

# PLANET

*The Study on the Integrated Regional Development Plan for the Savannakhet and Khammouan Region in the Lao PDR and the Northeastern Border Region in the Kingdom of Thailand*

Japan International Cooperation Agency

Committee for Planning and Cooperation  
Lao People's Democratic Republic

Office of the National Economic and Social Development Board  
The Kingdom of Thailand

# Development Vision and Cooperation Programs for the Cross Border Region

## Final Report Summary

**The Study on the Integrated Regional Development Plan  
for the Savannakhet and Khammouan Region  
in the Lao People's Democratic Republic**

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

September 2001

International Development Center of Japan

S S F

KRI International

JR

Pacific Consultants International

01-122(1/2)

### **Currency Equivalents**

US\$1 = 41.4 Thai Baht  
(1998 Bank of Thailand reference rate)

US\$1 = 7,700 Kip  
(Estimate from 1999 IMF reference rate)

## Preface

In response to each request from the Government of the Lao People's Democratic Republic and the Kingdom of Thailand, the Government of Japan decided to conduct the Study on the Integrated Regional Development Plan for the Savannakhet and Khammouan Region in the Lao PDR and the Northeastern Border Region in the Kingdom of Thailand, and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent a study team which was headed by Dr. Jinichiro Yabuta of International Development Center of Japan to the Lao PDR and the Kingdom of Thailand from March 2000 to August 2001.

The team held discussions with the officials of the Lao and Thai Governments, and conducted field surveys. After the team returned to Japan, further studies and analysis were made and this report was prepared.

I hope that this report will contribute to the development of the Savannakhet and Khammouan Region and the Northeastern Border Region and enhancement of friendly relations among Lao PDR, Thailand and Japan.

I wish to express my sincere appreciation to the officials concerned of the two Governments for their close cooperation extended to the team.

September 2001

A handwritten signature in black ink, consisting of stylized Japanese characters, positioned above a horizontal line.

Takao Kawakami

President

Japan International Cooperation Agency

September 2001

Mr. Takao Kawakami  
President  
Japan International Cooperation Agency  
Tokyo, Japan

Dear Mr. Kawakami

### Letter of Transmittal

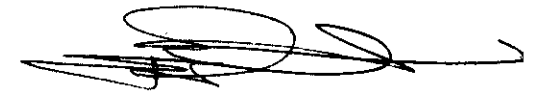
We are pleased to submit to you the final report for the Study on the Integrated Regional Development Plan for the Savannakhet and Khammouan Region (SKR) in the Lao PDR and the Northeastern Border Region (NBR) in the Kingdom of Thailand. The report contains our studies on the present condition of regions as well as surrounding international environment, analysis of the underlying conditions affecting the further regional development based on the regional resources, formulation of SKR and NBR masterplans and development programs/projects for cross border cooperation.

This report presents 22 projects for cross border cooperation over the two countries. Among them, the three most important projects are listed as priority projects for the earliest implementation.

We wish to take this opportunity to express our sincere gratitude to your Agency and the Ministry of Foreign Affairs. We also wish to express our deep gratitude to the National Economic and Social Development Board (NESDB) in the Kingdom of Thailand and the Committee for Planning and Cooperation (CPC) in the Lao PDR and other authorities concerned for the close cooperation and assistance extended to us during our study.

We hope that this report will contribute to regional development of the cross border region.

Very truly yours,



Jinichiro Yabuta

Project Manager / Cross National Development Team Leader  
The Study on the Integrated Regional Development Plan for  
the Savannakhet and Khammouan Region in the Lao PDR and  
the Northeastern Border Region in the Kingdom of Thailand

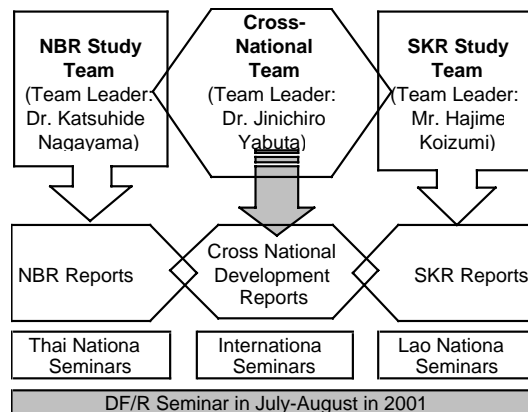
# Cross Border Region



## FOREWORD

This volume summarizes a report, “Development Vision and Cooperation Programs for the Cross Border Region (CBR Report)”, which is prepared to complement the Master Plans for Savannakhet and Khammouan Region in Lao PDR (SKR Report) and for the Northeastern Border Region in Thailand (NBR Report). SKR and NBR are the regions facing each other along the Mekong River as shown in the map. The term Cross-Border Region (or CBR) in this report is used to represent a combined geographical area that consists of SKR and NBR.

Relationship between this volume and SKR and NBR reports are as follows:



### **Role of CBR Report:**

A main role of CBR Report is to facilitate region-to-region cooperation between SKR and NBR. As a medium to facilitate this cross-border cooperation, the report consists of following subject matters:

#### **To know each other better:**

Firstly, it is important to know each other before starting to work together. The report provides key information about SKR and NBR that should be understood and shared by both parties.

#### **To know where we are:**

Secondly, it is also important to know surrounding conditions of SKR and NBR. The report provides key information about international settings surrounding SKR and NBR in terms of both economic outlook and spatial structure. In addition, major on-going projects at the level of GMS are summarized for reference.

#### **To know where to go:**

Thirdly, it is needed to have common baseline development visions for SKR and NBR. The report describes geo-economic characteristics of CBR, and then future development

visions to be shared by both SKR and NBR. These visions are also provided as starting points for Master Plans for SKR and NBR.

At the same time, it is so obvious that there is a large difference between socio-economic conditions in Lao PDR and Thailand. So is in SKR and NBR. Thus, it is inevitable to prepare two separate master plans for them. More specifically, detailed development targets and strategies are presented in SKR and NBR reports.

**To Highlight the Link between SKR and NBR:**

On the other hand, enhancement of the link between SKR and NBR is important for both of them. Therefore, Cross-Border Cooperation Programs are prepared to highlight common interests specifically related to enhancement of the link between SKR and NBR.

**To present concepts and options for region-to-region cooperation activities:**

Any cross-border activity shall be a “joint” activity in practice. There is no entity that is responsible for the CBR as one integrated unit of administration in terms of implementing development programs. Therefore, Cross-Border Cooperation Programs are prepared to facilitate these joint activities. There shall be various joint meetings or committees to promote joint activities.

**Structure of the report:**

The CBR Report consists of seven chapters. In Chapter 1-3 existing conditions are described. In Chapter 4, the geo-economic characteristics and development visions for the CBR are presented. Chapter 5-7 consists of the cooperation programs and priority projects.

**Appendices:**

Appendices consist of four sector papers but they are not included in this summary. Please refer to the main report.

**Development Vision and Cooperation Programs  
for the Cross Border Region**

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**SUMMARY**

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### **List of Abbreviations**

ADB	Asian Development Bank
AFTA	ASEAN Free Trade Area
ASEAN	Association of Southeastern Asian Nations
BOI	Board of Investment (Thailand)
CBBDF	Cross-Border Business Development Forum
CBR	Cross-Border Region
CEPT	Common Effective Preferential Tariff
CIQ	Custom, Immigration and Quarantine
CPC	Committee for Planning and Cooperation (Former SPC)
DCA	Department of Civil Aviation (MCTPC, Lao PDR)
DOA	Department of Aviation (MTC, Thailand)
DOH	Department of Highways (MTC, Thailand)
EWC	East West Corridor
F/S	Feasibility Study
FDI	Foreign Direct Investment
FIMC	Foreign Investment Management Committee (Lao PDR)
FTI	Federation of Thai Industries
GMS	Greater Mekong Subregion
GPP	Gross Provincial Product
GRP	Gross Regional Product
HRD	Human Resources Development
IMF	International Monetary Fund
IMR	Infant Mortality Rate
IRAP	Integrated Rural Accessibility Project
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
Lao PDR	Lao People's Democratic Republic
LCC	Lao Chamber of Commerce
MCAT	Mukdahan City Art Terminal
MCTPC	Ministry of Communications, Transport, Post and Construction (Lao PDR)
MMR	Maternal Mortality Rate
MTC	Ministry of Transport and Communications (Thailand)
NBR	Northeastern Border Region (Thailand)
NESDB	National Economic and Social Development Board
OECD	Overseas Economic Cooperation Fund

PFI	Private Finance Initiative
SAA	Savannakhet Airport Authority
SAPROF	Special Assistance for Project Formulation (OECF)
SKR	Savannakhet and Khammouan Region
SMAA	Savannakhet – Mukdahan Airport Authority
SPC	State Planning Committee (The former name of CPC. Lao PDR)
TCC	Thai Chamber of Commerce
UNDP	United Nations Development Programme
WTO	World Trade Organization

## CHAPTER 1 OVERVIEW OF SKR AND NBR

### 1.1 Basic Outlook of CBR

#### Baseline Indicators

Baseline indicators of SKR and NBR are as summarized in Table 1.1.

**Table 1.1 Baseline Indicators of NBR-SKR**

Indicators (1998)	Savannakhet			Khammouan			SKR Total		Mukdahan		Nakhon Phanom		Sakon Nakhon		Kalasin		NBR Total	
Land area (km <sup>2</sup> )	21,774	16,315	38,089	4,340	5,513	9,606	5,947	26,405										
Population (prs.)	726,890	294,830	1,021,720	330,413	711,116	1,090,190	947,964	3,079,683										
Pop. density (prs/km <sup>2</sup> )	33	18	27	76	129	113	159	117	<i>(Pop growth 1997)</i>									
Pop. growth rate (%)	2.5%	2.6%	2.5%	1.1%	0.7%	0.8%	0.8%	0.8%										
Households	120,550	53,660	174,210	75,094	177,779	272,548	236,991	762,412										
<b>Economic Structure</b>	<i>(1998 at current price, billion Kip)</i>								<i>(1997 at current price, billion Bhat)</i>									
Production																		
GPP/GRP	525 100%	351 100%	876 100%	8.5 100%	13.6 100%	23.1 100%	19.9 100%	65.1 100%										
Agriculture	289 55%	238 68%	527 60%	1.7 20%	2.8 21%	4.9 21%	5.0 25%	14.4 22%										
Industry	51 10%	76 22%	127 14%	1.6 19%	2.1 15%	3.7 16%	2.5 12%	9.8 15%										
Services	141 27%	33 9%	174 20%	5.2 61%	8.7 64%	14.5 63%	12.4 63%	40.8 63%										
Import duties	44 8%	5 1%	49 6%	-	-	-	-	-										
GRP (approx. in mill. US\$)	201	135	336	211	341	577	497	1,626										
<b>Per Capita GRDP</b> (Approx. in US\$)	<i>(Kip)</i>								<i>(Bhat)</i>									
	721,792	1,191,575	857,354	25,594	19,163	21,174	20,983	21,125										
	277	457	329	640	479	529	525	528										
<b>Employment</b>	<i>(Population census 1995)</i>								<i>(Average of February and August surveys in 1998)</i>									
Agriculture	90%	88%	89%	62%	67%	62%	71%	66%										
Industry	2%	3%	2%	10%	11%	16%	12%	13%										
Services	8%	9%	9%	28%	22%	22%	17%	21%										

#### Population Outlook

Approximately 3.1 million people or 75% of the total population of CBR live in NBR side, while only 1 million people or 25% of the CBR population in SKR side.

The ratio of children in the total population is very high in SKR (Figure 1.1). In CBR, there are many ethnic groups. For example, there are not only ethnic majorities such as ethnic Lao in SKR and Thai in NBR, but also ethnic minorities; Puthai, Kor, Laven, Talieng, So, Yor, Kha, Kaleng, Saek and Kala. Ethnic Lao accounts for 60% of the SKR total population, and ethnic Thai for 95% of the NBR total population.

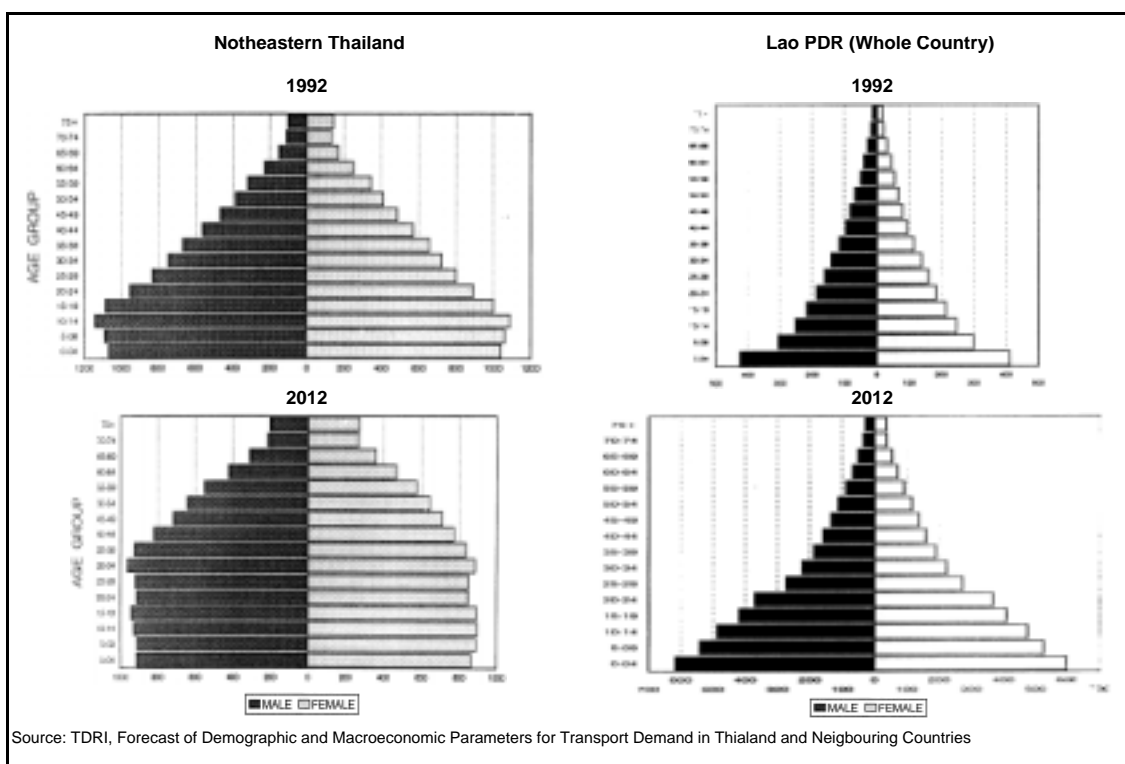


Figure 1.1 Population Pyramid of SKR and NBR

## 1.2 Human Resources

### Public Health

The current situation of public health in SKR and NBR is quite different from each other (Table 1.2). Infant mortality rate (IMR) in SKR is very high, accounting for more than 80 per 1,000. Maternal mortality rate (MMR) in SKR also falls into a serious level, accounting for more than 650 per 100,000.

Table 1.2 Infant Mortality Rate and Maternal Mortality Rate

	SKR		NBR			
	Savannakhet (1995)	Khammouan (1995)	Mukdahan (1999)	Nakhon Phanom (1997)	Sakon Nakhon (1997)	Kalasin (1998)
IMR (per 1,000)	80	85	8.27	13.10	4.00	8.57
MMR (per 100,000)	656	n.a.	53	n.a.	7	18

Note: IMR: Infant Mortality Rate, MMR: Maternal Mortality Rate

### Literacy and Enrollment Ratio:

Most of illiterate population in CBR is concentrated in SKR (Table 1.3). There have been many dropouts before completing 3rd grade especially in SKR rural areas. At

lower secondary level, there is a larger difference between SKR and NBR. Enrollment rate (gross enrollment rate) at this level is approximately 29% in SKR, in contrast to 75.5% in NBR (Table 1.4).

**Table 1.3 Illiteracy Rate**

	(1995)			(1998)				NBR Total
	Savannakhet	Khammouan	SKR Total	Mukdahan	Nakhon Phanom	Sakon Nakhon	Kalasin	
Illiterate	164,076	67,146	231,222	21,046	1,994	17,492	24,667	65,199
% of illiterate/pop.	43.8	44.0	43.8	6.4	0.3	1.6	2.6	2.1

Source: Lao PDR Statistic Office, Laos Population Census, 1995. Min. of Interior, Community Development Data, 1998.

**Table 1.4 Gross Enrollment Ratio in CBR**

Gross enrollment rate	SKR (1998)		NBR (1999)			
	Savannakhet	Khammouan	Mukdahan	Nakhon Phanom	Sakon Nakhon	Kalasin
Primary School	102.3	109.3	106.6	103.3	87.9	92.0
Lower Secondary	29.4	28.4	91.7	85.3	94.6	49.5
Upper Secondary (Academic)	10.7	10.6	53.4	49.5	82.1	7.5

Source: UNDP, Integrated Rural Accessibility Project (IRAP), 1998. Prime Minister Office, Thai Education, 1999.

## 1.3 Economic Structure

Economic structures of SKR and NBR are as shown in Table 1.5.

**Table 1.5 Economic Structure of SKR and NBR**

	NBR (1998)	SKR (1999)
GRP by industrial origin at current price (million US\$)		
AGRICULTURE	426	171
INDUSTRY	176	42
SERVICES	1,008	94
Import duties	-	2
GRP total	1,609	307
GRP Per Capita (US\$)	517	295
GRP Share		
AGRICULTURE	26%	56%
INDUSTRY	11%	14%
SERVICES	63%	31%
Import duties	-	
Population (000)	3,115	1,046
Urban Population	498	153
Rural Population	2,617	893

US\$1=41.4 Bahts (1998 Bank of Thailand reference rate)

US\$1=7700kip (Estimate from 1999 IMF reference rate)

Source: Study Team estimates from data provided by Thailand NESDB and Lao PDR Statistics Office

NBR has larger non-agricultural contents in the economy than SKR does. In NBR, the agricultural sector accounts for only 26% of GRP whereas in SKR it accounts for 56%. The service sector has a share of 63% in NBR in contrast to 31% in SKR. Low profile of the industrial sector is somewhat in common. The industrial sector accounts for 11% in NBR and 14% in SKR.

## **1.4 Land Use**

### **Forests were already converted to farmlands in NBR:**

Although the people's life once depended on the forestry for a long time in NBR, the forest coverage had been decreasing drastically over the years. Currently, the forest coverage rates in each province in NBR are between 9 to 31 %. The total forest coverage rate in 1995 is 15% and it is considered to be very low level.

### **Better resource endowment in SKR:**

In contrast to NBR, the forest keeps its important role in people's livelihood in SKR. Whereas the forest coverage is gradually decreasing, it still remains very high at the level of 85%. These forests in the mountainous areas are one of the major sources for the wood processing industries in NBR. Given low population density, SKR has an advantage in land resources.

## **1.5 Available Development Resources in SKR and NBR**

### **Potentials and constraints:**

Table 1.6 summarizes views and insights into development potentials and constraints with regard to existing resources for regional development in SKR and NBR. For more detail, please see the reports of SKR or NBR master plans.

Regarding natural resources, there is a clear contrast between SKR and NBR. SKR has good potentials in natural resources including forests, water, and land, whereas NBR has no more room for agricultural expansion. On the other hand, NBR has advantage in educated human resources, technology, and market access.

**Table 1.6 Existing Development Resources Analysis of SKR and NBR**

	<b>SKR</b>	<b>NBR</b>
<b>Natural Resources</b>	<b>Abundant but Sensitive:</b>	<b>No More Frontier:</b>
Potentials	-Rich forestry resources -Rich water resources -Available land resources	- - -
Constraints	-Shifting cultivation -Forest reserve to protect	-No more forests -Insufficient water -No more land for agriculture
<b>Human Resources</b>	<b>Lack of Basic Qualification:</b>	<b>Good but Need to Upgrade:</b>
Potentials	- -	-Good quality of industrial workers -Experience on border trade practices
Constraints	-Rapid population growth -Shortage of qualified manpower -Slow Social Integration -Lack of entrepreneurship	-Shortage of highly skilled workers
<b>Economic Activities</b>	<b>Very Small Non-Agriculture Sector, Need More Links to Markets</b>	<b>Insufficient Urban Economies, Need to Diversify Rural Economies</b>
Potentials	-Diverse local products -Proximity to Indochina Market	-Diverse local products -Proximity to Indochina Market -Good provision of infrastructure
Constraints	-Dependence on rice production -No capital and technology -Isolated from market -Dominance of the subsistent economy	-Dependence on mono-cultural cropping -Insufficient industrial base -Remote from sea ports and urban centers

Source: SKR Master Plan, NBR Master Plan

## 1.6 Perspective on Socio-Economic Change

### 1.6.1 Population

#### **Rapid population growth continues in SKR:**

The economic frame for SKR assumes its population to grow at 2.6% from 2000 to 2020. Urban population growth rate, 3.7%, is more than rural population growth rate, 2.4%. This high rate of population growth is changing the SKR's population structure. Although the death rate is decreasing, the birth rate has not been decreasing yet. The demographic transition is still undergoing.

#### **Urban shift is expected in NBR:**

In contrast, NBR's annual population growth rate is assumed to be 0.8% during projected period. It is unlikely to have rapid population growth. However, population movement from rural area to urban area within NBR is set to be high reflecting the fact that promotion of non-agriculture economies is assumed to be one of the major NBR development strategies.



## 1.6.2 Economy

### Population growth based expansion in SKR:

SKR's economy is likely to expand rapidly. Rapid population growth is one of the major factors of expanding economy. In 2020, GPP is estimated to increase 4.8 times as much as the current level (Table 1.7). However, GPP per capita is not growing as much because of huge population growth.

### Structural change based growth in NBR:

It is also assumed for NBR to have rapid economic growth from 2000 to 2020. In 2020, GPP is likely to be almost twice as much as the current level (Table 1.7). With a low population growth rate, a growth factor should be improved labor productivity based on structural changes in the economy. GPP per capita shall increase significantly, which is 62% increase from the current level. In addition, with steady population movement from rural to urban area, NBR's economy is assumed to shift to "higher-value added" one.

### Urban growth is a key to rural growth:

With larger urban sector, agricultural sector in both SKR and NBR shall have more chance to diversify products to fulfill urban consumption, such as vegetables and dairy products.

**Table 1.7 Perspective of Population and Economic Situation**

		1998	2005	2010	2015	2020
SKR	Population (,000)	1,022	1,209	1,363	1,514	1,682
	Urban (,000)	153	197	234	278	330
	Rural (,000)	869	1,012	1,129	1,236	1,351
	GPP (1998=100)	100	169	272	378	476
	GPP/capita (1998=100)	100	143	204	255	289
	GPP Share of Agriculture (%)	56	51	40	35	33
	GPP Share of Industry (%)	13	15	18	19	20
	GPP Share of Service (%)	30	33	41	46	47
NBR	Population (,000)	3,115	3,311	3,459	3,607	3,754
	Urban (,000)	498	666	813	961	1,107
	Rural (,000)	2,617	2,646	2,646	2,646	2,646
	GPP (1998=100)	100	126	150	173	196
	GPP/capita (1998=100)	100	119	135	149	162
	GPP Share of Agriculture (%)	26	23	21	19	18
	GPP Share of Industry (%)	11	13	14	15	16
	GPP Share of Service (%)	63	65	65	66	67

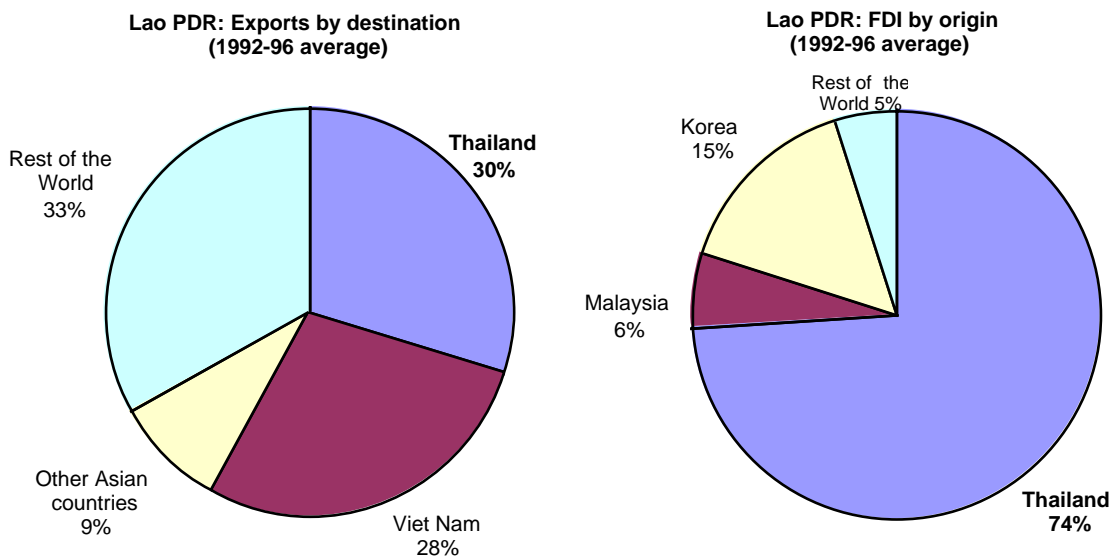
Source: Frameworks for NBE and SKR master plans

## CHAPTER 2 INTERNATIONAL SETTINGS: ECONOMY AND SPACE

### 2.1 International Economic Environment

#### Lao – Thai Bilateral picture

Lao PDR is rich in natural resources (water, electricity, forests, and land). On the other hand, Thailand has advantage in capital, technology (human resources and institutions), and consumer market. Given these characteristics, a present baseline picture of Thai-Lao economic relationship is the fact that the Lao economy is largely dependent upon the Thai economy. This is also reflected in the fact that virtually all of major urban centers in Lao PDR are concentrated along the Lao-Thai border areas. Thai-Lao economies will continue to be linked very closely.



Source: World Bank estimate

Figure 2.1 Export and FDI of Lao PDR

### ASEAN Economy: AFTA

The ASEAN countries signed the Common Effective Preferential Tariff (CEPT) Scheme for the ASEAN Free Trade Area (AFTA) in 1992. Currently, the CEPT includes more than 90% of all commodities. “Free Trade” will be realized by lowering or eliminating the tariff rates on CEPT items. AFTA will liberalize not only commodity trade but also investment among ASEAN countries.

**Table 2.1 GMS Countries and International Trade Affiliations**

Country	GMS	ASEAN	Trade liberalization under AFTA	WTO
			CEPT Items	
Thailand	Member	Member	2003	Member
Laos	Member	Member	2008	Accession in process
Viet Nam	Member	Member	2008	Accession in process
Cambodia	Member	Member	2008	Accession in process
Myanmar	Member	Member	2008	Member
Yunnan (China)	Member			Accession in process

Source: ADB, WTO and ASEAN

### AFTA in the Context of SKR-NBR

In the regional context, AFTA will influence the SKR and NBR as follows:

**Table 2.2 Potential Influence by AFTA on the Two Regions**

	SKR	NBR
<b>Border Trade</b>	More active movement of primary products across the border as gateway areas. SKR and NBR will have to put more emphasis on the products with comparative advantage over the other side.	
<b>Investment</b>	Attract investments, including FDI, especially those industries with preference for stronger inland-links with GMS markets	
<b>Industrial sector</b>	Potentials to accommodate up-stream portion of local-resource based industries	Potentials to accommodate down-stream portion and supporting urban services
<b>Service sector</b>	Induce growth of service sector that serves operation of both domestic and international trade network	

AFTA regime has three implications for CBR development, in short to medium term. Firstly, resource based exports will have to refine competitive edges over neighboring countries. Secondly, CBR could attract investments, including FDI, especially those industries related to resource processing and associated with stronger links with GMS markets. Thirdly, expansion of trades will induce growth of service sector that serves operation of both domestic and international trade network.

## 2.2 Spatial Structure

### The Mekong River and its Watershed

Divided by mountains, the Northeastern Region of Thailand lies in a different river basin from the Central Region. The Northeastern Region, which extends across the most area of the Khorat Plateau, belongs to the Mekong River basin by its tributaries. The relatively flat terrain within the Khorat Plateau enables people to extend their agricultural land by deforestation.

The SKR is also located in the Mekong River watershed. Figure 2.2 shows the cross section along the East West Corridor. Located in the same watershed, SKR and NBR are sharing the benefit from the Mekong.

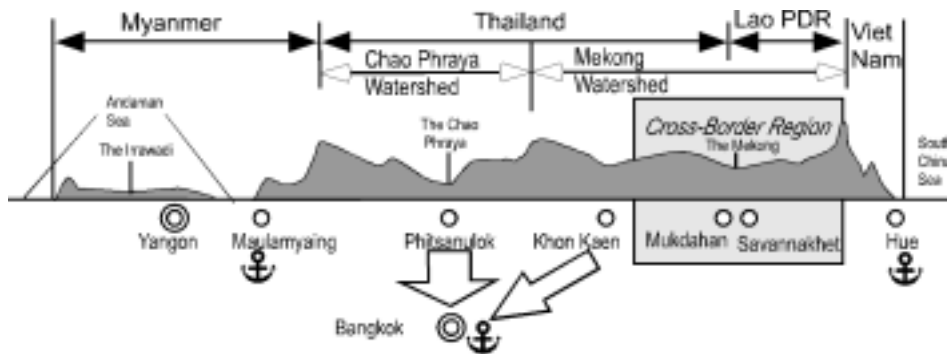
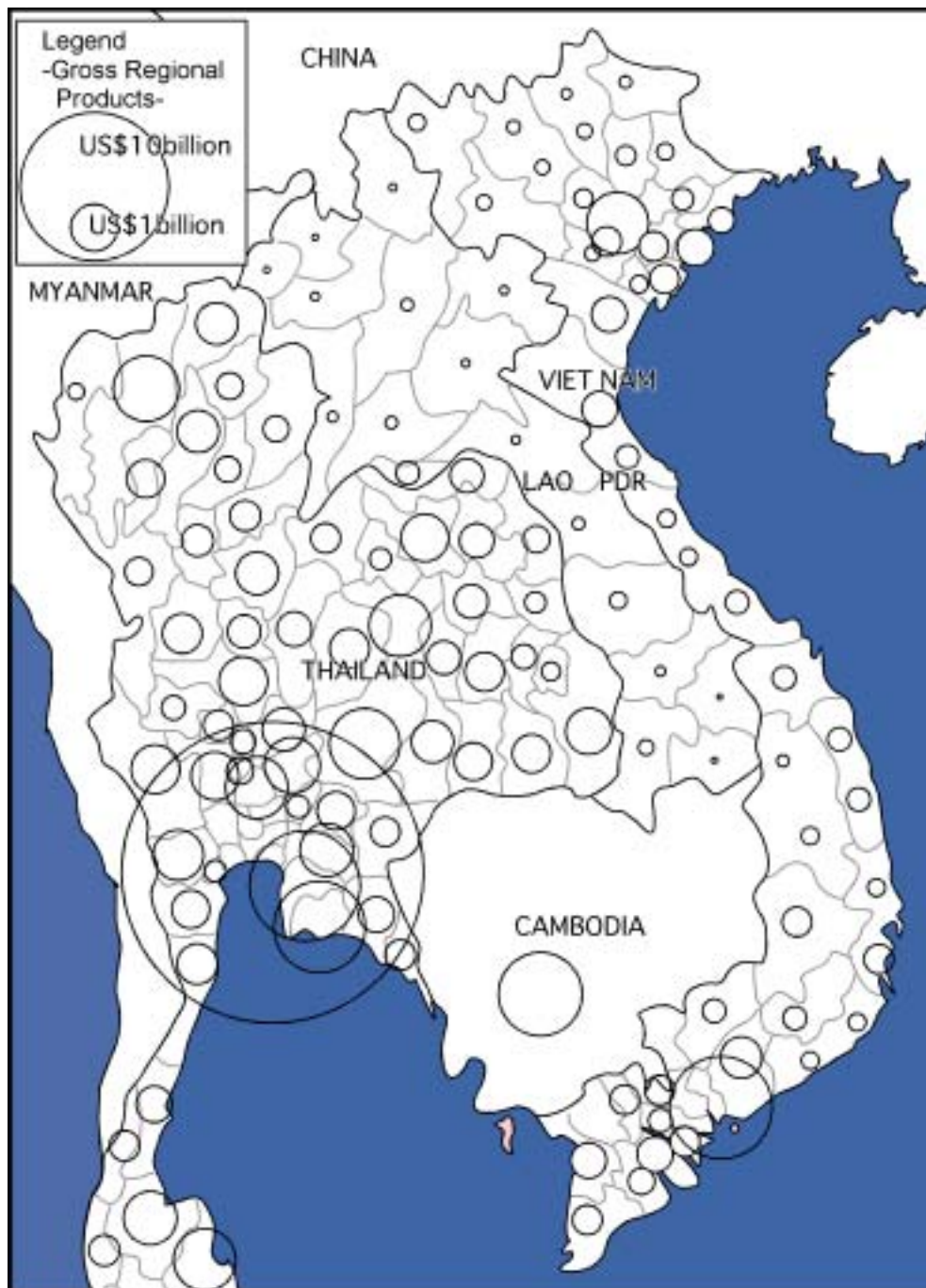


Figure 2.2 Cross-section Along East West Corridor

### Population and Economic Activity Distribution

The human settlement pattern differs by country. Compared with Thailand and Viet Nam, people live scarcely in Lao PDR especially in the northern region. Densely populated areas are limited to the Bangkok, Hanoi and Ho Chi Minh region only.

Figure 2.3 expresses the distribution of economic activities by gross regional products (GRP). The primacy of Bangkok Metropolitan Region is quite large in the region. There are the two economic centers in Viet Nam. The scale of economic activity in Lao PDR is very small in comparison with the other areas.



Source: Thailand in Figures 2000-2001, etc.

**Figure 2.3 Distribution of Economic Activities (1998-1999)**

## CHAPTER 3 EXISTING PROJECTS AND PROGRAMS IN INDOCHINA

### 3.1 Review of Existing Projects and Programs

#### GMS Program



Figure 3.1 Cross-Border Region in GMS Countries and Economic Corridors

The GMS Economic Cooperation Program was initiated in 1992, with the assistance of the Asian Development Bank. Sector studies were subsequently conducted and became the basis for the identification of subregional projects. A number of these subregional initiatives have now entered implementation stage.

To ensure effective project implementation and to sustain cooperation, the six countries established an institutional mechanism as part of the GMS Program. Working groups and forums have been set up to discuss and recommend approaches to issues affecting both the "hardware" and "software" aspects of implementation. A ministerial body coordinates subregional cooperation and provides overall policy guidance and support.

### **Ongoing Projects and Programs**

#### Port Development:

JBIC (Japan Bank for International Cooperation) has been financing several projects around Da Nang in Central Viet Nam. Among them, Da Nang Port Improvement Project and Hai Van Tunnel Construction Project are of importance to the development of Central Viet Nam. On the other hand, even after the completion of Da Nang Port Improvement Project, the port likely to remain as a feeder port due to lack of hinterland.

At the other end of EWC, the Andaman Sea, the port development is very slow in Myanmar. Because the Mawlamyine Port, the third largest port in Myanmar, has only 4.2m depth water during spring tides, only small coastal vessels can anchor in the harbor. It does and will not work as an internationally important port.

Thus, the ports at the both sides of EWC unlikely to function as two ends of a new "Indochina Landbridge" as initially expected. This means that function of EWC is rather to connect the economic centers within the Indochina Peninsula than to connect Andaman Sea and South China Sea.

#### Civil Air Transportation:

Linkage by air transportation is becoming more important than ever in Asian countries. Asian airports are competing against one another to establish the status of international hub airport. Since the late 90s, the new airports have been developed to absorb the growing international passenger demand in Asia. Currently, however, it is not certain which airport will survive towards the future.

The Bangkok International Airport (Don Muang Airport) is one of the most important hub airports in the Southeastern Asia. The completion of New Bangkok International Airport (Nong Ngu Hao Airport), which is scheduled to open in 2004, will strengthen the attractiveness of the Bangkok region as the international air hub.

The superiority of Bangkok region as an international hub has two implications for the Cross-Border Region. Firstly, the access to outside of the Indochina Peninsula will be so improved that the region will accept more tourists and investors than now. Secondly, the SKR is required to link Bangkok region by air directly in order to improve accessibility.

#### Railways:

The current role of railway is very limited in Indochinese countries. Especially, CBR holds no railway network. However, its importance is emphasized if considered future trade with China, the country with highly developed railway system. The rail connection will promote cargo transportation on the network between China and Thailand.

#### Power Supply:

Electricity is one of the most traded “items” among the GMS countries. Viet Nam and Thailand sell electricity from their grids to central Lao PDR. At the same time, Lao PDR sells power from north.

## **3.2 Economic Corridors under GMS Program**

### **ADB Definition of Economic Corridor System**

The most important feature of GMS Program is international corridor system spread over the boundaries (Figure 3.1). ADB defines “Economic Corridor” as follows:

“An economic corridor is a well defined area where infrastructure improvements are linked with production, trade and other development opportunity in order to promote economic development and cooperation among contiguous regions or countries<sup>1</sup>”.

This is a holistic approach to development and cooperation on the linearly defined belt. A corridor includes road, railway, power transmission line and optic fiber cable.

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<sup>1</sup> ADB. A Wealth of Opportunity. P. 32.



**Four priority economic corridors:**

Specifically, GMS Program identified the following four economic corridors for cooperation.

- East West Corridor
- Phnom Penh – Ho Chi Minh City Corridor
- Kunming – Chiang Rai Corridor
- Kunming – Hanoi – Haiphong Corridor

All corridors have the similar combination of infrastructure projects. EWC was activated as a pilot project. Other three corridors are classified as the “second tier” and waiting for implementation.

The transportation components of the EWC are as follows:

- The Second Mekong International Bridge (Financed by JBIC)
- Route 9 improvement (Financed by JICA and ADB)
- Route 1 improvement from Dong Ha to Da Nang (Financed by the World Bank)
- Da Nang Port upgrading (Financed by the JBIC)

**EWC as Part of Indochina Inland Network**

As observed in the previous sections, more immediate function of EWC is likely to be a new inland corridor of Indochina Peninsula, rather than to be a new land-bridge. The present study did not find a strong evidence that suggests EWC has a potential to bring dramatic changes in international transportation to and from Indochina. On the other hand, EWC is significant as the first major corridor with East-West orientation within Indochina where existing corridors are all North-South oriented. Thus, EWC has more immediate potentials as a part of inland network to connect economic centers within the GMS, namely Bangkok, Hanoi, and Hanoi rather than to provide outlets to connect GMS to the outside world.

## CHAPTER 4 DEVELOPMENT VISION OF CROSS-BORDER REGION

### 4.1 Geo-economic Characteristics of CBR Development

#### Landlocked Area:

The CBR is geographically remote from both seaports and major economic centers along the coastal areas of the GMS, namely Bangkok, Hanoi, and Ho Chi Minh City.

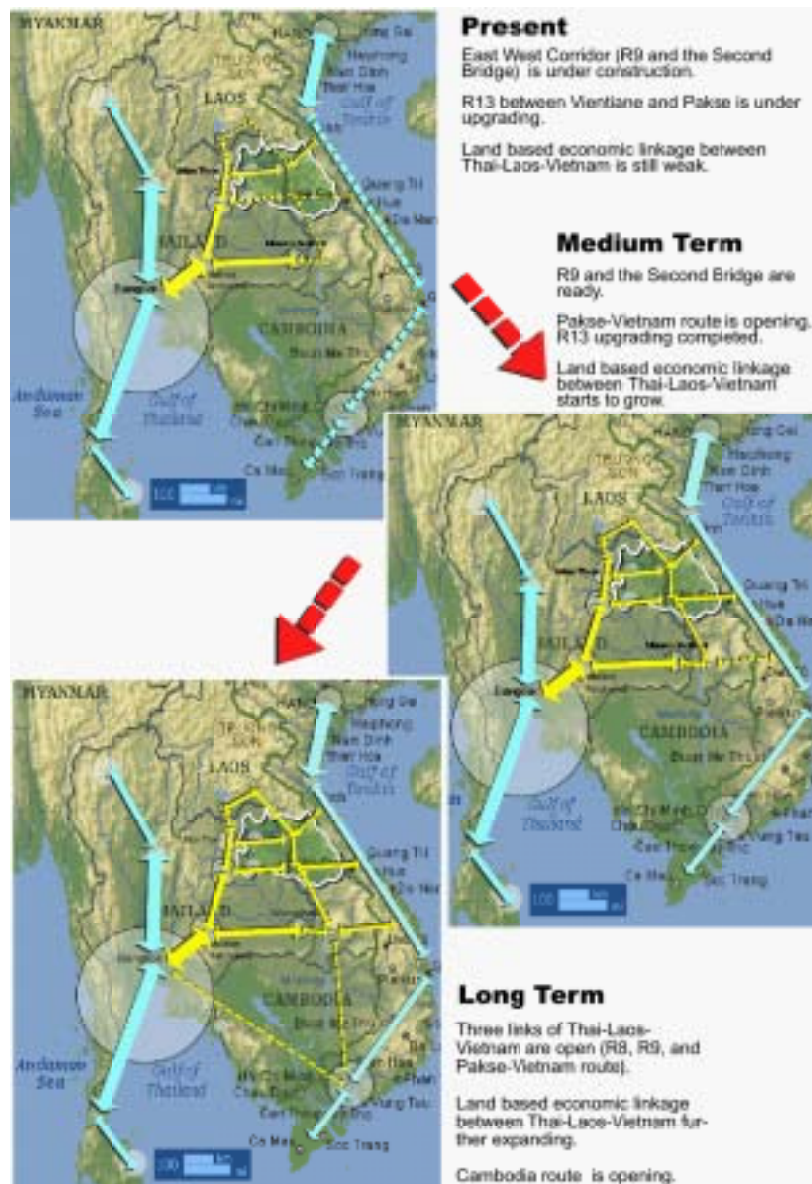


Figure 4.1 Structure of East-West (Thai-Laos-Vietnam) Network

**Tail End Economy:**

The CBR is located in “**tail ends of economic network**” stretching out from Bangkok as shown in the figure 4.1. This implies that the area is at the most upstream of “value added chain” of economic activities where raw materials are processed minimally. As a result, the CBR economy has small margin of value-added and low profile of non-agricultural economic activities.

**Implications of East-West Corridor to CBR: Inland network:**

The EWC has an important role to connect economic centers within the GMS rather than to connect GMS and the outside world. To be more specific, immediate function of EWC at the level of GMS is to formulate network between a Thai economy and a Vietnamese economy. In this sense, a notion of EWC is not limited to a single corridor along the Second Mekong Bridge and Route 9 towards the port of Da Nang but rather a set of growing network of inland transportation between Thailand, Lao PDR, and Vietnam. Given this inland transportation network in place, the CBR will have at least two major crossroads at the center of the network. Thus, it is natural to assume that CBR has more immediate potential markets within GMS rather than international trade outside of the GMS.

**Gap between Lowland and Highland:**

Market-based Livelihood and Private Sectors in the Lowland:

Within CBR, there is a large income disparity between advanced and underdeveloped parts. Advanced parts are the lowland belongs to Khorat Plateau that includes both the Northeastern Thailand and the Western lowland of Lao PDR along Mekong River. Within this lowland part, economies are already integrated in market based economies more or less. Between SKR and NBR, private traders are the main agents of integrating cross border markets.

Non-market Based (subsistent) Livelihood in the Highland:

In contrast, there are remote and subsistent (non-market based) economies under shifting agriculture in the mountainous areas of the further eastern areas of CBR. These inner parts suffer from the relatively low agricultural potential due to higher risk of erosion during rainy season and shortage or unstable availability of water especially during dry season. On the other hand, these are the areas that hold rich forest resources. Interactions between the highlands and the lowlands are limited for lack

of road connections to the lowland. Fulfillment of basic human needs is the highest priority in these areas. In longer terms, improvement of rural household income in underdeveloped areas is essential to bring up the level of the regional economy as a whole.

Economic Boundary is Between Lowland and Highland:

It is important to note that, unlike a national statistical data book, a real spatial boundary of local livelihood is not along Mekong River (a national boundary) in terms of economic structure. A real boundary of local economic space lies somewhere between lowland and highland in SKR.

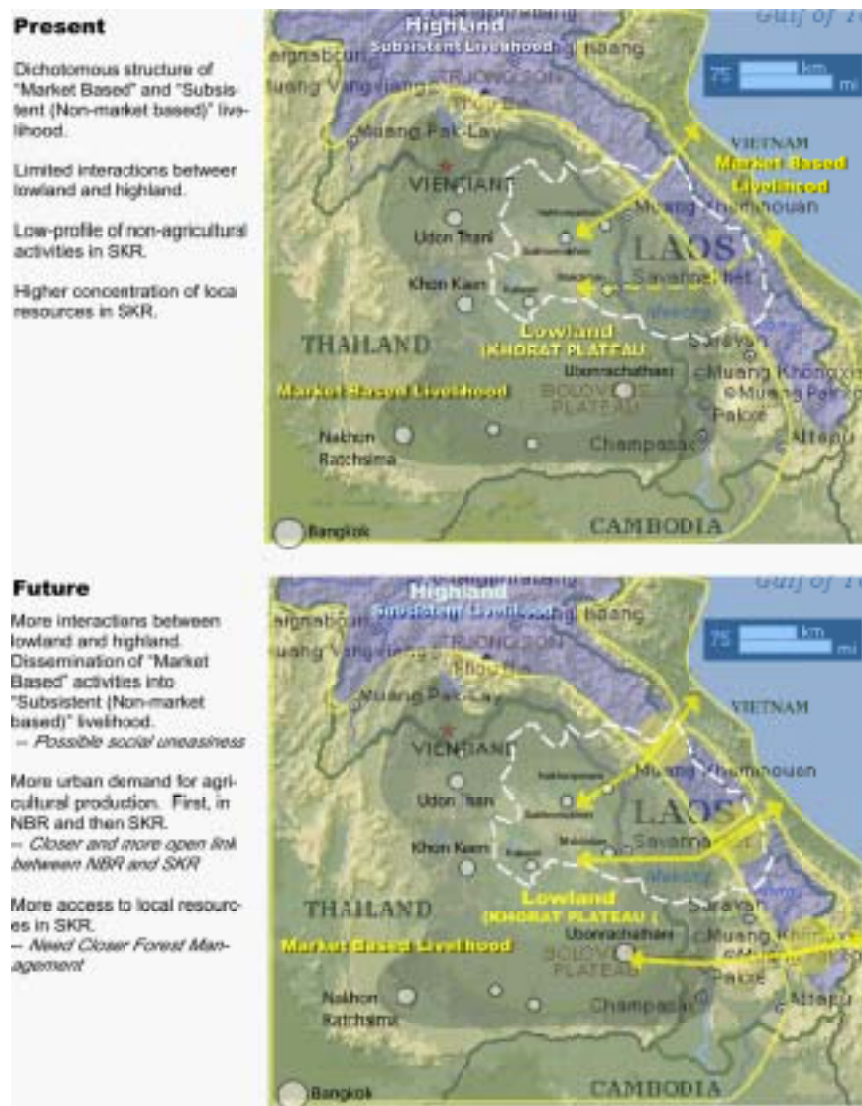


Figure 4.2 Spatial Image of Geo-economic Structure in the CBR

**Risk of Social Uneasiness and Resource Degradation in Highland:**

It is also probable that a market-based economy quickly penetrates into once closed and self-reliant community as Thai-Lao-Viet Nam road network is developed. This transition of livelihood pushes up demand for cash income among the people in the mountainous areas. Without preparing alternative ways of production other than shifting cultivation, introduction of money based economy may result in social uneasiness and higher pressure on forest resources. Degradation of forest resources in SKR has negative impacts on NBR as well.

## **4.2 Development Vision for CBR**

With above mentioned five key factors of geo-economic characteristics in mind, following five development visions for CBR are drawn as common ideas to be shared by both SKR and NBR.

**[Vision 1] Landlocked to Land-linked: Best use of local resource base and new access to inland GMS market.**

One prominent common factor for SKR and NBR is that the regions are both land-locked. There are some key strategies to develop the land locked regions.

- **Focus on Local Resources:** Both SKR and NBR are in a disadvantageous position in international trade. This is one of the major reasons why SKR and NBR have not been attractive destinations for investors of the “importing materials, processing, and export products” type of industry. Rather, industries that best utilize available local resources are more viable for these land-locked regions.
- **Inland Market of GMS:** By the east-west corridor development, industries with target markets within GMS, within the range of land transportation from SKR and NBR, may find locational advantage to invest in these regions. It would be a common target for SKR and NBR to collectively make full use of this strengthened comparative advantage.
- **Maintain good conditions of Route 9 and other GMS network:** Good roads and safe and efficient trade environments are key factors to transform CBR from present “tail end economy” to “crossroad economy”.

**[Vision 2] Urban based development: Urban-rural linkage**

Within CBR, there is a large disparity between advanced and underdeveloped parts. Improvement of rural household income is essential to bring up the level of the

regional economies. At the same time, it is also true that rural development alone is not good enough to alleviate the situation. In this regard, the urban sector development is important not only to these riverside urban areas themselves but also to the underdeveloped parts on respective sides. There are two aspects to note.

- **Diversification of market demand for the agricultural sector:** Firstly, urbanization is an important factor to promote diversification of agricultural production in the surrounding areas. As an urban economy grows, it generally diversifies its demand for food, such as more demand for fresh vegetable and livestock products.
- **More-value added within the region:** Secondly, it is particularly important to bring more downstream portion of “value-added chain” of agricultural production into the regional economy. For example, activities related to simple agricultural processing that brings in more value-added to the agricultural sector tend to concentrate in the vicinities of urban economies.

### **[Vision 3] Maximum Use of Complementary Roles: Opportunities of Being Different**

Basically, NBR has advantage in technology and market access, while SKR has advantage in natural resource base. As a baseline strategy, it is natural to create effective combination of respective advantages for the purpose of benefits on both sides.

- **Better Urban Market Access in NBR:** If target markets of the agricultural sector of SKR can include urban demands in NBR, a potential growth margin could be much larger than the one with limited market within the Lao PDR. NBR with more urban activities can take complementary role on the demand side, first by offering more urban markets to SKR, and then in the future, create spreading effects to grow urban sectors on the side of SKR.
- **Better Resource Endowment in SKR:** On the other hand, NBR can benefit from the complementary function of SKR. For example, the food processing industry in NBR suffers from unstable supply of raw materials for food processing. Given the fact the share of younger generation in the labor force continues to decrease in NBR, some traditional crops, especially those require intensive use of labor or extensive use of land, are less and less viable to produce. SKR with less constraints with land and young labor can take complementary role in agro-processing, first by supplying raw materials.

**[Vision 4] Private Sector Led Interactions**

Interactions of SKR and NBR should be promoted with a more emphasis on the private sector initiatives. The official cooperation at the national level are vital to further promote non-official interactions. Without national level agreement, cross-border cooperation remains to be somewhat sensitive matter at the level of local administration as well. To facilitate official efforts for cooperation, it is a good idea to start private sector cooperation wherever possible. There are following two reasons to do so.

- **Existing private interactions are firmly rooted in the local society:** There are various existing cross-border interactions, especially between trading partners on the both sides. Ties between them are not only business relationships but also embraced in ethnic and cultural commonality. It is better to enhance these private interactions with practical functions firmly rooted in the local socioeconomic activities rather than to install arbitrary entities without any social background.
- **Private initiatives are more flexible:** Regarding inter-local cooperation, private initiatives, when applicable, are often more flexible and efficient than the official channels. The official channels often require to go through a long list of formalities to initiate cross-border activities in order to secure legitimacy of national representation.

**[Vision 5] Better Management of Natural Resources**

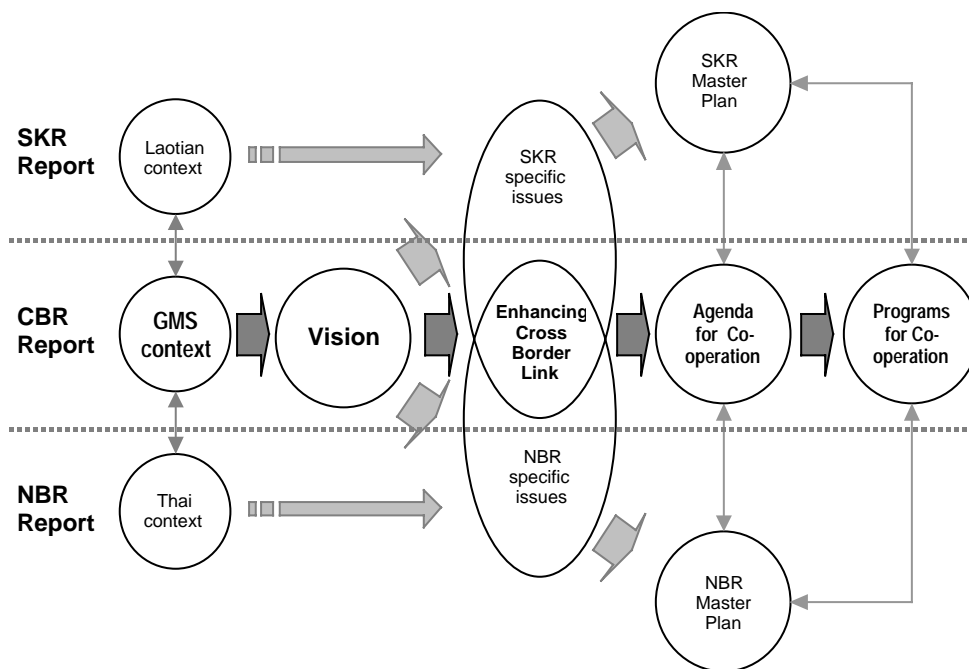
Steady supply of natural resources to the processing industries will be a key factor to attract investments to CBR. As already mentioned, it is quite important for CBR to have more open and efficient move of resources and products between SKR and NBR. "Open economy", however, is not equal to allowing over-exploitation of resources. Rather, it is more important to install closer and transparent control over natural resources when trading is under market mechanism.

# CHAPTER 5 CROSS BORDER DEVELOPMENT COOPERATION PROGRAMS

## 5.1 Agenda for Cross Border Development Cooperation

### 5.1.1 Conceptual Flows

Conceptual flows of SKR Master Plan, NBR Master Plan, and present CBR Report are as summarized as the following figure.



**Figure 5.1 Conceptual Flow of Cross Border Cooperation**

As shown in the figure, the visions have implications for both country specific issues and cross-border cooperation. SKR or NBR specific issues and strategies are extensively addressed in respective master plans as summarized in the next section. At the same time, there are some issues that can only be tackled with cooperation and interactions between SKR and NBR. This kind of issues are addressed later in this CBR Report.



### 5.1.2 Development Strategies for SKR and NBR

Development strategies for SKR and NBR are defined in respective master plan as summarized in table 5.1.

**Table 5.1 Development Strategies for SKR and NBR**

	SKR Master Plan	NBR Master Plan
<b>Natural Resource Development</b>		
<b>Issue</b>	Abundant but Sensitive	Detoriorated and No More Frontier
<b>Objectives</b>	Protection of the environmer	Sustainable Natural Resource Management
<b>Strategies</b>	Resource Management: Focus on Forest management	Rehabilitation of Natural Resources and Sustainable Land Use Management
<b>Human Resource Development</b>		
<b>Issue</b>	Lack of Basic Qualification	Good but Need to Upgrade
<b>Objectives</b>	Closing living standard gap betwee rural and urbanareas	Enrich Human Reources for next step industrialization.
<b>Strategies</b>	Capacity Building: Fullfill Basic Education	Increase of Technical and Manageri Workers in Middle-class
<b>Economic Development</b>		
<b>Issue</b>	Very Small Non-Agriculture Secto Need More Links to Markets	Insufficient Urban Economie; Need to Diversify Rural Economies
<b>Objectives</b>	Enhancement of livelihood throuç income generation in the rural area	Well-reformed Agricultr
	Closing living standard gap betwee rural and urbanareas	Taking Advantage of Emerging GMS Indochina MKT
	Promotion of partnership wit neighbouring countries	Decntralization and Public Participatio
<b>Strategies</b>	Income Generation: expand productic of commercial crops	Diversification of Local Products: mixec farming, cottage industries
	Land-locked to Land-linked: promot trade	Promotion of New Leading Industrie
	Creating a New Identity of SKR: Ecç products.	Urban Centers and Infrastructu Development

Source: SKR Master Plan, NBR Master Plan

#### **Strategies for Natural Resource Development:**

As already described in Chapter 1, there is a clear contrast between SKR and NBR regarding natural resources.

#### **Strategies for Human Resource Development:**

Lack of educated human resources is one of the largest bottlenecks for development of SKR. Expansion of basic education should be given utmost priority. As to meet more immediate needs, it is also recommended to strengthen technical training.

On the other hand, NBR has readily available human resources for commercial activities and industrial workers. Thus, upgrading of training is the issue.

### Strategies for Economic Development:

In SKR, agricultural sector has very different profiles in highland and lowland. In highland with subsistent agriculture, meeting BHN is most important. For lowland with more potentials for commercial production, it is needed to expand linkages between agriculture and urban demands or processing industries, including those in NBR.

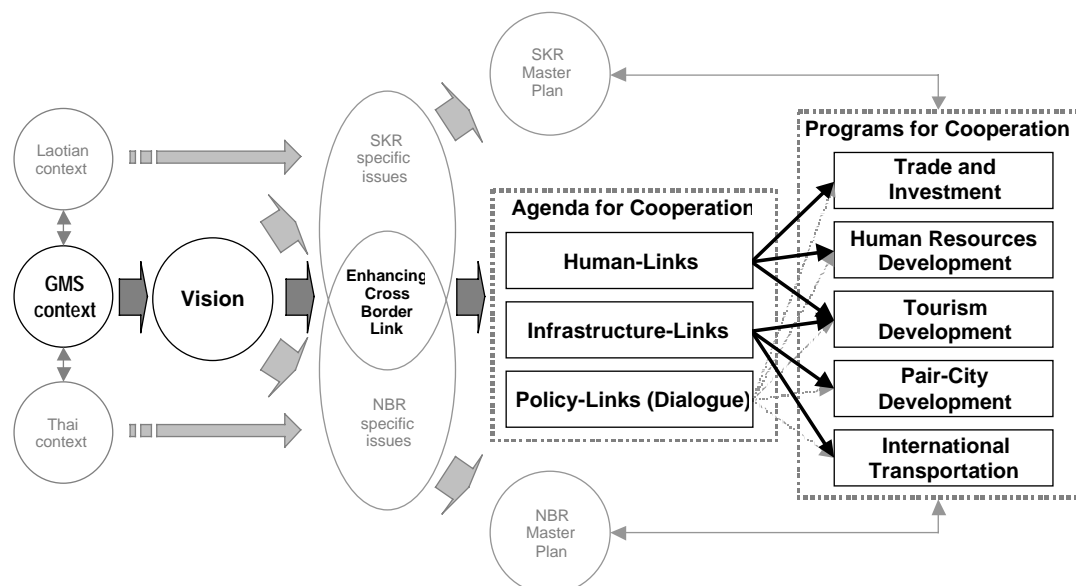
Non-agriculture sector is very small in SKR reflecting very low concentration of urban economies in the area. Instead of holding large urban centers by themselves, it is better for SKR to have access to urban services and market on the side of NBR.

In NBR, the agricultural sector is very much dependent upon few low-value added crops. Without additional land for expansion, agricultural reform is the only way to improve productivity, including farmland integration and crop conversion.

### 5.1.3 Necessity for Cross Border Cooperation

#### Enhancing the Link between SKR and NBR:

To promote development of SKR and NBR in line with the visions and respective strategies, cooperation between these two regions are indispensable in many aspects. Among the others, “enhancement of the link between SKR and NBR” is identified as a core issue in the cross border arena that is boiled into three agenda for region-to-region cooperation, and five recommended cooperation programs as shown in the Figure 5.2. Detailed discussions are as described in the following sections,



### **Figure 5.2 Agenda and Programs for Cross-Border Cooperation**

#### **Recommended Agenda for Cooperation:**

There are some existing promoting factors to enhance links between the regions including following things.

- Close cultural commonality between SKR and NBR,
- International trends such as AFTA and GMS Programs, and
- Complementary characteristics of two regions.

In order to exploit full potential of these positive settings, however, it is strategically important for all concerned parties from both SKR and NBR to get together in one place, and have closer discussion to jointly enhance the link between two sides of the Mekong River. To begin with, following items are recommended as agenda to discuss forms of region-to-region links and related cooperation.

#### **[Item 1] Establish Cross-Border Human-Links: Information sharing and common understanding**

Process is as important as outcome in the multi-level cooperation. Information sharing and common understanding through well-established human-links would necessarily encourage various initiatives on respective sides for further cooperation.

#### **[Item 2] Establish Closer Cross-Border Infrastructure-Links**

In long-term, more bridges and ferries are hoped to be developed over the Mekong River from the viewpoint of NBR-SKR development. Accessibility, both physical and nonphysical, should be explored as much as possible for the purpose of regional development along the Mekong River. Urban development along the Mekong should be a priority.

#### **[Item 3] Establish Policy Dialogue: A Premise**

The cooperation will call for a maximum use of comparative advantage on both sides and minimization of negative incidents. Policy dialogue at the national level is needed in order to adjust regional policy direction to this end. Without national level agreement, it is difficult to promote region to region cooperation. Concerned parties in SKR and NBR, on the other hand, must jointly identify what they want to change at the national level policy and regulation, and collectively appeal this to the national level policy makers on both sides.

## 5.2 Cross Border Cooperation Program

### Basic Concept for NBR-SKR Cooperation Programs

NBR-SKR Cooperation programs (and constituent projects) were listed based on the following requirements.

- The programs which need resources from both sides.
- The programs which benefit the both sides.
- The programs need mutual collaboration.

By the above criteria, five programs have been identified for SKR-NBR cooperation. Contents of each programs are as follows (Table 5.2).

### Trade and Investment Environment Improvement Program

New investment from outside will be an engine to industrialize the region. This program intends to improve trade and investment in the CBR by facilitating resources from private investors. The program includes following major projects.

- Cross Border Business Development Forum
- Cross Border Contract Farming

### Human Resources Development Program

Cultural tie between SKR and NBR is an advantage to promote HRD cooperation. The international training at academic and vocational levels is included in this program.

Components of cross-border HRD programs are accommodated in country-specific HRD projects that are presented in respective master plans for SKR and NBR. Especially, following projects are recommended.

- Establish sister-school relationships between Laotian schools such as Savannakhet Technical School and Thai schools such as Rajabhat Schools in NBR.
- Mutual support as one school system, regular exchange-programs, and sharing teaching staff and curriculum.

### Tourism Development Program

Tourism is one of the key subsectors of service industry. This program is to promote

- tourism in CBR through various projects. There are two key aspects.
- Integration of the cross border as “Mekong-and-its two-River sides.”
  - Increase publicity of the CBR within a tourism industry.

Given, these two aspects in mind, we propose following 4 major activities.

- Activity 1. Cross-border integration of tourism
- Activity 2. Joint Publicity Campaign
- Activity 3. Creating new tourism centerpiece
- Activity 4. Upgrade Tourism Supporting Facilities

### **Pair-City Development Program**

To generate scale merit of urban functions, geographically close cities are encouraged to formulate a "Pair-city". Pair-cities are defined as couples of cities facing over the Mekong to utilize certain urban functions mutually. This program expects involvement of municipalities on both sides and deregulation at national level. It maximizes utilization of the existing facilities and saves duplicated investment on both sides. The Program includes the following projects:

- Savannakhet Airport Utilization
- Nakhon Phanom Airport Utilization
- Third Mekong Bridge
- Secondary Crossing Points
- Telecommunications Gateway
- Emergency Medical Services

### **International Transportation Development Program**

This program is closely related with the East-West Corridor development. This program intends to improve international transportation in CBR and to assist tourists and traders to move and carry cargoes more smoothly and sustainably. This program contains following projects.

- EWC Operation and Maintenance Forum
- Route 9 Joint Maintenance
- Joint Custom Operation

**Table 5.2 Cross-Border Programs and Projects**

Program	Project	Contents		Type of cooperation	Immediate beneficiary	Implementation body	Government channel
		Thai-side	Lao-side				
Trade and Investment Environment Improvement	Investment promotion	Border region special incentive	Law and institution development (T/A from Thailand)	Cooperation, support	Both sides	GG (Government-Government) base	National and local
	Cross-Border Business Development Forum	Providing integrated opportunities for business communities.		Collaboration, support	Both sides	Private	Local
	Governor Forum	Creation of governors' forum to discuss local issues. Some issues are forwarded to the central ministries.		Joint	Both sides	Provincial Governments with help of central ministries	Local and national
	Venture business and management support service database	Establish database of business resource	-Utilize Thai support	Information sharing	Thai side	Thai Government	National
	Livestock Development	-Livestock processing -Contract farming	-Vaccination -Livestock farmer support -Pasture -Market	Collaboration, support	Both sides	Government and private	National and local
Vegetable and Fruit Development	-Process -Contract farming	-Vegetable and Fruit Development	Collaboration, support	Both sides	Government and private	National and local	
Human Resources Development	Savannakhet Technical Training	-OJT System -Study Abroad -Instructor	-Technical School -Mutual Recognition of Qualification and certificates	Collaboration, support	Lao side	Government and private	Local
	Deregulation of Immigration Labor	Deregulation of immigration	Provide qualified labor force	Collaboration	Both sides	G-G base	National and local
	GMS International University	Provide site and basic resources for program		Collaboration	Both sides	G-G base	National
Pair-City Development	Savannakhet Airport Utilization	Deregulation, City Air Terminal	Air Control, Runway Extension	Joint	Both sides	G-G base	National and local
	Nakhon Phanom Airport Utilization System Development	Deregulation, Airport Utilization System Development		Joint	Both sides	G-G base	National and local
	Third Mekong Bridge	Construction of bridge between Thakek and Nakhon Phanom		Joint	Both sides	G-G base	National and local
	Secondary Crossing Points	Agreement and construction		Joint	Both sides	G-G base	National and local
	Telecom Gateway	-Extension of service -Construction	Construction and Operation	Joint	Lao side	G-G base and Private	National
	Emergency Medical Services	Provide medical service	Medical Training	Collaboration	Lao side	G-G base with private participation	Local
Tourism Development	Deregulation of immigration control		-Visa Waiver -Common Visa	Collaboration	Both sides	G-G base	National
	Joint Festival and Event	Joint tourism promotion		Joint	Both sides	Local	Local
	Pilgrim Tour	Joint development of tourism resource		Joint	Both sides	Local	Local
	Tourism Free Zone		-Deregulation -Investment in tourism	Collaboration, support	Both sides	G-G base	National and local
International Transportation Development	EWC O&M Forum	-Establish a forum to discuss operational issues on EWC.		Joint	Both sides	G-G base	National and local
	Route 9 Joint Maintenance	-Technical cooperation	-Establish maintenance program -Toll collection	Joint	Both sides	G-G base with private participation	National and local
	Joint Custom Operation			Collaboration	Both sides	G-G base	National

## CHAPTER 6 INSTITUTIONAL FRAMEWORK FOR IMPLEMENTATION

### 6.1 Basic Ideas for Implementation

This study proposes two levels of interactions; programs and projects. Cross-Border Programs describe the packages of interactions.

Currently, there is no public organization to oversee both Thailand and Lao PDR. Nonetheless, two countries have many communication channels besides its diplomatic route. Many line ministries and agencies, including CPC and NESDB, on both sides meet on bilateral base. ASEAN and GMS sectoral forums provide chances to discuss multilateral issues. Creating a new institution exclusive for Cross-Border Programs is not a welcoming idea for both CPC and NESDB.

### 6.2 Implementing Schedule and Organizations for Programs and Projects

The implementation schedule and related agencies for Cross-Border Programs and projects are examined (Please see 6.2 of Main Report). One of the most important milestone is the completion of the Second Mekong Bridge. Some projects should start early to meet the completion of the bridge. Some projects should start after the completion of bridge.

### 6.3 Implementing Organizations for Projects

Table 6.1 indicates the proposed institutional setup for Cross-Border Programs and Projects.

**Table 6.1 Institutional Arrangement for Cross-Border Programs and Projects**

Item		Name	Institutional Setup
Visions and Programs		--	The concepts should be shared to both.
Cross-Border Projects	Priority Projects	Cross-Border Business Development Forum	United private institution from both sides.
		Savannakhet Airport Utilization	Nonpublic Authority. PFI can be introduced.
		Route 9 Joint Maintenance	Lao agency for operation with Thai technical assistance.
	Other Projects		G-G Base or Private.

For institutional arrangement, the following three categories have been considered.

**Public - Private**

For projects that have revenue, more private organization works better. For some projects, Private Finance Initiative (PFI) would be suitable.

**Unified Organization - Divided Organization**

Then the organization has a scale of unified – divided. A unified organization has advantages in responsible decision making and distribution of resource over the countries.

**Permanent - On-demand**

The last scale for Cross-Border projects are permanent – on-demand. An organization is not necessary to have a permanent office or secretariat. Board and its permanent office are also an option for the organization. The executive members, committee or board, which consists of members from both countries, can meet on demand basis.

The interaction of two countries needs a long process of communications and understandings. For the purpose of deregulation by existing line ministries and agencies, it is appropriate to establish a communication channel between the two besides the official diplomatic route. Cross-Border programs are to be realized through the communication channels on demand base for the line agencies of the two countries.

## **6.4 Financing Sources for Projects**

The Cross-Border Projects are designed to be implementable at the minimum cost. They do not require huge investment. However, the programs and projects necessitate some financial sources as initial seeds.

Possible Financial sources are as follows.

- Public Budget of Each Country
- External Sources
- Investment from Private Sector



# CHAPTER 7 PRIORITY PROJECTS FOR CROSS BORDER COOPERATION

## 7.1 Selection of Priority Projects

Some projects are cross-related to other programs, even to programs of NBR and SKR Masterplan. Table 5.2 lists the all projects for cooperation by program. Three projects have been identified for preliminary feasibility studies (Pre F/S) during the Phase III of this study. The criteria to identify the projects are as follows:

- Local needs are more prioritized than long-term, international or national needs.
- More private investment is encouraged.
- Existing activity and investment are fostered.

Finally, three projects were shortlisted for examination of Pre F/S.

- Businessperson Forum
- Savannakhet Airport Utilization
- Route 9 Joint Maintenance

These projects are shaded on the project list of Table 5.2.

## 7.2 Cross-Border Business Development Forum (CBBDF)

### Background

There are following background issues.

- Cross-border business and trade activity in CBR is not up to its potential based on complementary characteristics of SKR and NBR.
- G-G (government to government) based discussions and arrangements alone are not enough.
- Need to have a private sector led institutional mechanism, in cooperation with the local administration, for discussing business development in CBR.

### Objectives

The objective of Forum is to create driving force for private sector development in CBR by connecting CBR with potential markets, direct investment inflows, management technologies and local resources.

### Roles and Function in Masterplan

This Forum is derived from “CBR Vision 4 Private Sector Led Interaction.” It is one of the major components of “Item 1 Establish Cross-Border Human-Links.” The Forum also aims to realize the NBR strategy 3 of “Promotion of manufacturing and distribution industries by utilizing GMS market.” It also fulfills the SKR objective of “Promotion of partnership.”

### Project Description

#### Concept

The concept of the Cross-Border Business Development Forum can be described in the activity/function chart (See Table 7.1).

#### Expected Participants

Members:

- Entrepreneurs and representatives of the private companies in CBR
- Interested businesspersons outside CBR

Associate members:

- Representatives of the national associations and industrial societies such as TCC, FTI, LCC and Bank Association

- Representatives from the municipalities in the 6 provinces

Honorable members:

- The Governors of the 6 provinces in CBR

Observers:

- Representatives of NESDB, CPC, BOI, FIMC, both Ministries of Industry, both Ministries of Commerce, both Ministries of Finance and concerned government offices as observers
- A consultant/advisor who provides technical advice and support to building up the Forum
- The press

**Table 7. 1 Activity / Function Chart of Cross-Border Business Development Forum**

5 Purposes of the Forum	10 (or 11) Activities	6 Functions					
		Getting to know each other	Learning business and management	Sharing information and resources	Collaborating each other	Influencing and lobbying	Arbitrating and solving conflicts
Local Resources Development and Utilization	Semi-Annual General Meetings Annual Public-Private Joint Meetings Thematic Group Meetings Directory Services						
Improvement of Business Environment	Policy Recommendation and Lobbying Arbitration Service between Members						
Invitation of Direct Investment	(Inviting Lecturers and Observers) Issuance of News Letters Exhibitions						
Market and Marketing Channels Development	Study Tours and Reporting						
Management Capacity Building	Quarterly Seminars and Workshops						

: Primary purpose, : Secondary purpose, : Tertiary purpose

**Important Issues**

- Elimination of constraints for cross-border business and trade development
- Establishment of mutual trust and rapport among businesspersons in NBR and SKR
- Establishment of mutually agreeable business ethics and practices between NBR and SKR
- Development of business channels with business entities outside CBR
- Human resource development and introduction of cutting edge management methods and technologies to CBR
- Increasing knowledge about the GMS market
- Thematic groups may be formed for some of the industrial sub sectors such as agro processing, livestock farming and processing.

## Expected Organization

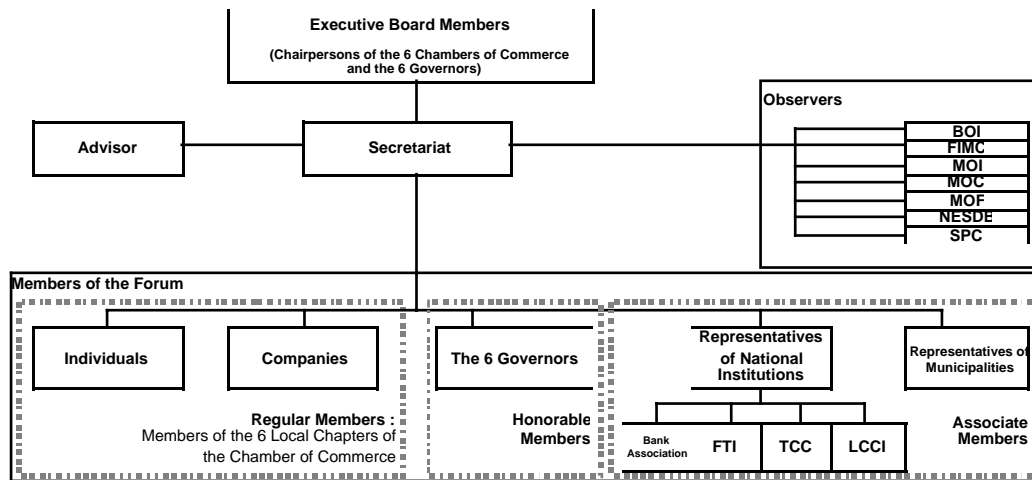


Figure 7. 1 Organization of the Forum

## Demand Forecast and Cost Estimate

### Demand Forecast

Although there is no quantitative evidence of existing demand for CBBDF, it should be appropriate to consider that CBBDF is welcomed to the people in CBR. The initiative of the private sector people in the private sector development is important.

### Cost Estimate

Regular Activities Total	\$73,000	(annually)
<u>Advisor or facilitator (if necessary)</u>	<u>\$150,000</u>	<u>(annually)</u>
Grand Total	\$223,000	(annually)

## Initial Environmental Examination

No significant impact is found.

## Preliminary Forecast of Benefit

- Increase of private investment in CBR (not quantifiable)
- Increase of job opportunities in CBR (not quantifiable)
- Sales increase of locally produced products outside as well as within

## 7.3 Savannakhet Airport Utilization

### Background

Currently, the CBR has three airports. Thai side holds two airports: Nakhon Phanom and Sakon Nakhon. Lao side has only Mukdahan Airport. Table below summarizes the outline of the three airports.

**Table 7. 2 Existing Airports in Cross Border Region**

Airport	Runway (m)	Weekly Flight (2001 Summer)	Annual Passengers (1999)
Nakhon Phanom	2,440	7	43,472
Sakon Nakhon	2,600	7	47,938
Savannakhet	1,500	7	7,313

Source: Airport Development Masterplan in Thailand (JICA, 2000)  
Dept. of Civil Aviation, MCTPC, Lao PDR

On the other hand, demand side for air service is changing. The Second Mekong International Bridge and East West Corridor will open the region to new international environment around 2005. Considering the future change of the region as above, the region is necessary to be connected with Bangkok International Airport directly.

### Objective

This project is intended to utilize the existing Savannakhet Airport for passengers from and to both Mukdahan and Savannakhet.

### Roles and Function in Masterplans

The primary role of the project is to improve air service in the area at reasonably nominal cost. It will provide a solid base for tourism development and investment.

### Alternatives

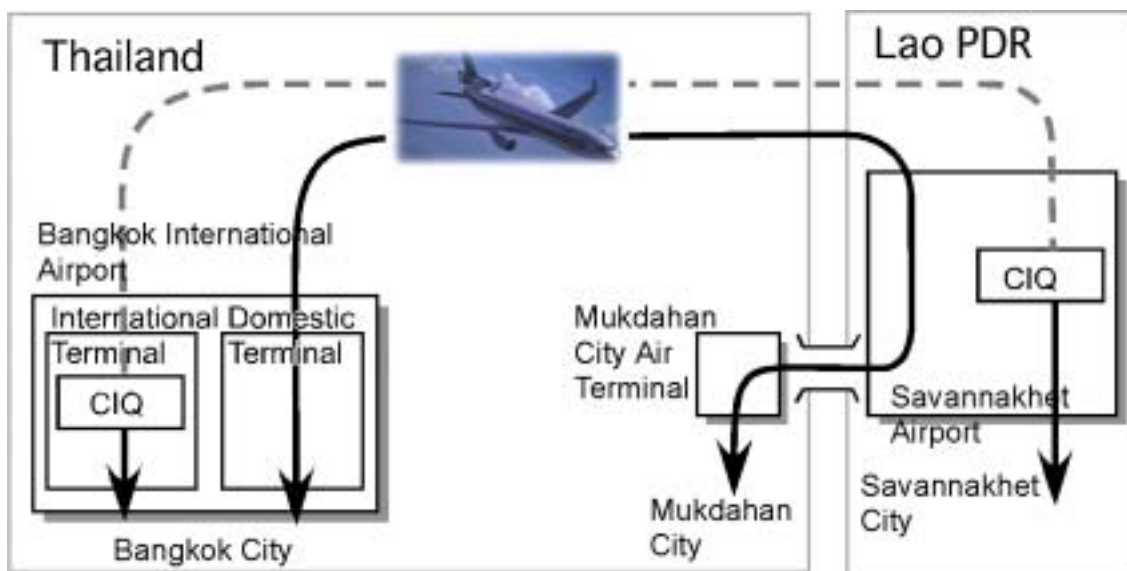
The next Table indicates the alternatives for airport usage for Savannakhet – Mukdahan Area. Currently, the Savannakhet Airport is the only one airport in the area. The residents of Mukdahan seldom use the airport because the airport has flights only to Vientiane and Pakse.

**Table 7. 3 Alternatives for Airport Operation in Mukdahan-Savannakhet Pair City**

Alternative	Savannakhet	Mukdahan	Advantage	Disadvantage	Necessary Actions
Current Situation	1,500m Domestic	None		Inconvenient for all cities.	
1	1,500m Domestic	New, Domestic	Smooth operation	Construction cost. Far from Mukdahan. Inconvenient from ZVN.	New Mukdahan airport construction
2	1,500m Domestic	Former Air Force Base utilization. Domestic	Cheaper than new airport.	Rehabilitation cost. Far from Mukdahan.	Rehabilitation of AFB.
3	1,500m International. Open to Mukdahan residents.	None	Efficient usage. Close to Mukdahan.	Complex protocol.	Cross-border arrangement.
4	2,200m International	None	Holds larger aircraft. Efficient usage. Close to Mukdahan.	Uncertain demand. Runway extension cost.	Runway extension. Cross-border arrangement.

Alternative 3: Airport Utilization

For an aircraft to Bangkok: Passengers from Mukdahan City check in at Mukdahan City Air Terminal (MCAT) and then pass the Second Mekong International Bridge without immigration control to Savannakhet Airport. Savannakhet residents pass custom, immigration and quarantine (CIQ) at Savannakhet Airport Terminal to board the same airplane (Figure 7. 2).



CIQ: Custom, Immigration and Quarantine

**Figure 7. 2 Operational Scheme**

Alternative 4: Runway Extension

The current length, 1500m, of the Savannakhet Airport runway is too short to accept a jet plane. Specifically, small jet airplanes such as Boeing 737 require the length of 2,120m<sup>2</sup> (See Table below).

**Table 7. 4 Design Aircraft and Necessary Runway Length**

Aircraft Class	Large Jet	Medium Jet	Small Jet	Turbo Prop	STOL
Typical Aircraft	B747-400	B767 A300-600	B737-400 A320	ATR-72	Do 328
Number of Seats	400	250	150	65	30
Runway Strip (m) (Runway+Overrun)	2,620	2,120	2,120	1,720	1,420

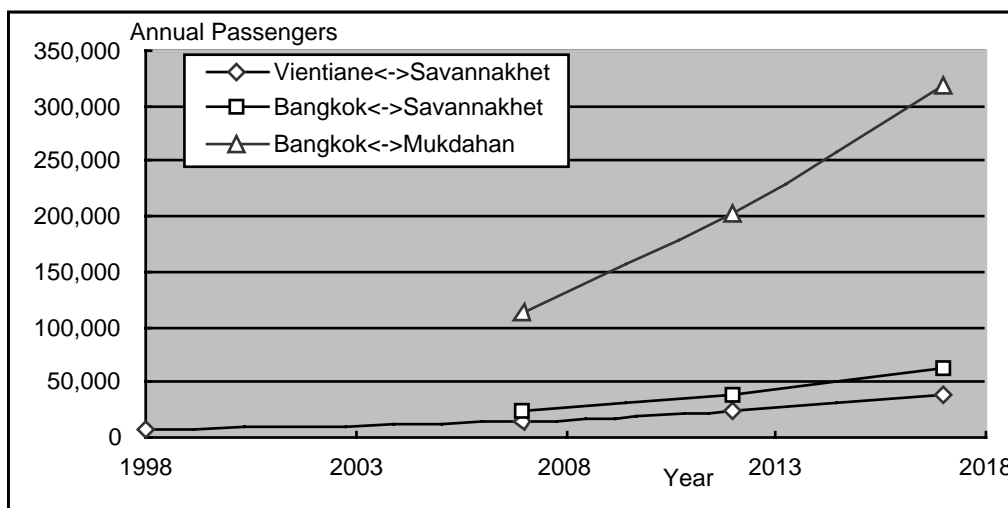
Source: JICA Airport Development Masterplan (2000) p.8-10.

The extension is not a precondition for the Alternative. This can be considered as the next phase after the commencement of operation of the Alternative 3.

**Demand Forecast and Cost Estimate**

Passenger Demand Forecast

Figure 7.3 indicates the passenger demand forecast for the Savannakhet Airport.



**Figure 7. 3 Passenger Demand for Savannakhet Airport**

<sup>2</sup> By ICAO Recommendation. 2,000m(Runway) +2\*60m (Overrun).

### Revenue of Airport

The following table shows the revenue for the airport operation in the year 2007 based on the demand forecast. Airport tax structure is tentative.

**Table 7. 5 Revenue of Airport in 2007**

#### Landing Fee and Navigation Fee

Aircraft	Flight	Landing Fee(\$)	Navigation Fee (\$)	Annual Number of Flights	Annual Revenue(\$)
ATR-72	Domestic	26	32	330	19,140
B737	International	226	320	330	180,180

#### Airport Tax

Destination	Airport Tax (Baht)	Annual Departing Passengers in 2007	Exchange Rate (B/\$)	Annual Revenue(\$)
Vientiane	50	7,668	41.4	9,261
Bangkok	100	68,568	41.4	165,624

Total 374,205

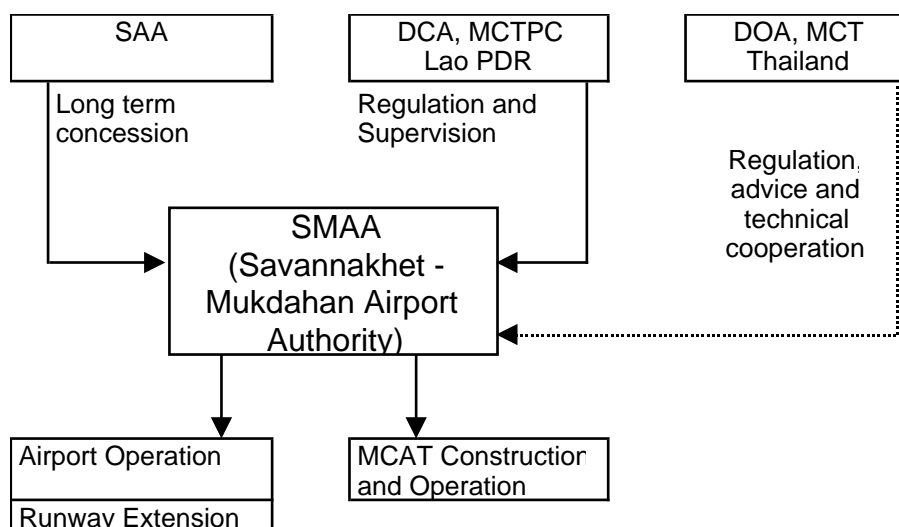
### Cost

MCAT (Passenger Terminal, Bus Yard and Buses) : US\$ 2.35 million

Savannakhet Airport Extension: US\$ 1.13 million

### Institutional Settings

This study recommends establishing a new authority, such as “Savannakhet – Mukdahan Airport Authority (SMAA),” for the integrated operation.



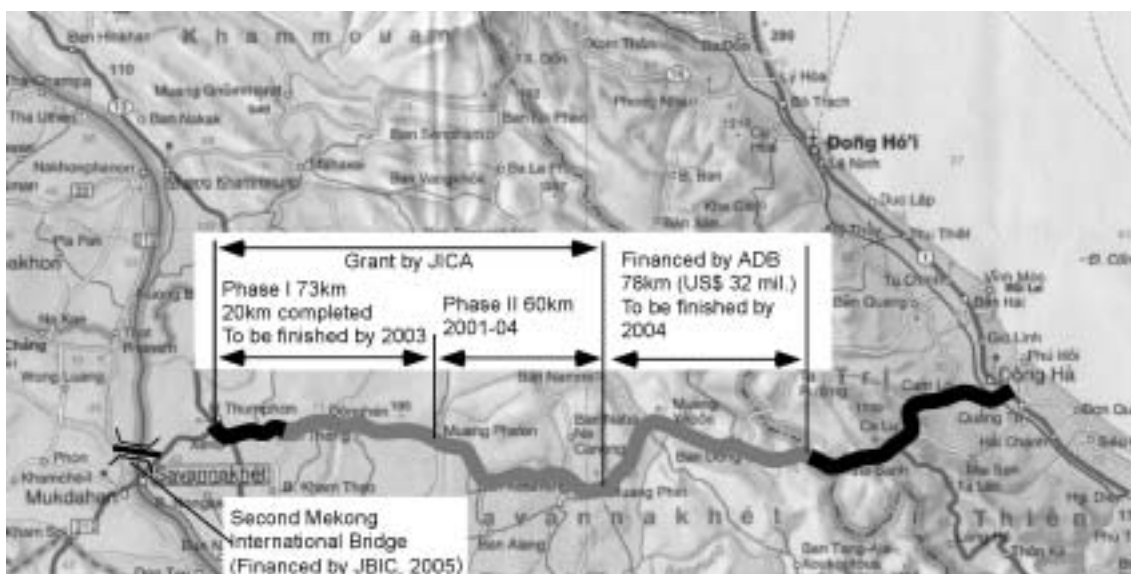
**Figure 7. 4 Savannakhet-Mukdahan Airport Authority**



## 7.4 Route 9 Joint Maintenance

### Background

The Second Mekong International Bridge and the East West Corridor will be completed around the year of 2005-6 (Figure 7. 5). Then, the issue will turn how to maintain and how to repay the loan for the bridge and ADB section of Route 9.



Source: MCTPC and JICA Study Team

**Figure 7. 5 Lao Section of EWC and Donors**

### Objective

As a part of International Transportation Program, the project is intended to establish a fair, sustainable and affordable maintenance system for the Lao section of Route 9. Involvement of adjacent countries is also encouraged in technical and financial aspects. It is most appropriate to maintain the route 9 by international joint effort.

### Roles and Function in Masterplans

Well-maintained Route 9 is a critical element of the East-West Corridor. The development scenarios of both SKR and NBR depend on the success of Corridor. This project is related to the following parts of Masterplans.

### Alternatives

For the ADB loan repayment, the Lao Government has primary responsibility and a part of toll can be allocated to it.

For the Maintenance cost, there are three major alternatives as follows:

**Table 7. 6 Alternatives for Source of Maintenance Cost**

Alternatives	Source of O&M Cost	Major Points
Alternative 1	Simple User Charge at a few toll gates	Semi-access controlled toll-road. Full maintenance cost recovery by road users
Alternative 2	Cost sharing by three countries (national budget)	Ordinary Highway (Freeway) Full O & M costs are covered by national budget or road special account of each country. And the cost is shared by each government in proportion to traffic volume (by registered country) or other indicators (vehicle-km, amount of exports etc.).
Alternative 3	Combination of User Charge and National Budget in reflection to each national conditions	Lower tariff charge (semi access controlled toll way) based on affordability of Lao users Supplemental cost sharing by Thai or by two countries (Thai and Viet Nam). Thailand : Lower user charge + National Budget Lao PDR: Lower user charge Viet Nam : Lower user charge + National Budget

### Demand Forecast

There are several traffic demand for the East- West Corridor. Maunsell forecast 397 thousand trucks for medium/heavy two-way trucks per year in the year of 2010<sup>3</sup>.

Here refers the demand forecast by the SAPROF (Special Assistance for Project Formulation) Team for the Second Mekong International Bridge Project by the former OECF.

**Table 7. 7 Traffic Forecast**

	2005	2010	2020
Low	126	175	343
High	210	385	1,300

Heavy Vehicle, Average Daily Traffic

Source SAPROF Report (1998).

The traffic forecast is based on the middle of two scenarios.

### Maintenance Cost

The unit prices for Route 9 maintenance is available as follows:

Routine Cost: US\$ 694 /km/year<sup>4</sup>

<sup>3</sup> Maunsell etc. 1996. *East-West Transport Corridor Study Final Report*. Asian Development Bank and Mekong River Committee. Executive Summary, p.iii.

Periodic Maintenance: 2-lane road<sup>5</sup> :US\$13,000–28,000 /km depending on traffic volume.

The Figure below expresses the relationship between traffic forecast and required cost for maintenance and capital repayment per vehicle.

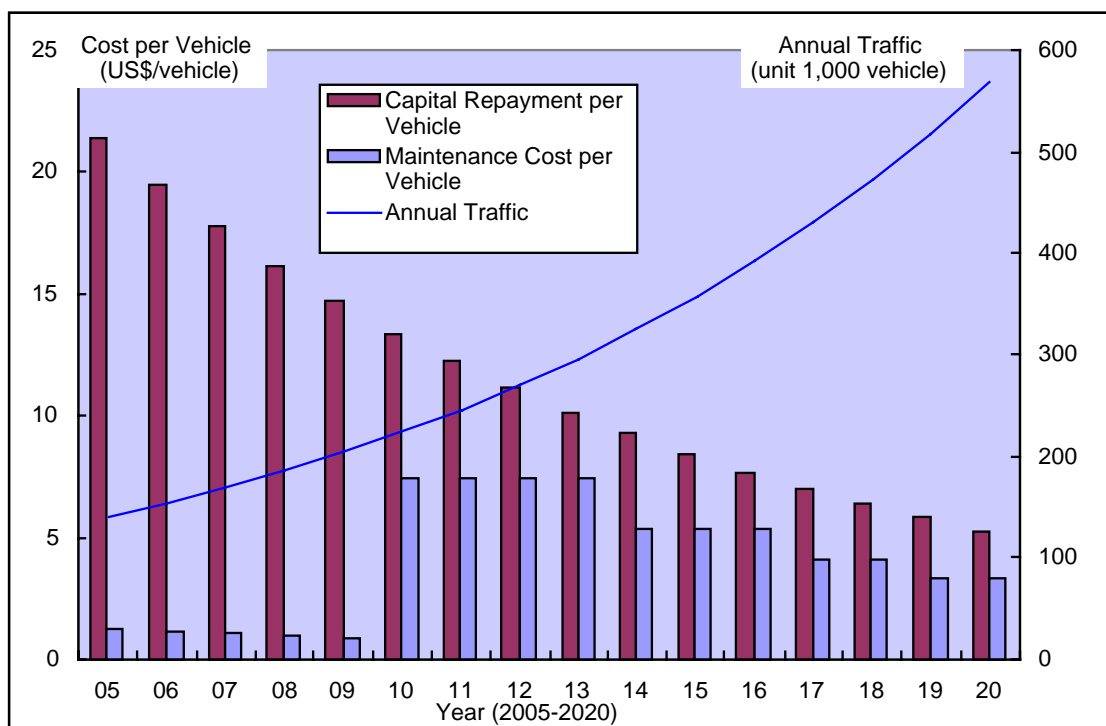


Figure 7. 6 Traffic Volume and Unit Cost for Maintenance

The above Figure suggests that the US\$ 5 is appropriate level for the unit cost of maintenance per vehicle. The annual traffic is expressed in the total number of vehicle, it suggests that the toll will be as follows under the full user charge assumption.

Table 7. 8 Toll Structure and Financing Alternative

	ADB Loan Repayment	Maintenance Cost
Heavy Truck	Baht 500	Baht 250
Passenger Car	Baht 150	Baht 75

<sup>4</sup> World Bank. 2001. *Project Appraisal Document for ... Road Maintenance Project*. P.41.

<sup>5</sup> Maunsell etc. 1996. *East-West Transport Corridor Study Final Report*. Asian Development Bank and Mekong River Committee. Appendix M.

## Evaluation of Alternatives

The above analysis indicates the toll level of the route 9. This study chooses the Alternative 1, Simple User Charge system, because the level of toll is within affordable range for the road users. The study suggests installing three tollgates on the Route 9. The locations are Xeno, Muang Phin and Lao Bao.

At the same time, the analysis shows that it is very difficult to pay all required cost for Route 9 maintenance by the current Road Maintenance Fund. It is acceptable to charge road users on Route 9. Because the maintenance cost is recurrent payment, the adjacent countries are reluctant to support the system financially.

## Institutional Settings

A new agency under the Department of Roads, MCTPC, will be a responsible agency for the Route 9 maintenance. The agency, temporarily named as “Route 9 Agency,” will function as follows:

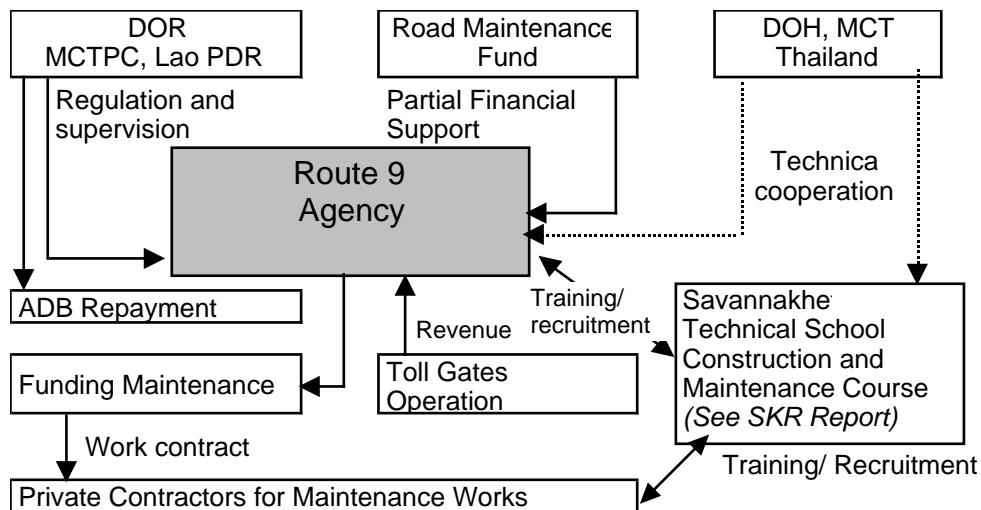


Figure 7. 7 Route 9 Agency

## 7.5 Plan of Project Implementation

The Table below expresses a timetable for Cross-Border Project implementation. Two important milestones are as follows.

Year 2004: Route 9 completion.

Year 2005-6: Completion of Second Mekong Bridge

Late in this decade, AFTA will decrease import duties into Lao PDR. Accordingly, the trade and capital mobilization will be more active. It is necessary to improve investment base by the middle of this 2010s.

**Table 7. 9 Project Implementation Timetable**

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
External Environment				Rt9 completion		Second Mekong Bridge				
Cross Border Project	<b>Business Development Forum</b> 01 Activation 02 Study tours etc. 03 Exhibitions etc.									
	<b>Savannakhet Airport Utilization</b> 02 Feasibility study, detailed design 02- Government deregulation and negotiation 03-04 MCAT construction 04 First flight to BKK. Operation without bridge 06 Operation with bridge 06-07 Runway extension works									
	<b>Route 9 Joint Maintenance</b> 03 Savannakhet Technical School (SKR) 03 Establish maintenance agency 03 Tollgate installment for western section 04 Tollgate installment for other sections 04 Start routine maintenance and technical cooperation 07 Start periodic maintenance									