

7. STRENGTHENING OF LOCAL GOVERNMENT

The primary concern of this section is focused on the public sector, in particular local governments, because the roles of local governments will become more important under the decentralization policy. In this sense, some problems and shortcomings of local governments to be addressed are identified:

- administrative capacity;
- people's participation;
- financial availability; and
- sustainable project implementation system.

7.1 Strengthening of Administrative Capacity

(1) Establishing Computerized Information System

The establishment of a computerized information system for development planning, program/project formulation, financial management, budgeting, administration and service delivery can enhance the planning and management capacity of local authorities if it is combined with appropriate training programs for their executives and staff.

(2) Inquiring into the Possibility of Amalgamation among Local Governments

In rural areas, amalgamation of several small TAOs into larger units (new Tambon) as collective communities may cope with the existing situation, that is, many small TAOs without sufficient administrative and financial capacity. In urban and urbanizing areas, a merger between the urban nucleus and surrounding TAOs and new Tesaban may cope with the problem of underbounding of the municipal areas.

(3) Promoting the Formation of Local Government Cooperatives

If there is little possibility to merge local governments, then local governments will have to learn how to do joint investment projects together to gain economies of scale, which is a new experience in Thailand. An

effective method to promote cooperation among local governments is the formation of "local government cooperative."

7.2 Promotion of People's Participation

(1) Dissemination of Best Practice of People's Participation in Local Governance

It is essential to conduct a study in order to identify and disseminate best practice on people's participation in local governance. In the near future, Thailand will accumulate around 8,000 experiences of local authorities regarding the operation of the new model of policy making. By conducting a study on their experiences and the promotion of "Technical Cooperation among Local Authorities," local authorities and communities can benefit from and make use of all the findings which otherwise would remain experiments or may take a long time to reach all local governments and communities.

(2) Provision of Training Programs on Leadership and People's Participation

Provision of appropriate training programs for local leaders and civil society has been required. Although the Thai's new model of local policy making is excellent, this does not automatically produce good performances by local governments. The model still depends on the capacity of leaders and local people and the way they participate in order to achieve intended benefits. In this respect, it is important to disseminate their method of leadership and people's participation to other local leaders.

7.3 Strengthening of Financial Capacity

(1) Establishment of Tambon Development Fund

It is proposed that the Tambon Development Fund be established. Today, there is a Municipality Development Fund that has been utilized by many municipalities to finance specific development projects as well as

urgent needs. However, there is no such fund for TAOs, thereby making it difficult for them to implement needed development projects due to the lack of budget. The proposed Tambon Development Fund can solve part of their financial problems. It has the following mechanism similar to that of the Municipality Development Fund.

(2) Introduction of Guidelines for Issuing Bonds for Large Municipalities

As for municipalities, one way to develop their own sources of revenues is issuing municipal bonds. Introducing this instrument into the financial environment in Thailand has several benefits. In addition to raising capital for specific projects, it may serve as an incentive for municipal reform and institution building by stimulating administrative and financial discipline on the part of existing local bodies and/or by creating independent statutory authorities.

These authorities are charged with the responsibility and resources to undertake specified tasks. The creation of such authorities has been essential in financing and supplying infrastructures, for instance, sewerage systems, solid waste treatment systems, water resource developments and local airports.

Furthermore, the introduction of the municipal bond may mobilize domestic savings and strengthen capital markets, which could encourage the movement of funds from the informal sector into the formal economy.

(3) Establishment of a "Self-reliant Village Fund"

Unlike the Tambon Development Fund proposed before, this is a fund to provide each village with a grant (1 million Baht per year) in order to support villages' self-help activities. A rationale for the establishment of this kind of fund is that the effects of projects can be extended at the regional as well as the national levels. Therefore, it has a possibility to remedy the problem of huge disparity in income between urban and rural sectors in Thailand. Second, in supporting the people and the communities to handle some of the functions of TAOs, this may also contribute to reducing the burden of TAOs with weak administrative and financial capacity. Third, the fund can contribute not only to the

construction of physical facilities, but also to the increase in the number of individuals who acquire knowledge and experience to cope with their own problems.

7.4 Establishment of a Project Management and Implementation System

(1) Provision of Training Program for Local Authorities and Civil Society

It is necessary to improve the training program on development planning and monitoring for local authorities and civil societies. The new model of policy-making process in local authorities in Thailand presupposes the strong capacity of local authorities and civil societies at each level. However, the civil societies, TAOs and Tesaban Tambon have been just established, so that they do not have sufficient skill and experience regarding the formulation of development plans and project monitoring. Partly because the formulation of a development plan has been regarded as the work of the central government, even large municipalities and provincial authorities have not accumulated needed skills in this field. For the new model of policy making to be effective, therefore, the Thai Government should improve existing training programs on development planning and monitoring for local authorities and civil societies.

(2) Introduction of a Performance Indicator System for TAOs

As for the municipality, the TDRI recently conducted research on its performance indicator system. The research attempted to build municipal performance indicators based on four basic standards, namely, efficiency, services, financial discipline, and saving (cost management and cost-recovery), then proposed 26 indicators to cover the main tasks of a municipality, such as registration, public services, hygiene maintenance, finance and tax collection.

It is important to establish such kind of performance indicator system for TAOs as well. The establishment of such a performance indicator system for TAOs can contribute not only to effectively monitor and evaluate TAOs' performance but also to improve prioritization of local needs by giving a message to local authorities about the tasks expected.

(3) Establishment of Local Government Associations

At present, many local governments in Thailand do not possess sufficient financial resources and technical expertise to pursue some of their functions effectively such as solid waste and wastewater management, computerization and fire-fighting. The capital requirements needed to set up efficient facilities are too costly for the local government alone to afford.

By establishing a common facility, each local government is able to reduce costs while achieving the same objective. In addition, managing common facilities requires sustainable cooperation among member local governments. However, this is difficult to achieve since each local government usually has different interests derived from different resources, skills, objectives and procedures.

Thus, the sustainability of cooperation depends largely upon the effectiveness of coordination among local governments. The creation of local government association can contribute to handling this issue.



8. IMPLEMENTATION PROGRAM

8.1 Development Scenario

The development scenario is composed of three phases.

Phase 1 (2001-2005): Strengthening of the Existing Economic Activities and Preparation for Future Development

In the initial stage, existing economic activities should be strengthened and preparatory works for future development should be focused on.

As for the environmental issue, maintenance of the current eco-system is the focal task through forest conservation and provision of urban environmental facilities. Agriculture should be encouraged to put higher valued-added products and production methods by agricultural diversification and crop conversion, while local resources, which are currently inadequately utilized, should be sufficiently utilized by developing new products and improving existing products.

Human resource development, in particular vocational training, should be strengthened for further industrial development. Infrastructure development focuses on the transport facilities relevant to the 2nd Mekong Bridge to smoothly facilitate the East-West Corridor. In response to decentralization, the capability building of local governments, in particular staff training, is essential at the initial stage.

Phase 2 (2006-2010): Promotion of Local Industry and Human Resources

Based on the achievements of Phase 1, coherent efforts need to be made for encouraging local industry promotion in both the agriculture and industry sectors.

Agricultural diversification and crop conversion should be accelerated by exploiting new markets and developing distribution channels. Using local products from diversified agricultural products, agro-processing industries should be promoted. An industrial network should be organized to improve the market information and technical supporting system for local business promotion.

To effectively utilize the completed 2nd Mekong Bridge, border cooperation between Mukdahan and Savannakhet should be encouraged in business and administrative areas through a projects and programs under "Pair-City" development concept. Local governments need to be strengthened to embark and evolve local initiative projects and programs.

Phase 3 (2011-2020): Promotion of Industrial Development targeting GMS Market

Towards the long-term vision, continuing efforts should be made in Phase 3. In general, the NBR can formulate its own unique economic zone, which targets the GMS markets. Agricultural diversification and crop conversion have been achieved with higher value-added products and seasonal workers have obtained middle-class jobs. New investments for manufacturing, transport and a variety of urban services are promoted based on well-developed infrastructures, an adequate number of quality human resources and an adequate size of urban economy. People co-exist with nature by sustainable utilization of natural endowments.

Table 8.1 summarizes the recommended development scenario as mentioned above.

Table 8.1: Recommended Development Scenario

Phase	Phase 1	Phase 2	Phase 3
Year	2001-2005	2006-2010	2011-2020
Target	Strengthening of the existing economic activities and preparation for future industrial Development	Promotion of local industry and agriculture	Promotion of industrial location targeting GMS market and formulation of independent economic zone
General Development Objectives	The development should be focused on the preparation of future development and uplifting existing industries to mitigate the rural poor.	Local based economy should be strengthened by diversifying marketing and distribution channels. Local industrial support system should be organized to prepare investment from other areas.	The NBR forms its own independent economic zone under a sustainable natural resource utilization. Development will be coordinated and decided by local initiatives.
Economic Development	Current agriculture will be upgraded to produce higher value-added products. Utilization of local resources, which are not adequately used, will also be promoted. Major focal actions are: <ul style="list-style-type: none"> ● Agricultural diversification and crop conversion ● Promotion of local resource based products 	Agricultural diversification and crop conversion will be accelerated and local industry should be promoted through: <ul style="list-style-type: none"> ● Promotion of agro-processing industry ● Promotion of direct sales channels and pilot shop in BKK ● Establishment of local industrial platform (LIP) ● Establishment of local products development and research center 	Industrial development is accelerated with Indochina East-West Corridor and GMS market by: <ul style="list-style-type: none"> ● Promotion of investment for manufacturing, transport and service industries ● Utilization of IT Technology and LIP
Human Resource Development	Human resource development, in particular middle class workers, which will require industrial development in medium and long term, should be emphasized by: <ul style="list-style-type: none"> ● Expansion of vocational training ● Promotion of human resource development for industry 	Overall education and training system of the NBR will be completed though: <ul style="list-style-type: none"> ● Improvement of basic education ● Improvement of out-of-school education 	The NBR becomes a center of human resource development with: <ul style="list-style-type: none"> ● Establishment of higher educational institute targeting GMS
Environmental Management	Forests should be well conserved and rehabilitated, which play a core function of eco-system of the NBR, and environmental loads from human activities should be reduced by: <ul style="list-style-type: none"> ● Conservation of Phu Phan mountain area ● Provision of urban environmental facility 	Co-existence between forest conservation and human activities will be encouraged through: <ul style="list-style-type: none"> ● Agro-forestry in buffer zones ● Community forest development in hilly areas 	Sustainable natural use and minimum environmental lards from human activities will be accomplished by: <ul style="list-style-type: none"> ● Urban growth management ● Establishment of agro-forestry and community forest
Infrastructure and Urban Development	Transport infrastructure relevant to formulate Indochina East-West Corridor should be constructed.	To strengthen urban economy by utilizing 2 nd Mekong Bridge, border cooperation will be encouraged though: <ul style="list-style-type: none"> ● Establishment of pair city (Mukdahan and Savannakhet) 	functions of the urban enters will be strengthened adequately to lead regional economy by: <ul style="list-style-type: none"> ● Establishment of the NBR Urban Alliance
Institutional Development	To prepare decentralization, capacity of local government should be strengthened through: <ul style="list-style-type: none"> ● Training for the local government staff ● Computerization of administration 	Local government will improve its capacity of project implementation and efficient administration through: <ul style="list-style-type: none"> ● Establishment of local government income collecting system ● Improvement of project implementation capacity ● Performance indicator system 	The local government will achieve "Good Governance" through: <ul style="list-style-type: none"> ● Improvement of public service delivery system ● People's participation practice ● Improvement of transparency and accountability

8.2 Project Costing and Schedule

In total 92 projects/programs are proposed as components of the PLANET Master Plan. The total required public funding to implement the Master Plan is estimated at 23.2 billion Baht at year 2000 constant prices for over the next 20 years.

Implementation of the Master Plan is divided into three phases to reflect the concept of the development scenario as follows:

Phase 1: Strengthening of the existing economic activities and preparation for future development (2001-2005);

Phase 2: Promotion of Local Industry and Human Resources (2006-2010); and

Phase 3: Promotion of Industrial Development targeting GMS Market (2011-2020).

The cost for each development phase is 6,456 million Baht for Phase 1, 10,791 million Baht for Phase 2, and 5,196 million Baht for Phase 3. Average investment cost of each phase is 1,291 million Baht per year during Phase 1,

2,158 million Baht per year during Phase 2, and 591 million Baht per year during Phase 3.

Thus, priority is given to the Phase 2: Promotion of Local Industry and Human Resources.

Transportation sector is dominant, reaching at about one-third of the total investment cost. Most of it is allocated to highway improvement under the "Urban Alliance Program" and construction of the Third Mekong Bridge in Phase 3. Agriculture sector requires the second largest investment, reflecting the current industrial structure of the NBR economy. Urban sector requires a similar amount of investment with the agriculture sector, most of which is used for improvement of urban environment such as wastewater treatment facility.

In the short-and medium-term, NBR will need an intensive budget allocation for environmental improvement such as wastewater treatment system and solid waste treatment system. At the same time, the institutional and organizational arrangement for preparation of the Local Industrial Platform is required in order to enhance the private participation in the long-term.

Table 8.2: Master Plan Implementation Cost

Strategy	Sector	Phase 1	Phase 2	Phase 3		Total Cost			Number of project	
		2000-2004	2005-2009	2010-2014	2015-2020	(Million Baht)	USD million	Share(%)		
1	Environment	450.0	150.0	115.0	65.0	780.0	18.8	3.4%	3.4%	6
2	Agriculture	1,580.0	2,210.0	405.0	5.0	4,200.0	101.4	18.4%	19.5%	14
	Rural Community Development	115.0	115.0	15.0	15.0	260.0	6.3	1.1%		4
3	Industry	400.0	1,177.0	400.0	150.0	2,127.0	51.4	9.3%	11.1%	11
	Tourism	332.0	50.0	38.0	0.0	420.0	10.1	1.8%		5
4	Human Resource Development	773.6	863.3	276.8	276.8	2,190.4	52.9	9.6%	9.6%	13
5	Health	185.0	143.3	33.3	33.3	395.0	9.5	1.7%	51.8%	4
	IT	45.0	120.0	0.0	0.0	165.0	4.0	0.7%		6
	Transport	60.0	3,535.5	1,520.0	2,000.0	7,115.5	171.9	31.1%		10
	Urban Development	2,125.0	2,030.0	0.0	0.0	4,155.0	100.4	18.2%		10
	Local Government Empowerment	390.8	316.7	241.7	95.8	1,045.0	25.2	4.6%	4.6%	9
	Total	6,456.4	10,710.8	3,044.8	2,640.9	22,852.9	552.0	100.0%	100.0%	92

Note: excluding DOH's committed two projects (TR01 and TR03) and a project beyond year 2020 (TR13)

8.3 Evaluation of the Master Plan

(1) Capability of Thai National and Provincial Budget

For 2001, the total expenditures of the Thai government are estimated to amount to about Bt 910 billion (USD 21.98 billion). Of this total, expenditures on capital investment are estimated at about Bt 221 billion (USD 5.34 billion) in 2001.

In terms of overall Government expenditures, the necessary funding for the proposed Master Plan represents a quite small proportion. The annual average investment in Phase 1 is just a 0.14% of the year 2001 national budget. It therefore seems very easy to accommodate the additional expenditure from within existing sources of the national budget.

On the other hand, it is quite difficult for the local governments of NBR to allocate the budget to the Master Plan implementation within their funding capability. In 1998 total revenue of the NBR provinces was Bt 942 million (USD 22.95 million), which is lower than the necessary fund for the master plan implementation.

It therefore can be concluded that the national government should have responsibility for the implementation in terms of financing.

(2) Economic Consideration

The economic consideration provides a comprehensive view of whether the proposed Master Plan meets the NBR's economic objectives efficiently or not. In the master plan, the analysis takes the perspective of NBR as a single economic agency, and analyzes the public investment costs and economic benefits to the society of NBR in terms of contribution to the growth of GRDP.

To achieve the goal of the Master Plan: 100,000 Baht per rural household in the year 2020, Alternative 3: Urban Rural Linkage based Development scenario was selected. Under this scenario all the component projects were arranged. Table 8.3 summarizes anticipated GRDP of two different development scenarios: "with" and "without" cases.

A difference between the two GRDPs is regarded as additionally generated GRDP in the NBR by the master plan implementation.

The annual average growth rate of the "without" case over the next twenty years is calculated at 2.54% per year. While in the case of "with PLANET" scenario, the annual average growth rate is estimated at 3.25% per year. The net present value of the differential of the two GRDPs is estimated at Bt 53,696 million (USD1,297 million), while that of the implementation cost is estimated at Bt 12,226 million (USD295.3 million).

Figure 8.3: GRDP of "With PLANET" and "Without PLANET"

	Urban rural linkage development scenario (With PLANET)			Trend case (without PLANET)		Differential of GRDP (With - Without)	PLANET Project Cost
	GRDP	Per capita GRDP	Rural household income	GRDP	Per capita GRDP		
Unit	Million Baht	000 Baht	000 Baht	Million Baht	000 Baht	Million Baht	Million Baht
1998	66,625	21.4	70	66,625	21.4	0	
2010	99,933	28.9	87	89,516	25.9	10,417	17,166 (2001-2010)
2020	130,371	34.7	100	112,883	30.1	17,488	5,687 (2011-2020)
Annual growth rate	3.25%	2.33%	1.71%	2.54%	1.64%		
Net Present Value						53,696	12,226

Thus, the public investment under the master plan will contribute to the growth of GRDP at plus 0.71% in average or provide a GRDP four times larger against the additional public investment for PLANET in terms of net present value via stimulating the private sector activity.

Therefore, it can be said that the implementation of PLANET is very feasible from the public investment point of view.

8.4 Organizational and Institutional Arrangement

The first and foremost important thing for the master plan implementation is to base on the consensus the importance and significance of developing an appropriate regional structure among the four provinces to achieve the target. Funding issue is the most critical matter that should be tackled by the four provincial governments with close cooperation with the national governmental organizations.

(1) Establishment of Higher Committee for NBR Development

In order to ensure the funding sustainability of the master plan implementation, continuous efforts should be made by the four provincial governments. The provincial governments should jointly negotiate this matter with central government agencies such as NESDB and MOF.

The establishment of a “Higher Development Committee for NBR” is proposed to deal with such matter. This committee will be headed by the four provincial governors, and supported by high-rank officials of the four governments as secretary. This committee will discuss development policy issues jointly and establish a common development strategy.

Another important function of this committee is coordination with the Lao side. Since the master plan includes several projects under the “Pair City Program,” close cooperation is required to proceed with the idea.

(2) Establishment of PLANET-NBR Technical Coordination and Development Promotion Committee

The effect of the proposed projects is not limited within the four provinces; most of the projects provide a region-wide benefit including the Lao side. The regional development issues in NBR should be dealt with by exerting orchestrated efforts by the four provincial governments. In this context, it is recommendable that under the policy guideline of the previously proposed “Higher Committee,” the establishment of a technical coordination and development promotion organization is proposed as a single NBR-specific development and management body.

This organization includes the following sub-committees:

- Transportation Technical Coordination and Promotion Sub-Committee;
- Urban Infrastructure Technical Coordination and Promotion Sub-Committee;
- Education Program Coordination and Promotion Sub-Committee;
- Health Sector Coordination and Promotion Sub-Committee;
- Industrial Development Coordination and Promotion Sub-Committee; and
- Environmental Management Sub-Committee.

(3) Empowerment of Rural Community

The involvement of rural community, especially in developing rural products (One Village, One Product project), is an indispensable need in the context of NBR development because more than 70% of the population inhabits the non-municipal area (villages).

To support such rural activities, establishment of an administrative organization is proposed under each province. The function of this organization includes:

- Consulting services regarding financial access;
- Consulting services regarding market access;
- Technical advice and support; and
- Coordination between villages on production process (horizontal regional

specialization).

(4) Involvement of NGOs

Ten (10) NGOs are currently active in the Northeast region of Thailand. There is a large possibility of working together with these NGOs for implementing the Master Plan under a decentralized local society.

Therefore, it is proposed that a single public (or semi-public) organization be established to coordinate the activities of NGOs covering the four provinces. The functions of this organization shall include:

- Registration and matching services between NGO activities and local needs
- Monitoring of NGO activities; and
- Arrangement of Joint Activity Programs to be done by multiple NGOs, etc.

(5) NBR Business Forum

Encouragement of private sector activity is a key factor in developing the regional economy, and this could be the most important issue in the future NBR. In this context, establishment of a single organization consisting of business entities of the four provinces towards further promotion of private sectors' business activities. This organization will be established by private sector initiative but should be supported by the four governments. Activities of this organization include:

- Regular meeting for information exchange;
- Public-private meeting for discussion of development policy and projects;
- Joint promotion to invite external investment; and
- Support to compatriot activities in Bangkok, etc.

9. PRIORITY PROJECTS AND PROGRAMS

9.1 Selection of Priority Projects

A total of 92 projects have been identified in the Master Plan. These proposed projects and programs are prioritized by the following criteria:

- Local needs to realize the vision by the local stakeholders;
- Contribution to industrial restructuring in the NBR;
- Contribution to improvement of farm household income;
- Necessity of local initiatives for project implementation under a decentralization policy; and

- Contribution to strategically strengthen the regional function of the NBR in relation to the macro concept along with the Indochina East-West Corridor development (realization of maximum utilization of the Second Mekong International Bridge).

Based on the criteria, the following 14 projects/programs are selected as the first batch of priority projects/programs, which should be discussed by the proposed Higher Committee and the various central government agencies:

PRIORITY PROJECTS AND PROGRAMS

- Integrated Farming in Rain-fed Areas Project
- Farm Activities Integration Program
- Livestock Promotion Project
- One Village, One Product Project
- Local Industry Platform (LIP) Project
- Special Incentives for Border Trade Zone Program
- E-commerce Promotion Project
- Local Area Network by IT Project
- Mukdahan City Air Terminal Project(a part of Joint Utilization of Savannakhet Airport)
- Mukdahan Goods Distribution and Processing Center Project
- Joint Urgent Medical Care System Development between Mukdahan and Savannakhet
- Joint Tourism Promotion Program
- Strengthening of Higher Education Capacity Project
- Local Government Capacity Building Program

9.2 Projects and Programs for Preliminary Feasibility Study

Among the selected 14 priority projects/programs, 4 projects have been selected for pre-feasibility study based on the following criteria:

- The project which has been justified by the central government;
- The project which has the appreciation of the local stakeholders;
- The project which has less problems on land acquisition; and
- The project which has advanced in project preparation.

(1) Integrated Farming in Rain-fed Areas

Objective: Increase and stabilize farm income by introduction of integrated farming system

Model Case: A farming household - rice (10 rai (1.6ha)), fruit (4 rai (0.64ha)), vegetables (2 rai (0.32ha)), pond (2 rai (0.32ha)), house (2 rai (0.32ha)), cow (5 head), chicken (75)

Initial Investment Cost: 180,000 Baht (USD 4,348)

Operation and Management: 14,000 Baht (USD 338) per year

Revenue: 52,000 Baht (USD 1,256) per year (after 5th year of operation)

FIRR: 13.1%

(2) Local Industry Platform (LIP)

Objective : To establish a new supporting organization to promote local business activities, to promote external investment, to develop new local industries

Scope: Coordination and integration of private, public and academic societies

Human resource development

Support to technological development

Business incubation

Information exchange

Consulting services on business management

Research and development
Initial Investment: 52 million Baht (USD 1.27 million)

(3) Human Resource Development

1) Expansion of Rajamangala Institute, Kalasin

Objective: To provide IT-related engineers

Scope: To establish new IT faculty in Rajamangala Institute

Initial Investment Cost: 75 million Baht (USD 1.81 million)

Revenue: 38.5 million Baht (USD 0.93 million) per year after 2011

FIRR: 19.0%

2) Establishment of New Rajabhat Institute, Mukdahan

Objective: To educate local people as middle-class engineers and managers; to provide higher education to NBR and Lao people

Scope: 4 faculties (education, science and technology, social science and business administration), 1,500 students

Initial Investment Cost: 823 million Baht (USD 19.88 million)

Revenue: 52 million Baht (USD 1.26 Million) per year (after 2011)

FIRR: 9.9%

(4) Mukdahan Goods Distribution and Processing Center

Objective: To develop a new goods distribution center to meet the increasing goods transportation demand due to the development of the East-West corridor.

Scope: Truck terminal (600 berth: 200 berth in phase 1), Inland Container Depot (ICD), Industrial Estate

Initial Investment Cost: (truck terminal and ICD only) 188 million Baht (USD 4.54 million)

Revenue: 49.1 million Baht (USD 1.19 million) per year in 2020

FIRR: 15.9%

10. RECOMMENDATIONS

To forward this master plan, the following actions are recommended:

- NESDB should position the PLANET Master Plan in the next 5-year plan (9th National Economic and Social Development Plan) in the context of border area development. In this regard, it is recommended that the NBR be designated as a “Special Border Economic Zone” to raise the priority of its projects among the central agencies.
- Concerned agencies in the central government should jointly carry out the proposed projects and programs. In particular, the priority projects such as the Mixed-Farming System in rain-fed areas, Human Resource Development projects (expansion of Ratchamangala Institute in Kalasin, establishment of Ratchaphat Institute in Mukdahan), Local Industry Platform (LIP) projects and Mukdahan Goods Distribution and Processing Center project should be carried out immediately.
- Local governments (provinces and municipalities) should review and update their development plans to cope with the master plan. The projects and programs proposed under the Master Plan should be included in the next 5-year plan after a review process.
- Provinces in the NBR should continuously maintain close cooperation to realize the Master Plan. Regular meetings among the 4 provinces or a committee for the Master Plan Implementation should be organized to petition the project implementation to the central agencies.
- NESDB and SPI should keep close cooperation for the Master Plan Implementation. Joint implementation of priority projects between Thailand and Laos such as the Joint Use of

Savannakhet Airport should be carried out as a symbol of Thai-Lao cooperation.



FUTURE SPATIAL DEVELOPMENT CONCEPT

Figure

Legend

- Regional Primary Urban Center
- Regional Secondary Urban Center
- Local Urban Center
- Regional Primary Road
- Regional Secondary Road
- Local Primary Road
- Indo-China East-West Corridor
- Tourism Service Facilities Development
- Industrial Area/Disaster Center
- Border Pair City Development
- NBR Urban Alliance
- River Crossing
- Vocational Institute (Expansion)
- Local Industry Platform
- GNSS University
- Airport
- Second Mekong International Bridge
- Water Bodies

Natural Conservation

- National Park/Wild Life Sanctuary
- Reserved Forest Area
- Buffer Zone
- Community forest
- Reforestation Area
- Conservation Area (Flood Prone Area)

Agriculture Diversification and Crop Conservation

- Pan Rubber Promotion Area
- Vegetables/Fruits Promotion Area
- Mixed Farming Promotion Area
- Cassava
- Sugar Cane
- Intensive Farming in Large Scale

Figure

Scale: 0 10 20 30 Kilometers

Map Source: 1. ITC, Land Use Division, Department of Land Development, Ministry of Agriculture and Cooperatives
2. Royal Survey Department, Project map (1:50,000)
3. Royal Survey Department
4. National Geographic Institute, Thailand
5. Ministry of Natural Resources and Environment, Thailand

PLANET
The Study on Integrated Regional Development Plan for the Northeastern Border Region in The Kingdom of Thailand

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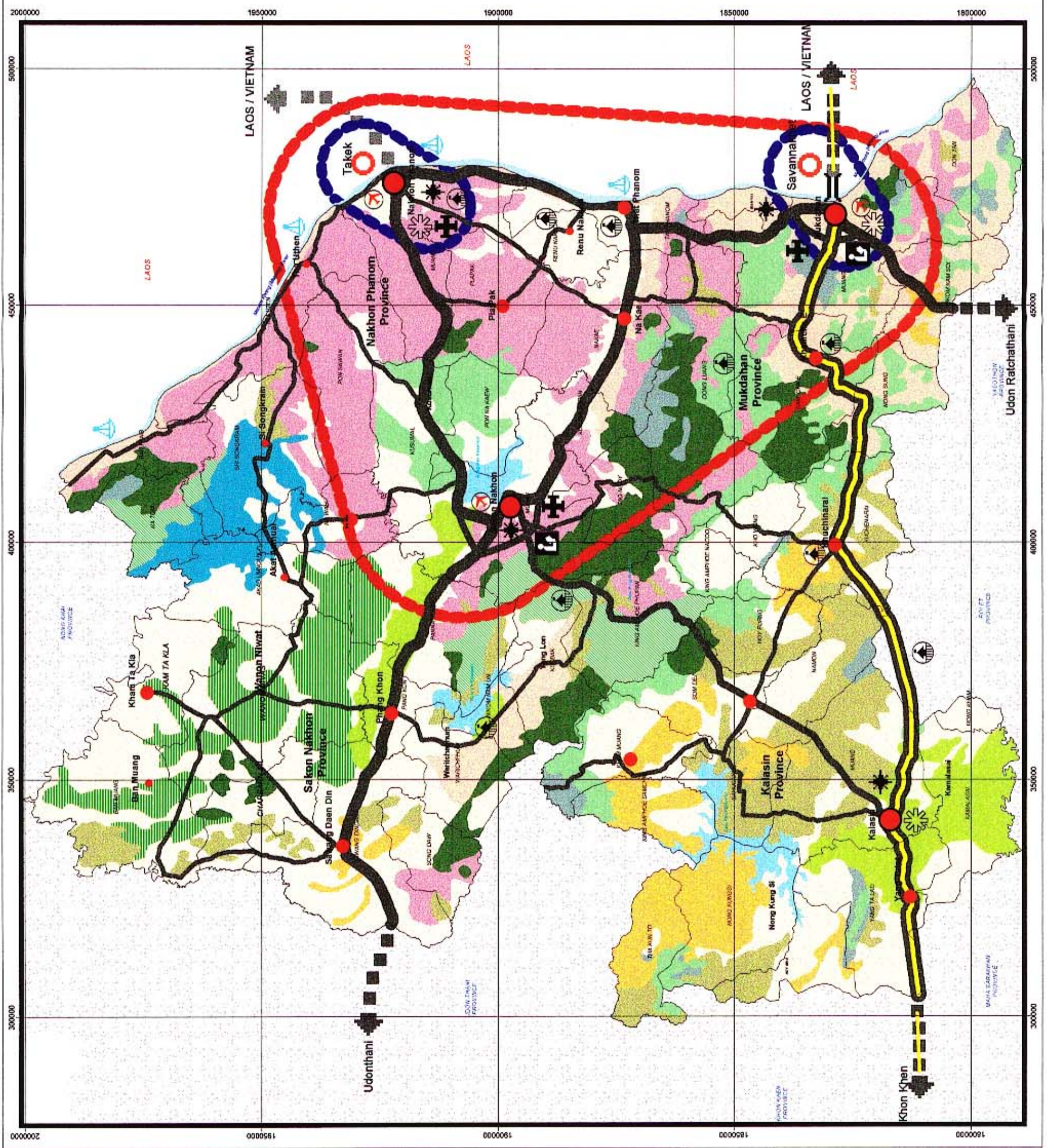


Table A1 Implementation Schedule of the Projects (Strategy 1: Environment Sector)

Code No.	Sector	Name of Project/Program	Location	Implementing Organization	Schedule				Cost (Million Baht)	
					2000-2004	2005-2009	2010-2014	2015-2020		
1	ENV01	Environment	Water Quality Management Program	Sakon Nakhon Nakhon Phanom Mukdahan Kalasin	MOSTE Municipality	■				450.0
2	ENV02	Environment	Soil Conservation Program	Nakhon Phanom Mukdahan Sakon Nakhon	MOSTE		■			100.0
3	ENV03	Environment	Buffer Zone Program in Phu Phan Mountain	Mukdahan, Sakon Nakhon	RFD		■	■		100.0
4	ENV04	Environment	Community Forest Program in the Hilly Forest Area	Nakhon Phanom Mukdahan	RFD			■	■	100.0
5	ENV05	Environment	Rural Energy Production	Sakon Nakhon Nakhon Phanom Mukdahan Kalasin	RDF			■	■	30.0
6	LU01	Land Use	Farm Activities Integration Program	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	BOI DOAE			■	■	50.0
						450.0	150.0	115.0	65.0	780.0

Table A2 Implementation Schedule of the Projects (Strategy 2: Rural Community Development Sector)

Code No.	Sector	Project/Program	Scope (components)	Place	Implementing Organization	Schedule				Cost (Million Baht)
						2000-2004	2005-2009	2010-2014	2015-2020	
RCD01	Rural Community Development	Artisan Certificate Project	Fact finding survey Setting evaluation criteria and system Selection of craftsmen Promotion Incentive provision	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	CDD MOID	■	■	■	■	60.0
RCD02	Rural Community Development	Women's Production Group Strengthening Project	Training (designing, quality control, business management) Study tour Establishment of support system (loan, consulting services)	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	CDD MOID TAC NGOs	■	■			100.0
RCD03	Rural Community Development	One Village One Product Promotion Project	Seminar, study tour & training Consulting service	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	CDD MOID TAO NGOs	■	■			50.0
RCD04	Rural Community Development	CDW Service Improvement Project (PLANET)	Demand survey Data system establishment Registration of resource persons Establishment of match-making service	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	CDD TAO	■				50.0
						115.0	115.0	15.0	15.0	260.0

Table A3 Implementation Schedule of the Projects (Strategy 2: Agriculture Sector)

Code No.	Sector	Name of Project/Program	Location	Implementing Organization	Schedule				Cost (Million Baht)
					2000-2004	2005-2009	2010-2014	2015-2020	
AG01	Agriculture	Program for Increasing Production Efficiency in Irrigated Area	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	DOAE Local Government	■				100.0
AG02	Agriculture	Restructure of Agricultural Production in Rain-fed Area	Sakon Nakhon Mukdahan Nakhon Phanom	DOAE	■	■			1500.0
AG03	Agriculture	Strengthening of Farmer's Organization	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	DOAE	■				100.0
AG04	Agriculture	Rubber Plantation Development	Nakhon Phanom Mukdahan	DOAE	■	■			500.0
AG05	Agriculture	Small and Medium Pond Development Project	Sakon Nakhon Mukdahan Nakhon Phanom Kalasin	Muban	■	■			500.0
AG06	Agriculture	Community Mobile Water Pump Project	Sakon Nakhon Mukdahan Nakhon Phanom Kalasin	Muban	■				120.0
AG07	Agriculture	Livestock Promotion	Sakon Nakhon Nakhon Phanom Mukdahan	DOLS		■	■		600.0
AG08	Agriculture	Daily Production Development	Sakon Nakhon Nakhon Phanom Mukdahan	DOLS		■	■		200.0
AG09	Agriculture	Acquaculture Estate at Mekong River	Nakhon Phanom Mukdahan	DOF		■			50.0
AG10	Agriculture	Promotion of Freshwater Prawn Culture	Sakon Nakhon Kalasin	DOF		■			300.0
AG11	Agriculture	E-commerce System of Village Products	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	NECTEC		■			100.0
AG12	Agriculture	Improvement of Marketing System	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	MOAC		■			100.0
AG13	Agriculture	Farm Experience Exchange Program	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	TAO DOAE	■	■			10.0
AG14	Agriculture	Village Leaders Training Program	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	TAO DOAE	■	■	■		20.0
					1,580.0	2,210.0	405.0	5.0	4,200.0

Table A4 Implementation Schedule of the Projects (Strategy 3: Industrial Sector)

Code No.	Sector	Project/Program	Place	Implementing Organization	Schedule				Cost (Million Baht)
					2000-2004	2005-2009	2010-2014	2015-2020	
IND01	Industry	Local Industrial Platform	4 provinces	Public and Private sectors					400.0
IND02	Industry	International Joint Research Center by Universities	4 provinces	MOE, Universities in NBR					100.0
IND03	Industry	Industrial Technology Development Center	4 provinces	MOSTE					150.0
IND04	Industry	Sofia Plaza	4 provinces	MOE 4 provinces					50.0
IND05	Industry	Mediaship	4 provinces	NECTEC 4 provinces					1.0
IND06	Industry	Nakhon Phanom Industrial Area	Nakhon Phanom	IEAT					250.0
IND07	Industry	Sakon Nakhon Bio-Park	Sakon Nakhon	IEAT, MOSTE					150.0
IND08	Industry	Mukdahan Goods Distribution and Processing Center	Mukdahan	MOTC, IEAT					270.0
IND09	Industry	Kalasin Industrial Area	Kalasin	IEAT, Kalasin					250.0
IND10	Industry	Compatriot Office for I-san People in Bangkok	Bangkok	4 province					6.0
IND11	Industry	Small and Medium Industries Support Program	4 provinces	4 province					500.0
					400.0	1,177.0	400.0	150.0	2,127.0

Table A5 Implementation Schedule of the Projects (Strategy 3: Tourism Sector)

Code No.	Sector	Project/Program	Place	Implementing Organization	Schedule				Cost (Million Baht)
					2000-2004	2005-2009	2010-2014	2015-2020	
T01	Tourism	Tourism Free Zone Program	Sakon Nakhon, Mukdahan, Lao and Vietnam	MOFA, BOI, Province, TAT					38.0
T02	Tourism	New Tourism Products Development Program	Sakon Nakhon, Nakhon Phanom, Mukdahan, Kalasin	TAT, Province, Chamber of Commerce					75.0
T03	Tourism	Local Participation Promotion Program	Sakon Nakhon, Nakhon Phanom, Mukdahan, Kalasin	CDD, TAO, DOH, TAT					50.0
T04	Tourism	Improvement of Tourism Environment	Kalasin, Sakon Nakhon, Nakhon Phanom, Mukdahan	Municipality, Province, TAT, DOH					250.0
T05	Tourism	Joint Tourism Promotion	Kalasin, Sakon Nakhon, Nakhon Phanom, Mukdahan	TOT (Laos), TAT, Chamber of Commerce, Province (Thailand and Laos)					7.0
					332.0	50.0	38.0	0.0	420.0

Table A6 Implementation Schedule of the Projects (Strategy 4: Human Resource Development Sector)

Code No.	Sector	Project/Program	Place	Implementing Organization	Schedule				Cost (Million Baht)
					2000-2004	2005-2009	2010-2014	2015-2020	
HRD01	Human Resource Development	Education Awareness Campaign	Mukdahan (Nong Sung and Dong Luang) Nakon Phanom (Phon Sawan)	MOE and Provincial Education Offices					2.0
HRD02	Human Resource Development	School Accesibility Improvement	Mukdahan, Nakon Phanom, Sakon Nakhon and Kalasin	MOE, and Provincial Education Offices					32.4
HRD03	Human Resource Development	Scholarship Fund	Mukdahan, Nakon Phanom, Sakon Nakhon, and Kalasin	TAO, MOE and Provincial Education Office					20.0
HRD04	Human Resource Development	Primary Teachers Training	Mukdahan, Nakon Phanom, Sakon Nakhon and Kalasin	MOE, and Ris					350.0
HRD05	Human Resource Development	Lower Secondary School Independence	Mukdahan, Nakon Phnaom, Sakon Nakhon and Kalasin	MOE and provincial education offices					500.0
HRD06	Human Resource Development	GMS International University Training Center	Nakon Phanom	MOE, and MOUA					100.0
HRD07	Human Resource Development	English & Computer Literacy Improvement	Higher Education institutes; e.g., RI at NBR	MOE and MOUA/Individual Universities; e.g. RI					8.0
HRD08	Human Resource Development	Vocational School System Reform	Nakon Phanom, Sakon Nakhon and Kalasin	MOE, MOI, MOI, MOLSW, Related provincial					40.0
HRD09	Human Resource Development	Internship for Vocational Students	Mukdahan, Nakon Phanom, Sakon Nakhon and Kalasin	MOE and MOI					20.0
HRD10	Human Resource Development	Vocational School Expansion	Mukdahan, Nakon Phanom, Sakon Nakhon and Kalasin	MOE and MOI					200.0
HRD11	Human Resource Development	Capacity Building Training for Local Government Officers	Mukdahan, Nakon Phanom, Sakon Nakhon and Kalasin	MOE					20.0
HRD12	Human Resource Development	IT HRD Center in Rit Kalasin	Kalasin						75.0
HRD13	Human Resource Development	New Rajabhat Institute Mukdahan	NBR	MOE					823.0
					773.6	863.3	276.8	276.8	2190.4

Table A7 Implementation Schedule of the Projects (Strategy 5: Urban Sector)

Code No.	Sector	Project/Program	Place	Implementing Organization	Schedule				Cost (Million Baht)
					2000-2004	2005-2009	2010-2014	2015-2020	
UR01	Urban Development	Waste Water Treatment in Nakhon Phanom	Nakhon Phanom Municipality	Municipality	■				1000.0
UR02	Urban Development	Expansion of solid waste disposal site at Nakhon Phanom	Nakhon Phanom Municipality	Municipality		■			100.0
UR03	Urban Development	Flood Control at Nakhon Phanom	Nakhon Phanom Municipality	Municipality		■			300.0
UR04	Urban Development	Solid waste management at Mukdahan	Mukdahan Municipality	Municipality	■				100.0
UR05	Urban Development	Waste Water Treatment in Mukdahan	Mukdahan Municipality	Municipality	■				1000.0
UR06	Urban Development	Bridge park in Mukdahan	Mukdahan Municipality	Municipality		■			80.0
UR07	Urban Development	Waste Water Treatment Expansion at Sakon Nakhon	Sakon Nakhon Municipality	Municipality		■			500.0
UR08	Urban Development	Waste Water Treatment at Kalasin	Kalasin Municipality	Municipality		■			1000.0
UR09	Urban Development	Segregated waste collection project in Kalasin	Kalasin Municipality	Municipality	■				25.0
UR10	Urban Development	Kong Don Krang park development in Kalasin	Kalasin Municipality	Municipality		■			50.0
					2,125.0	2,030.0	0.0	0.0	4,155.0

Table A8 Implementation Schedule of the Projects (Strategy 5: IT Sector)

Code No.	Sector	Project/Program	Scope (components)	Place	Implementing Organization	Schedule				Cost (Million Baht)
						2000-2004	2005-2009	2010-2014	2015-2020	
IT01	Information and Communication Technology	Optic Fiber Extension Project	Expansion of optic fiber link from each Amphoe Muang To all other Amphoes.	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	TOT and concessionalre		■			0.0
IT02	Information and Communication Technology	Rural Telecom Improvement Project	Fixed line extension Rural wireless system Rural terminals	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	TOT and TT&T	■				0.0
IT03	Information and Communication Technology	International Telecom Gateway Project	Connection to Savannakhet -Microwave -Optic fiber, etc	Mukdahan	CAT or private		■			0.0
IT04	Information and Communication Technology	Rural Cargo Information Center	Call Center Short Mail Service Center Information provision through internet	In any Changwat	Changwat Office		■			75.0
IT05	Information and Communication Technology	Agricultural Market Information Center	Mini-FM broadcasting Short Mail Service Center Product information center online Online product market Agriculture futures center	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	Changwat Office		■			45.0
IT06	Information and Communication Technology	Seasonal Labor Matchmaking Center	Seasonal Work Information Center Call Center	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	Employment Security Office	■				45.0
						45.0	120.0	0.0	0.0	165.0

Note: the costs of TOT's programs are excluded from the Master Plan costing

Table A9 Implementation Schedule of the Projects (Strategy 5: Transportation Sector)

Code No.	Sector	Project/Program	Place	Implementing Organization	Schedule				Cost (Million Baht)
					2000-2004	2005-2009	2010-2014	2015-2020	
TR01	Transport	The Second Phase Widening Project/NBR Urban Alliance Development Program (PLANET)	NBR	DOH, MOTC	■				4080.0
TR02	Transport	New Widening Project/NBR Urban Alliance Program (PLANET)	Mukdahan Sakon Nakhon Nakhon Phanom	DOH, MOTC		■			4600.0
TR03	Transport	The Second Phase Widening Project/International and Regional Interface Development Program (PLANET)	NBR	DOH, MOTC	■				9154.0
TR04	Transport	Rural Products Home Delivery Service Center Project	Mukdahan Sakon Nakhon	Mukdahan Sakon Nakhon Private sector	■				37.5
TR05	Transport	Inland Container Depot	Mukdahan	Changwat Office, Concession to private companies		■			188.0
TR06	Transport	Mukdahan City Air Terminal Project	Mukdahan	DOA, MOTC		■			62.5
TR07	Transport	The Third Mekong Bridge	Nakhon Phanom	DOH, MOTC			■		2000.0
TR08	Transport	Ferryboat Pier Improvement Project	Nakhon Phanom	DOH, PAT, Municipalities		■			38.0
TR09	Transport	Savannakhet Airport Dedicated Shuttle Bus Service Development	Mukdahan	DOA, MOTC Concessionaire		■			4.5
TR10	Transport	Minor Boat Pier Improvement Project	Nakhon Phanom Mukdahan	DOH, PAT, Municipalities	■				45.0
TR11	Transport	Mukdahan and Savannakhet Urban Transportation Master Plan Study	Mukdahan Savannakhet	OCMLT Mukdahan Savannakhet			■		70.0
TR12	Transport	Nakhon Phanom and Tha Khek Urban Transportation Master Plan Study	Nakhon Phanom Tha Khek	OCMLT Nakhon Phanom Tha Khek			■		70.0
TR13	Transport	Bua Yai - Mukdahan - Nakhon Phanom Railway Project	Mukdahan, Nakhon Phanom	OCMLT SRT				beyond 2020	-
including planned DOH project									20349.5
excluding planned DOH project (PLANET New Project)									7115.5

Table A10 Implementation Schedule of the Projects (Strategy 5: Health Sector)

Code No.	Sector	Project/Program	Place	Implementing Organization	Schedule				Cost (Million Baht)
					2000-2004	2005-2009	2010-2014	2015-2020	
H01	Health	Non-Communicable Disease(NCD) Control Program	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	Province, Municipality, TAO					100.0
H02	Health	Improvement of School Health System	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	Province, Municipality, TAO					220.0
H03	Health	Regional Referral Information Networking Project	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	Hospitals, clinics and health centers					75.0
H04	Health	Improvement of School Milk Program	Kalasin Sakon Nakhon Nakhon Phanom Mukdahan	DOL					360.0
					185.0	143.3	33.3	33.3	395.0

Table A11 Implementation Schedule of the Projects (Local Government Sector)

Code No.	Sector	Project/Program	Place	Implementing Organization	Schedule				Cost (Million Baht)
					2000-2004	2005-2009	2010-2014	2015-2020	
LG1	Local Government	Staff Training program for TAOs	Whole Nation	DOLA					30.0
LG2	Local Government	Establishment of Tambon Development Fund	Whole Nation	DOLA					200.0
LG3	Local Government	Introduction of Guidelines for Issuing Bond for Large Municipalities	Whole Nation	DOLA					115.0
LG4	Local Government	Study on the Identification and Dissemination of Best Practice of People's Participation in Local Governments	Whole Nation	DOLA					75.0
LG5	Local Government	Introduction of Performance Indicator System for Local Government	Whole Nation	DOLA NESDB					75.0
LG6	Local Government	Promoting Technology Transfer from the Central Government to Local Governments	Whole Nation	DOLA and other central government					37.5
LG7	Local Government	Promoting the Formation of Local Government Cooperatives	Whole Nation	DOLA					37.5
LG8	Local Government	Establishment of "Self-reliant Village Fund"	Whole Nation	DOLA NESDB					400.0
LG9	Local Government	Pilot projects for computerization of Municipality	Pilot Municipality to disseminate to whole Nation	Pilot Municipality(ies)					75.0
					390.8	316.7	241.7	95.8	1,045.0

List of projects and Programs