises lost more than 500 million baht each per year during the period of the Fifth Plan: the Bangkok Mass Transit Authority and the State Railways of Thailand.

2.3 Increase in investment. During the period of the Fifth Plan, investment by state enterprises almost doubled from the Fourth Plan amount of 89,000 million baht to 170,000 million baht. Most of this went on transport and communications and energy, which accounted for 87 per cent of the total investment budget of state enterprises in the Fifth Plan. Thus the operating expense budget and the investment budget of the state enterprises now exceed the government budget.

2.4 Increase in foreign borrowing. State enterprises have come to rely more on foreign loan sources because self-generated revenues, government subsidies and domestic fund sources have not been sufficient to finance the rapid increase in investment budgets. State enterprises increased their foreign borrowing for investment from 47,264 million baht during the Fourth Plan to 76,195 million baht during the Fifth Plan, or from 57 per cent to 65 per cent of the total foreign borrowing by the public sector. The effect on the debt structure and the financial stability of the government has been substantial; therefore, owing to the increased reliance on foreign sources of funds by state enterprises, it is imperative to mobilize funds from domestic sources and to increase the capital of the growing state enterprises.

2.5 Fund mobilization. The mobilization of funds from domestic sources has certain limitations: the amount mobilized is insufficient to satisfy the funding needs of state enterprises largely due to the high interest rates and short loan-repayment periods. Moreover if state enterprises try to borrow more at a high rate of interest from domestic sources, opportunities for fund mobilization by private sector businesses will necessarily be lessened. Therefore state enterprises should try to either increase the proportion of fund mobilization from their own income or limit the amount and type of investment. They should also attempt to increase capital, establish joint ventures with the private sector and privatize some of their activities in the future, because the private sector is able to operate many state enterprise activities more efficiently, which would enable state enterprises to limit the amount and type of investment to major activities.

2.6 Increase in the use of revenues for investment. Funds mobilized from the revenues of state enterprises increased from 10 per cent of project investment during the Fourth Plan to 20 per cent during the Fifth Plan. While this represented an improvement in fund mobilization, it also affected the ability of state enterprises to return revenues to the government. Revenues remitted to the government fell from 73 per cent of net income during the period of the Fourth Plan to 42 per cent during the Fifth Plan period. There is thus a need to consider the increase in mobilization of self-generated funds in conjunction with the remittance of revenues to the government.

2.7 Pricing of goods and services and monopolies. State enterprise pricing of goods and services is subject to conditions that are specified by the ministry in charge. For some state enterprises, especially in the fields of transport and public utilities, price adjustments are difficult to achieve and pricing below cost results in losses. At the same time, state enterprises that can more easily adjust their prices and those that have a monopoly on particular goods and services tend to overcharge or set prices beyond the standard level; thus while high profits may be achieved the production costs of related industrial businesses and the competitiveness of the country as whole is affected.

2.8 Dependence on government subsidies. Government subsidies for state enterprises amounted to 9,000 million baht during the Fourth Plan period and 11,500 million baht during the Fifth Plan period, respectively 10 per cent and 7 per cent of the state enterprises total investment budget for these periods. There were also additional subsidies to compensate for losses by some enterprises, which were caused by inefficient management or underpricing, and subsidies allocated in line with specific government policies. All these subsidies inevitably lead to inefficiency in the operations of state enterprises and fail to promote competition within the industries and services.

2.9 Guarantees for loans to state enterprises. State enterprises are able to borrow from foreign and domestic sources at lower interest rates than those paid by private businesses because government guarantees for the loans reduces the element of risk for the creditors. The privilege accorded to state enterprises of special rates of interest — lower than rates to the private sector — on loans from government banks, is another form of indirect subsidy. The government guarantee makes creditors less thorough than they should be in their appraisal of state enterprise investment projects; many of these projects do not merit loans and entail high risks. Therefore, to increase the investment efficiency of state enterprises or encourage them to operate in a similar manner to private businesses, the same standards should be applied in assessing state enterprise borrowings as those used for commercial loan requests by the private sector.

2.10 Problem of the accumulation of overdue payments owed by certain state enterprises to others and to government agencies. Unpaid debts owed by state enterprises to various government agencies and other state enterprises have continually increased and now amount to 6,500 million baht. This has caused a chain reaction which has led to liquidity problems for creditor enterprises and higher production costs for goods and services. There is an urgent need, therefore, to find a way to settle these debts, especially those resulting from the consumption of fuel, electricity, water and telephone services. The collection of fees from users in other state enterprises and government agencies should be carried out on the same basis as that used for the private sector.

2.11 Staff administration and development. Many important problems need to be solved in the administration and development of staff of state enterprises:

(1) There is a lack of experienced and qualified personnel at the board of directors, senior executive and operational levels. Many of the senior executive and board positions are filled for political purposes, which has led to frequent personnel changes, discontinuity in admin-

istration, personnel lacking relevant experience and, in the end, damage to many state enterprises.

(4.7) To improve the employment conditions of child and female labour: The majority — about 86 per cent — of members of the boards of directors are government officials, both civil and military; only 7 per cent of board members are private sector businessmen.

— Ensure that children receive an education up to Grade 6 in accordance with the law on compulsory education. The minimum working age for children will be raised and more occupations prohibited to children will be identified. Welfare, housing, working hours, education and training opportunities for child labour all need to be improved.

(2) Rates of salary, compensation and fringe benefits such as medical expenses, tuition fees, provident funds, pensions, overtime payments and performance rewards are very high, compared to those offered in government and private offices. They are about 55 per cent higher on average than the rates in government offices, and they are also higher than the rates for middle-ranking and low-level personnel in the private sector. High staff costs have added to the production costs of goods and services, and high prices have resulted. In some enterprises one of the principal reasons for returning a loss has been that increases in personnel expenditures have not been in proportion to other expenditures. On the other hand the salaries and compensation for senior executives are a great deal lower than those paid by the private sector, therefore, because they cannot compete with the private sector, it is difficult for state enterprises to attract and keep highly qualified executives.

— Eliminate inequality of opportunity and the problems of physical handicaps. Eradicate discrimination against female labour in terms of wages, working conditions, training and skills development. Improve assistance to females who are forced to be pushed into working against their will.

— Accelerate the development of knowledge, occupational technology and technology transfer through occupational groups, professional associations and educational institutions in order to improve efficiency in occupations and self-employment.

(4.8) To promote and develop occupational knowledge and standards: During the period of the Fifth Plan, state enterprises were required to formulate corporate plans. The corporate plans, however, could not provide as much of a framework for actual operations as they should have, in fact they did not have clearly stated operational targets on which investment and pricing decisions could be based. This is because each state enterprise was established to fulfil different objectives or to play different roles, providing public utilities or infrastructure, security or welfare services, generating revenue or initiating specific industries in the country, and so on. With the passage of time these roles should be revised to accept changes in the economic and social structure.

— Professional committees and associations will together provide information on increased prospects for occupations, set up standards for each occupational group and promote occupational ethics, establish a system to certify occupational standards and provide criteria for different types and levels of occupation accordingly.

(4.9) To be revised to accept changes in the economic and social structure: The structure of several state enterprises need to be reformed in view of the fiscal and monetary constraints on the part of the government, changes in technology, limitations in the management of state enterprises and the capability of the private sector.

(4.10) Develop an information system on human resources and employment for the purpose of planning both long-term and short-term development policy on human resources and labour and for international cooperation and coordination. To accomplish this, a central information data system for monitoring state enterprises is a suitable organization.

2.12 Operational targets and corporate plans: During the period of the Fifth Plan, state enterprises were required to formulate corporate plans. The corporate plans, however, could not provide as much of a framework for actual operations as they should have, in fact they did not have clearly stated operational targets on which investment and pricing decisions could be based. This is because each state enterprise was established to fulfil different objectives or to play different roles, providing public utilities or infrastructure, security or welfare services, generating revenue or initiating specific industries in the country, and so on. With the passage of time these roles should be revised to accept changes in the economic and social structure.

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2.13 System for monitoring state enterprises: During the period of the Fifth Plan the government paid more attention to the management of state enterprises. In addition to preparing corporate plans for state enterprises, the National State Enterprise Committee was appointed in 1985 with the responsibility and authority to monitor the operations of state enterprises in compliance with government policy. The secretariat of this committee consists of representatives from the Fiscal Policy Office, Budget Bureau and Office of the National Economic and Social Development Board. The committee is constrained by the lack of an officer in charge of systematically supplying the committee with analysis; this type of work is currently assigned to officials of the 3 different government agencies. Furthermore the Office of the National Economic and Social Development Board has submitted to the Cabinet improved criteria to be used in analysing the annual investment budgets of state enterprises. The criteria will allow the state enterprises and their problems to be viewed from a wider and clearer perspective.

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(3.3) Develop the employment system to ensure security and safe working conditions that support economic and social development and facilitate more employment. Working conditions, the health of the labour force and policy on salaries, wages and compensation will be adjusted in line with labour productivity improvements, economic conditions and the cost of living.

CHAPTER 3

GUIDELINES FOR DEVELOPING STATE ENTERPRISES

(3.4) Promote and develop the activities of occupational groups and professional associations to enable them to extend the dissemination of technology related to their occupations and upgrade professional service capabilities to the standard of international firms.

1. General development guidelines for state enterprises during the period of the Sixth Plan will be in accordance with the following objectives:

(4) Measures

1.1 Maintain the financial stability of the country by reducing external borrowings, mobilizing internal funds, especially from state enterprise earnings, and limiting the size and nature of state enterprise investments.

— Provide vocational education and training as required by the labour market and the economy. Promote skills efficiency and improve services in order to gain recognition, especially in the ongoing economic assistance and to be charged services at a reasonable price. To accomplish these, state enterprises require management which is more commercially oriented. New channels to increase revenues and reduce production costs should be explored so that the state enterprises need become more self-reliant and less dependent on government subsidies.

1.3 Review the role and revise the supervisory role of the state enterprises in line with current national guidelines. Opportunities for investment and international participation in state enterprises will be given to the private sector. Clear and practicable procedures for restructuring state enterprises will be determined. This will require revision of the government's supervisory role at the ministerial and central levels. To facilitate more flexibility in the management of state enterprises, laws, rules and regulations need to be revised.

— Implement diplomatic policy and strengthen relations, understanding and cooperation with countries that do or could employ Thai labour.

2. Specific development guidelines

To achieve the major objectives outlined above, the following guidelines are adopted for state enterprise development in specific areas.

2.1 Investment

— Support the expansion of the labour market to regions other than the Middle East, for example, to Europe, America and Asia.

2.1.1 Maintain the current level of investment by state enterprises in line with the Sixth Plan stipulations on public sector investment, in order that debt payment by the government sector may remain at the projected level of 11 per cent of export earnings. State enterprise investment will need to be determined on an annual basis in accordance with the economic and financial conditions of the country.

— Test and certify skill levels and register skilled labour to facilitate labour exports.

2.1.2 Ensure that state enterprises invest in good projects by requiring returns on state enterprise investments to be no lower than the interest on government bonds. Exemptions from this constraint will be granted only in cases where development projects have been assigned to state enterprises by the government.

2.1.3 Reduce investment or joint investment in extension activities, both upstream and downstream, that would be better operated by the private sector. Certain activities already in operation will be transformed into joint ventures with the private sector in order to reduce the financial burden of state enterprises and, possibly, to enable investments in other necessary activities. In addition investment in the form of state enterprise welfare will be reduced or cancelled.

2.2 Fund mobilization

2.2.1 Reduce external borrowings by limiting state enterprises' foreign loans in the first 3 years of the Sixth Plan to the level of foreign loans during the final period of the Fifth Plan. In the latter period of the Sixth Plan the ceiling will be determined in relation to the financial condition of the country.

2.2.2 Investment of state enterprise revenues should not fall below 25 per cent of total investment, and their debt service coverage ratio should be maintained at 1.5:1 (internal cash generation to debt). If state enterprises are able to reach the target of fund mobilization from their own income, they will save 42,500 million baht in foreign loans during the Sixth Plan period.

2.2.3 While mobilizing funds from the self-generated income of state enterprises will mean less financial return for the government, the amount remitted to the government by each state enterprise should not be lower than the rate of juristic income tax.

2.2.4 Encourage state enterprises to increase their capital to attain an appropriate debt-to-equity ratio. State enterprises can increase their capital by selling shares to the private sector. This will promote the mobilization of funds from domestic sources.

2.2.5 Arrange tax collection (for business tax, juristic income tax, etc.) in such a way that fair competition between the public and private sectors is promoted, and thus increase both efficiency in the use of resources and public sector revenues.

2.3 Loan guarantees

Reduce guarantees on loans to state enterprises and government subsidies in the form of lending to state enterprises below market rates. Only investments that follow government policy will be given loan guarantees by the government, well-managed state enterprises whose projects yield high rates of return will be able to guarantee their own loans.

2.4 Pricing of goods and services

In determining the price of goods and services, state enterprises will achieve more self-reliance by observing the following:

2.4.1 Cover the costs of producing goods and providing services, including operating overheads, and yield sufficient returns for future expansion and investment.

2.4.2 Discontinue subsidies. Beneficiaries of services will directly shoulder the cost burden, except in operations which have to achieve targets set by the government.

2.4.3 Discontinue indirect subsidies, whether through loan guarantees or low-interest loans, except in cases which are designated to implement government policy.

2.4.4 In monopolistic state enterprises, where the government should control the pricing of goods and services, prices must be compatible with international standards, especially for energy and international telecommunications.

2.5 Personnel management

2.5.1 Include plans for manpower in each state enterprise, corporate plan. Targets for production and employment will be clearly stated, and the work force increased only if growth targets are met.

2.5.2 Restructure middle-level and low-level salaries and compensation packages to conform with private sector rates.

2.5.3 Restrict overtime payments and combined welfare benefits to, respectively, 15 per cent and 10 per cent of salary in order to increase labour efficiency and reduce the cost of labour per production unit.

2.5.4 Encourage the hiring of private sector services instead of hiring in-house staff for such services as security, staff transport and office cleaning.

2.5.5 Promote private sector participation in management by establishing suitable rates of compensation.

2.5.6 Restructure state enterprise boards of directors and select and appoint qualified personnel who are necessary for the work of each enterprise, including experts and businessmen with experience and capabilities in fields that will benefit the state enterprises, in order to achieve more efficiency in business operations and continuity in management.

(4.2.8) Encourage private business enterprises to take a role in the public health services, especially by producing personnel in specific branches of public health. Rules and regulations that hinder participation by private organizations will be reviewed.

Table 6.1
Summary of operations, investment and remittances to the government

(4.3) Improve the administrative mechanisms to facilitate health promotion, as follows:	Fourth Plan		Fifth Plan	
	Million baht	%	Million baht	%
(4.3.1) Establish a central organization or national public health committee to coordinate different government agencies and both government and private agencies implement programs along compatible lines.	391,782		885,480	
expenditure	369,346		827,763	
net profit	22,436		57,717	
(4.3.2) Revise laws, rules and regulations on the development of public health whether they are the direct responsibility of the Ministry of Public Health or the joint responsibility of the Ministry of Public Health and other ministries. The revisions will ensure conformity with health promotion policies and measures in the Sixth Plan, for example, laws and regulations on occupational health and the environment.	16,371		24,075	
Total investment budget*	88,932	100	169,889	100
Sources of funds				
— revenue	17,408	20	54,798	32
— national budget	9,018	10	1,470	1
— loans				
— domestic/other	15,242	17	29,126	16
— foreign	47,264	53	76,955	45

*Including non-project investment

(4.3.4) Establish a training centre and network for developing administrative and operational personnel especially at the district and sub-district levels.

(4.3.5) Develop technology and systems for collecting, analysing and interpreting data and using public health and drug information for planning, management, monitoring and evaluation work.

3.3 Work Plan for Spiritual and Cultural Development

(1) Objective

To promote the participation of all parties in society in spiritual development and raise the level of awareness of communal responsibility, diligence, self-reliance with dignity, work cooperation and cultivation and conservation of the national identity and culture. These are the foundations for the preservation of unity, love, patriotism, peace and progress for the people, society and the nation.

PART 3
RESTRUCTURING PRODUCTION AND SERVICES

PROGRAMME 7
DEVELOPMENT OF THE PRODUCTION SYSTEM,
MARKETING AND EMPLOYMENT

DEVELOPMENT OF THE PRODUCTION SYSTEM, MARKETING AND EMPLOYMENT

CHAPTER 1

INTRODUCTION

1. The Programme for Development of the Production System, Marketing and Employment is aimed principally at solving the following 3 types of economic problems:

- (1) trade deficit;
- (2) employment; and
- (3) rural poverty and income distribution.

2. In order to achieve these aims the direction of the programme focuses on 2 principles: first, on strategic changes and a new approach to development with a view to restructuring production and marketing into a systematic whole consistent with domestic and foreign economies and markets; and, secondly, on defining an appropriate role for the government, taking into account the prevailing constraints on financial resources.

3. To establish a link between production and marketing, it is vital to change the approach from 'sales based on production' to 'production for sale', particularly in foreign markets, which will complement the 'production diversification' strategy that uses domestic markets as indicators to diversify local production. Each of these 2 strategies is suited to producers at different stages of preparedness; for instance, the production-for-sale strategy will concentrate on well-prepared agricultural and industrial producers, whereas the strategy for diversifying production will be applied to middle-level farmers and to small and medium-scale industrial manufacturers, especially those in the provinces.

4. Given the present state of the economy, with its rapidly changing trends and trade protectionism, success in adjusting the approach to development as mentioned above will depend to a large extent on 'marketing development'. To develop both domestic and foreign markets effectively requires a systematic approach and a joint effort from the public and private sectors. Information on production and marketing may provide a linking mechanism. A list of commodities should be compiled periodically, as appropriate, and would serve as a supporting instrument for

translating this programme into actual production diversification, production for sale and increased employment.

5. In view of the current constraints on financial resources, the Programme for Development of the Production System, Marketing and Employment deems it necessary to define the proper role of the public sector as supporting the private sector, especially medium-scale and small enterprises, in 5 areas:

- (1) Research and development and technical support;
- (2) Increase in marketing expenditure;
- (3) Poverty alleviation;
- (4) Promotion of income-generation through export-oriented production and services and foreign exchange savings through import substitution of agricultural products; and
- (5) Establishment of an organization to link up the policies on production, processing and marketing.

6. Since this development will use the programme system as an instrument, it requires a number of agencies both directly and indirectly concerned to work together systematically. The Programme for Development of the Production System, Marketing and Employment covers agricultural and industrial production and marketing, trade and services, and consequently involves a wide range of agencies, including the Ministry of Agriculture and Cooperatives, Ministry of Industry, Ministry of Commerce, Tourism Authority of Thailand, Ministry of Finance, Bank of Thailand and Ministry of Science, Technology and Energy. In order to ensure that the Programme for Development of the Production System, Marketing and Employment can be implemented by the government within the constraints of the budget and the rapid changes in the markets, emphasis must be placed on the formulation of annual operational plans. Each agency concerned will then be able to coordinate and formulate its annual work plans and projects in advance, and in time for the annual budget proposal, bearing in mind the rapid changes in market conditions.

CHAPTER 2

OBJECTIVES AND TARGETS

1. During the Fifth Plan period, production and marketing conditions throughout the world underwent significant changes. On the production side, Thailand found herself competing with an increasing number of countries, both developed and developing, especially in the export of her major traditional agricultural products, such as rice, maize, and so on. Moreover demand from countries importing Thai products has decreased because of increased productivity in these countries; Indonesia, for instance, has reduced her rice imports from Thailand. There has also been a change in consumer tastes in foreign markets; for example, consumers' health concerns have reduced world market demand for sugar and tobacco. Meanwhile the prevailing climate in international markets is hardly conducive to Thailand's efforts to identify and promote new export items with export values as high as those exported in the past, such as sugar and tapioca. Furthermore the export value of most of Thailand's traditional agricultural products are on a downward trend. During the Fifth Plan period the decline was particularly marked in sugar, which fell by 21 per cent, and rice, by 14 per cent, causing a correspondingly large reduction in farmers' incomes and incomes from these exports. Increased competition in production and the declining export value of the major traditional agricultural products have resulted in a slow growth rate in export value, decreasing from a peak of 20 per cent per annum during the Fourth Plan to a low of 7 per cent per annum during the Fifth Plan, which has had a negative impact on foreign exchange earnings and farmers' incomes.

2. On the industrial front, the present trend in world trade consists of increasing protectionism, trade restrictions, subsidization and other unfair trade practices — all measures designed to protect domestic manufacturers in such developed countries as the United States and the members of the European Economic Community. This situation is having a detrimental effect on Thailand's export markets. At the same time, although Thailand's dependency on exports to such major trading partners as Japan, the United States and countries in the EEC and ASEAN had declined from 69 per cent during the Fourth Plan to 66 per cent during the first 3 years of the Fifth Plan, which is an indication of Thailand's success in diversifying exports to an increasing number of new markets such as those in African countries, most of the new trading partners are low in economic status and have their own financial difficulties. The problems faced by Thailand in her export markets and the instability of new markets point to a precarious marketing situation during the period of the Sixth Plan. Consequently a high growth rate in exports will be difficult to achieve, and this in turn will affect the problems of growth and stability in the entire economy, of unemployment and of providing funds for future development.

3. Besides the problem of extensive fluctuations in the world economy, the Thai economy will continue to face the problem of unemployment, which was already prevalent in the period of the Fifth Plan and is likely to become even more serious. The characteristics and serious nature of the unemployment problem can be summarized as follows:

3.1 Open unemployment, as in the case of 389,700 unemployed people who were earnestly seeking employment in 1984. By 1991, the last year of the Sixth Plan, the number is expected to reach between 700,000 and 800,000. Apart from these openly unemployed, there are some 300,000–400,000 people outside the labour force who are ready and willing to work. While this group of people are not considered among the openly unemployed, they represent a major problem for the country.

3.2 Unemployment among moderately and highly educated people, that is from vocational and upper secondary level education to tertiary level. This group is part of the openly unemployed and constitutes an increasing problem due to its rapid growth from 36,700 in 1977 to 83,800 in 1982 and 117,400 in 1984, representing 30 per cent of those openly unemployed. It is estimated that the number of unemployed in this group will continue to grow at a fairly high rate during the Sixth Plan period.

3.3 Seasonal unemployment among those with low educational attainments in the agricultural sector. There were as many as 3.8 million people in this group in 1984 of which the majority, 67.0 per cent, came from the northeast, with another 22.1 per cent coming from the north. It was found, moreover, that approximately 700,000 of the seasonally unemployed were prepared to work.

3.4 Underemployment, a problem closely related to the poverty problem and endemic among those who are already employed but who are not fully capitalizing on their labour. About 90 per cent of the underemployed group consists of people who are employed full time but earn a meagre income. The remainder comprises those who are employed part time or have few working hours and those who are not fully exercising their capabilities. The total number in this low-income group increased from 10 million in 1982 to 11.3 million in 1984, with 75 per cent of these in the agricultural sector.

4. Changes in economic and trading conditions in the later years of the Fifth Plan and the trend anticipated in the early years of the Sixth Plan will affect the Thai economy as a whole in 3 different ways: first, world trade is expected to continue to grow at a low rate due to the policy of the industrialized countries to maintain the current rates of economic growth and employment; secondly, protectionist measures, especially non-tariff barriers, adopted by industrialized countries which constitute Thailand's major markets will certainly prevail; and, finally, the prices of traditional agricultural products are not expected to stabilize, especially in the early part of the Sixth Plan period.

5. The unpredictability of the world economy, a problem beyond the control of Thailand, will have a direct effect on the maintenance of Thailand's overall economic growth. Besides

it is estimated that the labour force will expand at the rather high rate of approximately 2.8 per cent per year, or over 800,000 people per year, during the Sixth Plan period as a result of high birth rates in the past. Thus over the coming 5 years, employment will have to be found for another 4 million people, which will be a considerable burden for the nation. Various aspects of the employment problem may become more critical if there is no corresponding growth in economic activities to absorb the increased labour force. Therefore a low growth in export capacity will result in low economic growth rates, which in turn will affect economic stability, rural poverty, employment and income distribution.

Main principles in the Programme for Development of the Production System, Marketing and Employment

6. Considering the nature of prevailing problems, changing circumstances and trends, it is imperative to restructure and systematize the development of production and marketing in such a way that they become fully integrated. To this end, 3 principles are adopted. First, the domestic production system should be restructured so that the risks which arise from market instability are reduced. In the case of traditional commodities, such as maize, tapioca and rubber, it is necessary to implement ad hoc measures which solve immediate problems arising from the production and marketing conditions abroad. It is, therefore, not possible to map out any definite policies or long-range plans. In practice emphasis should be placed on reducing production costs and improving quality in line with existing programmes and projects from the Fifth National Economic and Social Development Plan. In the case of non-traditional commodities which have potential for production and market expansion both locally and abroad, it is necessary to provide a linking mechanism that will lead to effective and appropriate restructuring of the production system.

7. Secondly, priority should be given and attention paid to marketing. The public sector, in particular, will have to play a more active role in studying and monitoring the movements of agricultural and industrial products in international markets; this will provide a basis for the public sector to restructure domestic production by integrating production plans with marketing plans. Integrated plans will have to be formulated for each type of product and each market; this will be accomplished by establishing a system that identifies market opportunities in the form of a list of products with high potential for penetrating foreign markets as well as diversifying domestic production, generating employment and increasing the incomes of farmers and the general public.

8. Thirdly, the production system should be restructured; it should be transformed in such a way that the manufacturing and processing of agro-industrial products is able to solve the existing unemployment problem and absorb the increased labour force. Restructuring the production system requires a concerted effort from various sectors, especially the agricultural sector. The traditional pattern of single-crop cultivation should be transformed into multiple crop cultivation, a diversification which would increase the use and efficiency of agricultural labour and enable farmers to earn more income. By restructuring the production system, the number of people working in agribusiness and in certain agriculture-related activities will be increased and, in developing rural industries and services, supplementary occupations for agricultural labour will be created.

Objectives and targets

9. In view of the foregoing constraints and problems, 3 major objectives of the Programme for Development of the Production System, Marketing and Employment are laid down:

9.1 To alleviate the various types of unemployment problems, jobs will be created to ensure an increase in full-time employment of at least 3.9 million people. Details of this proposal are discussed later in the guidelines for development.

9.2 To alleviate the effects of economic imbalances, namely the trade deficit and the current account deficit. Revenues from the export of goods and services will be increased by an average of 9.9 per cent per year. Foreign exchange will be saved by import substitution of agricultural products. Production costs will be reduced by encouraging the use of appropriate technology in support industries and of domestic production materials. Exports will be diversified in terms of products and markets. At the same time more revenue will be derived from tourism, with the number of foreign tourists increasing at an annual average rate of at least 7.5 per cent, resulting in an average of 7.4 per cent more income from tourism each year.

9.3 To alleviate the problems of rural poverty and income distribution, priority will be given to farmers living in the target areas for rural development under the Fifth Plan and in the additional target areas to be determined by the Committee on National Rural Development under the Sixth Plan.

Development guidelines

10. During the Sixth Plan period, it is estimated that new entrants to the labour market will total 4.1 million people. Employment targets therefore need to be determined to absorb the larger labour force. The target for the period of the Sixth Plan is to create a minimum of 3.9 million jobs, assuming that the economic growth rate is 5 per cent per annum and that the Programme for Development of the Production System, Marketing and Employment is carried out in earnest. If the economic growth rate exceeds the 5 per cent mark, employment will correspondingly exceed the set target.

Apart from setting targets for job creation to absorb the new labour force, it is also necessary to solve other types of employment problems, as described in the Programme for Development of the Production System, Marketing and Employment, in order to simultaneously alleviate the problems of rural poverty and income distribution. Details of the targets for increased employment during the Sixth Plan period are presented in the following table:

Table 7.1
Targets for increased employment during the Sixth Plan period
classified by economic activity

Unit: thousand persons

	Fifth Plan	Per cent	Sixth Plan	Per cent
Total increased employment	3,579	100.0	3,900	100.0
Agriculture	1,967	55.0	1,300	33.3
— Full-time employment	—	—	1,300	33.3
Non-agriculture	1,612	45.0	2,600	66.7
— Industry	425	11.9	800	20.5
— Trade and banking	386	10.8	600	15.4
— Services	510	14.2	750	19.2
— Others	291	8.1	450	11.6

11. It may be deduced from the preceding table that the new targets place more emphasis on creating jobs in non-agricultural sectors than did the targets of the previous plan. During the period of the Fifth Plan, overall economic growth led to increased employment of 3.6 million of which 1.96 million, or about 55 per cent, were in the agricultural sector. The Sixth Plan, however, targets an increase in agriculture of only 1.5 million, or about 38.5 per cent of total increased employment, of which 1.3 million will be employed full time and the remaining 0.2 million will be employed during the dry season.

12. The reduced target for employment growth in the agricultural sector, together with the increased rôle in employment allotted to the industrial and service sectors, is necessitated by the fact that during the period of the Sixth Plan a higher proportion of newly qualified people in the work force will not be suited to agricultural activities. At the same time the agricultural sector faces more constraints that will hinder its growth than in the earlier plans in, for instance, limited farmland, fluctuating prices and conditions in the markets for agricultural products. Besides, the agricultural sector is already plagued by unemployment in various forms: from underemployment to seasonal unemployment. Setting a target for additional employment growth in the agricultural sector is tantamount to creating more problems, especially problems concerning rural poverty. On the other hand the public sector and state enterprises, which should absorb entrants to the labour force with middle-level or higher education, are also restricted by their limited capacity. Thus the major principle of the Programme for Development of the Production System, Marketing and Employment under the Sixth Plan consists of giving top priority to the development of industries and services that use resources to generate as much employment as possible; if this is not achieved the unemployment problem will become more serious during the Sixth Plan period than it has been before.

13. To achieve the increased employment target of 3.9 million while at the same time alleviating the various types of unemployment problems, the following development guidelines are specified:

13.1 Agricultural sector

(1) Reallocate existing, under-utilized resources to ensure that they are used appropriately, fully and with greater efficiency. About 14 million rai of hitherto unexploited land will be turned over to agriculture. Achieving diversification through restructuring production, in accordance with the Programme for Development of the Production System, Marketing and Employment, will bring about a more efficient use of farm resources. By improving the system of crop cultivation, a wider variety of crops will be planted, and by improving the agricultural system or introducing integrated farming, more activities will be created at the farm level. There will be more employment opportunities for those who are prepared to work while waiting for the agricultural season. Increased employment and increased income for farm labourers will eventually alleviate the problems of seasonal unemployment and underemployment. At the same time better use of farm resources will release some of the farm labour force for other activities, such as processing and afforestation.

(2) Promote the planting of economically valuable and fast-growing trees. If this traditional economic system were to be strengthened it would be able to absorb more of the labour force. At the present rate of afforestation of 193,000 rai per year, about 40,000 people per year will be employed in afforestation and related activities during the period of the Sixth Plan. The number could be increased to 184,000 per year if the rate of afforestation reaches 1.75 million rai per year. Most of the replanting will be undertaken by the private sector; replanting by the government will not expand greatly and will concentrate on afforestation and conservation in reserved forests only.

(3) A combination of diversifying agricultural production and promoting the planting of economically valuable trees to strengthen traditional agriculture will result in 1.3 million people holding full-time employment in the agricultural sector compared to 1.9 million during the Fifth Plan, a reduction of 32 per cent. Nevertheless agriculture will continue to absorb the highest proportion of the increased labour force; that is, about 33 per cent of the total growth in employment.

13.2 Industrial sector

If the strategies for developing specific industries are implemented, and the number of small and medium-scale industries increases as a result of investment promotion, during the Sixth Plan period the industrial sector will achieve an annual average growth rate of 6.6 per cent. This will result in a total increase in employment by the industrial sector of 800,000, or an average of 160,000 workers per year. Development guidelines for various types of industries are as follows:

(1) Develop export industries by expanding agro-industries with high potential for exports and for import substitution. The production base for new products will be expanded in, for example, agro-industries, wood and wood product industries, rubber and rubber product industries and textiles. Emphasis will be given to raising quality and standards in accordance with market demand, which will contribute to creating jobs and alleviating seasonal unemployment.

(2) Accelerate the development of engineering industries, which form the basis for other industries in the long run. Priority should be given to intermediate engineering industries and those for use in the agricultural sector, especially metal-working and the fabrication of telecommunications equipment and components. These activities will be able to absorb the vocational-level labour force while alleviating to a certain extent the problem of open unemployment.

(3) Support small and provincial industries. Product types will be diversified, entrepreneurial abilities developed, and technology will be promoted to reach the village level. These activities will contribute to creating more jobs while solving the problem of seasonal unemployment.

13.3 Marketing and services

(1) Give priority to and increase the role of the service and marketing sectors. Various service activities will expand, which will greatly encourage production for domestic sale and for export. Major activities in this field include tourism services, financial and insurance services that support production and marketing, public relations services, advertising and communication services concerned with marketing, market research, product quality development, processing, packaging, warehousing and transport services. These service-oriented activities will play a major role in generating employment during the Sixth Plan period by creating about 750,000 more jobs, or an average of 150,000 per year. The labour force recruited will consist mostly of those with middle-level or higher education.

(2) Develop tourism services. A study conducted by the National Institute of Development Administration (NIDA) on the economic impact of the tourism industry in Thailand shows that promotion of international tourism will create more jobs both directly and indirectly for various sectors in the economy: for every 9 visiting foreign tourists or every 73 in-country tourists, one job is created locally. Tourism promotion will therefore focus on lengthening the stay of foreign tourists, cultivating the up-market tourists who can afford to spend more in the country, improving tourism facilities at provincial tourist sites, conserving and developing tourism resources, promoting the formulation of tourism promotion and development plans in provincial regions, improving the quality and presentation of handicraft products and souvenirs, and so on. It is estimated that an effective tourism promotion campaign conducted both in Thailand and abroad should create employment for at least 150,000 people during the Sixth Plan period, which will in turn create more jobs and generate more revenue in tourism-related production areas, thus alleviating the problems of unemployment and underemployment.

13.4 Other activities

Place importance on promoting other non-agricultural occupations in the rural areas, whether they are carried out in the rural areas themselves or in local urban centres located within commuting distance. These occupations may involve taking over assignments from the towns or even from Bangkok, and may include dress-making, gem-cutting and toy-assembling, for instance. The occupations should be promoted in conjunction with provincial industries.

13.5 In addition during the Sixth Plan period the government and the private sector will need to implement other measures and supplementary projects, either independently or jointly, that will create more temporary and permanent jobs. Measures will include promoting self-employment and overseas employment. As for the problem of educated unemployed, it is necessary to seek a long-term solution; this will require adjusting the educational system to the labour market demands in accordance with the guidelines laid down in the Programme for Population, Social and Cultural Development.

Strategies and guidelines for restructuring production and marketing

14. To ensure that the foregoing development guidelines are used as the framework for formulating plans and projects to restructure production and marketing, the following 4 major strategies are considered appropriate:

14.1 Production for sale. Apart from production for household consumption, production for commercial or export purposes should respond to buyer's demands in terms of product type, quality, price and other attributes, which may vary from one market to another.

14.2 Production diversification. Diversification into products which support or substitute for major products that are not in demand in the market should be encouraged to reduce the risk and supplement the income of producers in the agricultural and industrial sectors. Production diversification should be carried out simultaneously with market expansion.

14.3 Marketing development. In the past almost all marketing development activities were carried out by the private sector; however, these activities involved too many procedures for the private sector, especially small enterprises, to handle alone. This has resulted in a limited scope of operations. The government should step in to support marketing development which will succeed in expanding markets.

14.4 Restructuring of the management system for production and marketing. In line with the objective and new development strategy, the government's administrative mechanisms and personnel preparedness should be developed and improved. Production and marketing should also be linked effectively and systematically.

The development strategy for each issue mentioned above will be detailed in the following chapters.

CHAPTER 3

PRODUCTION FOR SALE

1. Production for sale in the context of this development programme places importance on the production of goods and services which respond to market demand, especially demand in foreign markets. Each market has its own requirements in terms of product category, type, size, standards and quality, design, condition, packaging, price, seasonality, delivery time, taste, and so on. Production for sale should respond to product use by each group of targeted customers, whose purposes vary from direct consumption to utilization as raw or processed materials in industrial production.

2. It may be seen from the foregoing concept that production for sale emphasizes producing the goods that are ordered by different markets: the buyer, accordingly, clearly states his needs, especially in terms of product quantity, specifications and quality; at the same time the order enables the producer to decide on production feasibility and planning. The producer thus avoids marketing problems and is able to sell his product in sufficient quantity and at a fair price, while the buyer will be assured of goods which meet the quality standards stipulated in the order and are delivered on time and at the agreed price, thus enabling him to plan either the next production phase or an efficient sales campaign.

3. The principal target of production for sale within the Programme for Development of the Production System, Marketing and Employment is to make the system of production truly commercially oriented for both domestic and export sales. The principle of production for sale is not a new concept; there already exist large industrial concerns which manufacture goods on a subcontract basis or are hired to produce goods. However, agricultural producers and small independent enterprises still mostly abide by the concept of production-oriented sales, rather than production for sale. Therefore the guidelines laid down in this chapter focus mainly on agricultural products, most of which are still generally sold according to the production-oriented system.

4. The system of production for sale benefits producers, sellers and buyers by reducing the risks of sharp fluctuations in supply, demand and pricing. It also makes the best possible use of limited resources to satisfy public demand. In addition the public sector will be able to increase its support in a more clearly defined manner in the areas of suitable production siting, research and development, infrastructure and marketing.

5. The mechanism of the system of production for sale involves systematic interaction between the markets on the one hand and producers or sellers on the other to achieve the optimal efficiency. The starting point should be the development of a market system. The market serves as an information centre, transmitting data on market demand for goods and services to producers. Producers will attempt to meet the demands by adjusting their production planning and system. The success of this mechanism depends on the accuracy of market information and proper institutionalization. If producers are assured of markets, their efficiency will improve. Given the variety of options for each type of product, it is necessary to expand the mechanism during the period of the Sixth Plan.

6. The system of production for sale for agricultural products may be summarized as consisting of the following 6 patterns of operation:

6.1 In the first pattern, buyers state their needs for certain types of products and request government officials to promote cultivation of these products by farmers. The buyers offer no guarantee of quantity, price, quality, location or nature of the transaction. This pattern of production for sale has created a host of problems in the past and may cause further damage if allowed to continue.

6.2 In the second pattern, production is the result of encouragement from producers or distributors of seeds. In some cases, a long time may pass before it is known whether the products are saleable or even worthwhile. Great care should be taken in promoting this pattern in view of the risks involved in finding definite markets for the products.

6.3 The third pattern, to be found in agro-industries, is when a prior market agreement is reached by producers and processing plants, as in the cases of sugar and canned pineapple. Contract farming has proved viable and should be further promoted, on condition that the provisions of such agreements are amended to be more effective and beneficial to all parties concerned.

6.4 In the fourth pattern, supporting and operational units are set up by private enterprises. For example, production may be initiated by local or foreign firms which already have definite markets and, as promoters of the production, will import seeds, technology and technical know-how and control product quality and standards. This pattern merits promotion, although it requires large investments and lengthy continuous operations in the locality if it is to be fully effective. The major constraint, therefore, will probably lie in increasing the number of enterprises following this pattern.

6.5 The fifth pattern entails direct contact between the producer and the buyer. The producer is able to use his understanding of the market and market information to change the system of production for sale by himself. This pattern has good prospects if it can be widely adopted.

6.6 The final pattern embodies a systematic, phased approach to developing the system of production for sale through commercially oriented organizations. Private enterprises at the local level will function as a link between production and marketing; they will receive purchase orders and coordinate with producers in planning production and by encouraging farmers to grow crops of the quality and quantity required by markets and specified in contracts. This pattern of production for sale is probably one of the most appropriate for producing new products for both domestic and export sales, and merits increased promotional efforts from the public sector during the Sixth Plan.

Guidelines for operating the system of production for sale

7. The voluntary formation of groups of farmers and producers, including groups of small production units, will be an important guideline for the system of production for sale, especially exports.

8. Farmers' and producers' groups should play a major role in linking production with marketing. Production will thus be able to satisfy market demand for quantity and quality control, improve efficiency and reduce marketing costs.

9. The production for sale system requires regulated production to ensure that quantity and quality are adjusted to correspond to market conditions and needs. Legislation will enable the system to operate efficiently for certain types of products.

10. Since quality requirements constitute the most important market condition in the production for sale system, it is most important for producers and producers' groups to make suitable production choices, ranging from cultivation areas, categories and types of product and strain, to packaging.

11. In the production for sale system, standards are required to maintain product consistency and continuity which are demanded in the market and which provide convenience and clarity for advertising, public relations and market promotion. All parties concerned should understand that standards vary from market to market and from buyer to buyer, and standards should be established jointly by the private sector (sellers and exporters) and the public sector.

Role of the public sector in promoting production for sale

12. The private sector is already carrying out almost all of the activities related to production for sale, from deciding the types of product to be produced to finding markets for them. The role of the public sector should therefore be in supporting private sector decisions and providing necessary services. Where the pattern and mechanism for linking the market with the producer is already effective, the public sector should focus only on monitoring and extending the operation.

13. At the initial stage, the public sector's role of supporting the system of production for sale should follow these 5 principles:

13.1 Encourage and stimulate the voluntary formation of producers' groups. The practice, if widely adopted, should create production units that respond to qualitative and quantitative needs in the market, as specified in the development plan for the production for sale system.

13.2 Promote information on production and marketing, market research and target products, in line with the Programme for Development of the Production System, Marketing and Employment, as a starting point which could be used by the private sector in its production and distributing decisions.

13.3 Encourage research and technical studies on production and packaging. In particular a pilot project should be conducted to assess opportunities and possibilities for commercially oriented production.

13.4 Promote marketing infrastructure that permits the production for sale system to run smoothly, including transport and handling procedures, export zoning, quality guarantee and other necessary services which fall within the responsibility of the government.

13.5 Publicize and mobilize support for the appropriate and practicable patterns of production for sale from all agencies.

CHAPTER 4

DIVERSIFICATION OF PRODUCTION AND SERVICES

1. To reduce the risks attendant on fluctuating and unstable production and market conditions during the Sixth Plan period, the system of domestic production is in clear need of restructuring. It is necessary not only to adjust and transform the production system by diversifying into agricultural and industrial production which will generate more rural income and employment, but also to introduce diversification of services which contribute to foreign exchange earnings and employment.

Diversification of agricultural production

2. During the first three years of the Fifth Plan period, or from 1982 – 1984, the average annual value of crop production in Thailand (at 1972 constant prices) was estimated at 61,811 million baht. The combined value of the 6 major crops – rice, sugar-cane, cassava, rubber, maize and tobacco – accounted for 42,243 million baht, or 68.3 per cent of the total. In addition the annual export value of the 6 major crops averaged 74,427 million baht during the same period, or 74 per cent of the total for agricultural products which was estimated at 101,156 million baht. Moreover instability in the world economy, where competition and all kinds of trade restriction prevail, means that the export value of these major commodities is not expected to grow considerably in the near future. If Thai agriculture continues to depend on such a small number of traditional commodities as it does now, it will become increasingly difficult to increase farmers' household income.

3. The trend in the average export price per annum of every major crop, especially sugar and rice, is declining sharply (Table 7.2). Farmers who depend on only one major commodity not only risk the volatility of the markets but also use their labour and farmland inefficiently.

Table 7.2
Percentage change in export prices of agricultural commodities

(Unit: percent)

Commodity	National Economic and Social Development Plan		
	Third	Fourth	Fifth
Rice	36.2	15.0	-14.4
Sugar	31.9	9.8	-21.6
Tobacco	15.2	7.4	- 1.0
Cassava	13.6	11.8	- 2.9
Maize	19.8	6.2	- 2.4
Rubber	25.7	10.1	- 1.9

4. The growth rate of the agricultural sector in the Fifth Plan period was expected to be limited to only 2.8 per cent per annum on average, in comparison with average annual growth rates of 3.4 per cent in the Fourth Plan period and 5.6 per cent in the Third Plan period (Table 7.3). The reduced growth will affect the overall growth rate of the national economy and aggravate the existing problem of unemployment. It is therefore necessary to diversify production in accordance with existing resources: other commodities will be produced and traditional crops that are expected to encounter market problems during the Sixth Plan period, such as sugarcane, beans and tobacco, will be supplemented or replaced.

Table 7.3
Growth rate of agricultural product value during
the periods of the Third to Fifth Plans

(1972 constant prices)

Activity	National Economic and Social Development Plan		
	Third	Fourth	Fifth
Agriculture	5.6	3.4	2.8
Crop cultivation	6.0	3.9	3.1
- major crops	7.1	4.7	1.3
- others	4.6	2.4	6.8
Livestock	6.3	4.5	3.3
Fisheries	3.4	3.7	1.6
Forestry	2.7	-2.6	0.5

5. The production for sale strategy described in the previous chapter is concerned with production that responds to foreign market demands; it necessarily concentrates on the issues of product quality and prompt reaction to changing market conditions. Consequently only farmers who are reasonably well educated and sufficiently wealthy to invest a sizeable amount are likely to be able to deploy the strategy, not least because export opportunities for each type of product are limited by conditions prevailing in the market: production surpluses, for instance, may create gluts. For small-scale farmers living in the areas targeted for poverty alleviation in the Fifth Plan, support should be continued and modified to suit the changing capabilities of the population. The majority of farmers, who are in the middle-income group and thus do not belong to either of the preceding categories, may find it appropriate to adopt production diversification in agriculture. This approach, which can be carried out by the farmer himself, would reduce the cost, and consequently the risk, borne by the farmer; it also keeps pace with the sharp fluctuations in market conditions. While integrated farming along these lines has already been adopted by some farmers, the income of many of these farmers is still overdependent on one of the problem commodities. These farmers are at great risk and are not fully utilizing existing resources. Therefore high priority will be given to diversifying agricultural production during the Sixth Plan period with the middle-income farmers as the major target group.

Targets for diversifying production

6. A proportion of income should be diverted from dependence on problem commodities to other products and activities. Farmers will be encouraged to generate income from a greater variety of products and activities in order to stabilize and have more chance of increasing their income and that of their families. As a starting point, production for sale in neighbourhood markets should be diversified according to the following operational patterns:

6.1 Improve the cropping system by encouraging farmers who grow crops once a year during the rainy season to grow a greater variety of crops. This pattern may be divided into 2 types:

(1) Cultivation to increase production during the rainy season comprises several approaches: growing secondary crops alongside major crops, such as soya-bean plants with cotton plants and cacao trees with coconut palm-trees; reducing the cultivation area of major crops in favour of other crops by replacing, for example, rice and other major crops with a variety of vegetables for nearby markets or cassava with crops such as red sorghum; etc.

(2) Cultivation of supplementary crops before and after the major crops that entails growing short-lived crops which require little water before and after the major crops grown in the rainy season; for example, growing leguminous plants and other crops before and after rice or maize cultivation.

6.2 Improve the farming system, or integrated farming that requires a commercial-based joint undertaking of crop cultivation, livestock raising and fisheries.

6.3 Plant economically valuable trees, such as teak, pradu and such other fast-growing trees as leucaena and mangrove to supplement traditional agro-forests. It is necessary to determine the type of wood and species of tree appropriate for each terrain while bearing in mind the usefulness of the different kinds of tree.

Operational guidelines

7. Promote more efficient use of existing farm resources by stressing the importance of farmers and land characteristics. Guidance will be given to farmers to enable them to select commodities that are suitable to environmental conditions and market demand. Farmers in irrigated areas will be encouraged to increase productivity and reduce production costs; in particular, attempts to increase farm revenue through crop diversification and integrated farming will be encouraged. In order to increase farmers' incomes in backward agricultural areas, or the target rural development areas of the Fifth and Sixth Plans, diversification will emphasize production of goods for household consumption and sale to neighbourhood markets and of raw materials for industrial plants in the locality such as paper mills. Farmers outside the backward or irrigated agricultural areas will be encouraged to improve cropping systems by diversifying into other crops and to increase their productivity by growing perennial crops, wood lots and by raising livestock.

8. Stress activities that require little investment and can be carried out by farmers themselves on a continual basis.

9. Provide more opportunities for farmers to learn from their peers by studying the experiences and achievements of other farmers and other development projects conducted on comparable land.

Role of the public sector in promoting production diversification

10. Since decisions on most agricultural production activities are made by the farmers, the public sector's role will concentrate on creating opportunities, supporting the farmers' decisions and providing services which are necessary and within the capability of the government. The government's role should therefore focus on the following:

10.1 Carry out research and development and provide technical assistance in order to give farmers more options.

10.2 Increase the role of the government in providing guidance which will enable farmers to acquire information, technical know-how and experience from qualified persons or institutions.

10.3 Promote diversification of production into products that correspond to market demand and into import substitution products.

10.4 Provide necessary production inputs and agricultural credit.

11. To enable the government's operations to respond to the rapid changes in agricultural conditions and the diverse nature of farmers in different areas, there should be a system for transmitting policies and operational guidelines from central units to field workers in a clear, fast and efficient manner. In carrying out the work, emphasis will be placed on integrated and systematic operational plans and on regular project evaluation.

Diversification of industrial production

12. In the course of previous development, the industrial sector has played an increasingly significant role in national economic development in terms of both production and export. In 1985 industrial production accounted for 20 per cent of GDP while agricultural production accounted for 19.5 per cent. Currently, however, world trade and international markets abound with protectionism, restrictions and subsidization, which are designed to protect domestic manufactures; consequently, the few Thai industrial products which have had success in export markets, such as textiles, canned food and sugar, have begun to encounter trade barriers imposed by importing countries. The tendency is for market problems to increase during the Sixth Plan period, which will have an adverse impact on overall national economic growth and on the unemployment problem.

13. Despite its satisfactory growth rate, most expansion within the manufacturing sector has been in industries that rely on high volumes of imported raw materials and semi-finished components. Other intermediate industries, especially engineering, have seen slower growth. Most of the export industries are dependent on imported machinery, equipment and raw materials; for example, electrical circuits, ball-bearings, optical lenses. On the other hand, agro-industries for export, such as the food processing industry, are limited to only a small number of products despite their export growth.

14. Up to this time, the government's role in industrial development has been more regulatory than supportive. Certain government regulations hinder industrial undertakings. The structure of such taxes as business tax is not conducive to industrial development in general. There are disparities and duplications in taxation both internationally and at different stages of the manufacturing process. At the same time, small-scale industries, which form the basis for industrialization and job creation, have been accorded fewer privileges and government support than large-scale industries.

Targets for diversifying industrial production

15. The restructuring and diversification of industrial production are aimed at according the following 3 major roles to the development of industrial manufacture and services:

- (1) Support alleviation of the trade deficit problem.
- (2) Institute job creation and income distribution.
- (3) Encourage the transfer of technology which is appropriate to the production system and marketing and which is related to production diversification.

Principles in diversifying industrial production

16. There are 3 major principles, as follows:

16.1 Support production diversification into value-added manufactured products that use domestic raw materials. A greater variety of industries will be given the opportunity to develop in the provinces in response to demand from buyers in domestic and foreign markets. The private sector will be encouraged to take a leading role in this development.

16.2 Reduce the disparities between privileges awarded to large industries and those for small industries. Privileges will be awarded on a more systematic basis while the capabilities of manufacturers in provincial regions will be strengthened.

16.3 Improve the role, organization and administrative machinery of the public sector to make it more conducive to industrial development by shifting the emphasis from control and promotion to support and guidance.

Operational guidelines

17. General development guidelines. To restructure and diversify production in accordance with market demand by means of a mechanism for integrating production and marketing plans, the following guidelines are specified:

17.1 Support and promote diversification of production into goods that correspond to market demand. The market information system will be developed to enable it to guide production and clearly classify market opportunities on national and regional levels in the context of world market competition.

17.2 Promote and screen investment projects to ensure that they contribute effectively to technology transfer. The private sector will be encouraged to invest more in research and development in order that the competitiveness of domestic manufacturers may be enhanced.

17.3 Eliminate obstacles to industrial endeavours. For example, application procedures will be simplified, rules and regulations relaxed and work coordinated to dispense with the need to submit multiple applications to various agencies.

17.4 Restructure the tax system so as to make it more supportive of industrial diversification and growth. Double taxation will be avoided while the structure of import duties will be adjusted in accordance with changing circumstances to make, for example, the rates of import duty on various products comparable.

17.5 Improve the functions and responsibilities of agencies under the jurisdiction of the Ministry of Industry. These agencies will play a supportive rather than a restrictive role and serve as the centre for coordinating government agencies' support of private sector industrial endeavour.

17.6 Create opportunities for the private sector to participate more at every stage of the manufacturing and marketing process, from identifying, producing and developing the quality of products to satisfy market demands, to penetrating and expanding the markets. The private sector will be the key element in this development.

18. Development guidelines for target industries. Emphasis will be placed on 3 types of industry with the potential for generating related industries, distributing income and production to provincial regions and creating employment. The target industries are: agro-industries; small-scale and provincial industries; and engineering industries.

18.1 Agro-industries

(1) Develop and support agro-industries that have high potential for exports or for import substitution in accordance with the needs of markets and buyers, the production inputs of each region and the potentiality of each locality. Emphasis will be placed on improving quality and raising standards, advising on investment opportunities; research and development into appropriate technology or technology that may be effectively applied in solving problems, strengthening productivity, developing management systems and upgrading small-scale and medium-scale manufacturers.

(2) Expand the production base into new agro-industries which have high market potential from

– surpluses of such raw materials as rice, maize, cassava and rubber in the agriculture sector; and

– goods with development potential, such as processed food from vegetables and fruit, forest products (paper, furniture and others), pharmaceutical products and health food from medicinal plants, spices and aromatics.

(3) Promote cooperation in integrating and developing production, marketing, research and development, technology transfer, management and coordinated interests and investments of the public and private sectors, which should join forces systematically in a full cycle of

development plans and projects, information systems and Joint Public/Private Sector Consultative Committee.

(4) Encourage farmers to formulate production plans focusing on quality and to join groups for producing raw materials that are required by agro-industrial plants.

(5) Encourage agro-industrial plants to use appropriate systems for procuring raw materials and transferring technology to farmers.

(6) Encourage the development of agro-industries in rural localities, based on the needs of the market.

18.2 Cottage, small-scale and provincial industries

(1) Disperse industrial production and diversify the types of industrial goods in provincial regions. Priority will be given to strengthening the capabilities of small-scale provincial manufacturers, promoting widespread use of appropriate technology in production processes in the local area, identifying investment opportunities for investors in the locality and in Bangkok and upgrading the quality and standard of provincial products to a level compatible with demand in domestic and export markets.

(2) Strengthen the capabilities of the Ministry of Industry's agencies in provincial regions. More industrial promotion centres will be set up to increase the efficiency of the ministry in promoting and formulating development plans at the regional and provincial levels.

(3) Consider the possibilities for extending adequate financial credit at reasonable interest rates to small-scale industries.

(4) Consider the possibilities for granting promotional privileges to small-scale industries.

18.3 Engineering industries

(1) Accelerate the development of engineering industries, especially metallurgical industries, which will form the basis for long-term industrial development. Priority will be given to intermediate engineering industries, which have a reasonable capacity for technological adjustment and a great impact on other manufacturing sectors.

(2) Give priority to electronics industries that need to be developed simultaneously with metallurgical industries. Particular emphasis will be placed on telecommunications equipment, where product assembly and component manufacturing will increase product value, save foreign exchange and create other, related electronics industries.

(3) Promote the expansion of domestic markets for locally manufactured engineering products through a policy stipulating that government agencies and state enterprises actively support the products in their procurement and civil works.

(4) Promote and support both existing and emerging engineering manufacturers in an integrated system including technical consultancy, development and improvement of production technology, training, research and dissemination of the findings, finance (credit), management and marketing.

(5) Provide infrastructure services and promote the development of standards for engineering production and products.

Role of the government in promoting industrial restructuring and diversification

19. Apart from formulating work plans and projects for industry in line with the strategy of the Programme for Development of the Production System, Marketing and Employment, the operational roles of the government in the period of the Sixth Plan will be as follows:

19.1 Amend rules and regulations that obstruct investment, production and trade, besides supporting the setting of standards and upgrading the quality of industrial designs.

19.2 Restructure the tax system for promoting domestic production and subcontracted production. Tax measures will be determined for strengthening pollution control and promoting research and development by the private sector.

19.3 Increase the capability and efficiency of small-scale and medium-scale manufacturers. In particular the educational system and skills training will be modified to fit in with demand in the labour market while studies and research that contribute to improved production efficiency and raw material exploitation will be promoted.

19.4 Collect data and disseminate knowledge of production, marketing, management and investment to small-scale manufacturers in the provincial regions.

19.5 Encourage cooperation among government agencies in regard to investments between private sector interests in central and provincial regions, and in urban and rural areas. In addition, joint efforts by the public and private sectors to develop export markets will be strengthened.

19.6 Strengthen the system for subcontracting production so that industries of different sizes — large, medium and small — and in different locations — central and provincial regions, urban and rural areas — may support one another.

Diversification of mineral resource production

20. Up to this time, the production and marketing structures of Thai mineral resources have relied on a handful of ores, such as tin, tungsten and fluorite. These mineral resources are produced along traditional lines, with unprocessed or slightly processed ores being exported as the end product; there has been no development of these minerals into a factor in domestic industrial production to generate value-added products. Meanwhile ore deposits which can be produced at low cost, such as onshore tin mines, have been constantly depleted. Towards the end of the Fifth Plan period, the recession in the world economy, especially in the industrialized countries where the minerals are used as raw materials, further aggravated production and marketing conditions. Mineral production and marketing thus declined, which had a negative impact on production volume, export revenue and local employment. The condition is expected to remain uncertain in the Sixth Plan period.

21. Apart from producing traditional minerals, Thailand is a source of a great variety of precious and semi-precious stones, such as ruby, sapphire, topaz, garnet and zircon. The sources for most of these gems are in the provinces of Chanthaburi, Trat and Kanchanaburi; the combined output from these 3 provinces accounts for 85 per cent of total rough gem production in the country, while the remainder comes from Si Sa Ket and Phrae provinces. Moreover Thailand has rough diamond deposits most of which are found in tin mines in the south. These coloured gems and rough diamonds constitute important raw materials for the gem and jewellery industries, which are important export industries for Thailand.

22. Precious and semi-precious stones, both rough gems and rough diamonds, not only play a major role in creating value-added and earning foreign exchange — with annual export value amounting to no less than 8,000 million baht — but also help generate related activities that absorb at least 700,000 workers, of which about 300,000 work in gem mines when their labour is not needed in the fields while the remaining 400,000 work full-time in cutting and processing gems into cut stones and jewellery.

23. The growth of the precious and semi-precious stone industry has resulted from the efforts of the private sector. While the quality of the precious and semi-precious stones and the cutting skill of Thai workers have contributed to the growth and acceptance of these industries in domestic and export markets, the deposits of precious and semi-precious stones, especially such good quality coloured gems as ruby, topaz and sapphire, are gradually diminishing while rough diamond deposits are found only in tin mines which are in the concession areas of foreign companies. The decline in volume of precious and semi-precious stones will hinder growth and employment in the gem industry in the foreseeable future.

Guidelines for developing and promoting the precious and semi-precious stone industry

24. To diversify mineral resource production away from traditional minerals to the various precious and semi-precious stones that can be used as raw materials in the gem and jewellery in-

dustries in order to increase their value-added and export revenues and absorb more of the labour force, the following development guidelines are set for the period of the Sixth Plan:

24.1 Accelerate exploration of precious and semi-precious stone deposits in sites whose potential has been indicated by preliminary surveys.

24.2 Increase the production volume of precious and semi-precious stones. The possibility of allowing gem mining in forest reserve areas that have already suffered from deforestation will be considered. Permits for such production will be granted on condition that the areas be reforested once the gem deposits are completely exhausted.

24.3 Support studies and research that examine how to improve the quality of precious and semi-precious stones and thus increase their value.

24.4 Promote studies on cutting techniques and other treatments to enhance the colour and beauty of other minerals in order to make them comparable to precious and semi-precious stones.

24.5 Promote the training of cutters to enrich craftsmanship in the industry, and encourage the organizing of cutters that will develop the level of skills to the international standard.

24.6 Support improvements and developments in design for gem products as well as quality control and standards required by foreign markets.

Diversification of services

25 In the process of economic development to date, service activities have played an increasingly important role in the Thai economy. The share of the service sector in GDP increased from 33.4 per cent in the Fourth Plan period to 36.9 per cent during the first 4 years of the Fifth Plan. Moreover, judging from the increase in foreign exchange earnings from 14,770 million baht in 1977 to 51,440 million baht in 1981 and 72,700 million baht in 1984, the service sector has become a major foreign exchange earner. Service activities include tourism; retail and wholesale trade; financial services, such as banking, insurance and real estate; social services, such as education and public health; business services, such as market research and product research, advertising, public relations and communications; and services related to marketing and processing, including product quality inspection, packaging, warehousing, transport and job placement.

26. Service activities make an important contribution to the overall growth of the economy and to alleviating the problem of the current account deficit by being a constant and major source of foreign exchange, which offsets the trade deficit. Besides, service activities are the second most important generator of employment in the economy, after the agricultural sector. A study conducted by the Office of the National Economic and Social Development Board in 1981 found that the service sector was capable of absorbing at least 20 per cent of the total labour force and that 28 per cent of workers in the service sector were independent entrepreneurs with

high-level or medium-level academic attainments. It was also found that the most significant sector in job creation was the wholesale and retail trade which absorbed as much as 43 per cent of the total labour force in the service sector. Tourism was the second most important; the remaining 12 per cent of the labour force was employed in education, communications and transportation, public health, banking, business and entertainment.

27. Although the strategies and guidelines for the new approach in developing the production system during the Sixth Plan period will be translated into the restructuring of domestic production that should alleviate the problem of the trade deficit, reduce the risks borne by producers and create income distribution and increased employment, it is expected that there will be certain constraints and uncertainties in the restructuring and expansion of agriculture and industry – the major fields of production – particularly external constraints caused by the rapidly changing conditions of world production. It is therefore necessary to accelerate the diversification of services to enable the service sector to play a more active role in saving or generating foreign exchange earnings and creating employment.

Targets for diversifying services

28. Two major targets have been set for the diversification of services during the Sixth Plan period:

28.1 Diversify the development of services into new activities that could help alleviate the problems of the trade and current account deficits. Support will be given to activities which generate and save foreign exchange earnings and mobilize domestic savings.

28.2 Enable service activities to absorb more labour and thus help solve the problem of underemployment. The service sector will also play a more active role in promoting entrepreneurial abilities among those with middle-level or higher education.

Principles in diversifying services

29. The principles used in diversifying services will focus on 2 groups of services:

(1) Service activities that generate or save foreign exchange earnings and encourage job creation.

(2) Service activities that stimulate overall economic growth and job creation.

30. Service activities that encourage foreign exchange earnings or savings besides supporting job creation and which should thus continue to be promoted include tourism services, construction contracting, domestic reinsurance promotion, overseas employment of Thai workers, and so on.

31. Service activities that stimulate overall economic growth and job creation and thus merit more serious promotion include such insurance schemes as health and third-party accident insurance, marketing consultancy services, management, advertising, public relations, legal services, maintenance and repair services for agricultural and industrial tools, machinery and equipment and sending Thai experts to work overseas either under Thailand's technical assistance programmes for other countries or under other international programmes.

Development guidelines

32. Development guidelines for services during the Sixth Plan period will focus on specific services as follows:

32.1 Tourism

(1) Tourism services will continue to play a major role during the Sixth Plan period in generating both foreign exchange earnings and employment. The Tourism Authority of Thailand has estimated that in 1991, the last year of the Sixth Plan, the number of foreign tourists will have increased to over 3.7 million and that the growing number of overseas and domestic tourists will create jobs for at least 150,000 people.

(2) The following guidelines will be adopted to develop tourism services:

(2.1) Marketing activities

Priority will be given to increasing marketing expenditure abroad, especially on market research, advertising and public relations and publicity for tourist sites across the country. The aim is to lengthen the stay of foreign tourists, particularly up-market tourists who tend to spend more money in the country.

(2.2) Activities to diversify tourism production and services

Emphasis will be put on conserving and developing tourism resources, improving tourism facilities at provincial tourist sites, encouraging the formulation of tourism development and promotion plans for provincial regions and provinces, upgrading the design and quality of handicraft products and souvenirs and encouraging the setting up of city air terminals to cater to future growth in the number of tourists.

32.2 Overseas construction bids

(1) The construction business in Thailand has been developed effectively and has found increasing acceptance abroad, as is evident from the fact that its foreign exchange earnings

increased from 46.7 million baht in 1977 to over 120 million baht in 1985. At present, important markets are in the Middle East and in the ASEAN region. This business, however, is faced with certain problems and obstacles, which put Thai contractors at a disadvantage in not being able to compete internationally. Major problems and obstacles include the lack of information for Thai companies on business opportunities and on invitations for bids; the burden of costs arising from various bank guarantee fees, tax disadvantages and comparatively more expensive machinery and equipment; and the limited experience of Thai contractors and their lack of knowledge of procurement procedures, rules and regulations in foreign countries which would help them operate in this business.

(2) To increase the role of this service in generating foreign exchange earnings and creating jobs, the following development guidelines are specified:

(2.1) Provide an information system that can identify opportunities in overseas procurement and construction bids. At the initial stage, central agencies should be set up in both the public and private sectors specifically to coordinate these operations.

(2.2) Conduct a detailed study on the feasibility of adopting measures for encouraging the expansion of overseas construction bids by Thai contractors. The measures will aim at reducing the cost of guarantee fees and taxes for contractors, blunting the competitive edge which foreign firms have over Thai contractors due to machinery and equipment pricing, and strengthening groupings of Thai contractors in order to increase their experience and capability in carrying out their business. These measures will translate into action the policy of encouraging Thai contractors to take part in overseas construction bids.

32.3 Overseas employment of Thai labour

(1) Foreign exchange revenues derived from the employment of Thai labour overseas increased from 3,800 million baht in 1979 to over 23,000 million baht in 1985. However, declining oil prices in the major Middle Eastern markets for Thai labour, especially Saudi Arabia and Kuwait, coinciding with their near-completion of the economic infrastructure developments that required investments in large-scale construction have resulted in reduced growth in earnings by Thai labour in these markets. Therefore, in order to maintain the level of earnings from Thai workers abroad, it is necessary to switch from unskilled labour to skilled labour capable of doing work that requires technical or academic knowledge, such as repair and maintenance of machinery and equipment, supervision and administration.

(2) Development guidelines will focus on formulating promotional projects for promoting the overseas employment of Thai workers. The projects will include training in skills that upgrade the workmanship and capabilities of Thai workers in response to changing demand in the markets of the Middle East.

32.4 Insurance. The Sixth Plan emphasizes encouraging domestic reinsurance schemes to reduce the outflow of foreign exchange.

(1) Currently about 50 per cent of total insurance premiums are transmitted in foreign currency in payment for overseas reinsurance premiums. Of the total 1984 premiums for direct casualty insurance amounting to 5,378 million baht, a total of 2,527 million baht was exported. The outflow of foreign exchange has resulted partly from the inability of domestic insurance companies to cover all types of risk either because the indemnities are too high or because the risks are too great to be worthwhile. At the same time certain insurance groups try to minimize their liability despite their capacity to underwrite the entire policies domestically. Consequently money that could be circulated in the country is sent abroad.

(2) Development guidelines in this field will focus on classifying types of insurance, its regulations and assets, from indemnities and insurability to risk burden, in all aspects so that domestic insurance companies may be able to take on insurance coverage to their fullest capacities before overseas reinsurance is required. These guidelines will be carried out simultaneously with other monetary and fiscal measures in support of the development of insurance companies described in the Programme for Overall Economic Development.

32.5 Other service activities

(1) Other service activities that encourage foreign exchange savings and increase job creation include such business services as marketing management, market research, advertising and public relations, marketing communications, product quality control, processing, packaging, warehousing and transport.

(2) As these activities offer employment to those with a high-level or medium-level of education, development guidelines should emphasize the promotion of projects to develop small businesses by coordinating production and marketing agencies – the Ministry of Education, Ministry of Industry, Ministry of Agriculture and Cooperatives and Ministry of Commerce – to ensure that the projects are responsive to every aspect of labour market demand.

CHAPTER 5

MARKETING DEVELOPMENT

1. As has already been stated, marketing development is an important issue in which the private sector has been playing the major role. The importance of marketing development will increase in the period of the Sixth Plan, and guidelines for promotional efforts by the public sector need to be well defined. The public sector will concentrate on 2 major aspects of marketing: first, it will encourage diversification into promising new export markets so that dependence on the few major export markets is reduced while traditional market shares are maintained; secondly, it will promote new products that have the potential to be produced and to penetrate both traditional and new markets, and thus contribute to maintaining and increasing export growth in general.

2. Both of the key activities mentioned above are already being carried out effectively by large private concerns. The public sector should therefore adopt a supportive role for medium-scale and small-scale businesses that are still in need of marketing support: a market information system will be developed and the dissemination of market information restructured to enable these businesses to compete more effectively in foreign markets.

Mechanism and procedures for marketing development

3. Marketing development requires an integrated system that covers the entire marketing cycle, from market studies and penetrating and expanding the market to sales development and promotion. Moreover the marketing system needs to be connected to the production system to ensure that production and its products can be developed and adjusted to suit market demand. The essential linking mechanism consists of an information system and an organization whose responsibilities are to disseminate market information to the production side and to transmit the production information to the marketing side while evaluating and monitoring the whole cycle in a systematic manner.

4. The procedures involved in a system of marketing aimed at production for sale, market maintenance and increased market share may be divided into 5 major stages:

4.1 Conduct market studies and market research to identify opportunities in target markets and create a better understanding of market requirements.

4.2 Organize a market information system, based on the findings of the market research, that will help producers and exporters decide whether exporting is feasible and whether it is necessary to upgrade the goods for the target markets.

4.3 Develop product quality, based on knowledge of the markets and production and marketing technology, so that the goods are upgraded in line with market demand and made suitable for sale or for export at competitive prices.

4.4 Penetrate and expand markets by means of sales promotion campaigns, advertising, public relations and other supportive activities such as organizing trade missions and exhibitions and conducting trade negotiations to reduce protectionism and increased quotas in order that market shares may be maintained or even increased, as well as considering the possibility of providing necessary basic facilities such as a permanent exhibition centre for export goods.

4.5 Conduct evaluation and monitoring that brings to light constraints on sales, market shares and product types that have been promoted for sale, as well as market prospects and saturation. This information will form the basis for further market diversification.

Operational guidelines for marketing development and promotion

5. In order to carry out the development and promotion of marketing, the following 6 guidelines have been determined:

5.1 For foreign markets, emphasize studies and research on target markets so as to maintain or increase market share; studies on quality grading, standardization, rules and regulations for packaging and labelling; and the provision of sample goods for target export markets, so that products and product standards may be developed and improved to correspond to market requirements, as specified in the plan on production for sale.

5.2 Campaign to promote sales and marketing through various methods, ranging from public relations, dissemination of information and the organization of trade missions and trade fairs, to product development, trade negotiations and the promotion of activities that use trade privileges to increase market share.

5.3 Provide market information that warns of impending protectionism. The information will be used as a signal to adjust production volumes, assess market potential and share of the country and encourage specific marketing activities abroad.

5.4 Develop and promote domestic marketing while encouraging production diversification. The marketing system will be developed to link up with the production and processing of new products in order to strengthen sales capacity in domestic as well as export markets.

5.5 Restructure the system of domestic marketing to maximize the efficiency of marketing mechanisms. Basic marketing facilities will be provided. For example, the market in-

formation system will be made more useful to producers, exporters and farmers; central agricultural product markets and export zones will be improved by being located at production sites, which will reduce transport costs as well as improve and upgrade quality and standards in accordance with the principle of production for sale.

5.6 Provide training in quality and standard improvement, grading and quality control to correspond to production for domestic and local sale and to support quality development for export.

The role of the public sector in supporting marketing development

6. The public and private sectors must work together to create understanding of market requirements, select target markets, determine marketing strategies and implement marketing schemes. A national marketing plan will be jointly formulated; the plan will clearly define the roles, duties and responsibilities of the public and private sectors concerning marketing.

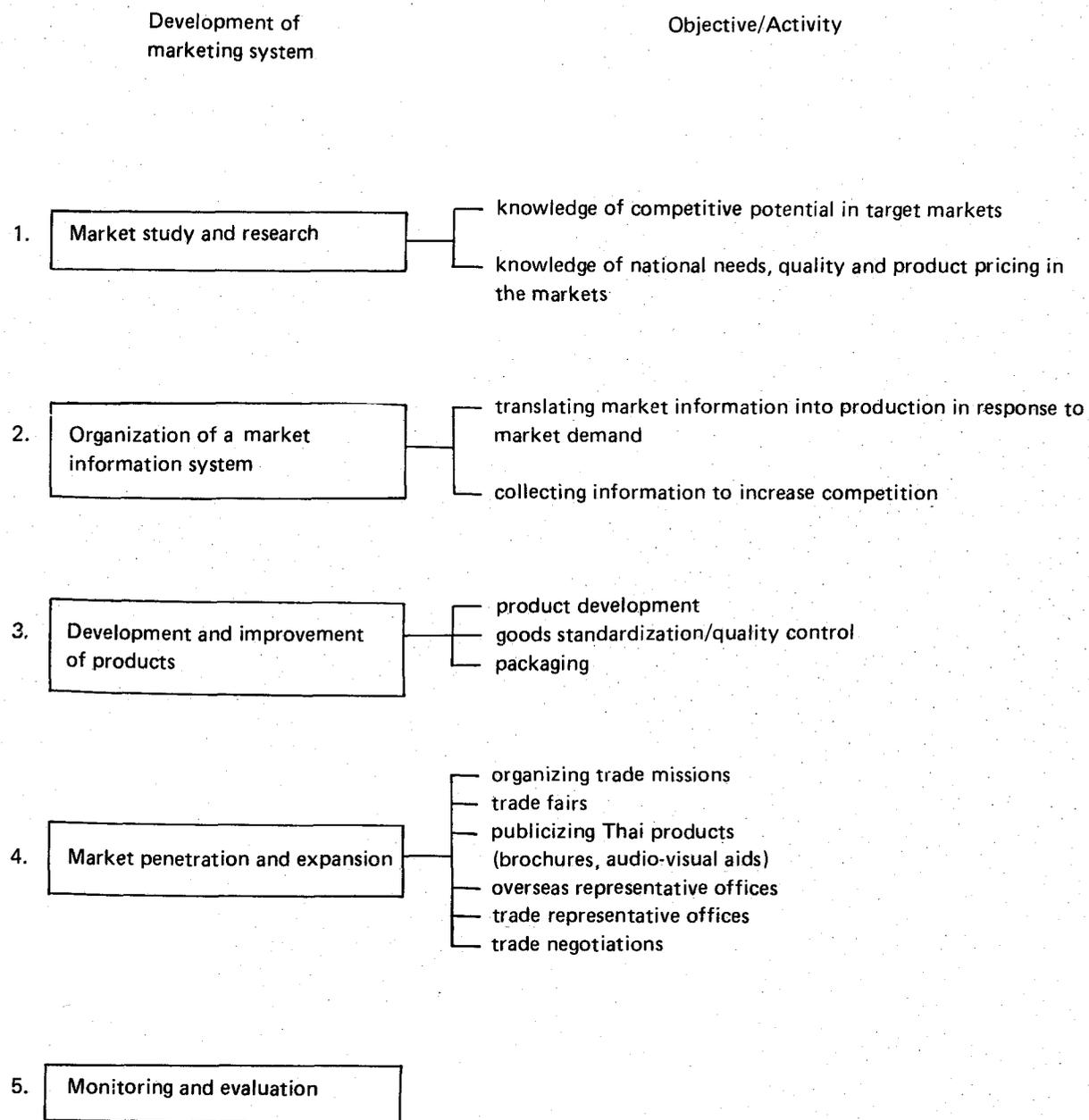
7. The public sector's role in marketing will follow 3 major principles:

7.1 The government will confine its role to operations at the 'macro' level. It will concentrate on clearly identifying goods and target markets, especially by conducting market research, and providing useful market information in support of the private sector's operations at the 'micro' level.

7.2 The private sector will be chiefly responsible for marketing development while the public sector will complement the private sector's role only when necessary; for example, by supporting small and new producers and exporters, and providing relevant market news to warn of developments in major target markets.

7.3 The public sector's participation in marketing development requires marketing expenditure. The government will increase its marketing expenditure to promote marketing efficiency and to share the burden borne by the private sector.

Chart Marketing development schemes



CHAPTER 6

RESTRUCTURING THE MANAGEMENT SYSTEM FOR PRODUCTION AND MARKETING

1. Restructuring production and marketing management constitutes an important strategy in the Programme for Development of the Production System, Marketing and Employment. In accordance with the objectives of the Programme for Overall Economic Development, the strategy is aimed at strengthening economic stability, solving the problem of rural poverty, distributing income and creating jobs. The system of production and marketing management that will contribute to the implementation of the major work plans includes the following:

1.1 Establish an organization which will be responsible for planning, control, supervision and solving the problems of production, processing and marketing. This will enable all parties concerned, in particular farmers or farmers' organizations, to participate in the decision-making process.

1.2 Give government support to an incentive system for production and marketing. The major objectives of the system are to strengthen capabilities in producing for import substitution and to enable Thai exports to compete more effectively in foreign markets.

1.3 Enable the information system to serve as a mechanism for systematically integrating production and marketing.

Incentive system for production and marketing

2. The previous results of export restructuring and overall growth were due not only to increasing demand in foreign markets but also to a number of export promotional measures aimed at increasing the competitiveness of Thai products by reducing export costs. Measures have included a variety of export incentives given by the government: financial measures to support export credit, tax measures in the form of tax rebates, promotional privileges for investment; the government has provided other basic facilities and necessary services, such as bonded warehouses, industrial zones for export and a marketing service in the form of an export service centre.

3. The implementation of marketing promotional policies and measures has to date been satisfactory, resulting in export growth for several types of Thai products, especially such manu-

factured products as textiles, electrical appliances and equipment and various new kinds of processed agricultural product. However, implementation has been limited by fluctuations in the world economy, constraints on trade volume, trade competition and the tendency towards protectionist policies in the world market, problems which will make it difficult to alter the guidelines for developing the production system and marketing during the Sixth Plan period, as follows:

3.1 The current system of incentives and promotion is not generally applied. It creates injustice and disparities among those involved in production and marketing because it favours direct exporters only and neglects other export manufacturers at each production stage, who indirectly contribute to foreign exchange earnings.

3.2 Certain provisions in the incentive system are direct subsidies from the public sector which are not in line with international trade practices nor with Thailand's commitments under international agreements. This issue could elicit retaliatory measures from Thailand's trading partners or rivals, as has occurred with textiles and steel pipes; reactions of this kind have a serious effect on exports to Thailand's principal markets.

3.3 The incentive system has distorted the structure of domestic manufacturing industry: on the one hand certain promotional privileges and tax incentives for investment tend to protect the production of finished goods which rely heavily on imported raw materials, adding little value to output and creating few jobs; on the other hand the production of primary, intermediate and capital goods, which will form the basis for the development of export industries, has been given little protection. Under these circumstances it may be concluded that the current incentive system is not conducive to exports, especially in the long run, and sometimes it even contradicts the prevailing export promotion policy.

3.4 The current incentive system is limited and geared towards large-scale export manufacturers and exporters of traditional agricultural and industrial commodities, such as rice, sugar, textiles and tapioca products. At the same time the system of granting privileges is unfair to small-scale manufacturing and does not support the decentralization of production activities into provincial regions. The system will also hinder the implementation of the production diversification strategy that is intended to increase the number of emerging export products.

4. Considering these facts and issues, the following 3 principles are laid down for restructuring the incentive system for production and overseas marketing:

4.1 The new management system for production and marketing involves measures to promote and motivate overseas marketing. These should be general measures to benefit all parties concerned in promoting the development of the production system and marketing in accordance with the main strategies of the production and marketing plans. These measures should be fair and well integrated in order to improve Thailand's competitiveness in the world market and achieve the objective of penetrating new markets and maintaining existing markets.

4.2 The system of government incentives and subsidies should accord with international trade practices and Thailand's commitments to the international community in order to

prevent retaliation in the form of trade restrictions and protectionism, which would obstruct the expansion of Thailand's production and exports.

4.3 The system of government incentives and subsidies should be made accessible to small-scale and new producers and exporters in order to increase the efficiency of production and the potential to compete in foreign markets.

5. To restructure the incentive system for production and overseas marketing in line with the foregoing development guidelines and principles, the following operational guidelines are specified:

5.1 Encourage more extensive use of domestic letters of credit for export products. This will enable both direct exporters and export manufacturers to benefit from the government's incentives and subsidies at every stage of manufacturing for export.

5.2 Extend terms of credit, especially long-term credit for agricultural exports, in order to maintain market shares and penetrate new markets.

5.3 Set up a system for calculating physical input coefficients to ensure that tax rebates for exporters are processed quickly, justly and accurately in accordance with international trade practices. The system, which has already been applied to a number of goods on an experimental basis, should be expanded to cover more products.

5.4 Establish an export finance guarantee fund that enables every direct and indirect exporter to benefit from export credit without collateral. This will increase competitiveness especially of small and new direct and indirect exporters in foreign markets.

5.5 Reduce disparities in privileges by making the tax structure more conducive to export marketing. The structure of business taxes and customs duties should be adjusted in order to reduce protection of finished and semi-finished manufacturing that is highly import-dependent for materials and equipment, and to increase protection of intermediate and capital goods industries.

5.6 Expand the operations of bonded warehouses for production plants in order to support production for export.

5.7 Encourage the formation of exporters' groups. Associations of small exporters of specific types of goods will be formed to represent their members; serve as a link for news and information on production and marketing, market penetration and product quality control; and complement the public sector's role in implementing the various stages of marketing development.

Information system for production and marketing

6. The market information system is an important mechanism for fully and systematically integrating production and marketing in line with the guidelines laid down in the Programme for Development of the Production System, Marketing and Employment. Information on marketing and production, however, is not yet linked systematically, even though several agen-

cies are compiling the information. Moreover the usefulness of these existing information systems is impeded because certain types of their market information do not correspond to users' requirements while accurate information is not available for producers in time to keep up with changes in market conditions.

7. Most information systems are currently confined to traditional goods that the government has targeted for production and marketing promotion. Primary information sources are limited, and the information is for the specific and diverse purposes of each agency. Consequently, there is no uniformity in the type, standard or data-collection period of the information. As a result, the existing information cannot be used as an effective mechanism for integrating production and marketing plans.

8. Restructuring of the information system for production and marketing at the beginning of the Sixth Plan period will prioritize new agricultural commodities that have potential for production and market growth in addition to traditional agricultural commodities; meanwhile most industrial products will be efficiently taken care of by the private sector. In restructuring the information system, 2 principles will be followed:

8.1 The information system should be arranged with a view to providing a systematic link between production and marketing and to providing the kind of information that benefits users in the public and private sectors, such as farmers who export and entrepreneurs.

8.2 The dissemination of information should be carried out in response to the needs of specific target groups. These target groups will be able to make use of the information directly in production for sale and production diversification.

9. In order to ensure that agricultural and industrial production and marketing are fully integrated and bring about production diversification and production for sale during the Sixth Plan period, the following guidelines for restructuring the information system for production and marketing are specified:

9.1 The Ministry of Commerce and the Ministry of Agriculture and Cooperatives will serve as the principal agencies in restructuring the information system.

9.2 The Ministry of Industry will develop a system for linking and exchanging information on industrial production and marketing between the public and private sectors. Existing private sector information systems, which are generally effective, will be supported and systematically integrated to cover all production units, marketing and supporting government agencies.

9.3 Compile a list of target products that require a linking system. This would comprise 161 short-listed agricultural products with production and marketing potential based on the Programme for Development of the Production System and Marketing, 38 industrial products and also other traditional products in the present system.

9.4 Establish national and local networks for transmitting systems and receiving production and marketing information. Production units and relay units in each locality will be linked through a transmitting system. Existing government communications instruments — The Daily Trade News, commercial counsellors' news bulletins and other mass media, especially official radio stations — will be used in disseminating information.

CHAPTER 7

ROLE OF THE PUBLIC SECTOR IN THE DEVELOPMENT OF THE PRODUCTION SYSTEM, MARKETING AND EMPLOYMENT

1. The private sector is responsible for nearly all production, marketing and export activities. Thus the role of the public sector in the Programme for Development of the Production System, Marketing and Employment will be confined to strengthening the private sector's capabilities whenever necessary. During the period of the Sixth National Economic and Social Development Plan, the government will carry out 4 activities in accordance with the new direction and strategies of the Programme for Development of the Production System, Marketing and Employment, as follows:

1.1 Research, development and technical assistance. The emphasis will be on improving the transfer of production technology, conducting pilot studies to assess the feasibility of commercially oriented production, studying and improving seeds and strains, conducting research into improved methods of cultivation and breeding, providing technical consultancy and carrying out research and dissemination of appropriate technology.

1.2 Increase in marketing expenditure. The role of the public sector in marketing will be to strengthen the private sector's marketing capabilities. Emphasis will be placed on studies of the structure, characteristics, opportunities, rules and regulations of the target markets; the provision of sample products; and marketing campaigns and promotion, including organizing trade fairs and missions, public relations, providing marketing services and trade exhibition sites, arranging training courses in marketing and improving and maintaining quality.

1.3 Alleviation of the problem of rural poverty. Major activities to be carried out include demonstrating and transferring production technology, improving the efficiency of production and processing in agriculture and industry, promoting production diversification at the farm level, identifying opportunities and assisting provincial manufacturers.

1.4 Promotion of earnings from production and services for export. Priority will be given to improving production techniques and value-added services for export products; reinforcing improvement in quality, design and standards of development; and promoting tourism and other services that support job creation.

2. The government's implementation of the 4 preceding activities will embrace a number of projects to be executed during the period of the Sixth National Economic and Social Develop-

ment Plan (1987–1991) by the agencies concerned with production and marketing; namely, the Ministry of Agriculture and Cooperatives, Ministry of Commerce, Ministry of Industry, Ministry of Science, Technology and Energy and the Tourism Authority of Thailand. The following criteria have been established to screen relevant projects:

2.1 The project will be a new or existing one that has adopted the new operational system in line with the 4 strategies of the Programme for Development of the Production System, Marketing and Employment in the Sixth Plan period.

2.2 The project will be consistent with the public sector's role of supporting the restructuring of production and marketing in keeping with changing circumstances and within the monetary and fiscal limitations of the government.

2.3 The project details and management will be ready for immediate implementation and its activities will be either linked or related to other programmes in the Sixth Plan.

3. Structure of work plans and projects to support the development of the production system, marketing and employment

3.1 There will be 4 groups of work plans and projects under the Programme for Development of the Production System, Marketing and Employment, as follows:

- (1) Production for sale**
- (2) Production diversification and poverty eradication**
- (3) Marketing**
- (4) Restructuring of the management system for production and marketing**

These 4 groups comprise 14 major work plans, of which 4 are related to agriculture, 3 to industry, 4 to marketing and 3 to the development of tourism services.

3.2 These 14 major work plans have the following objectives and core activities:

(1) Work Plan for Developing the System of Production for Sale

To study and conduct market research that identifies market opportunities, assess production growth possibilities, improve product quality to enhance competitiveness in foreign markets and support the restructuring of agricultural and industrial production based on the new approach.

(2) Work Plan for Restructuring Agricultural Production

To diversify agricultural production from traditional commodities that face marketing problems into several other new products that correspond to market demand; to improve product quality and determine the quantity of products in accordance with market conditions; and to reduce production costs by encouraging the use of appropriate agricultural knowhow in order to ensure greater competitiveness in foreign markets.

(3) Work Plan for Developing Agricultural Know-how and Technology

To develop, by upgrading production efficiency, several kinds of new products that satisfy market demand.

(4) Work Plan for Developing Agro-industries

To encourage the processing of agricultural products that increase farmers' income, employment, industrial investment in provincial regions and export earnings.

(5) Work Plan for Product Diversification

To reduce risks and supplement the income of producers and farmers, and to increase opportunities for expanding production and export bases.

(6) Work Plan for Developing Agriculture in Backward Areas

To create employment in the agricultural sector and increase the income of farmers by encouraging farmers to grow supplementary crops before and after the major crops, to adopt integrated farming in order to diversify farm production, to preserve food left over from consumption and, in areas where food production is insufficient, to continue the food production component of the Fifth Plan.

(7) Work Plan for Developing Engineering Industries

To develop and improve technology in small and medium-sized machinery and metallurgical industries that will be used as the basis for industrial development.

(8) Work Plan for Developing Small-Scale and Provincial Industries

To strengthen the capabilities of small-scale and provincial manufacturers, to expand the production base and diversify production, and to encourage increases in earnings and employment in provincial regions and rural areas.

(9) Work Plan for Improving Infrastructure and Services to Support Tourism Development

To develop the road network, electricity, water supply and telephone system, environmental conservation and other services necessary for tourism development.

(10) Work Plan for Conserving the Arts, Culture and Tourism Resources

To conserve and develop natural tourist attractions, historical sites and artifacts, local arts, culture and handicrafts as tourism resources, and to support the promotion of tourism marketing.

(11) Work Plan for Diversifying Export Markets

To maintain and increase export market share in target markets, and to reduce the risk of fluctuations in export revenues.

(12) Work Plan for Promoting Tourism Marketing

To increase foreign exchange earnings from the sale of tourism services, and to promote income distribution and employment.

(13) Work Plan for Promoting Agricultural Production

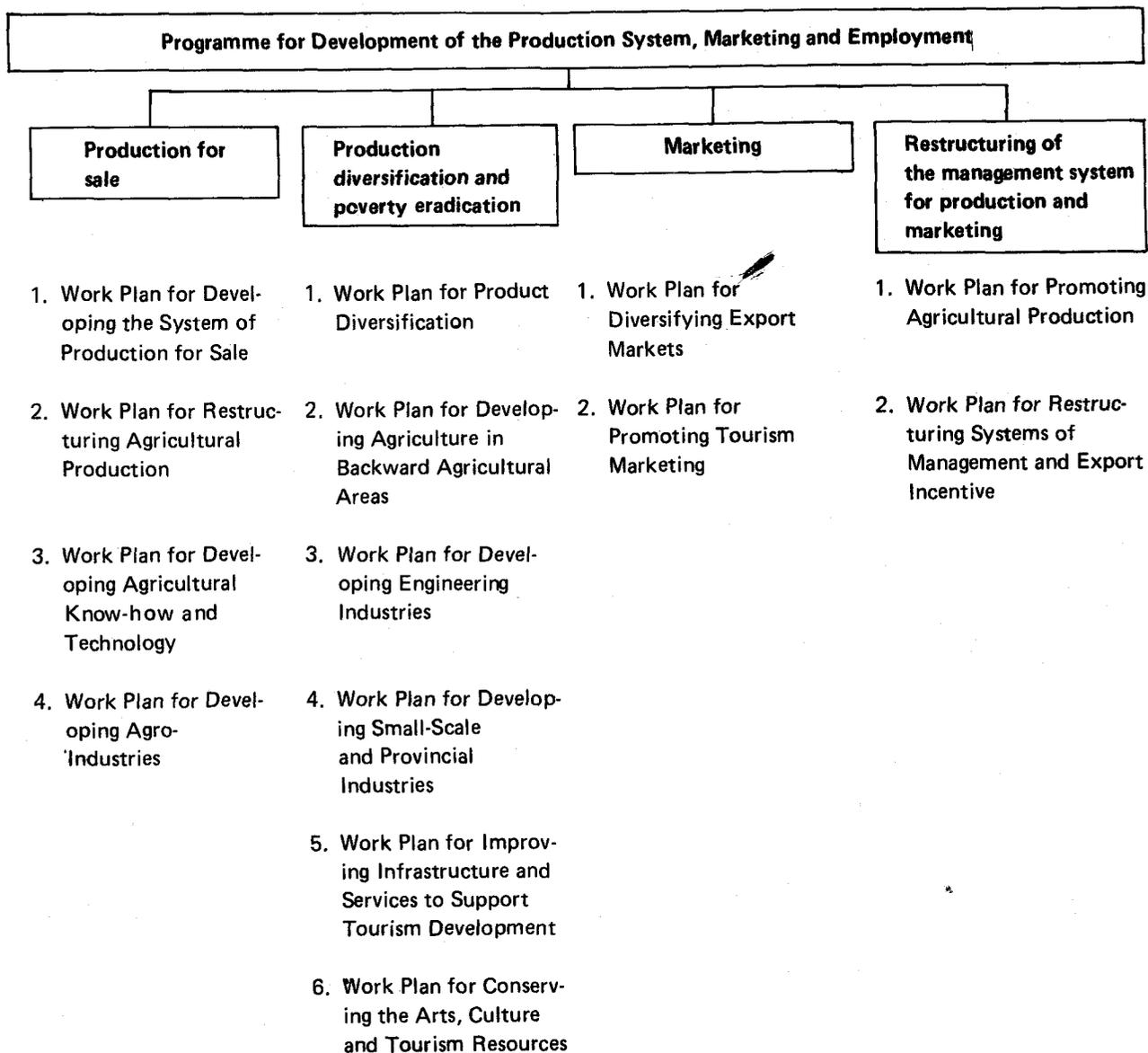
To enable farmers to increase production efficiency by maximizing the use of land, water resources and other production inputs by improving the operational methods of government agencies responsible for agricultural extension.

(14) Work Plan for Restructuring Systems of Management and Export Incentives

To revise the incentive and subsidy systems of the public sector in order to ensure fairness and enable exporters to compete internationally in accordance with international practices.

The following chart represents the structure of the 14 major work plans under the 4 groups:

**Major work plans under the
Programme for Development of the Production System,
Marketing and Employment
(4 groups with 14 work plans)**



4. In connection with the work plans and projects on production, marketing and employment under the Sixth Plan, the government agencies concerned will play a major role in determining projects and annual operational plans in line with changing economic and trading conditions in the world market. For 1987, the first year of the Sixth Plan, the Cabinet has approved in principle 26 projects proposed by the Ministry of Agriculture and Cooperatives, Ministry of Commerce, Ministry of Industry and the Tourism Authority of Thailand. The budget ceiling for these projects is approximately 270 million baht. The agencies concerned are expected to coordinate with one another in formulating work plans and projects to be implemented between 1988 and 1991 in time for each year's budgeting schedule.

PROGRAMME 8
DEVELOPMENT OF INFRASTRUCTURE SERVICES

DEVELOPMENT OF INFRASTRUCTURE SERVICES

CHAPTER 1

INTRODUCTION

1. Development of infrastructure services; namely, public utilities and amenities, energy, transport and communications, is a major factor influencing production processes, marketing and related business activities both within the country and abroad, which in turn affect Thailand's balance of international trade. Investment in the development of infrastructure is thus a key element in increasing national income and employment.

2. Since the First Plan the government has spent a great deal of financial resources on improving and expanding the nation's infrastructure services. In the Fifth Plan period, two thirds of total government investment were spent on infrastructure services. The foreign debt thus created, which accounted for more than half of total external borrowing by the government, had a large impact on monetary and fiscal conditions and foreign debt management policy during the period.

Results of development and restructuring of infrastructure services during the Fifth Plan

3. A major policy guideline of the Fifth Plan was the decentralization of prosperity to provincial regions. To support this, infrastructure services were developed; for example, secondary roads to production sites were built, telephone and telecommunications systems expanded and necessary public utilities and amenities provided to match community growth both in urban and rural in provincial areas. Although more rural highways have been built as a result of development efforts, the target has not been achieved because investment funds are limited.

4. Serious administrative problems within and between the agencies responsible for communications services has meant that the expansion of telephone services has fallen below target and plan implementation has been repeatedly postponed, despite few problems in fund mobilization and technology. The ratio of telephone lines to population in Thailand is only about 1.4 per 100 persons, compared to 4 telephone lines per 100 persons in developing countries. Thus the standard and quality of telephone services in Thailand clearly require much, and urgent, improvement.

5. In public utilities, tap water now reaches 67 per cent of the population within the Bangkok service area and 52 per cent of the population in urban and rural service areas in the provinces. Waterworks management has improved, and service fees have been changed to correspond to production costs in both the central and provincial regions, making it possible for government subsidies to be greatly reduced.

6. The Fifth Plan tried to restructure and develop energy use by reducing the level of dependence on imported energy, adjusting the pricing structure of various kinds of energy to reflect real conditions and aiming at energy conservation, especially in transport and industry. The results were as follows:

6.1 Domestic energy sources, particularly hydro, lignite and natural gas, were developed and came close to reaching their targets. As a result, energy imports were reduced from about 90 per cent of total commercial energy requirements in 1981 to about 58 per cent in 1986. Electricity services were expanded into rural areas with the result that 76 per cent of the country's villages were supplied with electricity by the end of the Fifth Plan.

6.2 Energy price restructuring was carried out, but not well enough to prevent fuel substitution, particularly among oil, lignite, coal and natural gas.

6.3 Energy conservation measures were carried out but inconsistently, especially after the substantial reduction in the price of oil.

7. The administration of infrastructure services has been made more flexible and efficient. In particular, the internal administration of state enterprises has been improved to bring it into line with private sector business practices and to increase competitiveness. Marketing and service efforts were accelerated together with cost reduction efforts. At the same time the type and size of investment were adjusted in accordance with monetary and fiscal conditions of the country, and private sector participation was allowed in operating certain activities or in joint ventures with state enterprises that offer basic services.

8. Much has been achieved in pursuing the objectives of reduced government subsidies and increased self-reliance of those local agencies and state enterprises that provide basic services. Various investments have been quite successfully restructured, as has the pricing system for services, especially bus and train fares, port charges, domestic air fares, telephone and postal service charges, metropolitan and provincial water supply charges, etc.

9. In summary, the restructuring and expansion of various infrastructure services met with reasonable success, especially in energy, air transport and some utilities. Land transport and telephone services, however, still face serious problems in both quantity and quality, thus creating bottlenecks and major obstacles for business in general: production, marketing, export and international business communications. These are therefore issues to be addressed in the Sixth Plan, especially:

9.1 Improve the quality of infrastructure services and maintain the existing service networks in order to facilitate economic activities that will increase income and employment.

9.2 Incorporate missing links in the system of infrastructure services in order to increase the efficiency of the economic system as a whole. This will include connecting production sources with markets, coordinating the use of different transport systems and linking various urban areas, especially Bangkok with its vicinity provinces.

9.3 Develop infrastructure services to accommodate modern technology in order to enhance the nation's competitiveness in world markets, particularly in regard to telecommunications and marine transport systems.

9.4 Restructure the government administrative system and management of infrastructure services. This will increase flexibility and improve efficiency so that services will be extended to a wider area. The pricing system and investment structure will be adjusted and the private sector will be encouraged to participate as much as possible.

CHAPTER 2

DESCRIPTION OF THE PROBLEMS

The main issues in developing infrastructure services during the Sixth Plan can be summarized as follows:

1. Many basic services are inadequate and their quality is below international standards. In particular, telephone and urban bus services do not satisfy public demand and, because of their monopolistic nature, lack competition.

2. Infrastructure networks have not been fully utilized and are not well linked together.

2.1 Large investments have been made in such basic services as roads, energy, electricity and natural gas, but the infrastructure has not been fully utilized. At present, for instance, Thailand has an almost complete network of major highways but lacks secondary roads to connect them. Again, many sea ports are underutilized because they lack supporting land transport systems; that is, roads and railways. Natural gas has a high production capacity but is not widely used while electricity generation has high surplus capacity.

2.2 Infrastructure networks in Bangkok and other urban areas are not linked together in a fully integrated system. Problems arise in coordinating work plans; for example, the expressway system with Bangkok road improvements, and waterworks expansion with flood protection and land subsidence. Moreover the expansion of various infrastructure in urban areas cannot keep up with community growth because of the lack of coordination between the infrastructure network and town planning measures; this has led to inefficiency in both land use and infrastructure distribution.

3. The pricing structure for infrastructure services is still inappropriate. Pricing for such infrastructure as railway spur line services, Bangkok Mass Transit Authority bus services, and postal services does not give adequate returns on investment which include capital costs and operating expenses and a surplus fund for future expansion. As a result, these services have to be subsidized by other activities or from the government budget. Some public utilities, such as natural gas and telecommunications services, are overpriced, which creates a strain on activities that are dependent on the services. In addition, price adjustments for many services are not in line with market forces due to the existence of price controls and of differing tax rates for petro-

leum products, for example, which has led to more substitution and thus inefficient consumption.

4. The rate of investment expansion is high, and fund mobilization is not in accordance with the country's monetary and fiscal policy. Owing to the high rate of investment expansion of some basic services, production capacity exceeds demand during times of economic recession, or the returns on investment are low. Such investments are increasingly dependent on foreign borrowing and proportionately less dependent on self-generated revenues. In addition, the lack of capital increases makes the capital base too low for the size of the business. Examples of the problem can be seen in electricity and international air transport services. Such increased foreign borrowing has required government guarantees and this has affected the level of government debt, which accumulated rapidly during the Fifth Plan period.

5. The organizational structure for infrastructure is not fully developed.

5.1 The administration of various infrastructure is distributed among different agencies. This leads to duplication and conflicts in policies and work plans, which directly affects the efficiency of the services and causes waste of funds. For example, investments in certain telecommunications services by the Telephone Organization of Thailand and the Communications Authority of Thailand overlap; the lack of an organization for coordinating policies and work plans has led to a lack of conformity in the work plans of different public utilities and amenities; and the many functional agencies concerned with national energy administration lack unified policies and cooperation with the private sector.

5.2 The operations of several infrastructure activities are monopolized by the government. While there is no competition, monetary and fiscal limitations prevent the government from investing in various infrastructure. Moreover the role of local organizations in providing public utilities and amenities cannot be developed fast enough to respond to community expansion because of their financial and technical limitations. Thus the role of the government should be reviewed and the private sector should be given the opportunity to participate in development. In so doing, the government's supervisory role should be clearly separated from the provision of infrastructure services since some agencies, such as the Bangkok Mass Transit Authority, are responsible for both supervision and provision of services.

6. Some laws, rules and regulations are obsolete and obstruct the development of infrastructure. Because infrastructure services have expanded in line with the nature and direction of economic and social growth, as well as changes in world technology, it is necessary to revise laws and regulations that obstruct operations; for example, obsolete land, water and air transport laws and regulations and communications laws which fail to clearly delineate the powers and functions of the agencies concerned. In addition, vital issues in the future development of infrastructure services include amending the petroleum laws to bring them into line with the policy of accelerating local petroleum exploration, and clearly and practicably determining the form and methods of private sector participation in the development process.

7. In summary of the major issues mentioned above, the Programme for Development of Infrastructure Services in the Sixth Plan specifies 4 components, which are described in detail in subsequent chapters. The 4 components are:

7.1 Development plan for public utilities and amenities

7.2 Development plan for energy

7.3 Development plan for transport

7.4 Development plan for communications

CHAPTER 3

DEVELOPMENT PLAN FOR PUBLIC UTILITIES AND AMENITIES

1. The Fifth Plan guidelines for developing public utilities and amenities aimed at supporting economic activities in production, marketing and distributing growth to provincial regions and poor rural areas. Emphasis was placed on increasing the efficiency and quality of service management, restructuring service fees and increasing private sector participation in the development of public utilities and amenities. While development has proceeded fairly successfully in line with these guidelines, problems remain because, for example, each service is managed independently, shortages prevail in many services, and the pricing structure is distorted and does not reflect real costs.

2. The results of the Fifth Plan can be summarized as follows:

2.1 Tap water for consumption has been supplied to 4.78 million people in Bangkok, or 67 per cent of the population in the 475-square-kilometre service area, and to 5.8 million people outside Bangkok, or 52 per cent of the population in the service area. Service fees have been adjusted to correspond more with production costs. But tap water is still not available in some rural areas and major industrial zones.

2.2 Housing demand in Bangkok almost doubled from 440,000 units in 1974 to 820,000 units in 1984. The government was able to reduce part of the housing problem for low-income and middle-income people, while the private sector played an increasingly important role in housing development. Private sector construction of high-income housing increased from 19,000 units to 122,000 units, causing a surplus in the market: at present there are 58,000 unoccupied shophouses and 8,000 vacant condominium units. The role of the private sector in developing low-income and middle-income housing, however, remains limited. At the same time, reduced government subsidies have exacerbated the funding problems of the state-owned National Housing Authority. In regard to slum-upgrading, the problem of defining roles and dividing responsibilities between the central government and local authorities has yet to be resolved.

2.3 The 11,630 million baht invested by the government in traffic and transport planning and problem-solving, especially in Bangkok, has succeeded in alleviating the problems to some extent. However, primary and secondary roads have yet to be integrated in a systematic network. Additionally, the standards of quantity and quality of the public transport service are low; the Bangkok Mass Transit Authority has accumulated a huge loss due to inefficient management and many other reasons.

2.4 Planning flood protection and solving the problems of flooding and drainage are important issues for urban communities in Bangkok and in major towns in provincial regions. During the period of the Fifth Plan, a flood protection and drainage system was built to alleviate the immediate problems, but there was no implementation of a long-term plan for Bangkok because a suitable division of responsibilities and investment costs between the central government, local authorities and the general public as direct beneficiaries, was still being considered.

2.5 Although the Fifth Plan specified the development of basic sanitary and environmental services, such as waste water treatment and garbage and waste disposal, implementation has been inefficient and below standard because it is carried out on a routine basis by local authorities. It is therefore necessary to revise the role of the government in this area, especially in garbage and waste disposal, in order that the private sector may be given the opportunity to participate.

3. Issues in developing public utilities and amenities can be summarized as follows:

3.1 Problems in providing services include shortages, low quality and, in some cases, targeting the wrong groups. Many utilities and amenities are still insufficient to meet the demand in all urban and rural areas as well as industrial zones. This is particularly so with tap water supplies, which also suffer from technical problems, a lack of synchronization between water supply and community expansion, shortage of funds, conflicts between the central and local authorities responsible for supplying water and higher than normal rates of waste water. Service quality is also low. Low-income housing is in short supply, and sub-letting and reselling results in middle-income people moving into low-income housing; the service does not reach the intended target group and thus the measures and methods of assigning housing should be revised.

3.2 The pricing structure for various public utilities and amenities cannot cover costs. Losses result and, consequently, subsidies from the government. With the subsidies being intermittent, the businesses have financial and liquidity problems, with large accumulated debts. This is especially evident with the Bangkok bus service. In addition there is a need to review pricing methods for certain utilities by basing fees on production cost. Rather than setting uniform fees for all localities, service fees for tap water supplies should be based on the different standards of living and average income in each locality and town. The government should consider subsidizing services to rural areas in the initial stages, especially services to poverty-stricken rural areas. At the same time the direct beneficiaries of urban services should bear more of the cost of investment, as is done for flood protection in Bangkok.

3.3 The mobilization of funds for expanding utilities and amenities is increasingly dependent on loans and less dependent on self-generated revenues. The resultant rise in interest expenses may cause debt-servicing problems in the future. At the same time the funding needs of various public utilities and amenities call for increases in capital. If the government is unable to afford such increases, private sector financial sources should be sought to effect the capital increases or to participate in joint investments.

3.4 The problem of debt for utility services causes liquidity problems. Debts between state enterprises and owed to state enterprises by government agencies amount to more than 10,000 million baht and have caused serious monetary and budgetary problems. Low liquidity and high overdrafts have resulted in losses for many enterprises and a consequent inability to expand.

3.5 The roles of the government and the private sector in operating utilities and amenities should be revised in accordance with government monetary and fiscal changes and limitations. The government should increase its supervision of operations to ensure compliance with policy, but it should reduce its operational role and allow more opportunity for the private sector to invest or co-invest in these activities. The objectives of enterprises whose operations may be run by the private sector and the steps for transferring the enterprises to the private sector must be clearly specified.

4. Development guidelines

4.1 Emphasize expansion and raising the quality of public utilities and amenities to satisfy the needs of economic restructuring and community growth. Infrastructure networks will be developed in accordance with the policy guidelines for Bangkok and its vicinity provinces and for new economic zones, and in line with town planning that aims to create more efficient and orderly land use and community expansion.

4.2 Develop utilities and amenities to stimulate decentralization of economic and production activities to provincial regions and rural areas. New economic bases will be spread out so that the concentration of activities in Bangkok and its environs will be reduced in the long run.

4.3 Define pricing structures and service fees that will enable costs to be covered and, as a result, self-reliance. To ensure fairness, direct beneficiaries of the services should bear most of the investment costs and operating expenses. The government will minimize direct subsidization of public utilities and amenities in the future, particularly in urban areas. Exceptions will be made for projects that serve special government policies or are located in poor rural areas. In determining service fees, the cost of providing services to each locality, which may not be uniform throughout the country, and the effect on the country's export competitiveness will be taken into account.

4.4 Divide the cost of investing in projects for developing public utilities and amenities so that the burden of the central government is reduced while the role of local authorities, state enterprises and the private sector is increased. The role of the central government will be defined in terms that enable it to supervise the provision of services rather than take an operational role. Local authorities, state enterprises and the private sector will be responsible for operations, thus allowing for competition and the prevalence of market forces. Consequently these utilities will become more business-oriented, rendering them more efficient than they would be as government monopolies.

4.5 Reorganize the utilities to attain more flexibility. Financial, marketing and operational efficiency planning will aim at bringing down the costs of production and personnel expenses. Financing of investment will be derived more from revenues and less from borrowings, and by increasing capital. A central organization will be set up for coordinating some investment plans to ensure a more unified approach, especially to Bangkok's traffic and transport problems.

5. Measures and work plans in line with the foregoing development guidelines consist of the following:

5.1 Work Plan for Supplying Water for Consumption and Solving Flooding and Flood Drainage Problems

(1) Improve and expand the waterworks utilities to cover a larger service area by upgrading existing facilities at the same time as building new ones. Water loss will be reduced and the problem of land subsidence caused by using artesian well water will be alleviated. The target for daily water supply is an additional 1.557 million cubic metres for Bangkok, other urban centres and rural areas. (Water production will be increased by 500,000 cubic metres per day in Bangkok and by 1.057 million cubic metres per day in other urban centres and rural areas.)

(2) Expand the provision of tap water through community waterworks in rural areas by upgrading existing facilities rather than acquiring new ones. The level of maturity of each community will be a significant criterion for expansion.

(3) Consider withdrawing the concessions for waterworks in order that the utilities may be run more efficiently. Rules and regulations and property compensation rates will be revised and the conflicts over areas of responsibility of the organizations should be resolved.

(4) Determine service fees for tap water in accordance with production costs and efficiency in running the utility in a business-like manner in order to reduce government subsidies.

(5) Improve the flood drainage system and the flood protection system in urban areas in coordination with town planning guidelines. The cost will be shared by local authorities and direct beneficiaries.

5.2 Work Plan for Developing Housing and Upgrading Slums

(1) Build 27,000 housing units mainly in urban areas for low-income and middle-income groups. Sale, rental and hire purchase prices will be set appropriately.

(2) Set up joint ventures between the National Housing Authority and the private sector to construct housing for low-income and middle-income groups. Joint venture policies, criteria and conditions will be clearly specified.

(3) Assign local authorities to upgrade the physical, economic and social conditions of slums, either in their existing locations or by relocating them to more suitable sites. The National Housing Authority will coordinate the operations.

(4) Include public parks in housing developments. The ratio of park area to community area should be 1:10. In urban and specific areas, large public parks should be developed at the ratio of 2 rai to every 1,000 people.

(5) Revise regulations by reducing procedures in applying for permits for land development, building construction, housing, land and public utilities in order to reduce production costs.

(6) Issue rules that encourage financial institutions to offer long-term loans to house buyers and housing developers. The Government Housing Bank, for example, will be encouraged to expand its services by opening more branches in Bangkok and in towns in provincial regions; emphasis will be placed on loans to small borrowers and on becoming a long-term financing source for the National Housing Authority.

5.3 Work Plan for Solving Traffic and Transport Problems

(1) Improve public transport services by adjusting the size of the Bangkok Mass Transit Authority and allowing private companies to compete to operate public transport concessions in certain areas. In addition, there will be at least 4 projects for building new segregated busways on certain roads while existing bus lanes will also be improved in order to facilitate bus travel.

(2) Carry out 33 projects for building main and secondary roads, expressways and access roads. Two more bridges will be built over the Chao Phraya River in the area of Bangkok and its vicinity provinces to create an interconnecting system and restrain development along the main roads.

(3) Preempt problems from occurring in urban growth centres in provincial regions where the traffic problem is still not serious. The master plan and urban traffic system that were initiated in the Fifth Plan should be set up and projects will be clearly prioritized within a suitable and realistic investment framework.

(4) Carry out 2 projects to improve the traffic system through control of traffic lights in Bangkok. Such projects require low investment but will yield a high return if they are successfully operated.

(5) Levy a toll for entering Bangkok's inner city area in the same manner as the expressways. The aims are to set up a fund for improving the traffic and transport systems, to derive service fees from direct beneficiaries and to comply with the payback guidelines on invest-

ment projects in Bangkok and its environs. Moreover toll collection will help to reduce the flow of private vehicles into the inner Bangkok area, and thus lessen traffic congestion in Bangkok. The project to levy tolls must be carried out in conjunction with quality improvement of public transport services so that the public will have appropriate alternative means of travel.

5.4 Work Plan for Waste Water Treatment and Garbage and Waste Disposal

(1) Expand and improve the efficiency of waste water treatment and garbage and waste disposal. Such basic economic and social services will be developed up to the standard level (according to development guidelines for Bangkok and its environs, specific areas and urban growth centres in provincial regions, which consist of the following 26 urban centres: Bangkok, Nakhon Pathom, Nonthaburi, Pathum Thani, Samut Prakan, Samut Sakhon, Chon Buri, Phitsanulok, Nakhon Sawan, Udon Thani, Ratchaburi, Surat Thani, Phuket, Lampang, Chiang Rai, Ubon Ratchathani, Roi Et, Surin, Sakon Nakhon, Rayong, Chachoengsao, Saraburi, Kanchanaburi, Petchaburi, Pattani and Nakhon Si Thammarat).

(2) Conduct a feasibility study on planning waste water treatment and waste disposal according to development guidelines for urban and specific areas other than the 26 urban centres mentioned above. The types of service will be clearly specified and provision of service will aim at profitability. The private sector will be allowed to participate in the investment.

(3) Give concessions to or establish joint ventures with the private sector in providing services for waste water treatment and garbage and waste disposal, in order to lessen the government's burden and make the operations flexible.

(4) Adjust service fees and methods of collecting them in order that local authorities may increase their efficiency and attain self-reliance in the long run.

CHAPTER 4

DEVELOPMENT PLAN FOR ENERGY

1. World energy trends and domestic energy conditions, that are important in formulating policy guidelines and energy development projects in the Sixth Plan, can be summarized as follows:

1.1 Uncertainty of oil prices and of foreign-exchange rates may cause rapid fluctuations in oil prices despite their downward trend during the first stage of the Sixth Plan, which alleviates Thailand's balance of trade deficit.

1.2 The lack of improvement in rules and regulations on petroleum exploration and natural gas market expansion in Thailand will lead to less investment in domestic petroleum exploration and development in the latter part of the Sixth Plan.

1.3 The currently low oil prices will expedite the restructuring of retail prices for petroleum products and the establishment of a mechanism for administering energy use and procurement with sufficient flexibility to adapt to future conditions.

1.4 Domestic demand for commercial energy has rapidly increased. Since more than half of commercial energy is imported, world energy conditions will continue to affect the Thai economy.

1.5 Energy management during the Fifth Plan enabled energy supplies in Thailand to be spread out and reduced dependence on imported commercial energy from 90 per cent in 1981 to 58 per cent in 1985.

1.6 Energy prices have not been sufficiently restructured. There are various constraints; for example, electricity rates and retail prices of petroleum products vary a great deal and this results in fuel substitution, while oil price adjustments do not keep pace with changing situations.

1.7 Commercial energy use in rural areas has greatly increased, but wood and charcoal remain the main sources of energy. Since forest areas, from which wood and charcoal are obtained, are rapidly diminishing and production costs are higher, the issue of rural energy supply must be solved in conjunction with the problem of rural poverty.

MAJOR ISSUES IN ENERGY DEVELOPMENT

2. During the Sixth Plan period, uncertainty of oil prices and the exchange rates of major currencies will continue, and this will obstruct planning for energy development. It is therefore necessary for the government to modify the mechanism for energy procurement and domestic energy pricing so that it is more flexible in adapting to changing world energy conditions. The major issues in energy development can be summarized as follows:

2.1 Although domestic energy resources are numerous and abundant, they have not been fully exploited because the exact amount of reserves has yet to be determined and the natural gas market has not been sufficiently expanded.

2.2 Domestic petroleum sources are not being developed as much as they should be because geological conditions are complex while the sources are small. Production costs are high and the situation is not conducive to developing petroleum sources; rules and regulations, negotiation periods and natural gas demand are all limitations.

2.3 Shortcomings remain in domestic energy price restructuring and efficiency improvement. In particular, the following need to be corrected during the Sixth Plan period:

(1) Imbalance between domestic consumption and refining leading to a surplus of gasoline, more imports of diesel oil and liquefied petroleum gas and, due to low local demand, more exports of condensate.

(2) Increasing substitution between 4 major types of commercial energy; namely, petroleum, lignite, imported coal and natural gas.

(3) Ineffective energy conservation, particularly in public transport and in medium-scale and small-scale industries. Reduced energy prices and inadequate pricing structure have made users less enthusiastic to conserve energy while traffic congestion in Bangkok has aggravated energy loss.

2.4 There is a surplus in world oil refining capacity and the world oil condition is fluctuating rapidly. Therefore the expansion or improvement of domestic oil refineries must take into consideration domestic demand and the need for refining efficiency comparable with international standards.

2.5 Rural consumption of commercial energy has increased because of lower supply and higher prices of wood and charcoal. Expansion of electricity and road networks to the rural areas also contributes to increased consumption of commercial energy.

2.6 The role of the government in energy administration is not clearly defined and is not conducive to efficient energy management. Because various energy agencies are not united under the same line of command, there is a lack of coherent energy management that makes

control and coordination difficult. Besides, without a permanent coordinating mechanism, the roles of the government and the private sector remain unclear.

2.7 Investment in energy, particularly electricity and petroleum, must be made more efficient. Investment should not be excessive and should correspond to the financial capacity of the agencies and the monetary and fiscal limitations of the country.

DEVELOPMENT GUIDELINES FOR ENERGY

3. Development guidelines for energy are as follows:

3.1 Reduce dependence on imported energy and diversify sources and types of energy by accelerating exploration and development of domestic energy sources; that is, natural gas, crude oil, lignite, hydro-power and various forms of non-traditional energy.

3.2 Restructure the prices of petroleum products and electricity rates in order to encourage efficient use of energy in line with the availability of energy resources. The prices of natural gas, lignite, imported coal and fuel oil will be determined accordingly.

3.3 Promote efficient use of energy by stressing energy conservation in transport, industry, commercial buildings and cooking fuelled by wood and charcoal.

3.4 Encourage the private sector to participate more in energy investments in order to relieve the government of part of its financial burden.

3.5 Promote and support the procurement of appropriate types of energy to satisfy rural demand. This must be carried out in conjunction with efforts to solve the poverty problem in rural areas.

3.6 Apportion energy consumption by taking into consideration the impact on the environment.

4. Targets

4.1 Restrict the national growth rate of total energy consumption to 3.7 per cent per year on average during the Sixth Plan period.

4.2 Reduce the level of energy imports from 58 per cent of commercial energy consumption in 1985 to 49 per cent in 1991. This will be accomplished by the following means:

(1) Increase domestic natural gas production from 354 million cubic feet per day in 1985 to 720 million cubic feet per day in 1991.

(2) Increase production of condensate in the Gulf of Thailand from 14,250 barrels per day in 1985 to 18,500 barrels per day in 1991.

(3) Increase inland crude oil production from 20,800 barrels per day in 1985 to 28,600 barrels per day in 1991.

(4) Increase the consumption of natural gas in generating electricity from 250 million cubic feet per day in 1985 to 500 million cubic feet per day in 1991.

(5) Increase its consumption of lignite in generating electricity from 5 million tons in 1985 to 9 million tons in 1991.

(6) Increase industrial consumption of lignite from 500,000 tons in 1985 to 1 million tons in 1991.

4.3 Other important targets:

(1) Maintain the reserve capacity for electricity generation at between 15 and 20 per cent of maximum electricity demand by 1991.

(2) Expand rural electrification to an additional 10,700 villages during the period of the Sixth Plan, bearing in mind the financial condition of the Provincial Electricity Authority.

(3) Attain industrial consumption of imported coal at the level of 500,000 tons by 1991, compared to 200,000 tons per year in 1985.

(4) Conserve energy in transport, industries and households sectors of about 390 million litres of crude oil equivalent annually during the Sixth Plan period.

MEASURES AND WORK PLANS

5. Measures to develop energy according to the determined guidelines are as follows:

5.1 Accelerate exploration and development of various kinds of domestic energy sources.

(1) Petroleum exploration and development

(1.1) Revise the petroleum laws in accordance with the policy to accelerate exploration and development of petroleum in the country. Various aspects of the rules and regulations will be reviewed.

(1.2) Encourage diversification and expansion of the natural gas market to correspond to the capability for future production expansion and to stimulate more exploration and development for natural gas.

(1.3) Speed up cooperative agreement with the Malaysian government and the concessionaire companies in the Joint Development Area in the Gulf of Thailand so that development can be achieved during the Sixth Plan period.

(2) Oil procurement diversification

(2.1) Procure imported crude and refined oil from a wider range of sources. Dependence on particular sources will be avoided.

(2.2) Adjust the duration and conditions of purchase contracts to Thailand's benefit and to reduce the risk of movements in prices and oil sources.

(3) Lignite exploration and development

(3.1) Encourage the Department of Mineral Resources to explore and mine for lignite for use in the industrial sector and in electricity generation.

(3.2) Encourage the Electricity Generating Authority of Thailand to undertake detailed surveys and mining of lignite in Mae Mo, Krabi and other economically viable sites for use in electricity generation.

(3.3) Promote research and development on expanding the use of lignite in the industrial sector and in rural households.

(3.4) Encourage the Electricity Generating Authority of Thailand and concerned agencies to prevent and alleviate the ecological impact of lignite development. The Office of the National Environment Board will be assigned to closely monitor and supervise the operation.

(4) Water resource exploration and development for electricity generation

(4.1) Encourage the Electricity Generating Authority of Thailand to explore and develop water resources that are economically and ecologically suitable for more electricity generation.

(4.2) Encourage appropriate sharing of construction costs for multi-purpose hydroelectric projects in order to ensure efficient utilization of resources.

(4.3) Speed up the National Energy Administration's drafting of the master plan for national development of small hydroelectric projects. Projects should be accorded priority based on the economic viability of the locations, and capable and well-prepared agencies will be assigned to develop the projects.

5.2 Energy pricing

(1) Determine energy prices that create optimum efficiency in the use of energy and reduce production costs in other sectors in order to increase the country's export competitiveness. The pricing structure should also help maintain the financial stability of the country.

(2) Determine energy prices that create competition between such substitutable fuels as natural gas, lignite, imported coal, gasoline, diesel oil and liquefied petroleum gas in order to achieve the foregoing objective. The tax rates on these fuels should not be very different from one another and the government will not encourage the exclusive use of any particular type of fuel, as follows:

(2.1) Revise the pricing structure of petroleum products by setting up compatible tax rates.

(2.2) Abandon the fixing of retail and ex-refinery prices during the early part of the Sixth Plan period. Prices should be allowed to float in accordance with the prices in the world market. Procedures for abandoning price control should be carefully studied.

(2.3) Encourage the adoption of criteria for setting natural gas prices, and establish regulations for determining the structure and tariffs for transporting natural gas through the pipeline.

(2.4) Allow coal to be imported like other fuels. The government should maintain the ceiling on coal import duty at 25 per cent throughout the Sixth Plan period.

5.3 Energy conservation measures

Promote energy conservation in transport, industry, commercial buildings and households. The establishment of versatile organizations will be encouraged in order to implement energy conservation measures effectively and improve conditions that will facilitate rigorous energy conservation.

5.4 Refinery capacity expansion and petroleum product imports

Upgrade the efficiency of domestic refineries to international standards, and thus help reduce the cost of oil procurement for the country. More appropriate petroleum products will be imported and the private sector will be encouraged to invest in refineries in order to improve flexibility in the conduct of business and reduce the financial burden of the government.

5.5 Promotion of research, development, production and use of non-traditional forms of energy

Encourage government agencies, academic institutions and the private sector to undertake research and development into non-traditional forms of energy. Taxes and fees for materials and equipment used in production should be adjusted in order to induce energy producers and users to invest in and use non-traditional forms of energy.

5.6 Promotion of production and use of appropriate energy in rural areas

Promote the planting of economic forests by households and communities. The private sector will be encouraged to grow trees for commercial purposes. Technology will be disseminated to rural areas on conserving types of energy that are already in use, and research and development of biomass energy will be promoted. The use of liquefied petroleum gas and rural electrification will be encouraged, based on market forces and without any price support.

5.7 Energy management and the roles of the government and private sector in energy development

Support coordination of the government's general plans and policies on energy within the context of the current energy administration. An Energy Board will be established and assigned to unify and systematize the plans and policies that are scattered among the various agencies, committees, subcommittees and working groups.

5.8 Investment measures

Improve the effectiveness of investment in electricity generation and petroleum production in order to avoid investments that are beyond the financial capability of the agencies concerned, which are subject to national monetary and fiscal limitations. It is important to provide a proper and more accurate system for projecting national electricity demand in order to reduce the reserve capacity of the electricity generation system and to encourage the private sector to participate more in energy investment.

Continually improve energy investment in accordance with the financial conditions of the country and of the principal agencies, namely, the Electricity Generating Authority of Thailand, Metropolitan Electricity Authority and Petroleum Authority of Thailand. The National Energy Administration, which is covered by the national budget, will be considered separately according to the country's annual monetary and fiscal capacity.

CHAPTER 5

DEVELOPMENT PLAN FOR TRANSPORT

1. During the period of the Fifth Plan (1982–1986) the transport system was restructured. Water transport and rail transport were emphasized to serve as a counterbalance to road transport and reduce transport costs at the same time. The aim was to encourage more efficient use of energy; a policy necessitated by the problems prevailing at that time.

2. The restructuring process has been slow because the road transport network is extensive, convenient and rapid and because the pricing structure of oil gives road transport an advantage over other kinds. This has led to the following problems:

2.1 The attempt to restructure the transport system in order to reduce use of roads and increase use of waterways and railways has not been successful. In the period of the Fifth Plan, the policy to conserve oil consumption and reduce transport costs led to an emphasis on waterways and railways as a means of local transport in place of roads. A water transport development project requiring an investment of 2,400 million baht and a project costing 10,000 million baht to develop the railways were undertaken. But the projects have not met their operational targets because of delays in implementation, project management problems, obstacles arising from bureaucratic procedures, financial problems and the lack of coordination between the projects and with other projects.

2.2 While road transport is still important, roads are in poor condition and there are missing links in some areas. The policy of the Fifth Plan was to slow down the construction of main roads and emphasize the construction of feeder roads to connect production and community areas in principal towns. Because alternative means of transport have been unable to replace roads and the network of highways is already in place all over the country, roads continue to be the key means of transport. However, road conditions are poor, inadequately maintained and repairs are delayed due to budgetary limitations. If roads continue to be neglected, large investments will be needed to rebuild them; therefore, road maintenance and repair are very important. Some areas still lack connecting roads, making the whole network incomplete.

2.3 Investments are wasted because existing facilities are underutilized. For example, many coastal ports have not been used because operational procedures are confusing and not consistent with the implementation of supporting projects. The problem of underutilized facilities may become more serious in major upcoming projects, such as the deep-sea ports, if demand and integration with supporting projects are not well planned.

2.4 A good transport system is needed to meet the increased demand from exports, tourism and specific-area development. The transport system should be improved in terms of quantity, standards, convenience and quality in order to satisfy the needs for economic development that emphasizes activities earning foreign exchange, improved national capabilities in competing with other countries and development of integrated industries in specific areas. The system should support the business sector directly and indirectly, both now and in the future.

2.5 The expansion of some aspects of transport services has not been able to keep pace with economic growth. In particular, tourism, exports and urban expansion have not been adequately supported by, for example: improving the road connection between Don Muang Airport and the city; providing sufficient facilities to meet demand; increasing speed, flexibility and practicality through the reduction of procedures, regulations, formalities and customs clearance; and improving the urban transport system.

2.6 The transport service operations of some state enterprises continue to face various problems; for example, the quality of service is not as good as it should be and the enterprises are not self-reliant. Such problems, particularly in the case of the railways and the Bangkok transport system, increase the government's burden.

Development guidelines for transport

3. Development guidelines for transport during the Sixth Plan are as follows:

3.1 Implement the transport restructuring policy by emphasizing water and rail transport. Major projects started during the Fifth Plan period will be completed. These include the development project for inland water transport, construction projects for deep-sea ports at Songkhla and Phuket, the development project for deep-sea ports on the Eastern Seaboard and the development project for Don Muang Airport.

3.2 Make full use of existing facilities. Emphasis will be placed on maintenance, improving standards and filling in the missing links in the networks.

3.3 Enhance the capabilities of national transport services so that they are more flexible and faster and thus contribute to other developments, particularly exports, tourism and development of the Eastern Seaboard.

3.4 Set fees to enable services to become self-reliant and reduce government subsidies. The collection of road tolls will be increased.

3.5 Encourage the private sector to play a greater role in investing in, operating and improving the service quality of basic transport activities in order to satisfy the growing demand, lessen the burden on the government and create a unified approach to development.

4. Measures and work plans

4.1 Land transport

(1) Roads

(1.1) Emphasize the repair and maintenance of highways and roads in rural areas, particularly where there is an urgent need.

(1.2) Emphasize the upgrading of construction standards for key roads in the network, and build roads to fill in the missing links between production areas, markets and cargo depots in order to support exports.

(1.3) Encourage the private sector to participate in investing in construction, repair and maintenance and revenue collection. The patterns, methods and procedures for participation will be clearly specified and made practicable.

(1.4) Establish a coordinating system or organization to ensure that policies, work plans and operations concerning the construction and maintenance of highways and rural roads will harmonize and support one another in order to justify investments.

(2) Railways

(2.1) Improve operational efficiency and strengthen safety measures. Railway tracks, bridges, stations, signalling systems and telecommunications systems will be improved, particularly on principal routes that serve export activities.

(2.2) Accelerate improvements that will make the administration more business-like. Emphasis will be placed on improving marketing measures in order to keep pace with economic conditions. In particular, freight services will be improved and fully integrated.

(2.3) Encourage the private sector to participate more in investing in and operating the railways by, for example, running train services or building railway lines to production areas and to export zones.

(2.4) Allow fare adjustments to ensure reasonable investment returns on branch line and suburban area railway operations if the government cannot subsidize operations.

(3) Road transport

(3.1) Encourage the private sector and local communities to participate more in investing in and operating the passenger transport system in Bangkok and the road transport system throughout the country.

(3.2) Allow fare adjustments to ensure reasonable investment returns on urban passenger transport operations if the government cannot subsidize operations.

(3.3) Consider restructuring taxes on road users, especially vehicle tax and taxes on fuel oil used for road transport purposes. Restructuring will make the taxes more suitable and equitable.

(3.4) Support a proper mass transit system to alleviate traffic congestion in Bangkok.

(3.5) Issue regulations and specify measures to make freight and passenger transport by road more disciplined and orderly. Road users will be monitored to ensure that the law is consistently followed; for example, methods of controlling vehicle weight will be improved.

4.2 Water transport

(1) Port development

(1.1) Improve and increase basic facilities that support port activities, such as channel dredging, inland water transport, sufficient public utilities and coordination between various means of transport.

(1.2) Accelerate the operation of port activities by encouraging private sector participation in investment and operation of newly-built and existing ports, particularly coastal ports in the south. The patterns, methods and conditions for private sector participation will be clearly specified and made practicable.

(1.3) Consider setting up a permanent central organization to coordinate policy, planning, control, supervision and development of ports throughout the country in order to ensure continuity in operations. Improvements to relevant laws and existing organizations will also be considered.

(1.4) Improve transport service capability and versatility in order to support exports and commerce. The development of deep-sea ports on the Eastern Seaboard will be accelerated, as follows:

a. Promote the establishment of cargo depots to facilitate port activities, stevedoring systems, export activities and solutions to the problem of port congestion. The private sector will be encouraged to participate by investing and operating while the government will support these activities by providing road and railway links and the necessary public utilities.

b. Accelerate bureaucratic improvements by reducing the number of procedures involved in, for example, customs procedures for water transport and goods-handling at ports. Procedures should be more appropriate and easier to follow.

c. Encourage the use of aggressive marketing strategies soliciting customers, setting attractive prices and advertising to increase use of ports.

(2) Merchant navy development

(2.1) Develop water transport so that it strengthens the circuit of export and import activities and the earning of foreign exchange while reducing dependence on means of transport from foreign countries. The government will promote the use of Thai maritime services for cargo transport. State enterprises and the private sector will be encouraged to modernize the maritime fleet.

(2.2) Promote the merchant navy by establishing cooperation between the government and private sectors to provide financial, marketing and other necessary supportive measures.

(2.3) Promote the development of information for managing merchant navy activities, especially in regard to regulations on reserving cargo space, shipping activities, export and import terminals for cargo and marine insurance. This will enable Thai business to gain a larger share of the benefits from merchant navy activities.

(2.4) Promote increased use of inland and coastal transport systems to accommodate the expansion of international trade and both onshore and offshore merchant navy activities.

4.3 Air transport

(1) Airports

(1.1) Improve the system for providing passenger and aircraft services at international airports. Emphasis will be placed on increasing convenience, flexibility, safety and coordination between the operating agencies. Service fees should be sufficient to cover costs in order not to encumber extension activities.

(1.2) Encourage the private sector to participate in investment in provincial airport activities.

(1.3) Consider deriving greater benefits from the use of U Taphao Airport.

(2) Aviation

(2.1) Support the expansion and improvement of the aircraft fleet, for both domestic and international flights, to correspond to market size. A long-term investment plan will be drawn up for this purpose.

(2.2) Allow the private sector to participate in increasing the capital of Thai Airways International Limited and Thai Airways Company Limited.

(2.3) Encourage the private sector to operate airline services on routes that are not operated by Thai Airways Company Limited.

(3) Air freight development

Aim for Thailand to become the regional centre for air freight and air communications by the following:

(3.1) Provide sufficient facilities to satisfy demand.

(3.2) Improve procedures by reducing the number of steps, regulations, formalities and customs procedures in order to increase speed, flexibility and practicality.

(3.3) Encourage and promote activities that link freight forwarding by sea and air so that air freight operations are expanded.

(4) Aviation-related activities

(4.1) Accelerate the improvement of road and other transport systems that increase convenience and flexibility in using Don Muang Airport. This will also support tourism and air freight activities.

(4.2) Provide more public transport services to the city. This will give passengers a wider range of choice: railway transport, buses, taxis, etc.

(4.3) Upgrade duty-free shops at international airports in order to attract more tourists.

(4.4) Improve and develop the efficiency of telecommunications systems information systems, aviation aids and meteorology.

4.4 General measures for transport

(1) Revise laws and regulations on land, water and air transport. Appropriate new laws should be drafted in order to create flexibility in operations. This will lead to overall economic development and facilitate private sector participation in investment and operations.

(2) Adjust fees for transport services in order to be in line with operating expenses, to give reasonable investment returns and to reduce government subsidies and loans. Self-reliance would be attained by, for example, increasing capital in proportion to the size of the business and levying tolls on vehicles using certain roads.

(3) Improve the efficiency of project management by establishing a system for control and supervision and by cutting out unnecessary bureaucratic procedures. Project managers will be assigned for specific projects that require a high level of coordination.

(4) Promote the development of all levels of personnel concerned with land, water and air transport.

CHAPTER 6

DEVELOPMENT PLAN FOR COMMUNICATIONS

1. Communications can be classified into 3 types: public communications, mass communications and communications for specific purposes. Public communications, such as the domestic and international telephone service, is the most important and necessary for supporting other developments. Since the period of the First Plan, the first 20 years placed little importance on communications development. In particular, public communications services grew slowly with an average annual investment of about 1,000 million baht. During the Fifth Plan period, however, more attention was paid to communications development and the average investment increased to more than 4,000 million baht per year.

2. Past expansion of communications services has been inadequate to satisfy the rapidly growing demand, especially for telephone services. Development results and problematic issues can be summarized as follows:

2.1 The telephone service continues to face a serious shortage problem and users remain dissatisfied with service quality. The number of telephone lines has been increasing at the rate of 9 per cent a year on average whereas demand has been increasing at the average rate of 15 per cent a year; the shortage of telephone lines is thus becoming more serious. In 1985 there were about 700,000 telephone lines, making an average of 1.4 lines per 100 persons, compared with 4 telephone lines per 100 persons in developing countries. In addition, users still find the telephone service inconvenient. The major causes of the problems in the telephone service are poor management and operations in the service organization, lack of good coordination within the organization itself and with related agencies and lack of flexibility of commercially oriented operations. The local shortage of telephone lines and poor service have affected other developments as well. For example, international telephone communications are inconvenient while industrial and commercial development has not progressed as far as it should have. As a result, dependence on transport services has increased. During the Fifth Plan period, however, efforts were made to expand the telephone service. In order to increase its flexibility, the private sector was invited to participate in investments and operations; however, there are some legal limitations.

2.2 The number of communications networks for specific purposes is growing and investment in them is often duplicated. Since the local telephone system, which is the major communications network, is insufficient and inconvenient there is increasing use of communications networks for specific purposes, which waste radio frequency resources and duplicate investments.

2.3 Mass communications services have expanded greatly but there is no effective coordinating system, particularly for public relations. At present, mass communications instruments and equipment are adequate: there are about 270 radio stations throughout the country broadcasting programmes concerned with public information, business and entertainment, including special education networks. State-run television stations are gradually expanding into provincial regions while stations that are jointly operated by the government and private sectors have already expanded their networks throughout the country. News and print media services have also expanded a great deal and have become highly competitive. However, there remains a lack of good coordination on mass communications within the government's own agencies and between the government and private sectors. As a result, existing communications instruments and equipment have not been used appropriately for the benefit of the general public.

Development guidelines for communications

3. Development guidelines for communications during the Sixth Plan period consist of the following:

3.1 Promote the development of domestic and international communications systems, emphasizing high service quality and connections that are convenient, fast, reliable and consistent. This will support national development, especially in regions of high economic importance. Importance will also be placed on expanding post and telegraph services and improving their quality throughout the country.

3.2 Improve the system in order to render the management and operations of the different agencies that offer communications services more flexible. Intra-agency and inter-agency coordination will be improved, especially in the areas of policy, planning, operations and investment, in order to benefit development of the nation as a whole.

4. Measures and work plans

4.1 Public communications

(1) Accelerate the expansion of telephone services provided by the Telephone Organization of Thailand. Investments will correspond to financial capability and telephone service targets will be achieved by improving management and operational flexibility.

(2) Accelerate improvements to complete the telephone network and strengthen quality, especially in areas of high economic importance. This will constitute a major network for supporting other communications services and for facilitating contact with other countries.

(3) Modernize data communications systems in order to serve business expansion with flexibility, convenience and rapidity and to connect more conveniently and extensively with the systems of foreign countries.

(4) Improve the investments and operations of the Telephone Organization of Thailand and the Communications Authority of Thailand in order to ensure their appropriateness and to avoid duplication. In this way the provision of services and the use of resources will be rendered more efficient.

(5) Encourage private sector participation in investing in and operating public communications services. For example, joint investments, leasing and partial or total takeovers will be allowed. In order to accomplish this, the concerned policy-making agencies will amend laws, rules and regulations, and specify attainable methods and conditions.

(6) Emphasize such qualities as convenience, speed, reliability and consistency and a wider variety in services in permitting private sector participation in local post and telegraph services.

(7) Determine service fees that are in accordance with the cost of expansion so that the growing demand of users can be met without obstructing the development of commerce and industry.

4.2 Communications for specific purposes

Expand communications networks for specific purposes only when necessary. The core networks should be used as much as possible in order to avoid duplicated investments and to ensure the efficient use of resources.

4.3 Mass communications

(1) Emphasize education services, government public relations and national security in the development of state-run radio and television broadcasting. Stations operated by state enterprises and the private sector should offer business information, entertainment and support to the government's public relations policy. Programme content should be in line with and supportive of the country's cultural heritage.

(2) Improve the efficiency of the country's public relations by supporting responsible organizations at the policy and implementation levels. Regulations will be set up to improve the supervision and coordination of mass communications in both the government and the private sectors and to benefit national development. Related areas will also be developed such as communications, public relations, data systems and personnel.

(3) Establish an evaluation system and monitoring measures for information dissemination to various localities. Information on problems will be collected in order to identify ways to improve performance and reach specified targets.

4.4 General measures for communications

(1) Promote the establishment of a central communications organization. This organization would be a coordinating committee for overseeing policy and investment planning and supervising operations so that they agree with and support one another. The Ministry of Communications will be in charge of establishing this organization in an appropriate form.

(2) Improve the services and operations of state enterprises involved in communications activities. To this end, the Programme for the Development of State Enterprises, which is part of the Sixth Plan, will be used as a guideline.

(3) Support the efficient management of radio frequencies by drawing up plans for frequencies, administration, control and monitoring of frequency use and reallocation of frequency use in a more systematic manner.

(4) Amend communications laws, rules and regulations in order to make them more flexible, relevant, up-to-date, facilitating and supportive of national development.

(5) Encourage the private sector to invest in local production of standard communications equipment and instruments.

(6) Promote research and development on communications. Standards for communications instruments and for calibrating testing equipment will be determined.

(7) Promote the development of personnel who are responsible for communications work at all levels. The capabilities of existing training units will be rendered more effective. Personnel training and seminars will be organized and courses on personnel development for communications should be included in the curricula of academic institutions in order to support communications growth during the Sixth Plan period.

(8) Promote the adoption of new and appropriate technology and services. These will be used in conjunction with the existing networks in order to aid business expansion.

PART 4
DISTRIBUTING PROSPERITY AND STRENGTHENING JUSTICE

PROGRAMME 9
DEVELOPMENT OF URBAN AND SPECIFIC AREAS

DEVELOPMENT OF URBAN AND SPECIFIC AREAS

CHAPTER 1

INTRODUCTION

1. In order to promote balanced economic growth in urban and non-urban areas, the Fifth Plan established spatial development strategies for decentralizing growth and economic activities to the regions by setting up projects to develop major urban centres and specific areas. It aimed to slow down future expansion of Bangkok Metropolis by introducing programmes and projects for developing the Eastern Seaboard sub-regional development. It also provided for regional urban growth centres development and feasibility studies for the preliminary preparation of some specific areas.

2. Concerning Bangkok Metropolis, the Fifth Plan concentrated on coordinating various projects aimed at improving public utilities, including transport and traffic systems. It also attempted to alleviate flooding in certain areas and establish a green belt zone in suburban areas.

3. Although the population growth rate of Bangkok has fallen over the past 15 years to an annual average of 3.8 per cent, this rate is still high when compared to the national annual growth rate, which has reduced to a mere 2.5 per cent. In the final year of the Fifth Plan, the Bangkok Metropolitan Region had a population of 8.2 million people. It is estimated that at the end of the Sixth Plan there will be 9.3 million people in this area. Therefore, it may be presumed that the Bangkok Metropolitan Region will remain the country's largest economic and employment base. In addition as the Thai economy restructures to become more oriented towards the industrial and services sectors in the future, the economic base in major urban areas — the Bangkok Metropolis and regional urban centres — will contribute more to employment. Thus an important strategy in future national development will be to lay down policy guidelines for urban development together with guidelines for developing new economic zones.

4. To realize the above-mentioned strategy, the Programme for Development of Urban and Specific Areas of the Sixth Plan will follow 4 main policies:

(1) Continue to accommodate the policy of decentralizing prosperity to the regions.

(2) Strengthen the economic base and employment in urban areas to support a more systematic transition to industrialization and services orientation in the national economy.

(3) Strengthen and improve the efficiency and sufficiency of infrastructure services in urban areas and in new economic zones so as to increase their capabilities and international commercial competitive position.

(4) Reduce the government's role in investment in accordance with budgetary constraints, by integrating fund mobilization efforts. Local authorities, state enterprises and the private sector will share investment in infrastructure services more appropriately.

5. The targets for developing urban and specific areas in the Sixth Plan are as follows:

(1) Develop Bangkok Metropolis and its vicinity towns as a single metropolitan region with self-contained polycentric pattern as well as with more efficient and orderly linkages.

(2) Develop regional urban growth centres to serve as the social and economic development base in each region. The centres will have the capacity to absorb economic activities decentralized from Bangkok, accommodate rural migrants and in the future, serve as the public administrative centres of the regions.

(3) Develop the Eastern Seaboard sub-region and prepare to develop other areas, such as the Upper South sub-region and Songkhla Lake Basin, into new economic zones. This will provide alternatives for future industrial locations and pave the way for strengthening the competitive position of national exports.

CHAPTER 2

DEVELOPMENT PLAN FOR BANGKOK METROPOLITAN REGION

Summary of development trends and major issues

1. Trends indicate that the Bangkok Metropolitan Region (BMR) will continue to grow: there will be an increase of approximately one million people during the Sixth Plan period, with the population reaching 9.3 million by 1991, thus making Bangkok Metropolis one of the 15 largest cities in the world. In this period it will not be possible to decentralize very many of the economic activities from Bangkok; the main urban growth centres and new economic zones first need to be developed sufficiently to accommodate both the decentralized economic activities and migration of the rural population over the coming 10 to 15 years.

2. It is necessary, therefore, to formulate strategies and guidelines to manage BMR development in an orderly fashion. This would also reduce overcrowding and eliminate the economic waste that arises from congested traffic and transport systems as well as from flooding and land subsidence.

3. **Lack of order and efficiency in population growth and land use in Bangkok Metropolis.** Growth has taken place predominantly in a corridor formed along main roads to the north and southeast, thus resulting in lengthy and confused commuting. At the same time there remains a great deal of vacant land in the suburban areas of Bangkok, particularly the existing large areas between arterial roads. The idle land suffers from a lack of access roads connecting local traffic to primary roads as well as insufficient public amenities. The nature of land ownership, based as it is upon small holdings, constitutes an obstacle to the development of infrastructure. Moreover there is a significant amount of vacant public land in the inner area of Bangkok which has not been utilized sufficiently to create economic benefits. These problems indicate that town planning measures alone are not adequate to enforce effective land use.

4. **Financial limitations on local and central government, the lack of fund mobilization, the pricing of services and the government's major share of responsibility for investment are factors contributing to the lack of public amenities in Bangkok.** The most critical area is public transport, leading to increased traffic congestion in the inner city area, which is aggravated by flooding and land subsidence. Public transport in Bangkok has, until now, been overly dependent on direct and indirect subsidies from the government. The financial condition of many public enterprises has deteriorated to a point from which recovery may not be possible, a situation con-

nected with the distorted pricing structure. Moreover investment in infrastructure has recently become increasingly reliant on foreign loans: investment contributions from self-generated revenues have diminished while service beneficiaries have played too small a role in shouldering the burden. Unless systematic solutions are found, especially to the problems of raising funds and establishing an appropriate balance for sharing the load between the central government, local authorities, state enterprises and the private sector, the shortage of funds for investing in improvements to infrastructure services in the BMR will become more serious.

5. The provision of basic public utilities including housing, does not cover the low-income group and the urban poor. In particular the poor living in slums lack essential basic services. Even though the population classifiable as poor has declined from 11 per cent of the total Bangkok population in 1976 to 5–6 per cent at present, between 10 and 20 per cent living in overcrowded communities may be considered poor enough to warrant assistance in regard to infrastructure and social services. In providing adequate basic services to the urban poor, the responsibility for allocating funds should be shared between the central government and the local authorities.

6. Organizational administration and planning for the mobilization of funds to provide infrastructure services that are in short supply do not correspond to the financial situation. The management of Bangkok Metropolis suffers from many problems and weaknesses, including overlapping responsibilities and insufficient programme coordination among governmental agencies local authorities and state enterprises. The problem is particularly noticeable when it comes to finding solutions to problems, such as traffic and public transport, where the role of the private sector is limited. Besides, many projects for developing public utilities lack appropriate financial plans to raise funds for investment. Most of them fail to pay due regard to return on investment, and expect too much financial support from government and foreign loans.

Development strategies for Bangkok Metropolitan Region

7. Development of Bangkok Metropolitan Region is based upon the following 5 policy guidelines:

7.1 Develop BMR by fostering more coordination between investment measures aimed at providing infrastructure and town planning measures. In particular, investments in urban transport network, flood protection, water supply facilities and housing development should influence land use and ensure the efficient expansion of Bangkok in the future. Investments should improve orderliness by lessening congestion in the central business area and encouraging more efficient land use in suburban areas of the city. In addition, industrial zones will follow general town planning in facilitating environmental protection and conserving agricultural land in certain areas.

7.2 Determine target areas for effectively applying town planning measures and plans for basic services in line with the density and size of the population, the location of economic activities and specific spatial problems. Bangkok Metropolitan Region, with a total area of 7,539 square kilometres, has been divided into 4 target areas:

(1) The central business area, covering approximately 147 square kilometres, consists of 12 Bangkok Metropolitan districts: Phra Nakhon, Pom Prap Sattru Phai, Pathum Wan, Samphanthawong, Bang Rak, Dusit, Phaya Thai, Thon Buri, Khlong San, Bangkok Noi, Bangkok Yai and Yan Nawa. It is estimated that the population in this areas, by the end of the Sixth Plan, will be 3.3 million, with an average density of 23,000 persons per square kilometre. Most of the area consists of traditional and new business districts. It is also the centre for services, government administration as well as historical and cultural centres.

(2) The rapidly growing suburban area, consisting of 8 Bangkok districts: Phra Kha-nong, Bang Khen, Bang Kapi, Huai Khwang, Bang Khun Thian, Phasi Charoen, Taling Chan and Rat Burana; and 3 districts in Nonthaburi province: Muang, Pak Kret and Bang Kruai. The population at the end of the Sixth Development Plan should be approximately 3.3 million and, with an area of 1,065 square kilometres, average density will be 3,100 persons per square kilometre. Most of the communities in this area may be regarded as self-sufficient in residential, business, industrial and agricultural facilities.

(3) The industrial area, comprising some 75 square kilometres and classified as specific industrial sites or industrial estates, consisting of the following districts in Samut Prakan province: Muang, Phra Pradaeng and Bang Phli; in Pathum Thani province: Khlong Luang and Thanyaburi; in Samut Sakhon province: Muang and Krathum Baen; and Sam Phran in Nakhon Pathom province. These areas include industrial estates and are rapidly expanding areas for industry with a high population growth rate averaging 4.0 per cent per annum.

(4) The Outer Bangkok Metropolitan Regional Area, covering some 6,352 square kilometres. This consists of municipalities and sanitary districts which are self-sufficient and are important agricultural areas. The total population at the end of the Sixth Plan will be approximately 1.4 million with a low density, compared to the first 3 areas, of 220 persons per square kilometre.

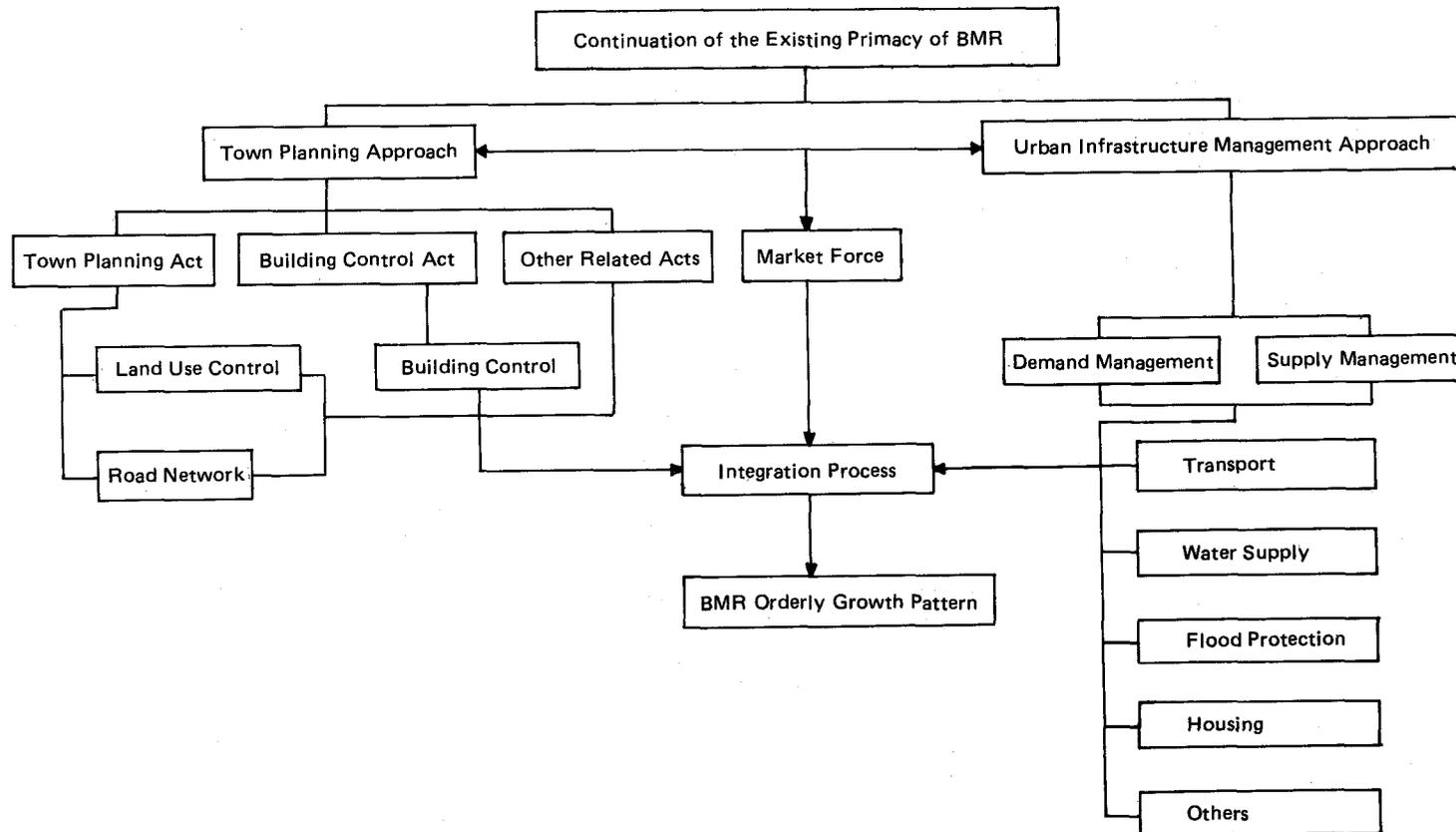
7.3 Establish policy guidelines for investing in urban infrastructure by changing investment cost-sharing between the central government, local authorities (including user charges) and state enterprises from the existing ratio of 48:12:40 to 10:24:66 by the end of the Sixth Plan. This will promote the role of the local authorities, which will have to improve their administration of tax and fee collection in order to widen the tax base. The role of relevant state enterprises will also increased by adjusting the user fees for public services to achieve break-even; state enterprises should be self-reliant so as to reduce government subsidies. The role of the private sector will also be promoted to increase its participation in the provision of urban infrastructure services in Bangkok Metropolitan Region.

7.4 Establish policy guidelines to develop the estimated 500,000 low-income urban poor and slum dwellers in the BMR. Housing will be built and slums upgraded by improving access to basic services. In addition, security of land tenure for residence for prescribed periods

of time will be supported, shelter will be provided for evicted communities and community participation in developing their own communities will be encouraged. Coordination between concerned agencies will be clarified and the private sector will be encouraged to foster self-reliance, occupational training and compulsory education among the low-income group, especially the youth.

7.5 A national urbanization development institution will be established to formulate and coordinate policies and plans and also mobilize funds for plan implementation. Special urban development funds for BMR will be set up particularly for flood protection and an inner core toll zone.

Figure 1 Bangkok Metropolitan Regional Development Management Pattern



Development programmes for the major infrastructure network

8. In preparing major infrastructure network development, consideration has been given to the need for consistency among sectoral development programmes which aim to reduce congestion and promote more effective land use. The programmes apply to the inner areas, suburban areas and outer areas of the BMR and aim at maximizing services, mobilizing funds from new sources, fixing service fees at a level sufficient to cover costs, lessening financial subsidies from the government and increasing the participation of the private sector. Key work plans are as follows:

8.1 Work Plan for Transport and Traffic Improvement

(1) Emphasize on improving and upgrading the quality of public transport services. In particular the popularity of bus services will be increased by replacing old buses with new ones, providing segregated busways on selected main roads reducing the size of the Bangkok Mass Transit Authority and reintroducing privatization and competition into the bus industry.

(2) Start to develop other mass transit systems to supplement the bus system, within financial limitations.

(3) Improve and expand the road network to create an interconnecting system. The emphasis will be placed on distributor roads to link secondary and access roads, and development roads to open up undeveloped land in conformity with the land use components in general town planning. Two additional bridges will be built, Bangkok Metropolitan Authority road approaches to the First Stage Expressway and Second Stage Expressway will be improved and suburban truck terminals constructed.

(4) Conduct a feasibility study on extending the application of expressway tolls to vehicles entering the central business area. Toll revenues will be used to improve the traffic and transport systems. The scheme will also increase the use of the mass transit system, thus reducing traffic congestion and increasing average traffic speed.

8.2 Work Plan for Water Supply and Flood Protection

(1) Extend water supply services to new urbanized areas to satisfy the increasing needs of the people thereby also reducing dependence on groundwater sources and the related problem of land subsidence. At the end of the period of the Fifth Plan, the water supply system covered 475 square kilometres, catering to 4.78 million people. The system will be expanded to cover 610 square kilometres and serve 5.8 million people by the end of the Sixth Plan. Expansion will focus on the newly developed area in the eastern part, where land subsidence is critical.

(2) Improve the management and distribution of water to lessen wastage and reduce the costs of water production.

(3) Construct a flood protection and drainage system to cover the 92 square kilometres of the city's core area. Measures for collecting fees, both directly or indirectly, from the beneficiaries will be needed to meet the costs. Studies on flood protection for 500 square kilometres of the eastern suburbs, on channelling water from the west bank of the Chao Phraya River and on flood protection for the west bank will be conducted, but their implementation will depend on mobilizing funds from new sources of revenue in accordance with the principle of recovering costs by collecting contributions from direct beneficiaries. An organization and special fund for the flood protection and drainage system will need to be set up.

8.3 Work Plan for Housing Development and Slums Upgrading

(1) Construct 22,000 housing units for low-income groups and collect appropriate service charges.

(2) Upgrade 20,000 slum units.

(3) Encourage the private sector to participate in developing housing for the low-income group. The Government Housing Bank will provide financial support to such investments by private developers. This will help alleviate the burden of the government in providing housing for low-income households.

Coordination between the development plans for infrastructure and town planning measures in the 4 strategic target areas

9. Investments in the development plans for infrastructure and town planning measures will respond to the need for solutions to the problems in each strategic target area as follows:

9.1 Central business area. This includes traditional and new business centres, which have high population density and increasing traffic congestion. In some areas, congestion lasts throughout the day, and public transport, which lacks the variety that would come from separate systems, is inadequate. Construction of expressways into the inner area has contributed to increased congestion, especially at expressway entry and exit points. The problem occurs because the road network of Bangkok has not been sufficiently adapted to the expressways, especially when flooding causes sudden traffic standstill in the inner area. Moreover land use in certain parts is still inefficient, especially in the old business quarter where old buildings are decaying; the lack of proper maintenance and development has resulted from problems with the 1979 Building Control Act. The pollution problem is thus aggravated, and there are altogether 452 run-down quarters in the inner area. Work plans, main projects and town planning measures for the inner area are as follows:

(1) Work Plan for Transport Improvement

(1.1) Construction of second-stage expressway and improvement of the associated BMR road network.

(1.2) Introduce segregated busways, which will be of great importance in planning public transport.

(1.3) Construct missing links in order to facilitate travelling.

(1.4) Consider the possibility of levying a toll for entering the inner area in order to generate more revenue which would be used in improving the traffic and mass transit systems and to curb the flow of private vehicles into the inner area.

(1.5) Improve the traffic system, especially through the control of traffic lights in each area which should correspond to traffic flow at each intersection.

(1.6) Consider the construction, subject to its financial viability, of the first line rail mass transit system for connecting the northern and inner area, because of the large number of commuters along this route.

(2) Flood protection and drainage improvement programme for the inner area. This programme aims at preventing flooding in the districts of Phra Nakhon, Pom Prap, Samphanthawong, Pathum Wan, Bang Rak, Yan Nawa, Phaya Thai and parts of Dusit and Phra Khanong, covering a total area of 92 square kilometres.

(3) Slum-upgrading programme in the districts of Bangkok Noi, Bangkok Yai, Dusit and Yan Nawa.

(4) Housing development programme in the inner area for people in the middle-income and higher-income groups in order to minimize commuting distances.

(5) Amend Bangkok regulations and Ministry of Interior announcements under the 1979 Building Control Act in order to encourage the private sector to maintain and rehabilitate the decaying old business districts in a more efficient land use manner.

(6) Develop 2-3 medium-scale public parks on vacant or underutilized public land in the inner area.

9.2 Rapidly growing suburban area. This area surrounds the central business area. It comprises suburban areas which are spreading out along main roads and have a high population growth rate. The pattern of land use in this area is inefficient: there is a disorderly mix of commercial, industrial, residential and agricultural areas. The suburban areas include a great deal of vacant and unused low-lying land, which lack connecting roads and infrastructure services. Groundwater is overutilized which has caused the problem of land subsidence and thus made much of the area susceptible to serious flooding. This situation is compounded by the many housing estates which have been developed in these areas. Work plans, major projects and town planning measures for the suburban areas are as follows:

(1) Work Plan for Transport and Traffic Improvements

(1.1) Improve and expand the network of primary and secondary roads in suburban areas, and link them with main and local roads and the mass transit system. This will encourage development of the suburban areas to cover vacant land and restrain community development along the main roads.

(1.2) Increase investment in roads in the suburban areas of Bangkok in order to attract future development to potential areas.

(2) Drainage project in the eastern and northern areas of Bangkok. This project will improve the drainage system in the districts of Huai Khwang, Bang Kapi, parts of Min Buri, Lat Krabang and Phra Khanong, or a total of 500 square kilometres in the eastern suburbs. It will be necessary to institute town planning measures to restrain construction in 240 square kilometres of this area. For the north, plans will be made to improve drainage in the eastern part of Nonthaburi province.

(3) Formulate measures to reduce the use of groundwater by the private and public sectors, and raise fees for using such water where public water supply is available.

(4) Promote the development of housing for middle-income and low-income groups, and upgrade slums, especially in Phra Khanong district and, in Nonthaburi province, Muang district.

(5) Develop 1-2 large public parks in suburban areas and encourage the private sector to participate by investing in them.

(6) Restrain construction within green belt areas, especially in Taling Chan, Phasi Charoen, Nong Chok and Min Buri districts, in order that more economic benefit may be gained from efficient land use.

9.3 Industrial areas. These are scattered in two major locations. First, the old industrial area of Samut Prakan province: the districts of Muang, Phra Pradaeng and Bang Phli, where the number of factories has increased very rapidly and the demand for infrastructure services, especially water supplies, has grown faster than supply; as a result, use of deep wells has become extensive, which has exacerbated land subsidence. Secondly, the new industrial area to the north in Pathum Thani province: the districts of Muang, Khlong Luang and Thanyaburi, where population growth rate is 4.4 per cent per annum. In these 2 areas, the use of agricultural land is declining, and there are shortages of public water supplies and housing for workers, while environmental problems have resulted from the concentration of factories. The need to solve these problems, especially in Phra Pradaeng, has led to formulation of the following work plans and measures:

(1) Improve primary and secondary roads to industrial areas and link them with the main road network.

(2) Extend the waterworks system for supplying surface water from the Chao Phraya River and increase fees for use of artesian wells in areas where public water supplies are available. The private sector will be encouraged to get concessions to construct surface water supply systems in industrial zones.

(3) Encourage factories that are starting up or expanding their activities to locate in industrial estates and industrial locations recommended in the general town plans.

(4) Establish measures for controlling environmental conditions in industrial and neighbouring areas, improving waste-water treatment standards and encouraging the formulation of vacant lot requirements and the conservation of fertile cultivating land.

(5) Consider ways to enhance the productivity of agricultural land that is within the sphere of influence of industrial locations.

(6) Promote the construction of housing for workers in industrial zones.

9.4 Outer Bangkok Metropolitan Region. This area covers 6,352 square kilometres and is an important agricultural area with a relatively low population density. The main and secondary roads are in poor condition; there is also a lack of distributor roads to provide an efficient connecting network. There are also problems concerning the division of responsibility in operating public utilities, especially water supplies where the problem is between the provincial waterworks, municipalities and sanitary districts. The following important development programmes and measures are thus stipulated:

(1) Emphasize maintenance of national and provincial highways to enable continuous use, and construct local roads for communities in the vicinity provinces to connect them to the main roads.

(2) Provide public utilities and services to the vicinity provinces by linking them to the Bangkok Metropolis network. The financial limitations of local authorities will be taken into account in developing projects. If large-scale investment programmes prove to be beyond their capacity, national agencies or the private sector will be encouraged to carry out the work.

(3) Accelerate the completion and publishing of general town plans for Bangkok Metropolis and the provinces of Nonthaburi, Pathum Thani, Samut Prakan, Samut Sakhon and Nakhon Pathom.

(4) Improve the collection of tax on unoccupied land to accelerate the use of land in creating economic benefits, in accordance with the land use component of the general town plans.

(5) Environmental development programme for the Bang Kra Chao area.

Development programme for the low-income group

10. The emphasis will be placed on extending public services broadly and on promoting occupations which raise the standard of living by encouraging the general public to participate in developing their own communities. In addition the agencies concerned will coordinate their activities and private sector organizations will be encouraged to contribute to community development in Bangkok slums, as follows:

10.1 Construct housing for the low-income group and upgrade slums, especially in water supply, electricity, pedestrian access, sanitation, etc. Communities will have a larger role to play in development, and consideration may be given to charging appropriate service fees.

10.2 Promote education, vocational training and skill development, including compulsory education, for the low-income group, especially the youth.

10.3 Support the establishment of a community development fund to pass on the benefits of medical services, nutrition and child care to the low-income group.

10.4 Establish a system for coordinating concerned agencies and encourage private sector organizations to participate in development by, for example, reducing taxes for the private sector on projects that develop the urban poor, reviewing rules and regulations that determine standards that constrain the construction of low-income houses and assisting financial institutions in the private sector to become funding sources for small-scale enterprises.

Appropriate investment cost sharing by the government, local authorities and state enterprises

11. The role of local authorities will be expanded by improving the administration of tax and fee collection, and by expanding the revenue base. This role will be complemented by the larger role of relevant state enterprises, which adjust their service fees to increase self-reliance. Reductions in government subsidies and encouragement of private sector participation in development are also considered, as follows:

11.1 Improve the efficiency of tax and fee collection, and expand the revenue base at the local and central levels with a view to promoting the role of local authorities.

Local authorities

(1) Accelerate the preparation of tax maps and registration, reassess the standard land value in line with market value, improve methods of assessing annuities and levy house and rent tax on owner-occupied dwellings which are currently exempt.

(2) Restructure and adjust the rate of vehicle registration fees to make them more appropriate and equitable.

(3) Create new sources of revenue based on beneficiary charges and ability-to-pay-principles. Sources could include surcharges on petrol, lottery and tobacco, property value added tax and parking fees.

(4) Allocate funds from regular revenues and from additional revenues that result from improvements in localities in order to increase investment in accordance with the development programmes.

Central government

(5) Consider reducing tax collection expenses from 5 per cent to a rate of not more than 3 per cent of the tax revenue.

(6) Allocate a certain portion of current revenue collected by the government from fees on the transfer of and transactions in immovable property, to finance the BMR development programme in the form of subsidy, debt repayment or additional contribution to the BMR development fund.

11.2 Consider cost recovery for public services.

(1) Determine the methodology and issue regulations to collect charges for public services directly from the beneficiaries on the basis of either full or partial recovery, especially in flood protection projects and road and bridge construction projects. In addition, tolls will be considered for inner areas with heavy traffic congestion, which would reduce the use of private vehicles.

(2) Adjust rates for services provided by state enterprises in order to cover operating costs, debt repayment and future investments and to improve management efficiency by setting stringent evaluation criteria for their operations.

11.3 Promote and encourage the private sector to participate in development.

(1) Enable the private sector to participate by investing in public services such as roads and bridges, bus services in some areas, housing, water treatment plants, cargo depots, garbage collecting and waste disposal, sewerage and drainage systems by granting concessions, renting or subcontracting.

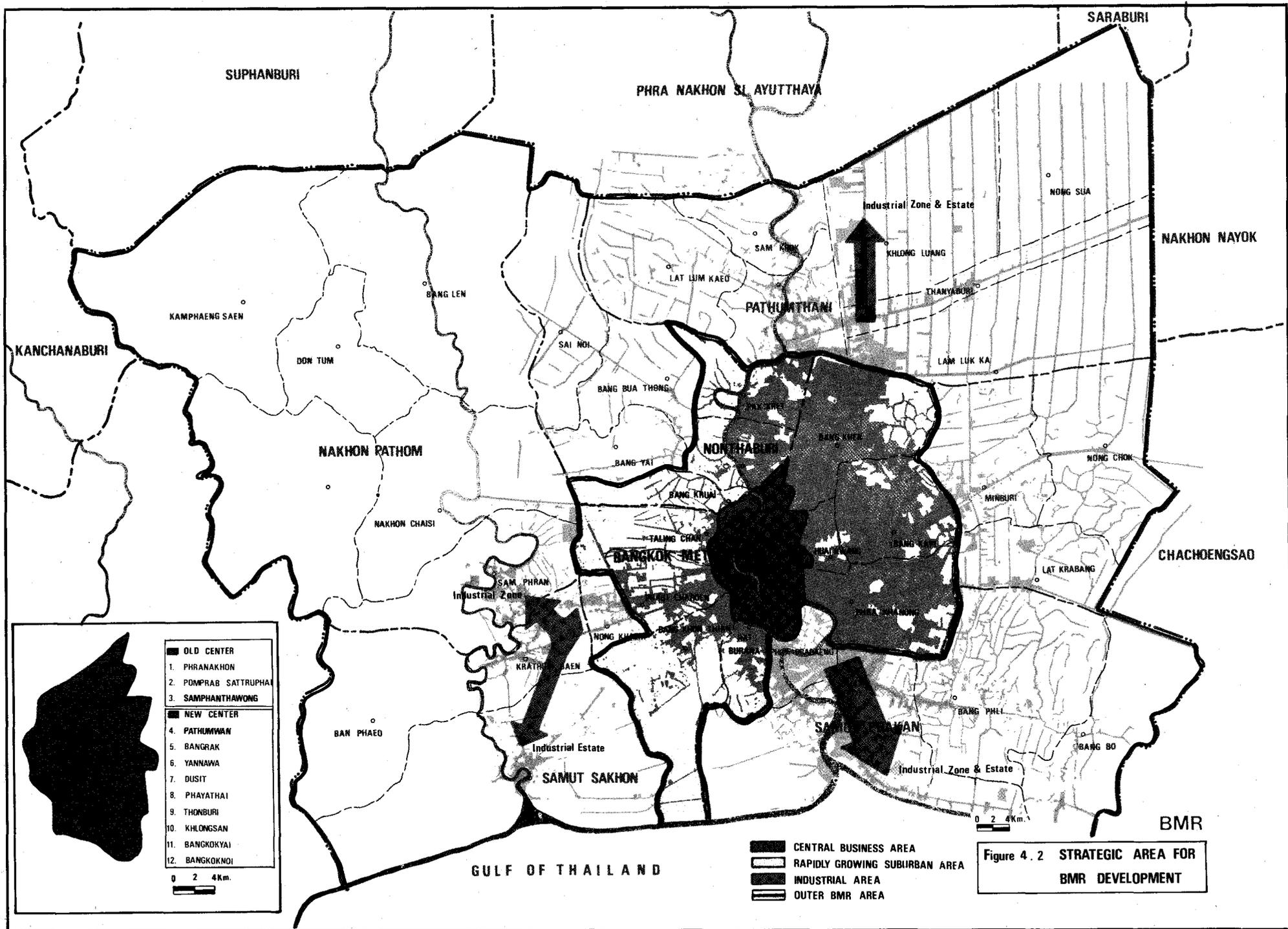
(2) Increase public and private sector cooperation in acquiring land and raising funds for the development of public parks.

(3) Mobilize funds from the private sector and establish a role for local financial institutions in developing public services by relaxing loan conditions and extending credit to more development projects.

(4) Use tax and financial measures and regulations as incentives for private sector participation in urban renewal in the central business area and in establishing activities in promotional areas such as industrial estates and flood protection areas.

Support for the establishment of a national urbanization development institution and Bangkok Metropolitan Regional Development Fund

12. A central organization will be established to lay down and coordinate policies, plans and programmes, and allocate investment funds for the programmes and projects. Development funds will also be established, in particular a flood protection fund and an inner core toll zone fund, and these will be coordinated with policies, plans and programmes of the newly established central organization.



CHAPTER 3

DEVELOPMENT PLAN FOR REGIONAL URBAN GROWTH CENTRES

1. The following work plans for systematically developing regional urban growth centres as an additional means of restructuring production were implemented under the Fifth Plan:

1.1 Improvements to infrastructure services have begun in 5 regional urban centres: Chiang Mai, Khon Kaen, Nakhon Ratchasima, Chon Buri and Songkhla-Hat Yai. This plan provides for more efficient services to urban economic activities. Most of the projects are in the implementation stage and will be completed at the beginning of the Sixth Plan, as follows:

(1) Development of key economic infrastructure in transport and communications, water supply and industrial estates has been implemented as follows:

(1.1) Chiang Mai Airport has been improved and expanded to the level of an international commercial airport, and is now open for service. The development of Hat Yai Airport into an international commercial airport and of Khon Kaen Airport into a commercial airport for domestic flights is currently being carried out and will be completed in the fiscal year of 1987.

(1.2) Construction of the deep-sea port at Songkhla is now 50 per cent complete. It is estimated that construction will be finished in the fiscal year of 1988.

(1.3) Telephone services have been expanded in the 5 regional urban centres, increasing from 26,461 telephone numbers in 1982 to 63,946 in 1985. The proportion of the population having telephones increased from 0.42 to 0.9 per 100 persons. This ratio is still quite low when compared to the figure for Bangkok of 8.3. Some 20,000 persons have also requested telephones but have not yet received them, especially in Songkhla-Hat Yai, Chiang Mai and Chon Buri, which each have between 5,000 and 7,000 outstanding requests. Thus expansion of telephone services in the main urban centres is still very low.

(1.4) The water supply shortage in Nakhon Ratchasima has begun to be tackled, with production capacity to increase from 30,000 to 91,000 cubic metres per day. Public water supply in Khon Kaen is being increased from 16,400 to 64,800 cubic metres per day. It is projected that construction of these two projects will start in the fiscal year of 1987.

(1.5) An industrial estate in the northern region (Chiang Mai-Lamphun) has been set up, covering 1,748 rai of land. Up to this time, only 62 rai of land have been sold to 7 entities because of marketing problems and high prices.

(2) Improvements to key social infrastructure, which encourage private sector investment are as follows:

(2.1) Public utilities have been improved via projects to develop the regional urban centres. Drainage and flood protection systems, road networks and traffic systems, bridges, fishermen's wharfs and the development of waterfront landscape are being undertaken. Slum-upgrading is underway in the 4 municipalities of Chiang Mai, Khon Kaen, Nakhon Ratchasima and Songkhla. Implementation of construction was behind schedule in 1985 because of delays in signing loan agreements, site clearance, negotiating and tendering bids. Effective implementation began in 1986.

(2.2) A total of 2,000 units of basic housing has been constructed in the main urban centres of Chiang Mai, Khon Kaen and Songkhla.

(3) Investment in the foregoing projects, which aim at developing the 5 regional urban centres, came to 3,300 million baht during the Fifth Plan. These projects have now been initiated and need to be accelerated and continued in the Sixth Plan, in particular the development of airports and deep-sea ports, expansion of the water supply and telephone services. The various utilities will continue to be improved in 4 of the regional urban centres, while infrastructure in the town of Chon Buri, which has not received adequate attention, will be given special attention.

1.2 Measures to decentralize growth to different geographic regions are still ineffective in stimulating investment. During the Fifth Plan, however, the government adopted the following measures to motivate industries to move to the regions:

(1) An Investment Service Centre was set up in Chiang Mai as the first regional centre to enable the process of applying for and being granted factory permits to be completed within 90 days. Power of attorney was also granted to provincial industrial authorities to issue or renew factory operating licences within 30 days from the date of request.

(2) Industrial promotion centres have been set up in the northeast (Khon Kaen) and south (Songkhla), in addition to the centre already in operating in the north, as implementing agencies for developing and promoting industry in these regions.

(3) An investment promotion work plan has been adopted to provide services related to investment opportunities, information and public relations. At present, 1,205 factories have been granted investment promotion: almost 70 per cent of these are in Bangkok and its vic-

nity areas, another 17 per cent are elsewhere in the central region and the remainder are scattered through other regions, with the smallest portion of 2 per cent in the northeast.

(4) The Industrial Finance Corporation of Thailand (IFCT) has extended credit services to industries in the 5 regional urban centres. Lending has increased by 690 million baht during the Fifth Plan period to reach a total of 1,336 million baht in 1986. Many, however, have missed the opportunity of benefitting from this credit because they are small-scale industries with no collateral. To solve the problem, IFCT established the 200-million-baht Small Industries Credit Guarantee Scheme, which started operating in regional urban centres during the fiscal year of 1986.

1.3 Directions for land use and town planning measures have been established and general town plans have been enforced in Chiang Mai, Khon Kaen, Nakhon Ratchasima and Hat Yai. These constitute important frames for determining zoning, for example residential, commercial and industrial areas. A network of main roads will be planned in line with policy guidelines for urban centre development, population growth and urban economic growth in the future.

During the Fifth Plan period, the expansion of Chiang Mai and Nakhon Ratchasima municipalities was completed whereas Chon Buri municipality is still in the process of being expanded. Town planning measures will be a success only when local authorities are able to use them to control construction work and land use.

1.4 Investment from local sources in basic infrastructure is very limited because local income is insufficient to develop such facilities.

(1) In the past five years, the ratio of investment in urban infrastructure between state enterprises, the government and local authorities averaged 45:40:10. The ratio for the government and local authorities was 70:30.

(2) Local authorities have few sources of revenue and lack the freedom to expand their revenue base; consequently, they must rely heavily upon government subsidies. Current revenue from the 5 main towns (6 municipalities) total approximately 456 million baht per year. Government subsidy amounts to 27 per cent of total revenue, an increase from 25 per cent 5 years ago. At the same time the revenue collected by the local authorities was approximately 29 per cent of total, or a decline from 36 per cent 5 years ago. The balance came partly from government revenue (38 per cent) and partly from special revenue (6 per cent).

(3) During the period of the Fifth Plan, however, improvements to the financial condition of local authorities were initiated. Tax maps and tax registration have been instituted to raise efficiency in the collection of local development tax and property tax and reduce tax collection expenses. Certain fees have also been raised, most importantly the fees for public health services. In addition, efficiency has been improved in planning, budgeting, accounting and personnel administration systems in the regional urban centres.

Development Strategies

2. Development of regional urban growth centres during the Sixth Plan period will continue to implement the Fifth Plan policy of spreading growth and administration to provincial regions and localities. The economic and social base of the regional urban centres will be developed to integrate and promote future rural development in the regions. The following strategies are adopted:

2.1 Develop the regional urban centres by coordinating the provision of essential infrastructure, town planning measures and land use. To complement these efforts, economic investment will be stimulated and local financial and administrative systems will be improved. As a result the investment burden will be shared more appropriately by the central government and the local authorities, and the economic base of the regions will be able to develop and prepare for accommodating the decentralization of activities from Bangkok Metropolitan Region.

2.2 Increase the number of urban growth centres targeted for development in the provincial regions to 24 cities (25 municipalities). Selection is made on the basis of the economic role of the urban centres, the size of their population and employment; the level of existing economic and social infrastructure services and the influence of urbanization on surrounding rural areas are also considered. Therefore, for the Sixth Plan period, the following priorities and procedures for developing urban centres are stipulated:

(1) Development will continue in the 5 regional urban centres of Chiang Mai, Khon Kaen, Nakhon Ratchasima, Songkhla-Hat Yai and Chon Buri. Emphasis will be placed on continuing and completing the on-going development programmes and projects.

(2) Development will be initiated in the 6 main urban centres of Phitsanulok, Nakhon Sawan, Udon Thani, Ratchaburi, Surat Thani and Phuket. Programmes and projects will be prepared for implementation in the second half of the Sixth Plan period.

(3) Preparations will be made to develop 13 other urban growth centres: Lampang, Chiang Rai, Ubon Ratchathani, Roi Et, Surin, Sakon Nakhon, Rayong, Chachoengsao, Saraburi, Kanchanaburi, Phetchaburi, Pattani and Nakhon Si Thammarat.

2.3 Provide economic, social and environmental infrastructure services that conform with town planning measures. The emphasis will be on improving public utilities in urban areas and on a major transport and communications network, such as airports and deep-sea ports, to link all regional urban centres with the national economy.

2.4 Accelerate investment promotion for industry, tourism and the marketing system in the urban growth centres. Employment opportunities will be increased to absorb excess labour from the agricultural hinterland.

2.5 Institute cost-sharing for investment in developing infrastructure services in urban areas. The ratio of government investment to local investment will be changed from 70:30 to 60:40. The role of local authorities will increase, thus constituting a more suitable apportioning of responsibility for urbanization.

Plans for developing economic, social and environmental infrastructure services

3. Plans for developing economic, social and environmental infrastructure services are as follows:

3.1 Work Plan for Transport Development

(1) Accelerate the construction of on-going development projects carried over from the Fifth Plan, namely, Songkhla and Phuket deep-sea ports, the inland water navigation channel in the Chao Phraya River, and inland water transportation goods terminal at Nakhon Sawan, and to make full utilization of the completed river and coastal ports.

(2) Increase the capability of air transport in various regional urban centres by completing improvements of Khon Kaen, Hat Yai and Surat Thani airports. Subsequently airports in other urban centres, such as Phuket, Udon Thani and Ubon Ratchathani, will be improved.

3.2 Work Plan for Communications Development

Emphasize the expansion of telephone services in 24 urban centres in the provincial regions by 81,540 numbers, which include 36,400 numbers in the 5 main urban centres.

3.3 Work Plan for Water Supply Management

Improve water supply to meet demand in urban areas, especially to solve the water shortage problem in Nakhon Ratchasima, and increase water supply in Khon Kaen, Udon Thani and Chon Buri where capacity is projected to increase by 134,400 cubic metres per day.

3.4 Work Plan for Urban Public Utilities Improvement

(1) Accelerate the improvement of public service networks in urban areas; for example, drainage, flood protection, waste water treatment, roads and bridges and waste disposal. Emphasis will be placed on completing projects in 4 regional urban centres, and on conducting feasibility studies on improving the public service system in other urban centres.

(2) Upgrade slums in the regional urban centres by finding a solution to the problem of real property rights, supporting community development organizations and promoting private sector cooperation.

3.5 Work Plan for Housing Development

Construct a total of 3,000 units of site and service of dwellings for the low-income people in Hat Yai, Ratchaburi, Surat Thani, Nakhon Si Thammarat, Chon Buri, Udon Thani, Lampang, Nakhon Ratchasima and Ubon Ratchathani.

3.6 Work Plan for Social Development and Environmental Management

(1) Encourage local authorities to play a key role in helping the 400,000 urban poor in the 24 regional urban centres so that they may all benefit from various public services. Their productivity will be increased through promotion of education and training in special skills, including fully integrated self-employment. Basic needs will also be satisfied by paying for the food and education of poverty-stricken youth and providing guarantees for credit used by the poor in carrying out their occupation.

(2) Develop labour skills to improve efficiency and raise standards. Labour market centres will be established in the regional urban centres to disseminate news on employment and on the labour market. Analysis of the state of the labour market will also be undertaken so that advice can be given to ensure that education and skill development are in compliance with the needs of the labour market.

(3) Manage the environment in order to solve pollution problems and promote environmental conservation in urban areas. Master plans and guidelines will be formulated for regulating and solving pollution problems from water sources, waste water and garbage, etc.

(4) Priority projects of the programme are: projects on regional labour market centres in Nakhon Sawan, Ratchaburi, Surat Thani, Ubon Ratchathani and Saraburi; a project to set up a skill development institute for the lower northeastern region in Ubon Ratchathani; and a project on development of environmental quality control in 10 regional urban centres.

Plans for developing the economic and industrial base in regional urban centres

4. Plans for developing the economic and industrial base in the main urban centres are as follows:

4.1 Work Plan for Industrial Promotion

(1) Increase and improve incentives. Public utilities will be provided, and special promotional privileges for industrial investment in the regions will be considered. Investment promotion for small and medium-scale entities and credit extension to industries in the regions will both be increased.

(2) Priority projects under this work plan are: the Small Industries Credit Guarantee Scheme; the project to provide low-interest credit for small industries in the provinces; the project to establish an institute on industrial development for machinery and metallurgy; the project to promote manufacturers at the provincial level; the project to promote small-scale and regional industries; and the project to improve capacity and establish an information system for industrial development.

4.2 Work Plan for Tourism Promotion and Development

(1) Develop tourism in 8 main tourist centres in the provincial regions: Chiang Mai, Phitsanulok, Nakhon Ratchasima, Rayong, Kanchanaburi, Surat Thani-Ko Samui, Songkhla-Hat Yai and Phuket.

(1.1) Encourage local authorities to preserve natural tourist resorts. Existing laws, such as the Building Control Act, will be used to control land use and construction in tourist resorts. Local authorities will draw up their own tourism development plans.

(1.2) Provide and upgrade necessary public utilities in tourist resorts, including roads, footpaths, parking lots, etc.

(1.3) Promote design and quality improvements of local handicrafts in tourist resorts.

(1.4) Develop information systems and public relations for tourism, both domestically and overseas.

(1.5) Important projects under this work plan are: a project to develop tourism by supporting improvements of public utilities at scenic tourist attractions and of small tourist facilities in the regions; a project to promote marketing and public relations for tourism; and a project to develop and improve souvenirs of important tourist resorts.

4.3 Work Plan for Developing the Market System and the Marketing Information System

(1) Encourage the private sector to establish central markets, and improve and derive benefit from existing central markets and agricultural markets. Market intervention, which entails government purchases to provide price guarantees, will be replaced by a warehousing system and agricultural credit. An information system on production and marketing will also be developed.

(2) Priority projects under this plan include: a project for education and training on marketing of agricultural products; a project to support central agricultural markets of the private sector in Nakhon Sawan, Phichit and Phitsanulok; and a project to develop an information system for production and marketing.

Plan for regulating land use

5. The plan for regulating land use is as follows:

5.1 Accelerate the proclamation of comprehensive town plans for all regional urban growth centres, and improve the capability of the local authorities to lay down and effectively implement town plans. Municipality boundaries will be redemarcated to encompass actual built-up areas.

5.2 Strictly enforce town planning measures in order to limit industrial activities to industrial zones, as stipulated in the general town plans. In issuing licences, implementing agencies will use town plans as a major criterion.

Plan for redistribution of cost burden of urban development, and consolidation of urban management among the central government, local authorities and state enterprises and promoting private sector participation

6. The plan for redistribution of cost burden and consolidation of urban management is as follows:

6.1 Central government

(1) Improve laws and regulations to promote urban development. For example, privileges and incentives will be increased for industries in the regions and the 1953 Municipality Act will be amended to decentralize more administrative and financial power to local authorities.

(2) Render technical assistance to local authorities in order to promote their capabilities in laying down plans, preparing projects and implementing large-scale development projects.

(3) Provide basic social needs to benefit the urban poor. Subsidies will be provided for investing in the development of public health services at the local level.

(4) Invest in developing some of the needed infrastructure services jointly with local authorities and state enterprises. Subsidies will be provided for projects that confer benefits to the regions and to the nation as a whole and yield low returns on investment.

(5) Reduce the tax collection expenses of local authorities from 5 per cent to not more than 3 per cent of revenues collected.

6.2 Local administration

Decentralize power and responsibility to local authorities so that they may increase their role in investing in development. The capability for self-reliance will be increased through financial and administrative improvements.

(1) Modernize the structure and methods for collecting local development tax and property tax fairly; for example, by announcing criteria to be used in assessing annual earnings from each type of property, adjusting the 2 types of tax mentioned above in order to put them on par with each other, fixing upper and lower limits within which taxes will be determined by the local authorities and abolishing property tax exemptions on owner-occupied dwellings.

(2) Expand and restructure regular revenues in order to increase the flexibility of local authorities. Collection rates should correspond to the cash required for the provision of public services in different areas.

(3) Increase revenues from new sources, either taxes, fees or commercial activities. These include a tax on natural resources, a local development tax levied on tobacco, transport tolls, flood and drainage taxes and parking fees.

(4) Relax conditions on loans from the Local Activities Promotion Fund, and extend credit for self-development. Funds will be mobilized from domestic and foreign sources to develop the localities.

(5) Increase the efficiency of local administration and management by improving the systems of planning, budgeting, accounting and financing of municipalities in all urban growth centres. Improved financial administration and budgetary expenditure are also required.

(6) Enable local authorities to take responsibility for investing in urban infrastructure services. Consideration will be given to financial capabilities, cost recovery of services and beneficiary charges.

6.3 State Enterprises

Strengthen management efficiency and the self-financing capability of state enterprises in order to provide adequately and reliably such services as water supply, dwellings, telephone and communication.

6.4 Private Sector

Encourage private sector participation in urban development by sharing costs in developing such infrastructure services as local public communication, air transport on feeder routes and new airports in the region.

CHAPTER 4

DEVELOPMENT PLAN FOR THE EASTERN SEABOARD SUB-REGION

Development issues

1. Development issues concerning the Eastern Seaboard sub-region include the following:

1.1 Bangkok is the country's only centre for all types of growth. The problems of high population growth rate and the concomitant congestion are difficult to solve, and a great deal of investment is required to solve such problems as traffic congestion, flooding, housing shortages and insufficient public utilities. It is therefore necessary to establish strategies for developing a new economic and employment base in order to decentralize growth and create an alternative to Bangkok. The Eastern Seaboard constitutes such an alternative in the following areas:

(1) The area of Map Ta Phut in Rayong province is where the natural gas pipeline from the Gulf of Thailand comes ashore, thereby providing an opportunity to develop industries using gas as raw material.

(2) The area of Laem Chabang in Chon Buri province has the geographic and natural features that make it suitable for developing a deep-sea port, which could become a principal commercial port for the country.

1.2 The concentration of national industrial development on Bangkok and the vicinity provinces aggravates congestion, causes pollution problems and leads to constraints on production efficiency, including problems in transporting raw materials and goods at various stages and the lack of infrastructure provided by the state. Therefore it is necessary to formulate a strategy for developing key industrial sites adjacent to the deep-sea port and providing infrastructure to ensure that production is efficient and internationally competitive.

1.3 Thailand's free-enterprise economy competes in the world market; the total annual value of exports and imports is over 400,000 million baht. However, reliance on the commercial port of Bangkok on the Chao Phraya River as the primary port has created much congestion, which has had a negative impact on the transport of exports and imports and led to a high rate of wastage. There is thus a need to develop a deep-sea port which will constitute a new gateway for technology and give access to the main sea transport routes of the world.

1.4 In the past, increases in the labour force resulting from population growth have been absorbed by the agricultural sector by expanding the land used for farming. At present, however, no forest land is left for conversion into agricultural land. The economic base therefore needs to be expanded in order to attract industries and services which will create jobs and absorb further increases in the labour force and the population.

1.5 In developing the Eastern Seaboard, emphasis will be placed on community and new town development in response to industrial development. To facilitate the influx of families, and thus ultimately decentralize prosperity from Bangkok, various social services will be developed.

Development policy guidelines

2. Policy guidelines for development consist of the following:

2.1 Policy guidelines for developing the Eastern Seaboard will rely upon economic activities to lead development. The state will initiate the work plan and invest in primary development of the basic infrastructure. The foundations will thus be provided for private sector investment in industry according to the principle that the various projects should prove their economic and commercial viability. In the first instance, government investment will be sufficient to satisfy the needs of potentially successful industries; government investment will also ensure sufficient flexibility to accommodate future demands.

2.2 Policy guidelines for urban development will be coordinated with town planning measures, environmental control measures and community development, which include such essential social services as schools, hospitals, police stations and markets. To facilitate the influx of families, the communities and urban centres established will be of a comparable standard to those in Bangkok.

2.3 Target areas for development have been determined by considering their functional and environmental suitability. A master plan on land use for industrial and community purposes and general town and specific area planning measures have been adopted to ensure that development is suited to the environmental conditions and consistent with development potential, as follows:

(1) Map Ta Phut in Rayong province will contain a major industrial estate adjacent to the deep-sea port for bulk cargo-handling services. The main infrastructure will be made available to promote private sector investment.

(2) Laem Chabang in Chon Buri province will be the principal commercial port for containers. It will contain an industrial estate for export and non-polluting industries.

(3) Urban centres and neighbouring communities comprise:

- Chon Buri, a centre of business and government administration;
- Pattaya, a business, commercial and tourist centre; and
- Rayong, a service centre and a base for education and technological research.

2.4 Develop basic industries in the Map Ta Phut area and small-to-medium-scale export-oriented industries in the Laem Chabang area. The first phase of development in Map Ta Phut concerns industries using natural gas as a raw material; the gas separation plant is already in operation. The aim is to encourage the private sector to take the leading role in investment, although the government will initiate, support and jointly invest in such large-scale projects as the National Fertilizer Project and the National Petrochemical Project.

2.5 Determine measures for supporting and promoting industrial investment by the private sector. Measures will be adopted to facilitate investment in the target areas of the Eastern Seaboard and to discourage investment in Bangkok and its environs.

2.6 Promote a new organizational system for development in specific areas in order that the work plan for developing the Eastern Seaboard may be carried out effectively. More private sector participation will be encouraged in order to decentralize the administrative system for infrastructure services.

2.7 Undertake environmental impact studies for the whole area and for each project. Monitoring and evaluation systems will be established before operations begin in order to closely inspect, follow-up and control environmental conditions.

Development work plan

3. During the period of the Fifth Plan, the development of the Eastern Seaboard, especially in the areas of Map Ta Phut in Rayong province and Laem Chabang in Chon Buri province, was mainly at the state of preparing feasibility studies. Detailed engineering designs for infrastructure projects were also drawn up so as to be ready for construction during the Sixth Plan period. Certain major infrastructure projects were completed during the Fifth Plan period: the project to install a water pipeline from Dok Krai to Map Ta Phut and the Chachoengsao to Sattahip railway project.

The various development targets to be continued from the Fifth Plan are as follows:

3.1 The Map Ta Phut area will be developed into an area for major industries, with a deep-sea port adjacent to the industrial zone to promote effective bulk cargo handling services for

raw materials. The following infrastructure services will also be provided to develop investment opportunities that ensure competitiveness with neighbouring countries in this region:

(1) Map Ta Phut industrial port. This will be a deep-sea port for loading and unloading bulk cargo with the capacity to handle 140,000-ton vessels throughout the year.

Construction of the first phase, to accommodate 60,000-ton vessels, is scheduled for completion during the Sixth Plan period and will include the following specifications:

- 2 berths for bulk cargo and one for general cargo;
- a 1,760-metre-long breakwater; and
- a 12.5-metre-deep water channel.

(2) Map Ta Phut industrial estate and community. Development of the initial 8,000 rai is scheduled for completion during the Sixth Plan period.

(3) Sattahip-Map Ta Phut railway line. This will link Map Ta Phut industrial estate with the Chachoengsao-Sattahip railway line. The 24-kilometre spur line will be completed during the Sixth Plan period.

(4) Communications, telecommunications and electricity networks. Installation will commence and come on-stream during the period of the Sixth Plan. The networks will be consistent with and sufficient to meet the needs of the major industries and the community in the Map Ta Phut target area.

(5) Community housing development. A construction policy will be formulated during the Sixth Plan period to respond to the plan for developing the major industries. The government will construct housing for workers moving into the Map Ta Phut area with their families and will also encourage concurrent private sector investment.

(6) Educational and social development. In the Sixth Plan period, educational and social development for Map Ta Phut will begin in order to promote the development of the major industries and communities. It will consist of work plans for developing education, developing the community, developing public health, promoting the safety of life and property and developing local administrative agencies.

3.2 Laem Chabang area will include a deep-sea commercial port which will be developed to enable the country to join the global sea transport system and incorporate container transport technology. In addition there will be an export processing zone, a commercial centre and a general industrial estate catering to non-polluting industries. Details are as follows:

(1) Laem Chabang commercial port. This will be primarily a deep-sea port for handling containerized cargo. The port will have the capacity to accommodate vessels of 140,000 tons throughout the year.

Construction of the first phase, to accommodate vessels of 2,000-TEU (approximately 30,000 tons), is scheduled for completion in the period of the Sixth Plan with the following components:

- 3 berths for containerized cargo, one for agricultural products, one for sugar and one for general cargo;

- a 1,300-metre-long breakwater; and

- a 12.5-metre-deep water channel.

(2) Laem Chabang industrial estate. Construction of the first stage is scheduled for completion in the Sixth Plan period and covers an area of 1,790 rai, consisting of a 1,367-rai general industrial estate and a 423-rai export processing zone.

(3) Nong Ko-Laem Chabang water pipeline. Construction will be completed during the Sixth Plan period so as to supply water to Laem Chabang port, Laem Chabang industrial estate and the neighbouring community:

- a 0.90-metre-diameter and 14-kilometre-long water pipeline;

- a capacity to provide 22 million cubic metres of water per year.

(4) Si Racha-Laem Chabang railway line. Construction will be completed during the Sixth Plan period in order to link the Laem Chabang industrial estate and the port with the Chachoengsao-Sattahip railway line.

(5) Communications, telecommunications and electricity networks. Installation is scheduled to begin during the Sixth Plan period in order to satisfy the needs of small-scale and medium-scale industries and the community in the Laem Chabang target area.

(6) Community housing development. The development policy of the Sixth Plan is set to promote private sector investment in building housing for the labour force and their families who migrate into the target area of Laem Chabang. The government will prepare necessary infrastructure for the communities.

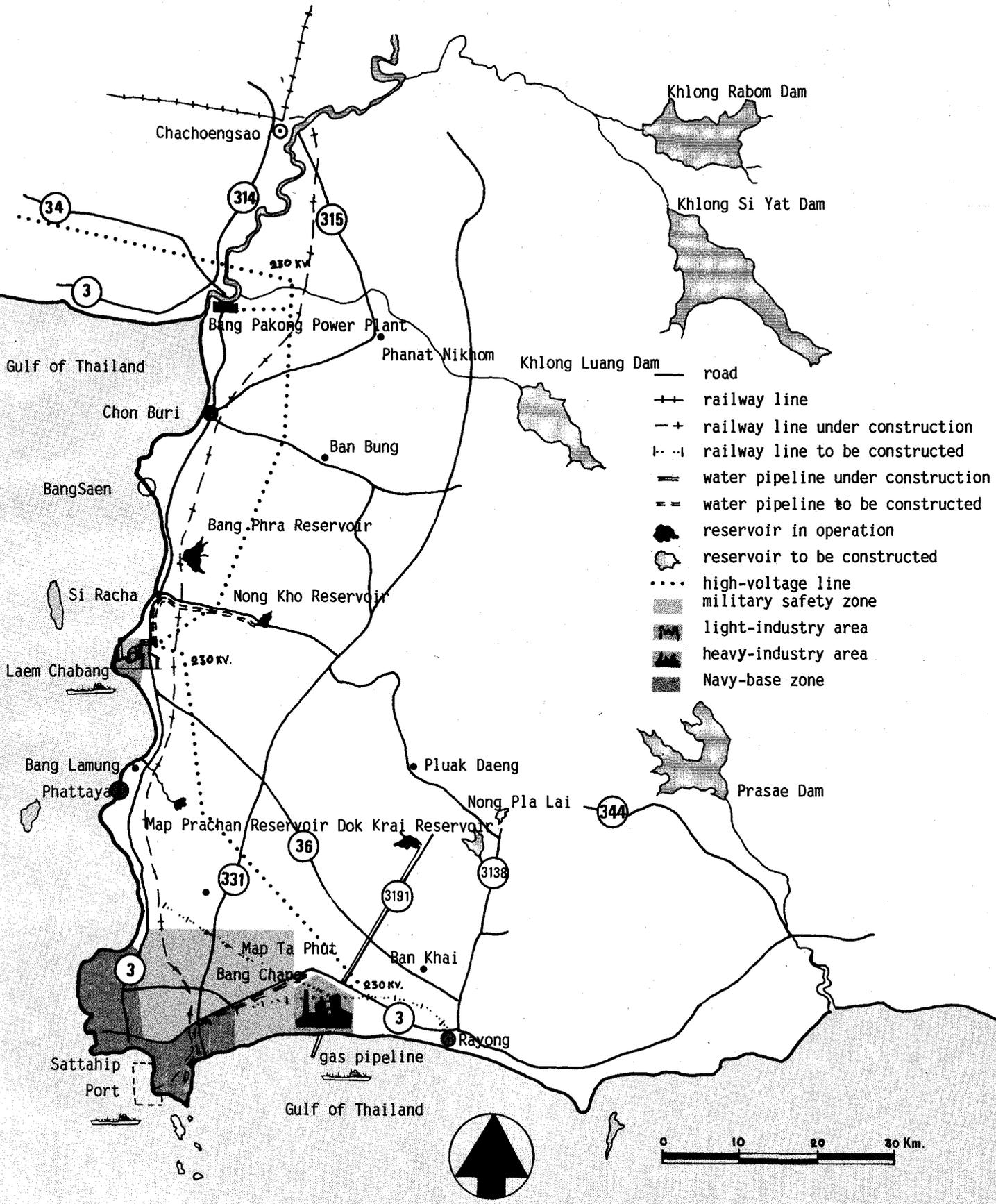
(7) Educational and social development. In order to promote the development of industries and the port in the Laem Chabang target area, work plans on educational development, community development, public health development, safety of life and property and development of local administration organizations will begin during the Sixth Plan period.

3.3 Other projects will support the development plan for the Eastern Seaboard. The following projects will promote more effective development of the 2 target areas:

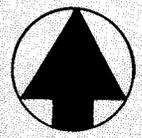
(1) Chachoengsao-Saraburi railway line. Construction will begin during the Sixth Plan period to link the northern and the northeastern railway lines with the eastern line, and thereby bypass Bangkok. The spur line will be 85 kilometres long.

(2) Environmental control. In continuation of the Fifth Plan, the impact of industry on the environmental conditions of the Eastern Seaboard will be closely inspected, monitored and controlled.

EASTERN SEABOARD DEVELOPMENT PROGRAM



- road
- ++ railway line
- + railway line under construction
- · · railway line to be constructed
- water pipeline under construction
- - water pipeline to be constructed
- reservoir in operation
- · · reservoir to be constructed
- · · high-voltage line
- ▨ military safety zone
- ▨ light-industry area
- heavy-industry area
- ▨ Navy-base zone



CHAPTER 5

PREPARATION FOR DEVELOPMENT OF OTHER NEW ECONOMIC AREAS

1. Apart from the development of regional urban growth centres and of the Eastern Seaboard subregion for the purpose of decentralizing economic growth from Bangkok to other regions and creating a more equitable balance, another alternative is to prepare the development of other new economic areas. In the Sixth Plan the southern region is designated an area for potential future development.

Development issues

2. Issues concerning the development of other areas into important new economic areas are as follows:

2.1 The south has suitable geographic features. It is well endowed with natural resources and comprises 13-14 per cent of the total land area and the total population of the country. Thus it is able to be a new economic and employment base and help the decentralization of growth from the Bangkok Metropolitan Region.

2.2 With the Andaman Sea to the west and the Gulf of Thailand to the east, the region enjoys 2 coastlines which may be developed into centres of international trade; this is apart from the existence of natural resources, such as tin, rubber, palm oil and fisheries, will enable the development of industry. In addition the south has the potential to be developed into the most important tourist area in this region.

Main objectives

3. In view of the development potential mentioned above, the southern region should be systematically prepared for development in accordance with the following objectives:

3.1 To open up the national economic system for greater competitiveness in international trade.

3.2 To decentralize industrial development to southern coastal areas and enable them to link up with developments in other parts of the country, such as the Eastern Seaboard sub-region.

3.3 To increase the efficiency of the use of natural resources and conserve the environment for long-term use.

Development policy guidelines

4. Development policy guidelines include the following:

4.1 Policy guidelines for developing the southern region are based upon the suitability of particular areas. Songkhla-Hat Yai will be developed into the economic and administrative centre of the whole region. The Andaman Sea coast, centred on Phuket, will be systematically linked with the Gulf of Thailand coast, centred on Surat Thani, by efficient transport and communications systems.

4.2 Target areas for development are designated as follows:

(1) Upper Southern Subregion. This will be the new economic base and commercial centre for international trade. The subregion covers approximately 22,000 square kilometres and comprises 4 provinces: Surat Thani, Phuket, Phangnga and Krabi.

(2) Songkhla Lake Basin. This is an important area endowed with natural resources and fresh water, which will provide a base for promoting development of the southern sub-region. It covers an area of 9,570 square kilometres and includes the whole of Phatthalung province; 6 districts and 2 minor districts of Songkhla province: Songkhla, Hat Yai, Sadao, Rattaphum, Ranot, Sathing Phra, Krasae Sin and Na Mom; and 2 districts in Nakhon Si Thammarat province: Cha-uat, and Hua Sai.

(3) Pak Phanang Basin. This is in Nakhon Si Thammarat province, an important rice-producing region in the south. It encompasses 1.07 million rai, consisting of the districts of Cha-uat, Hua Sai, Chian Yai, Pak Phanang and Muang and part of Ron Phibun district.

Development plan

5. During the period of the Fifth Plan, most development efforts for the southern sub-region were at the level of feasibility studies. Construction of some projects was initiated; for example, Chieo Lan dam, Songkhla deep-sea port and Phuket deep-sea port. In the Sixth Plan period, preparations for development will include the following elements:

5.1 Infrastructure development: roads connecting Phuket, Surat Thani and Khanom deep-sea port.

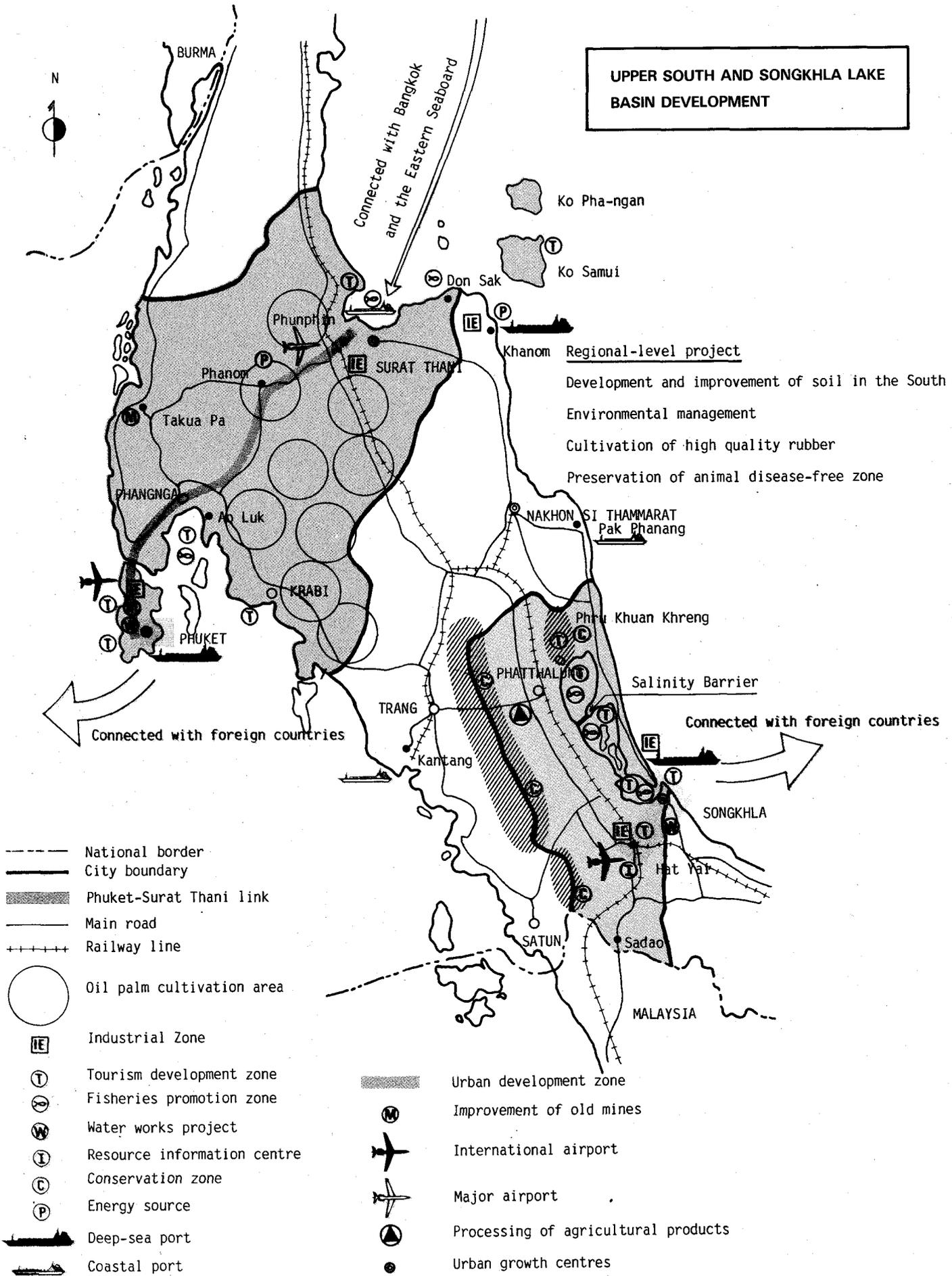
5.2 Urban development: water supply in Phuket, Surat Thani-Phunphin and Songkhla-Hat Yai; and measures to develop urban centres and control urban land use.

5.3 Industrial development: industrial estates in the south at Hat Yai, demarcation of the industrial zone for Songkhla deep-sea port and a study of the processing of agricultural produce in Phatthalung.

5.4 Tourism development: development and promotion of integrated tourism in the areas of Krabi-Phangnga-Phuket, Surat Thani-Ko Samui, Songkhla-Hat Yai-Songkhla Lake and Nakhon Si Thammarat-Khanom-Sichon-Laem Talum Phuk.

5.5 Natural resource and environmental development: substitution of high-quality rubber for palm oil, development of land and old mining areas, environmental control, commercial aquaculture in Songkhla Lake, Salinity barrier for Songkhla Lake, information centre for environmental conditions around Songkhla Lake, sanitation in Hat Yai and development of irrigation systems and modern agricultural methods to increase agricultural produce in the area of Pak Phanang Basin.

UPPER SOUTH AND SONGKHLA LAKE BASIN DEVELOPMENT



CHAPTER 6

MANAGEMENT SYSTEM FOR URBAN AND SPECIFIC AREAS DEVELOPMENT

The management system for developing urban and specific areas includes the following:

1. Objectives

(1) To transform plans into effective operational programmes in accordance with urban development policies and targets.

(2) To consolidate cooperation between the government, local authorities, state enterprises and the private sector in a systematic manner.

(3) To coordinate urban development with rural development and the development of specific economic areas in order to promote development and extend its results to rural areas.

2. Guidelines

(1) Urban development

(1.1) Establish a coordinating committee for development of the Bangkok Metropolitan Region and a coordinating committee for development of regional urban centres. These organizations will receive and relay communications and coordinate policy-level agencies with implementing agencies at the central, regional and local levels.

(1.2) Expand the role of the Provincial Development Committee to cover implementation of urban development.

(1.3) Revise and improve the structure of committees and/or subcommittees concerned with urban development to correspond to the newly established management system.

(1.4) Amend and improve problematic laws, regulations and orders, and remove obstacles to the administration of public services and the process of urban development, especially for investments in production expansion and job creation by the private sector.

(2) Development of specific areas and new economic areas

(2.1) Consider establishing a permanent organization with the status of a juristic person that would be independently managed in order to effect development in specific or economic areas continuously and efficiently. Administration of development work on the Eastern Seaboard subregion would serve as the starting-point for such an organization.

(2.2) Assign responsibility for development work in specific areas to the organization mentioned above. The organization will establish development plans for specific areas, set up projects and plans to coordinate operations and coordinate the work of government agencies, state enterprises and the private sector. It will undertake monitoring and evaluation to ensure that implementation is in accordance with development policies and targets for each specific area.

PROGRAMME 10
RURAL DEVELOPMENT

RURAL DEVELOPMENT

CHAPTER 1

INTRODUCTION

1. Rural development, one of the most important policies in the Sixth National Economic and Social Development Plan, will continue to be implemented on an uninterrupted and continuous basis. Rural development was accorded an extremely high priority in the Fifth Plan and will be given even higher priority in the present plan. Implementation of the previous plan has resulted in substantial progress; therefore, existing strategies, targets and other measures will be continued and improved in accordance with present conditions. At the same time, past shortcomings will be rectified in order to ensure that the Programme for Rural Development of the Sixth Plan will be implemented more effectively and will consequently achieve the desired results of solving poverty problems in rural areas, improving the rural standard of living and distributing wealth and prosperity as much as possible to all rural areas.

2. The rural poverty alleviation development programme adopted in the Fifth Plan period attained satisfactory results; it achieved most of its targets, ranging from budgetary allocations and distribution of projects in designated areas to benefits passed on to the population from project implementation. Nevertheless previous operations may be considered successful in solving rural poverty problems to a limited extent only and in rather limited target areas. Therefore in the Sixth Plan period the Programme for Rural Development will be extended to cover all rural areas with the aim of serving all rural people as extensively and fairly as possible.

3. In order to achieve the foregoing goals the Programme for Rural Development in the Sixth Plan period adopts a change in strategy and a new operational plan that will concentrate on actual problems confronted by the rural population in different areas, and the nature of these problems will determine the areas and priorities for implementation. Target areas will be divided into backward rural areas, middle-level rural areas and progressive rural areas. The government will concentrate its development efforts and resources on the backward and middle-level areas. The private sector will be encouraged to play a larger part in investment in progressive areas, in accordance with the general development policy which aims at reducing public sector involvement in areas which the private sector is capable of handling on its own.

4. In general the approach of the Programme for Rural Development of the Sixth Plan has 2 outstanding characteristics. First, it concentrates on extending rural development throughout

the country using the actual problems that confront the rural population as criteria in determining the target areas; the criteria will range from such basic problems as poverty, poor health and ignorance to problems in production and marketing, which have great impact on income and employment generation. Secondly, it encourages more participation by the private sector in solving their own and community problems in order to reduce the government's role and activities wherever people are able to manage on their own.

5. In order to encourage the general public and the private sector to increase their role in finding solutions to their own problems on the basis of self-reliance, the following strategies will be implemented: local organizations at the village and sub-district levels will be strengthened and thus made more capable of planning and solving community problems; local resources will be mobilized to establish community development funds; the people will be encouraged to solve their own and community problems by using the concept of basic minimum needs as a guideline; and rural development activities in which the private sector increases its participation and the government reduces its role to that of a supporter will be encouraged and expanded.

6. The administrative system for rural development under the committee on National Rural Development that was used in the previous plan period will continue to administer rural development in the Sixth Plan, but mechanisms for administering and coordinating government agencies both at the central and regional levels will be improved. An information system will also be developed in order to carry out rural development administration more systematically. In addition, efforts will be made to integrate all the economic, social and security targets in rural development. All of these measures are expected to lead to the adoption of a supportive role by the government and to more participation by the private sector.

7. In line with the preceding objectives and approaches, rural development will concentrate on finding solutions to the problems of everyday life and work that face the rural population. It will also focus on creating more opportunities for increasing production, which will lead to more income and employment generation. The 4 major guidelines are as follows:

- (1) Develop the basic infrastructure for rural production and marketing.
- (2) Increase the efficiency and capabilities of the public sector in solving rural problems.
- (3) Improve the system for administering rural development in order to integrate and systemize the efforts of each agency.
- (4) Increase the participation of the private sector and people's organizations in rural development.

8. In order to implement the foregoing guidelines, the following 3 groups of work plans are specified:

(1) Work plans to be implemented by government agencies with the cooperation of the people. These include work plans under the responsibility of the Ministry of Agriculture and Cooperatives, Ministry of Interior, Ministry of Public Health, Ministry of Industry and Ministry of Education.

(2) Work plans to be implemented mainly by the people or the private sector with the government adopting a supportive role, such as work plans on rural job creation, on developing the quality of life in rural areas according to the criteria of basic minimum needs and on rural development funds. Private sector work plans are also included.

(3) Work plans for promoting rural development administration through both training and briefing field officers in planning, monitoring and evaluating rural development.

Appropriate budgets will be allocated in support of the foregoing work plans. For 1987, a total of about 15,000 million baht has already been allocated. For the following financial years, 1988 to 1991, annual budgets will be estimated based on the 1987 budget allocation.

CHAPTER 2

RESULTS OF PAST PERFORMANCE AND DEVELOPMENT ISSUES

1. The results of rural development during the first 4 development plans did not reach all poor people in rural areas; a considerable number of the rural population were still facing rudimentary problems which are the basic causes of poverty. These problems, for which proper remedies have yet to be applied, include food shortages, disease, poor health and the lack of skills and education. Such problems have prevented poor people from improving the quality of life of their families and communities — a condition arising from national development policies prior to the Fifth Plan.

2. The Fifth Plan placed an emphasis on rural development, especially in the poverty areas of 288 districts and 12,562 villages in 38 provinces. Thirty-two intensive rural development projects were initiated under the integrated administration of the principal ministries; namely, the Ministry of Agriculture and Cooperatives, Ministry of Interior, Ministry of Education and Ministry of Public Health. The projects were successfully implemented at all levels down to the target areas. As a result, the standard of living of the rural population has been greatly improved in comparison with previous conditions. Some of the achievements during the Fifth Plan period can be summarized as follows: 288 district hospitals were constructed and sub-district health offices established in all target areas; primary health care was developed and disease prevention carried out in over 80 per cent of the target areas; over 60,000 rural households were trained in modern agricultural techniques; 2,655 additional village fish ponds were constructed, thus increasing the sources of protein-rich food for village consumption; cattle and buffalo banks were established for 20,000 households; and the number of illiterate people in rural areas was reduced by 300,000.

3. Despite such progress during the period of the Fifth Plan, the following important development issues remain to be dealt with in the Sixth Plan period:

3.1 While an increasingly effective and systematic structure for the administration of rural development has already been established, resulting in less duplication of efforts, an improved working system based on systematic planning and clear definition of the roles and responsibilities of development administration agencies at the national, provincial, district, sub-district and village levels, there are still many problems to be solved. The organizational structure needs to be further improved to become more unified and effective. A system for integrating and coordinating the activities carried out by different agencies has to be established in order to form clearly discernible plans of operation. Further improvement in the skills and efficiency of the per-

sonnel involved in rural development administration at all levels is still required. More importantly there is an urgent need to establish an effective management information system as an instrument for improving the administration and management of rural development. Systematic data collection, processing, and analysis in order to provide up-to-date and readily available standard information for decision makers at all levels will help facilitate the decision-making process and further enhance cooperation between all the government agencies concerned, thus reducing confusion and unnecessary waste in government operations.

3.2 Continuous efforts have been made in all 5 development plan periods to develop land and water resources, transport systems and agricultural production. However, problems in these areas still remain to be solved. In the case of land development, little progress was made in solving the problems of soil salinity, erosion and deterioration before the Fifth Plan period. More than 17 million rai in the northeast remain affected by the problem of soil salinity; over 29 million rai of land throughout the whole country still suffer from the loss of soil nutrients and fertility. All of these problems must be alleviated. In addition the problem of landlessness still prevails with more than one million rural households occupying land without legal title deeds, while the population of 3,683 villages, each comprising more than 8 households does not possess any land at all: they either have to rent land, or illegally occupy national reserves or permanent forest areas. Further efforts need to be made to solve these problems. In particular a detailed classification of land in national reserves and permanent forests would form the basis for solving the land use problem and accelerate the process of issuing land title deeds.

3.3 Despite the large government investment in the construction and improvement of water resources over the period of the first 5 national plans, 3,824 villages still lack agricultural water resources while 12,678 villages lack adequate water resources for consumption and household uses especially in the dry season. In transport and communications, it was found that 1,181 villages still have no road connections with towns or commercial centres: villagers have to spend more than 30 minutes travelling to the centres by other means of transport. Although the number of villages with this problem is relatively small when compared to the total number of 52,927 villages throughout the country, efforts should still be made to find a solution in the next 5 years. In addition, low agricultural productivity continues to burden the rural population in 11,240 villages. The problem is caused by several factors, such as inadequate use of technological resources, poor farm management as well as other deficiencies.

Number of villages with problems

Problem	Central	North	Northeast	South	Total
Deprivation of land rights	479	757	1,817	630	3,683
Lack of water resources for daily use and consumption	3,458	2,117	4,453	2,650	12,678
Lack of agricultural water resources	906	640	1,168	1,110	3,824
Inadequate transport system	375	317	236	253	1,181
Low productivity	982	1,699	6,880	1,679	11,240

Source: Primary data at village level (NRD 2c) 1984

3.4 In regard to rural employment, between 1982 and 1986 a large number of the rural population participated in the rural job creation project, especially in areas where the opportunities for post-harvest, seasonal employment were few, which resulted in cooperation with the organizations concerned and, hence, increased income. In 1985 alone, the project, together with the project of the Ministry of Agriculture and Cooperatives on job creation during the dry season which provided 0.6 million people with seasonal employment, created temporary jobs for 1.2 million people. The success of both projects has contributed to alleviating unemployment to a certain extent. However, as it is anticipated that the number of seasonally unemployed people will reach 4 million in 1987, it is evident that the scale of employment generation under the national projects is still far below actual needs. The next phase of development should emphasize rural jobs of a type that will increase production and ensure greater long-term earnings than previous job creation. Emphasis should be placed on promoting light industry in rural areas, at both the village and provincial levels, in order that it may become a main source for stable employment in the future.

3.5 In the areas of public health and education, despite the improved conditions resulting from previous intensive development efforts, some problems persist. According to the available data, both the adults and children in 7,094 villages (out of 52,927) are still afflicted by gastroenteritis, malaria and other diseases. In 1,400 villages, the infant mortality rate is still relatively high. In addition the educational level attained by 5 per cent of the rural population in 12,306 villages remains below the prescribed compulsory education level. More effort is required to solve these problems in the future.

Number of villages with educational and health problems

Problem	Central	North	Northeast	South	Total
1. Lack of education/training	1,652	2,006	7,271	1,377	12,306
2. Low level of health and sanitation	1,411	1,665	2,856	1,162	7,094
3. High level of infant mortality (new born – 5 years old)	114	209	825	252	1,400

Source: Primary data at village level (NRD 2c) 1984

3.6 Rural development in areas of strategic importance to national security, initiated in the Fourth Plan period with the development of specific areas, has helped reduce security problems derived from internal and external threats to a certain extent. Nevertheless with the political and military developments in the Indo-Chinese countries and the changes in the strategy of the Communist party of Thailand as well as the Thai government's current national defence policies, greater efforts should be made to develop these sensitive rural areas in continuation of past work. Additional emphasis should be placed on rural development for security purposes in the border areas in accordance with prevailing conditions and national defence strategies.

3.7 Despite some success in promoting people's participation in rural development during the Fifth Plan period, most development efforts introduced are still at the initial stages, and further development and expansion is required in order to reach as many target groups as possible. For example, achievements have included improving the administrative efficiency of sub-district councils and village committees, campaigning for improvement in people's quality of life in line with the principles of basic minimum needs and developing village funds supported by the rural development fund. In the case of commercial organizations, despite a longer period of development, over 50 per cent of the existing agricultural cooperatives and farmers' groups still operate at a loss due to poor management and need to be improved and developed. The private sector, on the other hand, has played an increasing role in supporting rural development activities, in both economic and social aspects, especially in the progressive areas. During this period there is therefore a need to establish a suitable coordinating structure, methods and procedures which will be used to improve cooperation between the public and private sectors and rural people in order to ensure that implementation is effective in all rural areas (progressive, middle-level and backward).

4. The 7 foregoing issues constitute important starting points for formulating rural development policies and guidelines that will achieve the objectives of national rural development during the Sixth Plan period.

CHAPTER 3

OBJECTIVES, STRATEGIES, TARGETS AND GUIDELINES FOR RURAL DEVELOPMENT

In order to ensure that the policy on rural development will contribute to overall national development by expanding the economy, developing society, improving the quality of life of the people and distributing wealth and prosperity to the rural areas, the following objectives, strategies, targets and guidelines are established for rural development during the Sixth Plan period:

1. Objectives. To improve the quality of life for socially and economically deprived rural people, to promote self-reliance and to increase adaptability to economic and environmental conditions.

2. Strategies. In order to attain the foregoing objectives, rural development in the Sixth Plan period will be carried out in line with the following 4 strategies:

(1) Development activities will be oriented towards solving the socio-economic and security problems of each area according to the actual conditions and needs of the people. Authority for the selection of target areas will be delegated to provincial authorities.

(2) Efforts will be made to improve the standard of living in all areas: backward, middle-level and progressive. The government will concentrate its efforts and resources on developing the backward and middle-level areas while increased investment by the private sector in progressive areas will be encouraged.

(3) Emphasis will be given to integrating the efforts of government agencies and of the public and private sectors and the general public, in order to solve fundamental problems in the rural communities and promote activities that generate production, income and employment through the use of appropriate technology for each locality.

(4) The role of people's organizations and the general public in deciding how to solve their own problems and those of their communities will be encouraged, thus increasing self-reliance.

3. Targets are divided into 2 types as follows:

(1) Development targets

(1.1) Economic approaches to solving the problems of the rural people will continue along the lines of those already implemented during the Fifth Plan period. Emphasis will be placed on ensuring adequate food supply for, and increasing the income of, people living in backward rural areas by finding solutions to the problems of agricultural production. Production, marketing and employment in middle-level and progressive areas will also be promoted in order to support the main target of achieving overall national economic expansion.

(1.2) The rural population will be provided with the basic social services necessary to everyday life and occupations besides safety of life and property. Ultimately they should be enabled to attain self-reliance, participate in developing their own standard of living and determine the course of their own lives based on the criteria of basic minimum needs.

(2) Target areas

Target areas will be determined in accordance with the problems and needs of particular areas, as follows:

(2.1) Backward areas in need of immediate development are defined as areas in which most of the people are economically deprived and which face 4 or 5 of the following problems: inconvenient communications, insecure land tenure, low production or incomes, poor health, shortage of water for domestic consumption and lack of knowledge concerning methods of self-improvement. There are 5,787 villages throughout the country of this type: 1,065 villages in the north, 2,684 in the northeast, 954 in the central region and 1,084 in the south.

(2.2) Middle-level areas, the second priority in development, are areas in which most people are economically deprived and which are afflicted by 1 to 3 of the preceding problems. Such areas comprise 35,514 villages in total: 6,672 in the north, 17,990 in the northeast, 5,731 in the central region and 5,121 in the south.

(2.3) Progressive areas are those in which most of the people have high production potential; such areas enjoy reasonably favourable economic conditions and suffer from few of the problems mentioned above. There are 11,621 such villages throughout the country: 3,079 in the north, 1,845 in the northeast, 6,221 in the central region and 476 in the south.

4. Development guidelines are formulated to ensure that rural development proceeds according to the foregoing objectives and contributes to general development targets in regard to economic growth, income distribution, social services and improvement of the quality of life. Development guidelines thus focus on creating opportunities to increase production which will help solve the problems of rural livelihood and occupations. The following 4 main guidelines are specified:

- (1) Develop the basic factors in rural production and marketing.
- (2) Increase the efficiency and capability of government agencies in solving rural problems.
- (3) Improve administrative mechanisms by consolidating efforts in an integrated rural development system.
- (4) Increase participation by people's organizations and the private sector, especially in operations in backward and middle-level areas.

Details of each guideline appear in the following chapters.

CHAPTER 4

DEVELOPING THE BASIC FACTORS IN RURAL PRODUCTION AND MARKETING

1. Rural development in the Fifth Plan period emphasized solving the problem of poverty in rural areas. Nevertheless evaluation of the results shows that the problem has been alleviated to a limited extent only, and the scope of rural development in the Sixth Plan period will therefore be expanded to include such areas as increasing opportunities for greater productivity, income and employment, which will be supported by development of the basic factors in rural production and marketing. The basic factors are: development of the quality of the population and labour force, development of natural resources (land and water), development of appropriate science and technology and the improvement of management efficiency by supporting the creation and strengthening of farmers' institutions. Guidelines and measures are as follows:

Development of the quality of the population and labour force

2. In improving national productivity within the constraints of financial and natural resources, a key issue is the development of the quality of the population and labour force in rural areas, especially in occupational skills. Comprehensive development of physical, intellectual and occupational skills should be targeted, taking into consideration the real needs of people in different age groups and in different occupations. The young should be trained physically, mentally and intellectually before entering the labour market while the training of adults already in the labour force should concentrate on improving capabilities and skills in accordance with changing technology. Details of this development guideline appear in the Programme for Population, Social and Cultural Development.

Development of land resources

3. Land as a factor in agricultural activities should be considered a key resource in rural development. The government has attempted to achieve the fullest possible use of available land by accelerating the development of land in the course of past development. Land development guidelines have been established for classifying land for appropriate land use and allocation, establishing a master plan for land use on a national basis and distributing land holdings by issuing the necessary legal documents and by undertaking land reform and land consolidation. How-

ever, the rapid increase in demand for land use due to population growth, coupled with the limited availability of land, has led to more land problems and, as a result, delays in reaching the land development targets of the Fifth Plan. Guidelines for developing land resources during the period of the Sixth Plan thus mostly continue the activities laid down in the Fifth Plan, especially in improving the efficiency of land use and the distribution of land ownership to rectify infrastructure and production problems in rural areas. Details of both development guidelines appear in the Programme for Development of Natural Resources and the Environment.

Development of water resources

4. The government has already invested a great deal in developing large-, medium- and small-scale water resources, which are important factors in agricultural production. As a consequence, the total irrigated area has reached 22 million rai at the present. However, the utilization of irrigated land continues to be limited because of inefficient management, while the development of small-scale water resources has yet to reach all target areas even though large-scale water resources have nearly all been developed. The development of rural water resources in the Sixth Plan period will therefore concentrate on improving water utilization and developing small-scale water resources in all potential areas. Details of this development guideline appear in the Programme for Development of Natural Resources and the Environment.

Development of science and technology for rural development

5. Rural development in the Sixth Plan period attaches more importance to developing science and technology to improve the quality of life of the rural population. The emphasis will be on appropriate technology for agricultural development and for promoting small-scale and medium-scale industries. Technological development will take the form of integration of traditional and modern technology. This will enable rural poverty areas to become technologically independent up to a certain level. In order to achieve this, the foundations of rural technology will be strengthened, suitable modern technology will be applied and traditional technology will be modernized and its efficiency improved. Rural development technology should at the same time be instrumental in improving agricultural and local industrial productivity and be suitable for practical use by the local population.

Guidelines for developing technology in line with the foregoing policy are as follows:

(1) Encourage personnel development in the rural population. The technical skills of human resources will be improved through the existing educational system and special training programmes organized by both the government and private sectors.

(2) Clearly define systems for transferring medium level technology for both vertical and horizontal rural development.

(3) Prioritize the promotion of scientific and technological development that is necessary for solving rural production problems, including research and testing services to serve as a basic structure for science and technology.

(4) Create close cooperation between government and private agencies that are directly responsible for applying technology. Problems, needs and appropriate guidelines for technological development in rural areas will be identified.

Support for the creation and strengthening of farmers' institutions

6. The formation of farmers' groups for improving production and marketing, either initiated by farmers or with the support of the government, plays an important role in supporting farmers who have the potential to produce for sale; for example, farmers' groups and cooperatives; such groups enable farmers to help each other or acquire government assistance in increasing production, improving and controlling the quality of their products and in solving marketing problems. Supporting the voluntary formation of farmers' groups and developing and strengthening existing farmers' institutions will therefore help solve production and marketing problems. The guidelines for promoting the formation of farmers' groups and developing farmers' institutions are as follows:

(1) Promote the voluntary organization of farmers involved in production for sale into groups which aim at improving production and quality control and creating collective power for exporting. The government will not become directly involved in the organization of these groups but it will provide information and advice to create awareness among farmers of the potential benefits of forming such voluntary groups.

(2) Support the development of management efficiency and economic and social unity in existing farmers' institutions, that is, farmers' groups and cooperatives, in the following ways:

(2.1) Central government agencies responsible for farmers' institutions will supervise and improve efficiency in the operations of such institutions.

(2.2) Government agencies related to farmers' institutions at the provincial regional level will promote the activities of such institutions. Production and marketing activities will be facilitated and coordination between government agencies will be supported in order to strengthen the farmer's institutions.

(2.3) Encourage financial institutions to provide support by extending loans for the production and marketing activities of farmers' institutions at appropriate rates of interest.

(2.4) Encourage the formation of a system for disseminating information on commerce, marketing and commodity prices, especially to remote areas.

(2.5) Establish a master plan for training farmers and cooperatives' officials. The plan will increase efficiency in training activities and create coordination between the training agencies.

(2.6) Farmers' institutions will assume the lead role in controlling production to meet market demand. This role will cover improving product quality and standards in order to achieve price stability.

(2.7) Farmer's institutions will formulate clear development plans in order to improve the quality and efficiency of their operations.

CHAPTER 5

INCREASING THE EFFICIENCY AND CAPABILITY OF THE GOVERNMENT IN SOLVING RURAL PROBLEMS

1. Development planning based on the actual problems in each area is a key strategy for rural development in the Sixth Plan period. Identification of the real problems and their characteristics in rural areas will lead to more effective mobilization of resources for rural development and problem solving. As a result of the Village Data Base Survey conducted in 1984, the following 5 major problems have been identified in rural areas:

- (1) Inconvenient transport and communications systems connecting villages with district and business centres.
- (2) Low productivity leading to inadequate income and unemployment.
- (3) Shortage of water for daily use and consumption in remote areas.
- (4) The health and sanitation of rural people.
- (5) Lack of knowledge for developing the quality of life, whether at the personal, family or community levels.

Guidelines for solving the problems

2. The responsibility for solving the preceding problems lies with the Ministry of Agriculture and Cooperatives, Ministry of Interior, Ministry of Public Health, Ministry of Education and Ministry of Industry. Guidelines for solving each problem are as follows:

First guideline. The policy of saving energy and reducing oil imports will form the basis in solving communications and transport problems. Existing roads will be repaired and maintained so that they can be used in any season while new roads will be constructed to connect villages, sub-districts and districts to the network of primary highways in order to facilitate transport of agricultural produce and rural commuters. Operational guidelines are as follows:

(1) Accord priority to improving and maintaining existing rural highways, especially where there is an urgent need. New construction will be limited to missing links that are necessary to connect the network to national and provincial highways under the responsibility of the Department of Highways.

(2) Place special emphasis on the construction, improvement and maintenance of rural highways that directly support local and regional economic activities such as development of tourism and rural industry, transport of products to markets and exports. Routing priorities will be selected with due regard to the other development activities.

(3) Prioritize backward areas that have communications problems, especially in areas where there is an urgent need and border areas where there are security problems. Construction and maintenance should aim at ensuring the availability of all-weather roads.

(4) Encourage people's participation in building roads that link villages with fields and thus facilitate work activities and the transport of produce. This would develop the sense of ownership and the desire to keep the roads in good repair.

(5) Avoid duplication of efforts and unconnected roads by basing the selection of routes for construction on the areas of responsibility of each agency involved in road construction and maintenance. For example, there are 57 provinces under the Office of Accelerated Rural Development, 35 provinces under the Public Works Department and the border areas come under the National Security Command Headquarters.

(6) Establish working groups under the supervision of the Planning and Project Subcommittee to study guidelines for developing rural highways and ensure that they conform to rural development policies.

Second guideline. To solve the problems of low productivity, inadequate income and unemployment, it is necessary to accelerate the development of rural occupations in both the agricultural and industrial sectors. Guidelines are as follows:

(1) In the agricultural sector occupational development efforts will mainly concentrate on solving the problem of production in areas dependent on rainwater because these are areas where soil fertility and productivity are low. Farmers' do not earn sufficient income for their livelihood. Development guidelines are as follows:

- Promote cooperation between the government sector, private organizations and farmers in occupational development for farmers so that they may enjoy a higher standard of living. A fully integrated agricultural system that covers production and marketing will be developed for products not consumed in the farming household and for surplus products.

- Improve the species of crops and livestock to suit local conditions.

- Encourage farmers to use technology that is appropriate to their capability.

– Improve cropping and animal husbandry systems to suit the soil and rainwater conditions in order to obtain maximum efficiency in resource utilization and sufficient supplies for household consumption.

– Promote production of raw materials, such as trees, for use in cottage industries in order to generate additional income.

– Improve the basic agricultural conditions that are necessary for facilitating future development efforts.

(2) In the industrial sector occupational development consists of the following:

– Promote cottage industries by providing occupational training and developing production techniques. Sources of raw materials and marketing will be particularly taken into consideration.

– Support the expansion of small-scale industries, most of which are industrial plants in the provinces, in order to create more employment. The promotion effort will be in the form of assistance to overcome such problems as lack of capital and technology and assistance to develop administrative, managerial and marketing skills.

Third guideline. It is necessary to accelerate the development of small-scale water resources in remote areas that was implemented in the Fifth Plan period in order to satisfy the people's basic need for water. Water resources will be identified in order to ensure an adequate supply for the consumption of rural people and to constitute a supplementary water resource for agricultural use in areas dependent on rainwater. Moreover a higher priority will be given to extension activities, project maintenance and people's participation in the development of small-scale water resources. Operational guidelines are as follows:

(1) Accelerate construction of small-scale water resources throughout remote areas in order to eliminate the shortage of water for drinking and household consumption in the Sixth Plan period.

(2) Accelerate implementation of the programme for ensuring clean water and tap water for villages. Coordination and cooperation between the government and the private sector will be emphasized and people will be encouraged to participate in the form of foundations or village funds.

(3) Allocate budgets for small-scale water resource development projects based on the actual problems and needs in each locality. The ranking of priorities will be based on the problems of each region: the northeast is accorded the highest priority followed in order by the central region, the north and the south. Project implementation should conform to the problems and needs of the people.

(4) Promote extension activities and project maintenance. Implementing agencies should ensure that people and officials cooperate in using small-scale water resources. Local authorities and people will be encouraged to make financial contributions to augment the government budgetary allocations for maintenance of small-scale water resource development projects.

(5) Establish a monitoring and evaluation system to ensure that small-scale water resource development projects are implemented according to the government policy.

Fourth guideline. In order to combat the problems of rural health, operational guidelines are as follows:

(1) Promote and increase opportunities for people to participate in developing the quality of life in line with the concept of basic minimum needs. This could be accomplished through the processes of community preparation, improvement of methods and technology, and public relations, which aim at inculcating a proper sense of awareness among government officials and the general public.

(2) Encourage local people to initiate and expand primary health care in order that they may be in a position to solve their own health problems, which is one of the basic minimum needs, in line with the actual condition and capability of each individual, family and community.

(3) Encourage the delegation of administrative authority for public health activities by increasing the role of the people in the decision-making process in regard to identifying problems, needs and problem-solving methods and determining how to manage resources that are derived from the efforts of the community and from the support of the government and private sector.

(4) Promote continuous coordination within the sector by developing a coordinating organization and mechanisms, communication techniques and the exchange of information and experience between agencies that deal with health services, education and training, research and technological development in order to accelerate the attainment of good health for all members of the public.

(5) Promote continuous coordination between sectors and between the public and private sectors by developing coordinating organizations and mechanisms, communication techniques and a change of attitude in administrators and field operators in order that they may respond to the objectives involved in developing the quality of life of the people.

(6) Improve the health service system in regard to the structure of health centres within the referral system and the system for exchanging knowledge, techniques and knowhow between agencies. The aims are to expand and improve the quality of health services so that they can address the physical and mental health problems of the people in a more integrated and efficient manner, especially at the village and sub-district levels, and to make more basic services available in communities.

(7) Promote the transfer of knowledge and technology concerning public health activities that have already been developed and successfully applied in various communities. Models and techniques for developing leaders of groups and work teams should start to be developed and tried out, as should the transfer of knowledge and technology between groups, work teams and villages which would lead to more self-reliance.

(8) Explore the alternatives and initiate financial methods and systems for health services based on the principles of public participation and of saving service fee expenses as appropriate to the nature of the problems and the society. The funds thus mobilized could be used in the provision of health services, health insurance and health care to low-income and elderly people as necessary and according to the principle and regulations already laid down.

Fifth guideline. The problem of inadequate knowledge for improving the quality of life of individuals, families and communities could be solved by concentrating on the target group of rural people with little capability for self-help. This group should be given the opportunity to gain sufficient knowledge to improve their quality of life and ultimately attain self-reliance. Guidelines are as follows:

(1) Carry out campaigns to create public awareness of the problems and to enable the general public to be able to solve their own problems and those of their communities based on the concept of basic minimum needs.

(2) Conduct literacy campaigns and reading campaigns to ensure that literacy is maintained.

(3) Promote various aspects of academic and occupational knowledge as appropriate to the local needs and in order that people may earn their livelihood. The initial target group will be those outside the formal educational system, followed by those within the school system.

(4) Educate children, women of fertility age and married women on nutrition and bringing up children.

CHAPTER 6

IMPROVING ADMINISTRATIVE MECHANISMS BY CONSOLIDATING EFFORTS IN AN INTEGRATED RURAL DEVELOPMENT SYSTEM

1. The present administrative system for rural development under the Committee on National Rural Development has been in operation in general rural areas since the Fifth Plan period. The main objectives of the system are to provide the instruments for controlling rural development operations based on the new concept which emphasizes the following 4 principles:

First: The efforts of the various agencies should be consolidated in order that solutions may be found to rural problems by integrating activities based on the 'programme'.

Second: To solve the actual problems faced by rural people in each area, localities should be ranked in order of priority, with the highest priority being accorded to areas where conditions are most severe.

Third: The participation of the people in rural development work should be encouraged in order to enhance self-reliance.

Fourth: Monitoring and evaluating systems should be established to identify implementing problems and obstacles in each area, assess the impact of implementation on and gauge the changes in rural standards of living.

2. In accordance with the preceding objectives, the administrative model for rural development under the Committee on National Rural Development places importance on the following:

2.1 Create unity within and between administrative organizations for rural development at the national, provincial, district, sub-district and village levels.

2.2 Establish plans for rural development in the provinces that may be used to achieve coordination between the efforts of officials in all branches and at every level.

2.3 In order to achieve the objectives efficiently, the following are necessary for the administration of rural development: budget administration, personnel development and information system development.

3. However, the current administrative system is still beset with operational problems. There is a lack of unity and coordinating efforts are not clearly defined. Moreover the administrative model does not lend itself to participation by people's organizations or the private sector. In addition, rural development efforts tend to place too much emphasis on individual problems, such as poverty, security, job creation, water resource development, and so on.

4. Therefore during the Sixth Plan period it is necessary to improve the system for administering rural development. The aim is to correct its shortcomings and have it comply with development guidelines and the operations of implementing agencies. If this is accomplished, the system will be able to serve as an effective mechanism for translating plans and policies into implementation in the provincial regions and localities. Issues comprise the administrative organizations and system of rural development, coordination of economic, social and security objectives, an information development system and increasing the efficiency of sub-district councils in administering rural development work.

Improvement of the administrative organizations and system of rural development

5. In order to ensure effective implementation of rural development work, the administrative system and organization of rural development needs to be improved in 2 areas; restructuring the administrative system for rural development and improving the coordinating mechanisms and organizations. Details are as follows:

(1) *Restructure the administrative system for rural development* at the national, provincial, sub-district and village levels to create flexibility in administering rural development within the framework of the Committee on National Rural Development in the Sixth Plan period. At the national level, the Committee on National Rural Development chaired by the Prime Minister is the highest policy-making body. Greater flexibility and efficiency will result from improving the administrative structure of this committee and its subcommittees. A supporting body will serve as the committee's secretariat and coordinate implementation of rural development policy by the public and private sectors. At the ministerial level, changes in the planning, monitoring and evaluating mechanisms are necessary in order to carry out effectively the policies of the Committee on National Rural Development. In a similar manner to the national level, at the provincial, sub-district and village levels, administrative reform will bring about more flexibility and efficiency in such decision-making and implementing processes as planning, coordinating, monitoring and evaluating.

(2) *Improve the coordinating mechanisms and organizations.* There are a large number of agencies currently involved in rural development activities, each with its own methods of operation, planning and project presentation. In order to avoid duplication of projects and delay in project implementation, rural development in the Sixth Plan will undertaken to improve the coordinating system and organizations that will ensure more efficient inter-agency coordination; mechanisms to be improved include standardized documentation forms, integrated schedules and manuals for rural development administration that clearly specify work procedures. Coordinat-

ing organizations will be restructured at the national, provincial and district levels. At the national level, the central coordinating organizations will be restructured; namely, the National Rural Development Coordinating Centre, the Secretariat of the Rural Employment Generation Programme and the Secretariat of the Rural Development Fund Programme. The aim is to create unity, clarify the scope of authority and responsibility and increase capabilities in order that they may be able to accommodate an increased work load in coordinating various types of rural development activity and be able to monitor and evaluate all rural development project efficiently. Provincial offices will also be reorganized. Planning units of the principal ministries should be established at the provincial level and coordinating organizations set up at the district level to serve as coordinating centres. These agencies will be responsible for coordinating the plans and project implementation of various agencies, which will include continuous and efficient supervision and monitoring so that there will be coordination with the central organizations.

Coordination of rural development strategies and measures in security sensitive areas

6. Rural development in security sensitive areas should aim at eliminating the conditions that cause security problems in these areas. To this end, the system and process of national economic and social development should be integrated with, and support, national security and military policy in order to bring safety to these areas. At the same time the quality of life of the people living in these areas and their ability to help themselves should be increased. Development of areas for security purposes will be carried out in line with the following guidelines:

(1) Development areas for internal security. Details are as follows:

(1.1) In areas still threatened by communist insurgents, rural areas surrounding mountain forests will be strengthened through development and security. The method of implementation will adopt the model of the Committee on National Rural Development that can harmonize with rural development at the village level.

(1.2) In the 5 southern border provinces, development work will continue from the Fifth Plan, focusing on improvements in development administration that will increase efficiency in solving problems. The following measures are specified:

- Emphasize economic and social development in order to alleviate social and psychological conditions. The 4 major target groups are: poor fishermen in the coastal areas; poor farmers; small-scale planters of local rubber trees; and youth and women.

- Review or implement at the policy level the following 2 issues that concern the administration of development for solving security problems in the southern border provinces: ensuring implementation according to the master plan for development designed by the Administrative Centre for Southern Border Provinces; and reviewing the roles and responsibilities of the committees in charge of determining policy and development guidelines in order to solve

the problems in the areas so that unity will be created and to enable implementing agencies to have sufficient capability to achieve policy goals.

- Develop areas under the influence of Malay communists by establishing community systems and providing the necessary basic economic and social services.

(1.3) In the northern upland area, the aim is to control hilltribes in security sensitive areas. Operating guidelines emphasize the maintenance of peace and order and consist of local administration work, permanent settlements, reduction of opium cultivation and reduction of watershed destruction. The following measures are specified:

- Allocate suitable areas to serve as permanent hilltribe settlements. Suitable areas are those which can be easily controlled and governed in terms of security, natural resource conservation and socio-economic development.

- Establish a master plan for agencies undertaking development work on hilltribe problems and the control of opium cultivation in the same target areas of the northern uplands. The master plan will aim at economic and social development for the hilltribes so that they can earn a living that is close to that of lowland Thai people. To accomplish this, the hilltribes will have to earn sufficient income from alternative occupations to replace the income derived from opium cultivation.

- Extend primary health care services (including nutrition), compulsory education and information dissemination to all people. The reduction of population growth rates among hilltribes and upland Thai people should be accelerated.

- Prevent and repel hilltribe migration by establishing penalties for illegal immigrants and collaborators. Hilltribes that are already established and have permanent occupations could participate and the hilltribe census undertaking will be accelerated.

- Accelerate the construction of access roads where necessary.

(2) *Development areas for border security.* Details are as follows:

(2.1) The designation of sensitive border areas and the guidelines for establishing villages for self-defence and development along the borders should be based on the nature of the threat, as follows:

- Border security areas outside the offensive lines include areas affected by border disturbances, such as districts within the range of heavy artillery or zones under the influence of subversive external forces. Emphasis will continue to be placed on the establishment of self-defence and development villages along the border areas, thus maintaining the village orientation of development and self-defence activities.

– Border security areas within the offensive lines comprise areas directly affected or likely to be affected by combat along the border, or by such border incidents as the influx of refugees, illegal trading, subversion, and so on. These areas include those strategically located in the possible line of attack from outside and areas directly opposite the location of external armed forces. Development and self-defense guidelines for these areas should not only be village-oriented, but should also adopt an area approach.

(2.2) Construct and strengthen border barriers against acts of foreign aggression in continuation of work carried out in previous periods.

(2.3) Aim at economic and social development of villages that will lead to self-reliance by allocating land and promoting agricultural production activities based on local production facilities. Strategic supplies should be prepared in 3 areas, as follows:

– Accelerate the development of communications networks by installing small-scale communications equipment all along the border.

– Develop health services in security sensitive areas by providing personnel and medical supplies. The areas should be able to administer first aid in the initial stage and be prepared to handle various situations, including the prevention of epidemic diseases and the promotion of family planning.

– Carry out such nutrition development projects as the establishment of rice banks, buffalo and cattle banks and village or school fisheries etc.

(2.4) In areas that need to be frequently evacuated, specify safe zones where children, women and the elderly may take refuge. The safe zones should be selected on the basis of suitability of location, requiring little investment and using available local resources, such as Royal Development Study Centres, and in accordance with the Ministry of Interior's plan for population migration control.

(2.5) Accelerate the construction of strategic roads along the borders and access roads where necessary.

(3) Promotion of economic and social development activities to correspond to the National Preparedness Plan. The base for mobilizing forces will be widened to ensure readiness for warfare, especially by promoting private sector industries to produce such strategic supplies as weapons, food and medicines and by expanding the existing Reservists for National Security Project for manpower development. The following guidelines are specified:

(3.1) Identify measures for mobilizing cooperation from all parties to ensure that strategic supplies are in a state of readiness. Mechanisms should be established for inducing systematic operations by the government and private sector agencies.

(3.2) Improve laws and administrative regulations that are necessary for coping with unusual conditions. These may include, for example, the rationing of food and other necessities.

(3.3) Accelerate the formulation of a complete Preparedness Plan and undertake further research and experiments in order to ensure that the Plan is complete and practicable.

Development of information system

7. The existing administrative system for rural development focuses on the use of plans in order to create cooperation between different sectors and levels. The information system is therefore one of the major instruments for planning, plan coordination, monitoring and evaluating the activities of the various projects and localities. A more efficient information system, in terms of speed of data collection and processing and uniformity of data, will facilitate close coordination between agencies. In order to achieve this, the following guidelines are specified for developing the information system for rural development plan coordination, monitoring and evaluation:

(1) Develop a centralized information system by storing basic data at the Information Processing Institute for Education and Development. Specific information should be kept at the implementing agencies in order to avoid duplication of efforts.

(2) Designate responsibility for management, collection, evaluation and utilization in order to allow management of the information system to operate with efficiency and timeliness.

(3) Increase the administrative efficiency of the information system by establishing standardized information for use by the various agencies. Each province and department involved in rural development should be equipped with computers so that an information network can be established linking central units and the provinces.

(4) Improve and strengthen the provincial and departmental information system for rural development. The information system will be used for planning, project screening, monitoring and evaluation at the provincial and departmental levels. The aim is to enable the implementing agencies to manage their own information, exchange information with other agencies and modify information bases rapidly.

(5) Study and analyse suitable administrative and information systems necessary for rural development at the provincial and departmental levels. The systems will aim at establishing a system for monitoring and evaluation and appropriate budgets for promoting better coordination between the responsible agencies.

(6) Establish an information system for planning provincial and departmental rural development within the framework of the National Economic and Social Development Plan. This will aim at ensuring that the work system for rural development is efficiently planned and managed in the long run.

(7) Establish an information system to be used for screening provincial and departmental rural development projects. The information will be used for considering increases or reductions in annual budget allocations and for selecting projects appropriate to actual needs.

(8) Establish an information system for monitoring and evaluating provincial and departmental rural development. The system will be used to assess the efficiency of each project, identify delays and obstacles that arise during project implementation and review the scope and contents of the projects and related policy guidelines at higher levels.

(9) Study, analyse and identify basic information needed by provinces, departments and the Information Processing Institute for Education and Development (the information centre for rural development). The aim is to establish more efficient information management in accordance with the coordination of work and responsibilities between provinces, departments and the Information Processing Institute.

(10) Train and upgrade personnel and prepare manuals for using the information system at the provincial and departmental levels in order to promote understanding of the rural development information system. Training should also be given on the use of data processing equipment, especially for computers that are necessary to rural development work.

Improvement of efficiency in rural development planning at the sub-district level

8. In order that sub-district councils may become independent and efficient organizations capable of planning and implementing local administration in accordance with the principle of decentralized authority, planning for rural development at the sub-district level will be used to determine guidelines. Planning will entail making a list of projects that will be used as a reference for sub-district councils to use in recommending guidelines for sub-district development plans. Planning will also serve as a guideline for the implementing agencies to follow and thus result in coordinated activities in the sub-districts and less duplication of efforts. Planning guidelines for rural development at the sub-district level are as follows:

(1) Planning for future land use. This is divided into 2 categories:

(1.1) Planning for land use outside community areas will aim at obtaining optimum agricultural and industrial use of land resources and maximum benefit for the local people.

(1.2) Planning for land use within community areas will aim at building public utilities and amenities, bearing in mind the need to minimize investment costs and provide wide service coverage.

(2) Planning derived from identifying communities with the potential to be further developed into the centres of subdistricts or villages. Suitable locations will be provided for public

services that are still unavailable, such as sub-district council offices, health centres, schools, agricultural markets, common silos and warehouses, public parks, children's playgrounds. The following will be implemented:

(2.1) Plans for developing water resources, such as irrigation planning and water resource improvement, will aim at obtaining maximum yields in agriculture and industry.

(2.2) Suitable sites and networks will be identified for infrastructure planning in order that they may benefit the localities. For example, communications networks will be planned according to the economic benefits to be derived from reducing production costs in agriculture and industry; water resource planning will take into account the need to provide clean water to the population over a wide area; and electricity supply planning will aim at making power available for production and for raising the standard of living of the people.

(2.3) Environmental development planning in rural communities will aim at making the environment clean, hygienic and orderly and free from such sources of pollution as dust, noise, odours, dirty water, etc. Local people should take the major role in developing their own environment.

CHAPTER 7

INCREASING PARTICIPATION BY PEOPLE'S ORGANIZATIONS AND THE PRIVATE SECTOR IN RURAL DEVELOPMENT

1. An important principle of rural development policy is in encouraging the people to play a greater role in rural development by understanding the nature of the problems involved, finding solutions to the problems and taking the initiative in solving their own problems and those of their communities wherever possible. Meanwhile the government would play a catalytic role in forging closer cooperation between the government and the people and the private sector through the following guidelines:

(1) Support the role of the sub-district councils in developing their own localities by implementing projects in accordance with rural job creation plans.

(2) Encourage the people to develop their quality of life in accordance with the concept of basic minimum needs.

(3) Support the mobilization of community resources to set up rural village development funds.

2. In line with the preceding guidelines, the Fifth Plan period saw progress in projects under rural job creation plans, in the campaign to encourage people to improve their quality of life in accordance with the concept of basic minimum needs, in promoting the setting up of special-purpose village funds, in establishing rural development funds for supporting the expansion of the special-purpose funds and in identifying village development projects. Operations were carried out by people's organizations such as village committees and central committees for voluntary self-defence and development, which are the key organizations for translating the government policy on people's participation in development into practical and effective implementation.

3. The implementation of people's participation in rural development in the Fifth Plan achieved results that are visible to some extent, but in some areas implementation is still at a very early stage and is limited in operational scope. The campaign to encourage the people to improve their quality of life in accordance with the concept of basic minimum needs, for example, was launched in only one village per sub-district in 1986 while rural development fund operations, which started in 1985, were confined to only 38 provinces in the targeted poverty areas.

4. Moreover previous promotion of people's participation in development has mainly concerned cooperation between the government and the people or cooperation among the people themselves. The private sector has recently taken a more important role in rural development alongside the public sector, but previous administration of rural development has not laid down a clear format for cooperation between the government and the private sector or between the private sector and the people.

Development guidelines

5. Rural development guidelines for increasing the participation of people's organizations and the private sector will thus continue to emphasize the role of sub-district councils in developing their own localities by means of project implementation under the rural job creation plans. At the same time the scope of operations will be widened by encouraging the people to develop the quality of life in line with the concept of basic minimum needs and by encouraging communities to increase resource mobilization by setting up village development funds. The pattern and form of operation for private sector participation in rural development will also be clearly defined.

5.1 Support the role of sub-district councils in developing their localities by continuing the Work Plan for Rural Employment Generation into the Sixth Plan period. The budget to be allocated for this purpose will not be less than 2,100 million baht per annum.

5.2 Support local fund raising efforts that aim at establishing rural development funds to be used in self-development.

Development will have 2 main targets: to foster self-reliance among the rural population and to allow the people to participate in rural development. The Work Plan for Rural Development Funds is designed to support the attainment of these targets. The funds will provide financial assistance through counterpart loans to the development projects of people's organizations and the various special-purpose funds. The Programme for Rural Development of the Sixth Plan specifies the following operational guidelines:

(1) Extend counterpart loans and technical support to development projects initiated by people's organizations throughout the country.

(2) Improve the management efficiency of rural development funds at all levels.

(3) Strengthen special-purpose village funds in terms of business investment, management efficiency and people's participation in the funds. The ultimate aim is to have a single, unified village fund.

(4) Extend counterpart loans to rural development fund projects in all villages throughout the country.

(5) Coordinate financial and technical assistance from domestic and foreign public and private sector organizations in order to strengthen the special-purpose funds.

(6) Improve administrative mechanisms, rules, regulations and procedures for operating rural development funds. The aim is to make them clearer, more precise and more in line with actual working conditions by adopting the administrative system of the Committee on National Rural Development.

(7) Promote and create understanding of the principles, rules and regulations among officials at all levels and among the people concerned.

(8) Take into consideration the level of support from the government budget and give priority to grants from various organizations.

(9) Promote the integration of the resources of the various special-purpose funds in the village. The aim is to combine resources and thus strengthen business operations and ultimately create a single village fund.

5.3 Support participation by the people in improving their quality of life based on the concept of basic minimum needs, which would lead to greater self-reliance.

In order to encourage the people to recognize problems, analyse causes and attempt to solve problems on their own wherever possible with a view to strengthening the capability for self-reliance, the key strategy adopted by the government includes a national campaign to encourage the general public to improve their quality of life. The campaign, launched in 1986, uses the basic minimum needs as a yardstick for measuring the quality of life of rural people in relation to the essential elements of health and sanitation, access to government services, people's participation in developing safety in life and property and spiritual development. If the basic minimum needs, for example access to clean drinking water, safety of life and property and participation in self-development, are satisfied, then the minimum standard of living is considered to have been attained. If the living conditions are below this level, there will be campaigns to create activities that improve the standard of living of individuals and communities. Activities that cannot be undertaken by the people themselves may be passed on for government solutions. A further use of the criteria of basic minimum needs is as instruments for accelerating the rural development activities of various ministries in particular areas, which will be achieved through cooperation between government officials, people's organizations and the local people; as a result, villages with high development potential may be developed into model villages exemplifying the achievement of self-reliance through government support and mobilization of local resources.

Operational guidelines in the Sixth Plan period are as follows:

(1) From 1987, every unit in every sub-district throughout the country will collect data on basic minimum needs and undertake development activities. In each district, a group of 3-7 villages will constitute core model villages. The villages will perform the following activities:

(1.1) Collect data on basic minimum needs for local use in line with the prescribed form (Jor Por Thor 1). Sub-district working groups on development will provide assistance by collecting information (Jor Por Thor 2) and summarizing the data (Jor Por Thor 3).

(1.2) Village committees will use the 32 criteria of basic minimum needs for identifying deficiency problems, analysing causes and prioritizing problem-solving projects. Projects within the capabilities of the village will be undertaken immediately. For projects requiring the support of the government and other government projects, the prescribed form (Kor Chor Chor, sub-district level) is to be submitted to the sub-district council for approval.

(1.3) Village committees will undertake to solve problems by implementing specified projects, as follows:

– Set up rural village development funds

– Village committees and the people will jointly implement problem-solving projects that they have identified as lying within their capabilities. This will be accomplished with the support of sub-district officials (sub-district working groups and development). For projects that address problems that cannot be solved by the village and have been presented to and approved by the sub-district council, the village committee and the people should offer their support.

(1.4) Village committees will collect annual data on basic minimum needs in order to evaluate improvements in the quality of life and standard of living of the village people.

(2) The government has marked the period of 1985-1987 for the national quality of life campaign. All agencies concerned, especially those of the 4 principal ministries, are to use the campaign as a guideline for setting up or modifying rural development projects under their responsibility in response to actual conditions that have been identified in the campaign survey.

(3) The Subcommittee on Coordination of National and Local Development Plans will supervise project implementation. The National Rural Development Coordinating Centre will be responsible for project management. The project will utilize the criteria of basic minimum needs (Jor Por Thor 1) together with the information system of the Committee on National Rural Development and will also include monitoring and evaluation of development activities.

5.4 Support the role of the Regional Joint Public/Private Sector Consultative Committees and the Provincial Joint Public/Private Sector Consultative Committees and increase the role of people's organizations, the general public and the private sector in rural development.

Guidelines for rural development in the Sixth Plan expand the scope of work from solving the poverty problem to include upgrading the standard of living from the poverty level to the subsistence level, which would in turn lead to better living conditions. In this respect, the Joint Public/Private Sector Consultative Committees at the regional and provincial levels may

participate in development and in solving rural economic problems, which will lead to progress in production and agricultural marketing and in rural industry. The private sector, which plays a vital role in rural development because of its manpower, budgetary resources and large number of organizations, could be the essential development force by increasing coordination with the government sector. It is therefore important that operational guidelines for promoting the roles of the Regional and Provincial Joint Public/Private Sector Consultative Committees, people's organizations, the general public and the private sector in rural development are specified as follows:

(1) Guidelines for supporting the role of the Regional and Provincial Joint Public/Private Sector Consultative Committees

(1.1) Support and mobilize ideas from the private sector for solving rural economic problems. Farmers and the rural population will be encouraged to acquire technical know-how and capabilities in agricultural and industrial production in line with the guidelines for overall economic development.

(1.2) Distribute production technology in agriculture and industry.

(1.3) Improve the quality of life of farmers by developing their knowledge and abilities.

(1.4) Develop efficiency in production, marketing and production control in correspondence to market demand.

(1.5) Locate and expand markets for agricultural and industrial products.

(1.6) Establish guidelines for production, marketing and finance in line with and in support of overall national development.

(1.7) Promote and strengthen farmers' institutions.

(2) Guidelines for increasing the role of people's organizations, the general public and the private sector.

(2.1) Support private sector consolidations by setting up a central organization for coordinating private sector activities in rural development.

(2.2) Designate government agencies as centres for coordinating with the private sector.

(2.3) Improve coordinating mechanisms by attempting to incorporate private sector work plans into provincial rural development plans.

(2.4) Encourage the private sector to use provincial rural development plans as a basis for planning projects and work plans.

CHAPTER 8

WORK PLANS AND BUDGET FOR RURAL DEVELOPMENT

Operational work plans

1. In line with the policy guidelines for rural development in the Sixth Plan, the Programme for Rural Development consists of 3 main groups of work plans, as follows:

1.1 Work plans of the principal ministries, namely, the Ministry of Agriculture and Cooperatives, Ministry of Interior, Ministry of Public Health, Ministry of Industry and Ministry of Education. This group consists of the following 5 work plans:

(1) Work Plan for Improving Infrastructure, consisting of road construction and maintenance projects, electricity, land allocation and issuance of land ownership documents.

(2) Work Plan for Increasing Production, Income and Employment, consisting of occupational promotion projects in agricultural and non-agricultural sectors and improvements in productivity.

(3) Work Plan for Water Resource Development, consisting of construction and maintenance of small-scale and medium-scale water resource projects and land development to benefit from small and medium-sized water resources.

(4) Work Plan for Public Health, consisting of projects for health and sanitation services and the promotion of sports and recreational activities.

(5) Work Plan for Promoting Knowledge and Education, consisting of projects to promote non-formal education and vocational training in agricultural and non-agricultural sectors.

The foregoing are part of the regular work plans of the 5 ministries. The plans have been integrated under the Programme for Rural Development within the administrative system of the Committee on National Rural Development. As a result, the operations of the ministries should support rather than duplicate each other. Each project should follow these operational conditions;

(a) Projects may be directly requested by the people in line with the procedures for preparing provincial rural development plans.

(b) Projects may be jointly requested by government agencies and the people; for instance, by district development committees in conjunction with sub-district councils or by sub-district working groups on development in conjunction with sub-district councils or village committees.

(c) Projects may be requested by provincial authorities in agreement with districts, sub-districts and villages on the subject of beneficiaries.

1.2 Work plans for encouraging participation by people's organizations and the private sector include the following 5 work plans:

(1) Work Plan for Rural Employment Generation

(2) Work Plan for Developing the Quality of Life of the Rural population Based on the Criteria of Basic Minimum Needs

(3) Work Plan for Rural Development Funds

(4) Work Plan for Government and Private Sector Cooperation

(5) Work Plan for Private Sector Organizations

1.3 Work plans for rural development administration consist of the following main activities:

(1) Develop plans for provincial regions so that the central and provincial regional agencies responsible for planning administration receive budget allocations and are able to coordinate assigned work in line with the rural development policy on a regular and continuous basis.

(2) Organize personnel training and supervision in order to improve the level of knowledge and efficiency of government officials at the central and provincial regional levels in regard to rural development administration.

(3) Monitor and evaluate rural development work. Ministries responsible for work plans under rural development plans will be encouraged to monitor and evaluate their own projects.

2. Ministries and departments are to draw up plans to accommodate and expand the benefits accruing to royal-initiated projects that have started up in rural areas to solve immediate problems. The projects aim at producing direct benefits for the people and could be expanded and incorporated into the regular system.

3. In implementing the work plans, sub-district councils will be encouraged to develop their own development plans that integrate local resources with external assistance. By using primary village data, the requests and project arrangements of the various agencies will be harmonized and the benefits derived from various projects will be integrated. It is anticipated that in the Sixth Plan period at least one sub-district in every district in the country should be able to accomplish the prescribed activities.

Work plan budgets in 1987 and in 1988–1991

1. 1987 budget

1.1 Government work plans, which comprise 5 major work plans in 1987, include projects under the responsibility of the Ministry of Agriculture and Cooperatives, Ministry of Interior, Ministry of Public Health, Ministry of Education and Ministry of Industry. The total budget of 13,017.37 million baht is allocated to the ministries as follows:

a. Ministry of Agriculture and Cooperatives	5,787.10 million baht
b. Ministry of Interior	3,314.58 million baht
c. Ministry of Public Health	2,801.38 million baht
d. Ministry of Education	787.67 million baht
e. Ministry of Industry	326.64 million baht

1.2 Work plans for encouraging participation by people's organizations and the private sector comprise 5 major work plans, 3 of which are ready for immediate implementation in 1987: the Work Plan for Rural Employment Generation under the Secretariat of the Rural Employment Generation Programme, Office of the Prime Minister; the Work Plan for Developing the quality of Life of the Rural Population under the National Rural Development Coordinating Centre, Office of the National Economic and Social Development Board; and the Work Plan for Rural Development Funds under the Secretariat of the Rural Development Fund, Office of the Prime Minister. The total budget for 2 of these work plans totals 2,130.00 million baht and is allocated as follows:

a. Work Plan for Employment Generation	2,100.00 million baht
b. Work Plan for Rural Development Funds	30.00 million baht

Both of these work plans are continuing from the Fifth Plan period.

1.3 For the administration of rural development during the Sixth Plan period, the organizations responsible for supervising, controlling and coordinating operations, training, monitoring and evaluation are the Office of Agricultural Economics; Office of Policy and Planning, Ministry of Interior; Office of the Permanent Secretary, Ministry of Public Health; Office of the Permanent Secretary, Ministry of Education; and National Rural Development Coordinating Centre, Office of the National Economic and Social Development Board. The budget allocated to work plans for administration for 1987 amounts to 29.75 million baht.

2. 1988–1991 budgets

In regard to rural development plan implementation during the 1988–1991 period, budgets can be clearly allocated for 2 groups of work plans only: work plans for encouraging participation by people's organizations and the private sector and work plans for rural development administration. The annual budgets for these 2 types of work plan will be equal to the budget set in 1987.

Annual budgets for the work plans of the 5 ministries during the 1988–1991 period will be allocated by each ministry, following the 1987 ratio of project budget to total ministerial budget.

- Notes:**
1. Guidelines for allocating the 1987 budget are based on the regular work plans of the 5 principal ministries in the previous year, plus some projects that have been revised or expanded.
 2. Guidelines for allocations the 1988–1991 budget are based on the 1987 budget and the rate of increase of 1987 over previous years.
 3. Guidelines for allocating ministerial budgets are based on the nature of the problems described in NRD 2c forms. Groups with the most problems will receive the highest budget allocations. Ranked in order of seriousness, the key groups of problems are: production, income and employment; public health; water resources; knowledge and education; and infrastructure.