

ผลกระทบทางเศรษฐกิจและสังคมของเส้นทาง R3 ต่อประเทศไทย สปป.ลาว และมณฑลยูนนาน ประเทศจีน

โดยเน้นที่ สปป.ลาว



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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต

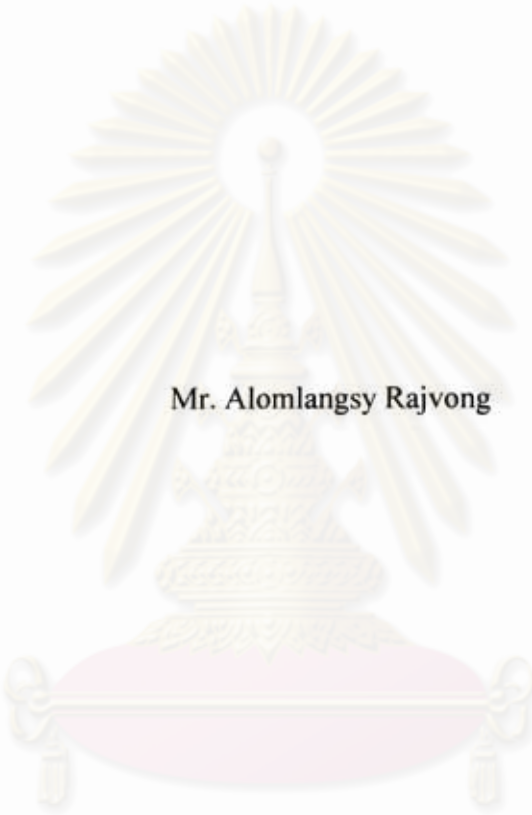
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**SOCIAL-ECONOMIC IMPACT OF R3 ROAD ON THAILAND,  
LAO PDR AND YUNNAN PROVINCE (PRC)  
WITH FOCUS ON LAO PDR**



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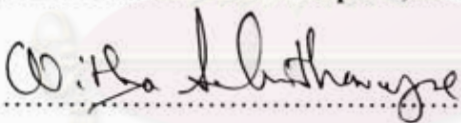
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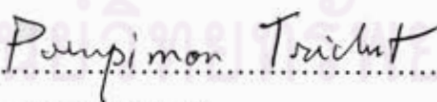
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การก่อสร้างถนนเป็นหนึ่งในนโยบายส่งเสริมการพัฒนาประเทศ และเป็นยุทธศาสตร์ในการลดความยากจน และ ยังสนับสนุนการค้า และ การลงทุนในเขตพื้นที่ต่างๆของถนน ถนน R3 ที่ก่อสร้างแล้วเสร็จเมื่อเดือนกุมภาพันธ์ ปี ค.ศ. 2008 ถนน R3 ได้เชื่อมโยงจุดผ่านแดน ไทย-ลาว (เชียงของ - ห้วยทราย) ในแขวงบ่อแก้ว ไปยังจุดผ่านแดนลาว - จีน (บ่อเต็น - โหมหาน) ในแขวงหลวงน้ำทา สปป. ลาว

การศึกษานี้ เน้นการศึกษาด้านผลกระทบทางเศรษฐกิจและสังคมของเส้นทาง R3 ต่อ สปป. ลาว โดยเฉพาะ แขวงบ่อแก้วและแขวงบ่อน้ำทา การศึกษาถูกแบ่งออกเป็นสองระดับ ระดับแรก ศึกษาการพัฒนาเศรษฐกิจและสังคมของแขวง บ่อแก้วและแขวงหลวงน้ำทา ซึ่งเน้นไปที่สามแขนงคือ การค้า การลงทุน และการเกษตร ที่จะแสดงให้เห็นภาพรวมของการ พัฒนาทางเศรษฐกิจของทั้งสองแขวงดังกล่าว ระดับที่สอง ศึกษาผลกระทบด้านเศรษฐกิจและสังคมต่อชุมชนต่างๆ ที่อยู่ใกล้ เส้นทาง R3 ในการศึกษาในระดับที่สองนี้ มีหมู่บ้านจำนวนทั้งหมด 12 หมู่บ้านถูกนำมาศึกษา ในเมืองห้วยทราย แขวงบ่อแก้ว มีจำนวน 5 หมู่บ้าน และในเมืองน้ำทา แขวงหลวงน้ำทา มีจำนวน 7 หมู่บ้าน

ผลของการวิจัย พบว่า เส้นทาง R3 เป็นส่วนประกอบของการพัฒนาเศรษฐกิจของ ไทย สปป.ลาว และมณฑล ยูนนาน สาธารณรัฐประชาชนจีน หลักฐานที่บ่งชี้คือ ปริมาณการค้าของทั้งสามประเทศได้เพิ่มขึ้นสูงหลังจากการสร้างเส้นทาง R3 ในเดือนกุมภาพันธ์ ปี 2008 ด้านการค้าผ่านแดนระหว่างประเทศไทย-จีน ได้เพิ่มขึ้นมากกว่าสองเท่าตัวนับตั้งแต่ ปี 2008 - 2009 ทั้งนี้เพราะเส้นทาง R3 ยิ่งไปกว่านั้นเส้นทาง R3 ทำให้การคมนาคมดีขึ้น การเข้าถึงตลาด โอกาสทางด้าน เศรษฐกิจและการศึกษา การเข้าถึงการบริการด้านสาธารณสุขและการบริการอื่นๆ ของประชาชนลาวที่อาศัยอยู่ในบริเวณถนน

แต่ทั้งนี้ทั้งนั้น ผลของการศึกษาจากกรณีศึกษาพบว่า เส้นทาง R3 ได้สร้างผลกระทบด้านลบทางสังคมให้แก่ชาวบ้าน ในสองรูปแบบดังนี้ รูปแบบที่หนึ่ง คือ ผลกระทบจากตัวเส้นทาง R3 โดยตรง เช่น การขูดเซยที่ดิน ระบบระบายน้ำ และ อุบัติเหตุตามท้องถนน และการเพิ่มขึ้นของราคาที่ดิน ผลกระทบรูปแบบที่สองเกิดจากการพัฒนาในพื้นที่เส้นทาง R3 โดยเฉพาะอย่างยิ่งในด้านการลงทุนต่างๆ ด้วยเหตุนี้ การศึกษานี้แสดงให้เห็นผลกระทบด้านเศรษฐกิจและสังคมของ เส้นทาง R3 และได้ให้ข้อเสนอแนะในการแก้ไขปัญหาต่างๆ ใน สปป.ลาว

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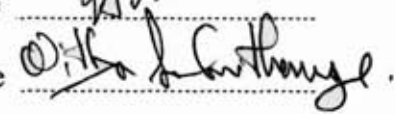
ALOMLANGSY RAJVONG: SOCIAL-ECONOMIC IMPACT OF R3 ROAD  
ON THAILAND, LAO PDR AND YUNNAN PROVINCE (PRC) WITH  
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Road Construction is one of the Lao government strategic incentives to the National Growth and Poverty Eradication Strategy (NGPES) and to foster trade and investment in the road areas. Having completed in February 2008, the R3 road connects Chiang Kong-Houaysai, Thai-Lao border checkpoint in Bokeo Province to Boten-Mohan Lao-Chinese border checkpoint in Luang Namtha Province, Lao PDR

This study focused on studying the social-economic impacts from the R3 road on Lao PDR; particularly, on Bokeo Province and Luang Namtha Province. There were two levels in this research. First, the study on Bokeo and Luang Namtha provincial social-economic development which focused on three sectors: trade, investment, and agriculture. It provided a wider view on economic development of the two provinces. Second, the study was on the social-economic impacts on local communities adjacent to the R3 road. Twelve villages along the R3 road were studied in this research. In Huaysai District, Bokeo Province, there were five villages; and in Namtha District, Luang Namtha province, seven villages were studied on social-economic impacts of the R3 road.

The research findings showed that the R3 road contributed to economic development on Thailand, Lao PDR and Yunnan Province, People’s Republic of China. The explicit evidences were the volume of trade among three parties has increased sharply since the completion of the R3 road in February 2008. The trans-border trade between Thailand and China increased more than two times from 2008 to 2009; thanks to the R3 road. Moreover, the R3 road provides better transportation, markets, economic opportunities, education, accessibility to healthcare services, and other services to Lao ethnic people along the road.

However, the findings from case studies showed that the R3 road created negative social impacts to villagers in two aspects. First, the R3 road physical impacts such as land compensation, drainage system, road accidents, and the increase of land prices. Second, the impacts were from developments on the R3 road area; mainly, the investments. Therefore, this study revealed social-economic impacts of R3 and gave suggestions for problems on Lao PDR.

Field of Study: Southeast Asian Studies Student’s Signature   
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จุฬาลงกรณ์มหาวิทยาลัย

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## LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AEDC	American Economic Development Council
AFTA	ASEAN Free Trade Areas
ASEAN	Association of Southeast Asian Nations
DAFO	District Agricultural and Forestry Office
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GMS	Greater Mekong Sub-region
GMS-ECP	GMS-Economic Cooperation Program
JICA	Japan International Cooperation Agency
Lao PDR	Lao People's Democratic Republic
LDC	Least Developed Country
MDG:	Millennium Development Goals
MoAF:	Ministry of Agriculture and Forestry, Lao PDR
NEC	Northern Economic Corridor
NEDA	Neighboring Countries Economic Development Cooperation Agency
NGPES:	National Growth and Poverty Eradication Strategy
NSC	National Statistics Centre
NSEC	North-South Economic Corridor
NSEDP	National Socio Economic Development Plan, Lao PDR
NSEZC	National Special Economic Zone Committee
NTR	Normal Trade Relations
PAFO	Province Agricultural and Forestry Office
PRC	Peoples' Republic of China
SEZ	Special Economic Zone
USA	United States of America

# CHAPTER I

## INTRODUCTION

### 1.1 Background

The Lao People's Democratic Republic (Lao PDR) is still the most forested country in Southeast Asia with 41.5 percent coverage; however, forested areas have been declining. The terrain ranges from low land plains along the Mekong River and alluvial plains along tributary rivers, to hills, upland plateaus, and mountains climbing to 3,000 meters in altitude. Seventy percent of the country is mountainous. Only six percent of the total land area is permanently used for agriculture - half for crops and half for pasture. Shifting cultivation still occurs on about 30,000 additional hectares with fallow periods of varying duration (MoAF, 2005).

Lao PDR is one of the world's most ethnically diverse countries. According to Census 2005, there are 49 recognized ethnic groups. These 49 groups are classified into four main ethno-linguistic groups: Lao-Tai account for 65 percent; Austro-Asiatic, Hmong-Mien, and Sino-Tibetan account for 24, 8, and 3 percent respectively. The Lao-Tai group traditionally lives on flat lands, while the Hmong-Mien group and Sino-Tibetan group live on hilly and mountainous areas and rely on shifting cultivation in the rural uplands for their living. Although this diversity can be seen as a very valuable asset for the country, the vast diversity of ethnic groups creates significant obstacles for government and development partners due to different languages, different cultural belief systems and practices. It would for instance be very costly for the Lao Government to deliver basic social services, including primary education and health. Many regions are accessible only in the dry season, and many can only be reached by small footpaths. Communities are often distanced from one another by hours, or even days of travel time. Apparently, these communities tend to be less developed than the lowland groups (Nolintha Sengthong, 2008).

**Table 1.1: Overview of ethnic grouping in Lao PDR**

<b>Ethnic group</b>	<b>Percentage</b>
Lao-Tai	65
Austro-Asiatic	24
Hmong-Mien	8
Sino-Tibetan	3

Source: Adapted from the Census 2005

The national development objectives are to sustain and increase broad-based economic growth, to eliminate mass poverty, to meet the Millennium Development Goals (MDGs) and to graduate from least developed country (LDC) status by 2020. The National Growth and Poverty Eradication Strategy (NGPES) and expanded exports are central features of the 2006-2010 Five Year Development Plan. To reach these goals, the nation faces special challenges because of its geography and levels of development. But the challenges can, of course, create opportunities as well.

Although roads are being improved, the national economy is highly affected by geography, with food in surplus areas unable to be moved to deficit areas. In certain instances, it is cheaper to buy imported goods than to buy from distant Lao suppliers. On the contrary, some Lao suppliers trade successfully in local markets because of lower priced products from other provinces while imports are costly. Furthermore, provinces still impose charges on movement of goods across their borders.

Lao PDR is at the centre of the Greater Mekong Subregion (GMS), a region consisting of the Kingdom of Cambodia (Cambodia), Lao PDR, the Union of Myanmar (Myanmar), the Kingdom of Thailand (Thailand), the Socialist Republic of Vietnam (Vietnam), and Yunnan and Guangxi provinces of China. Lao PDR is the only country bordering all the other countries in the sub-region. Its longest border is the 2,000 kilometer eastern border with Vietnam, and then an 1,800 kilometer western border with Thailand. It has shorter western and northern borders with Myanmar and China, and an even shorter southern border with Cambodia.

The economy of Lao PDR as measured by GDP grew by 7.3 percent in 1999, 5.9 percent in 2000 and an estimated 5.5-6.4 percent in 2001 according to Asian

Development Bank (ADB) sources. According to these same sources, the economy of Lao PDR grew by 6.5 percent in 2002. In 2009, the economy was relatively unscathed by the global slump, posting GDP growth of 6.5 percent. Growth was slower in 2009 since the country averaged a little below 7.5 percent growth during the previous 5 years. The 2009 growth was supported by significant increases in mineral production, a recovery in the price of copper in the second half of the year, and expansionary government policies (*Asian Economic Outlook, 2010*).

Lao PDR is a member of the Association of Southeast Asia Nations (ASEAN) and the ASEAN Free Trade Area (AFTA). It has trade preferences with Australia, the Peoples' Republic of China (PRC), Europe, Japan, the Federation of Malaysia (Malaysia) and the Kingdom of Thailand (Thailand). It has bilateral trade agreements and Normal Trade Relations (NTR) with the United States of America (USA). Agricultural trade with China and ASEAN under the Early Harvest Program (EHP) of the ASEAN-China Free Trade Agreement (FTA) has begun. And the Sixth Five Year Development Plan (2006-2010) of the Lao Government places special emphasis on increasing international trade - particularly exports.

The GMS has been the focus of large investments from the ADB and other donors to improve roads, transport, and other infrastructure. These road projects have gradually evolved into 'development corridors' or 'economic corridors' with complementary activities to promote trade and other development.

The GMS 'corridors' passing through the Lao PDR are:

- An east-west corridor that begins at Mawlamyine, Myanmar on the Andaman Sea, crosses Thailand, Lao PDR, Vietnam, and ends at Da Nang on the South China Sea in central Vietnam. The east-west corridor will also have connections to the Cambodian port of Sihanoukville on the Gulf of Siam.
- A north-south corridor connecting Kunming in Yunnan Province with the Lao PDR and Thailand. This corridor will have a connection to the Cambodian port of Sihanoukville on the Gulf of Siam. The north-south corridor will also

have access to a second east-west corridor connecting Thailand and Cambodia with Ho Chi Minh City and the other southern Provinces of Vietnam.

Contract farming confirms that the Lao PDR is a low-cost producer of raw agricultural products for both the Thai and Chinese markets - both for further processing and for direct consumption. For the Chinese market, the products in high demand are 'land-intensive' products such as maize and sugar cane. For the Thai market, many agricultural products are competitive.

More agricultural production for the domestic and export market offers high promise for broad based economic growth, for reduction of poverty, expanded choice, and better education, health, and future prospects for rural children. Most of the labour force (and its most rapid growth) is in rural areas.

China-Thailand: Goods from China are sent via Luang Namtha and Bokeo province to Thailand or vice versa from Thailand to China. Lao PDR has less comparative advantages than China - Thailand trade because of a more direct alternate road route between Yunnan province and Northern Thailand.

## **1.2 Area and Scope**

### **1.2.1 Northern Economic Corridor Project**

The Government of Lao PDR with assistance from the ADB and the governments of the PRC and Thailand, intends to implement the Greater Mekong Sub-region: Northern Economic Corridor Project (the Project). The Project calls for the improvement of the roadway from Huaysai on the Mekong River bordering Thailand to Boten on the border with the PRC.

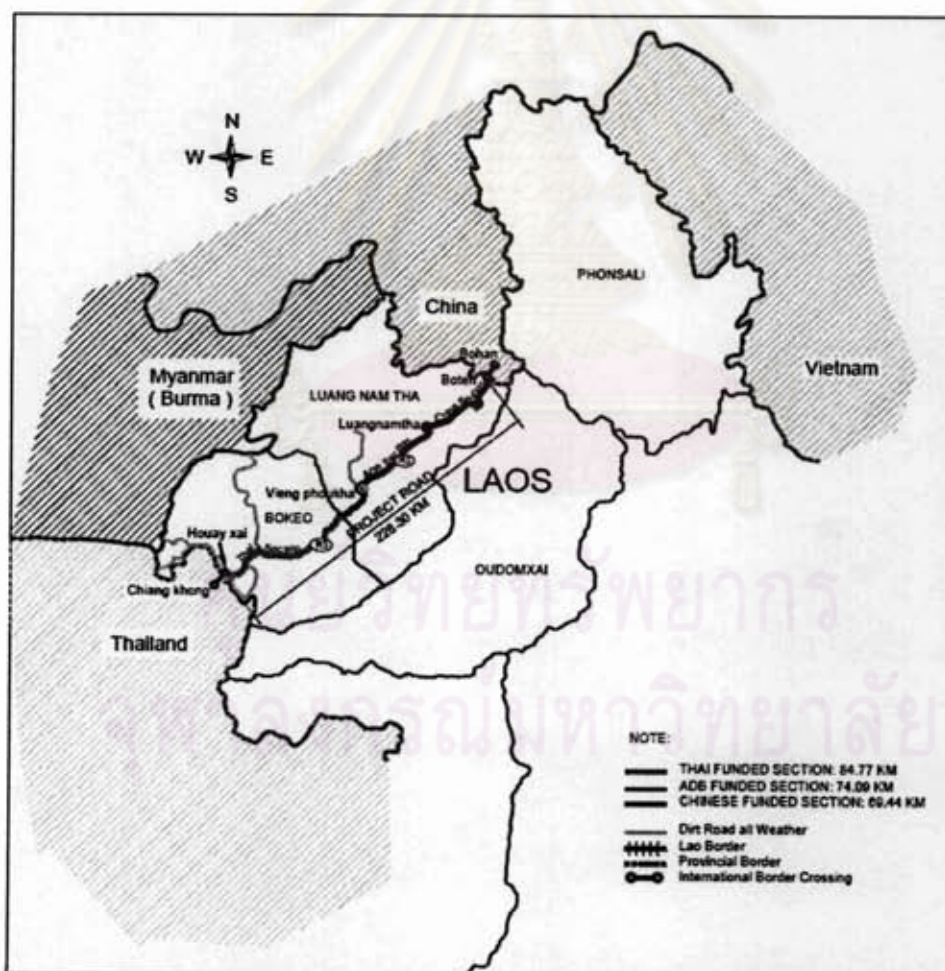
The road improvement is part of a regional development program for the Greater Mekong Sub-region, with the project as a whole designed to connect Chiang Rai, Thailand to Kunming, China via Lao PDR, and in a larger sense, to connect all of Southeast Asia to the PRC. The Lao segment of the road is the last unpaved section of national route three with facilitated transportation and trade benefits expected for the entire region.



The existing roadway in Lao PDR is approximately 228 km long, passing through the rural provinces of Bokeo and Luang Namtha. The Project is designed to upgrade the Lao road from its present, mostly unpaved state, to standards commensurate with adjoining roads in Thailand and the PRC. As such, the project is in line with Lao national government objectives to build a sealed primary road network and to develop the northern region.

The Thai funded section is 84 km, the ADB funded Section is 77 km, and the PRC funded Section is 67 km. The civil work started in October 2004 and was completed in February 2008.

**Figure 1.2.1: Map of R3 Road**



Source: ADB, 2004

The project road shall form an important link between countries that are within an area called the GMS. This area belongs to five countries namely Myanmar, Lao PDR, Thailand, Cambodia, and Vietnam, plus Yunnan Province and Quangshi Autonomous Region of China. These are the countries and provinces that are most influenced by the Mekong River. In total the GMS encompasses about 250 million inhabitants and is viewed by the ADB, as well as others, as having some of the most significant economic potential of any geographic area in the world. In support of this belief the ADB now has a division responsible exclusively for the GMS and has designated the improvement of the road as one of its highest priority projects.

### **1.2.2 State of the Problem**

The economy in Bokeo Province is generally less developed than the country as a whole, with a total population of around 124,000 people in the Province, of whom around 10,000 are classified as urban. The Province also has a density of approximately 20 persons per sq km. According to official figures, the incidence of poverty in Luang Namtha Province make it rank as one of the poorest provinces in Lao PDR. The pProvince contains approximately the same population as Bokeo Province, 134,000 as of the end of 2001, but with a slightly small number of 7,689 people classified as urban (T.A. No. 3817 – LAO).

An increase in tourism to Lao PDR generally as well as in the provinces of Bokeo and Luang Namtha has been developing. In these two provinces there are now a significant number of predominantly young foreign back-packer type visitors to the area, many of whom are now extending their stay for ecotourism treks and/or boat trips down the Mekong River to other parts of Lao PDR.

It should be noted that the R3 road passes through some 90 villages, albeit many are located relatively near the towns of Houaysai and Luang Namtha. These villages, most of which have around 200–400 inhabitants, contain a diverse group of ethnic and linguistic cultures. Most of the inhabitants of these villages are engaged in subsistence agriculture. As a consequence of this type of subsistence living, Luang Namtha Province, in particular, has some of the highest rates of poverty in Lao, with, for example, over 90

percent of the population of Vieng Phoukha District living below the poverty line. While construction of an improved Project Road will be a necessary condition to address poverty alleviation in this area it will not by itself be sufficient. Therefore, appropriate development measures taken in conjunction with the improvement of the Project Road will be needed to help to bring these inhabitants above poverty level standards.

However, having finished the road construction in February 2008, the adjacent communities along the road as well as the two provinces and the Lao PDR as a whole, still have less benefits from the road. Due to the special geography of the two provinces that have a variety of ethnic groups, the fact that they are agricultural production based, and the mountainous geographical landscape, there are challenges for governors and administrative units. First, the challenge is to form the policy, strategy and methods to address the current situation where only trucks from Thailand to China and from China to Thailand pass the provinces and give nothing to the nearby communities except dust, noise, and road degradation. Second, governors and administrative units try to gain as many potential advantages as they can such as trade, agricultural production, tourism, and investment. Hence, the a study of existing problems, potential of the local people, provincial and national social-economic policies is inevitable in order to improve the comparative advantages in some sectors such as poverty eradication. Impact mitigation and good strategy need to be used to gain as much benefit as possible from having this transnational linking road.

### **1.2.3 Conceptual Framework**

Key national development strategies and plans of Lao PDR include the “Long-Term Strategy of Socio Economic Development to the Year 2020, National Socio Economic Development Plan (NSEDPlan), the Strategy on Industrialization and Modernization, the National Growth and Poverty Eradication Strategy (NGPES), the Regional Development Strategy and other sectoral, thematic and sub-sector strategies and plans. One of the Lao Government’s overarching development goals is to lift the country from the ranks of Least Developed Countries (LDC) by 2020.

The direction set in the Sixth NSEDP (2006-2010) are to achieve the highest outcomes and make general changes along the following lines:

- Turn from under-development to fast and stable development, producing high value-added goods both in quantity and quality step-by-step in order to meet domestic market demand and increase exports;
- Increase competitiveness and utilize comparative advantages to effectively implement international economic commitments in the frameworks of ASEAN, GMS, and other bilateral and multilateral commitments;
- Strengthen links between economic development and social development, and protect natural resources and the environment. Social problems should be solved first with attention paid to such issues as the reduction of poverty, unemployment and social evils, and keep the social and political situation stable; and
- Accelerate the building of a comprehensive socio-economic infrastructure and finalize the establishment of a market-oriented economy with socialist orientation to form the basis for industrialization and modernization.

In addition, the Sixth NSEDP (2006-2010) is seen to be a break-through plan for creating fast, firm and qualitatively enhanced development with increased capacity for economic competitiveness. The Plan hopes to lift society to new heights both in material and moral wellbeing, significantly improving the quality of life of all the people and boosting the nation's status in the international area.

Within the country, "Rural Development," is to reduce the disparities between rural areas and urban centres by enhancing the transport and communications networks and improving the living conditions of the rural people, especially those in remote areas. The overall strategy is to create employment, increase incomes and restructure the rural economies. The government will support the development of small-scale industries. Industrial centers in the three regions -Northern, Center, and Southern regions- will be

developed. Investments will be made in the development of the border economic zones to provide services for import-export, tourism and border transport.

To be specific, “Infrastructure Development,” is to continue maintaining, improving and developing the socio-economic infrastructure with a focus on such areas as inland, international, river and air transport; telecommunications; schools; and health centers to create favorable conditions for development.

The GMS Strategic Framework focuses on five development thrusts to achieve its goal: (i) strengthen infrastructure linkages through a multisectoral approach, (ii) facilitate cross-border trade and investment, (iii) enhance private sector participation in development and improve its competitiveness, (iv) develop human resources and skill competencies, and (v) protect the environment and promote sustainable use of the subregion’s shared natural resources. The transport sector has been at the forefront of the GMS program and is the driving force to achieve the program’s Cs-enhanced connectivity, increased competitiveness, and improved sense of community (ADB, 2008).

The individual development plans of the GMS countries have been designed to develop trade through infrastructure development. While acknowledging the limitations of the existing network, the investment plans have an expansionary outlook targeted toward increasing the competitiveness. One of the GMS transportation networks is the “Northern Economic Corridor Project” passing through Bokeo and Luang Namtha provinces, Lao PDR which aim to foster border trade, trans-border trade, investment (domestic and FDI) and finally, economic development of Northern Laos.

Ultimately, the Lao government will continue investing in socio-economic infrastructure, expanding the production of goods, providing health and education facilities for the people and reducing poverty.

#### **1.2.4 Objective of the Study**

1. To study economic development benefits arising from the R3 road on Lao PDR; and

2. To look into social impact of the R3 road for Lao PDR.

### 1.2.5 Research Questions

Questions raised from this research are:

1. What are the economic potentials of Bokeo Province and Luang Namtha Province that can benefit from the R3 road?
2. What are the social impacts that mostly affect Bokeo Province and Luang Namtha Province, Lao PDR?
3. What are possible solutions and mitigation methods to the social impacts?

### 1.2.6 Hypothesis

According to the observation and the actual situation of Bokeo Province and Luang Namtha Province, there are trucks from Thailand to China and from China to Thailand. These two provinces heavily rely on agriculture and products from Thailand and China, whereas, the industrial production has just emerged. Therefore, Bokeo Province and Luang Namtha Province have less comparative advantages compared to Chiang Rai Province, Thailand and Yunnan Province in China. Moreover, the development of the special economic zone along the two border checkpoints, (1) Chiang Kong-Houaysai (Thai-Lao) border checkpoint, Bokeo Province, and (2) Boten-Mohan (Lao-Chinese) border checkpoint, Luang Namtha Province, create social impacts to the local Lao communities around the areas. Due to these reasons, it is hypothesized: **“The R3 road unevenly benefits Thailand, Lao PDR, and Yunnan Province (PRC), with Lao PDR suffering most social impacts.”**

### 1.2.7 Scope of Study

In order to accomplish the objectives, answer the research questions, and test the hypothesis of this research, the study focuses on two areas. First, it focuses on the eminent development areas of the provinces as to the overall situation, and second, the two border economic zones. This research studied two aspects: economic development and social impacts arising from the R3 road.

The research scope was set in order to clarify and limit both in terms of period and locations. First, I have chosen the period from 2006 to 2010 as the time frame of the secondary data and statistics from the provincial offices and related organizations. This period covered the period before the completion of the R3 road in early 2008 to the near present situation in early 2011. Therefore, the statistics are able to manifest and support the argument and the author's interpretations on the impacts, as well as proving the hypothesis.

Second, due to the limitation of the research time and budget, I have selected only Lao PDR, in particular, Bokeo Province which borders with Chiang Rai Province, Thailand, and Luang Namtha Province which borders with Yunnan Province, PRC. These two provinces are in the core area crossed by the R3 road that is the main element of this study. And as mentioned in the hypothesis, Lao PDR is the major party affected by the R3 road.

Moreover, I also defined places to conduct field research which included the border economic zones of the two provinces. However, in the case of Bokeo Province, there are two border economic zones.

First, Tonpheung District, Bokeo Province is invested into by the Chinese company, DokngiewKham Co. Ltd, under the project name: King Romans of Laos Asean Economic & Tourism Development Zone. I have excluded this border economic zone because: (1) It is located in Tonpheung District, the border with Yunnan Province, PRC which is not on the R3 track; (2) In the case of Bokeo Province, the investment from Thailand is mainly taken into account due to its adjacent location; and (3) The DokngiewKham border economic zone can stand alone as a case study of land concession for international investment.

Second, Houisai District, Bokeo Province, will be invested into by a Korean-Thai joint venture under the name AAC Green City Lao Co. Ltd that will invest in constructing a Casino-Hotel, and golf club with 1,320 million baht. The location of this border economic zone is placed near the 4<sup>th</sup> Thai-Lao Mekong Friendship Bridge, seven kilometers from Huaysai municipality. The construction of the bridge is expected to be

accomplished in November 2012, and the border economic zone will be accomplished in 2013. Therefore, I also omitted this border economic zone because it has not been built yet.

Finally, in the case of Luang Namtha Province, there is the border economic zone named Golden Boten City, under the Chinese company named Golden Boten City Group Co.Ltd which has invested in the border area along with Yunnan Province, PRC. The company gained a land concession of 10,250 Hai (Hai or Rai in Thai equals 1,600 square meters) which is taken into this study as it is largely related the R3 road.

Since this study has two objectives of (1) to study economic development benefits arising from the R3 road, and (2) to look into the social impact of the R3 road; the economic development benefits will be looked into in terms of trade, investment and agriculture, while the social impacts will be studied in terms of transportation, opportunity, accessibility, road impacts, Chinese businesses and migration.

### **1.3 Contribution of the Study**

#### **1.3.1 Significance of the Study**

The research will create greater awareness of the problems from the R3 road faced by Lao PDR. As rapid development and influx of Thai and Chinese investment into Bokeo Province and Luang Namtha Province, the local communities have been suffering from the construction phase of the R3 road in terms of the social impacts such as displacement of local communities and ethnic minorities the changes their economic, social and cultural milieu. It also causes a spread of communicable diseases due to the increased number of itinerant people such as workers, drivers, and tourists in rural communities. It further causes increased land prices around the road construction sites, and increasing of incidence of accidents (e.g accidents that could cause the loss of life and community assets such as cows and water buffaloes, and damage to property).

This study will also be a policy reference for the government of Lao PDR in order to solve the social impacts and to utilize the R3 road in social-economic development of the country. Accessibility and road construction provide opportunity to the landlocked



areas to access goods and services. Some of the obvious advantages that the road brings to the local communities along the way is the accessibility to education for their children, health care services, and access to the market for their agricultural products. However, a well organized policy is needed to solve and mitigate the social impacts that come with the availability of the road. Therefore, this research will document the actual social problems facing the local communities as well as the policy references in order to benefit and utilize the R3 road for in the social-economic development of the country.

### **1.3.2 Expectation of the Study**

This research is expected to provide:

- Better understanding of the economic potential benefits of the R3 road in Bokeo Province and Luang Namtha Province;
- Identification of social impacts that mostly affect the local communities along the R3 road in Bokeo Province and Luang Namtha Province, Lao PDR; and
- Possible solutions and suggestions for addressing the impacts and promoting development in Bokeo Province and Luang Namtha Province.

## **1.4 Structure of the Thesis**

There are five chapters in this thesis namely:

### **Chapter 1: Introduction**

This chapter is in order to provide a better understanding of the background of the R3 road under the context of the Northern Economic Corridor Project and the problems that have occurred due to the availability of the R3 road. In chapter 1, I set the objectives and research questions which have been followed throughout the whole thesis. Moreover, to be specific, I also selected the scope of the study and provided the contribution of the research. Therefore, the reader can imagine which problems needed to be solved in this study.

## Chapter 2: Literature Review and Research Methodology

Before setting up the research methodology, the fundamental academic work was done through documentary research. The R3 road was accomplished in early 2008 and there was some research done on the road. However, most of this research focused on the wider aspects that the road could provide. In addition, the main supporters of the research were project donors such as the Asian Development Bank, Thailand, and China. Hence, the aims of those researches were in their own interest. The second part of this chapter provides details on research methods and data collection.

## Chapter 3: Research Findings of Bokeo Province

Bokeo Province is one of the two provinces which is passed through by the R3 road, starting from the Chiang Kong-Huaysai, Thai-Lao border. In the wider sense, the economic benefits arising from the road were identified through the overall provincial economic development situation. For the specific issues, I selected Huaysai District as a case study of the social impacts on local communities and villages along the R3 road.

## Chapter 4: Research Finding of Luang Namtha Province

Luang Namtha Province had developed trading with Yunnan Province, China through their border, Boten-Mohan Border Checkpoint, before the coming of the R3 road. Consequently, the social impacts from the R3 road were more explicit than the case of Bokeo Province. In this respect, I chose Namtha District and villages along the R3 road as case studies to reveal the social impacts which happened to the daily life of local people.

## Chapter 5: Conclusion

This chapter highlights and summarizes the key issues of the study findings. Then, I precisely answer the research questions before giving suggestions to the problems. Finally, I give some points for further study.

## **CHAPTER II**

### **LITERATURE REVIEW AND RESEARCH METHODOLOGY**

#### **2.1 Literature Review**

Most poor people of the world reside in rural areas, which are frequently characterized by low levels of public infrastructure, especially roads. Inadequate roads raise transport costs, limiting the use poor people can make of local markets for the sale of their produce, the purchase of consumer goods and opportunities for off-farm employment.

Access to educational and health facilities, where they exist, is also constrained when it is difficult to reach them. In tropical areas, unsealed roads may actually be impassable during the extended rainy periods of the year. These problems are particularly acute in Lao People's Democratic Republic (Lao PDR), where inadequate roads are a severe problem for rural people. But significant road improvement is generally not a form of investment that rural people can make by themselves. Public sector involvement is required. Action to improve rural roads therefore seems a clear means by which large numbers of people might acquire the opportunity to participate in the market economy and thereby raise themselves out of poverty. But does it actually work?

Economic reforms, beginning around 1987, have seemingly contributed to these favorable outcomes by permitting greater participation in both local markets and markets in neighboring countries. However, it is recognized that removal of obstacles to the functioning of markets may be of little or no assistance to rural people if very poor roads prevent them from participating in these markets. This is especially important in the wet season, when many roads, even including some of the main highways connecting provinces, can be impassable for extended periods.

Basic infrastructure facilities are public goods and their inadequacy is a cause of market failure. Collective action is required to provide these facilities. Although there is

still much progress to be made, over the past decade efforts by the Lao PDR government with assistance from international institutions have resulted in significant improvements in the state of Lao rural roads. But there is still much progress to be made.

A number of studies have suggested that improvement of infrastructure in rural areas can contribute to agricultural productivity and economic welfare in those areas. Examples include Binswanger et al. (1993), van de Walle and Nead (1995), van de Walle (1996 and 2002), Jacoby (2000), and Gibson and Rozelle (2003). Lanjouw (1999) demonstrates, for the case of Ecuador, the importance of access to off-farm employment in these outcomes. A study of rural China (Jalan and Ravallion, 1998) suggests that higher density of roads in a particular area lowered the probability that households in that area would be poor. Srinivasan (1986) points to the special importance of these issues in landlocked countries such as Lao PDR.

**Comparative Logistics Performance:** A recent ADB funded study has provided comparative analysis of the logistics related to alternative transport networks along the western route of the NSEC (Banomyong, 2007). The Corridor-wide study compared the distance, time and cost of transporting goods along three alternative transport systems and found the cost of transporting goods via R3E through Lao PDR, via R3W through Myanmar, and the Mekong River (Figure 2). Table 2.1 summarizes the logistics indicators for each of these routes. It shows the use of R3W and R3E to be about 75 percent more expensive than using the Mekong River via the Chiang Saen port on the Thai side.

**Figure 2.1: R3W and R3E**



The Mekong River route takes 1.8 times longer to travel, however. In the case of the R3E route, the high cost relative to that of the Mekong River route is largely due to the high toll applied to the section between Huaysai and Boten in Lao PDR and the high border crossing fees at Boten-Mohan on the Lao-Yunnan border. In Myanmar, there is a reluctance to use the R3W route on the part of the truckers because of conflicting policies related to transit goods, a transit fee equal to 9 percent of value of the goods, and sub-standard quality of the road. The Mekong River route is currently used the most, but the R3E is expected to be widely used when the Third International Mekong Bridge is constructed at Chiang Kong.

**Table 2.1: Comparative Logistic Indicator of NSEC Western Route**

	Via Chiang Khong & R3E in Laos	Via Mai Sai & R3W in Myanmar	Via Chiang Saen & Mekong River
Distance (km)	1,906	1,867	1,834
Time (hrs)	51	45	88
Cost (US\$/ton)	\$ 472	\$ 470	\$ 271

Source: R. Banomyong (2007)

TSUNEISHI (2009) studies the “Border Trade and Economic Zones on the North-South Economic Corridor: Focusing on the Connecting Points between the Four Countries”; which focuses on the movement of people and cars, border trade and the situation concerning the progress of the border economic zones at the five border points in the four countries including Yunnan province in China, Shan State in Myanmar, Northern Laos and Northern Thailand, and covering three routes: R3A, R3B, and the Mekong River route. In this report, the author gives some status quo and challenges along the three routes, and on route R3A, there are the Mohan Border Trade Zone and the Boten Border Trade Zone in the border area between China and Laos. The Mohan Border Trade Zone was built in 2004 and is now operating, while the Boten Border Trade Zone has just been initiated, and still remains a plan. The increasing investment from China into Luang Namtha Province and Bokeo Province is heavily on the rubber plantations. And this plantations cause environmental degradation. On the other hand, in Chiang

Kong, Thailand, the Chiang Rai Border Economic Zone scheme is being promoted by the Thai Government; following by the construction of the Fourth Friendship Bridge between Chiang Kong and Huaysai that will complete in 2011. In this respect, Bokeo Province and Luang Namtha Province will be the centre of land transportation between China and Thailand.

In this report, the author mentions only about the advantages and the possibilities of the trade and investment, although there are some disadvantages on the rubber tree plantation on the environment. The report also covers the wider range of the area, so the information on the R3A road is mentioned only a part of the report. The author focuses on the economic aspects such as border trade, investment and GMS economic corridor; hence, there is no social economic impact on the local communities; especially along the border economic zones.

Asian Development Bank 2010, a study on the “Strategy and Action Plan for the Greater Mekong Sub-region North-South Economic Corridor”, provides the overall framework of the North-South Economic Corridor. The initiative of economic corridor approach to sub-regional development by the Greater Mekong Sub-region (GMS) countries emerged during the Eighth GMS Ministerial Meeting, held in Manila 1998. This economic corridor is expected to provide advantages of better transport links to remote and landlocked locations in the GMS. In this report, there are impediments and constraints that have been mentioned; including Social Concerns and Environmental Concerns. However, the problems arising in the report is that first, those concerns are the potential social and environmental impacts that were expected to happen. Therefore, there is no evidence or actual situation informed in the report. Second, the study is about the strategy and Action Plan that ADB set for the development of the NSEC. Finally, it is the project document itself; hence, the achievement of the project is the main focus of the report not the actual impacts that occur during the project implementation.

The most recent research was done in 2010 funded by Neighboring Countries Economic Development Cooperation Agency (Public Organization) or NEDA under the project name: “Costs and Benefits arising from NEDA Assistant Project”. This study

provides in-depth details of the Costs and Benefits of the R3 road project which covered 3 levels: (1) National Level; (2) Provincial Level; and (3) Community Level. However, this study rather tended to focused on the NEDA Assistant Project evaluation; in particular, it focused on the first R3 road phase from Huaysai District to Ban Sot, covering the road length of 84.77 Km which NEDA had provided the construction fund. Therefore, this research used 2 research methods: (1) Product Evaluation which aimed to evaluate the Civil Engineering Work, and (2) Outcome Evaluation which covered Transportation Economic Analysis, and Social-Economic and Environment Evaluation. Within the second research method, the Social-Economic Evaluation, the plain costs and benefits on Social-Economic to the province and community level were revealed in certain aspect. The researcher used questionnaire form to interview local villagers and in-depth interview technique to interview the village chiefs. Hence, the results from questionnaire were in the form of frequency in each question. And the in-depth interview with the 8 village chiefs in Huaysai District, Bokeo Province and Vieng Phoukha District Luang Namtha Province.

However, as mentioned that only the Thai-funded phase (84.77 km) was evaluated, it could not entirely represent costs and benefits on the R3 road; especially in the Luang Namtha Province. Moreover, there are more hidden issues beside the questions in the questionnaire form affecting the local communities due to the availability of the road. Nevertheless, this study, for me, is the significant pattern to my research. I need to use the results from the questionnaire as secondary data to my research.

Although there are some research conducted related to this research, those studies focus on the wider area of the R3 road project known as GMS Economic Corridor; in particular North-South Economic Corridor. Moreover, the previous reports are plan, feasibility study and transport cost analysis that facilitates the overall development, investors and transportation sector. The actual economic development and social impact to the Bokeo Province and Luang Namtha Province; especially, the local communities along the R3 road, as the crossing road of the trade between Thailand and China is still needed.

## 2.2 Definition of Terms

For the purpose of clarification of specific definitions of some terms used in this research, the search of definition of terms is based on the definitions defined in reliable source. The definitions that suit the content of this research were selected and referred to as below.

### Road access

The classification from the National Statistics Centre (NSC) was used to differentiate between households living in villages with road access from households living in villages without road access. Villages were assigned the same status as during the 2005 Census.

### Economic Development

Last (2007), defines "Economic Development" according to American Economic Development Council (AEDC) as "the process of creating wealth through the mobilization of human, financial, capital, physical, and natural resources to generate marketable goods and services." Other definitions include:

- The purposeful intervention into an economy to improve economic well-being.
- The process that influences growth and restructuring of an economy to enhance the economic well being of a community.
- The creation of jobs and wealth, and the improvement of quality of life.

E. Nafziger (2006), says:

*"Economic growth is an increase in a country's per capita output. Economic development is economic growth leading to an improvement in the economic welfare of the poorest segment of the population or changes in educational level, output distribution, and economic structural change."*

Soubbotina (2004), **Economic development:** Qualitative change and restructuring in a country's economy in connection with technological and social



progress. The main indicator of economic development is increasing GNP per capita (or GDP per capita), reflecting an increase in the economic productivity and average material wellbeing of a country's population. Economic development is closely linked with *economic growth*.

And definition of Economic Development from Business Dictionary defines it as:

*"Qualitative measure of progress in an economy. It refers to development and adoption of new technologies, transition from agriculture based to industry based economy, and general improvement in living standards."*

### **Social Impact**

In Misra, "social impacts" refer to the consequences to human populations of any public or private actions – that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalize their cognition of themselves and their society.

Vanclay (2003), provides a convenient way of conceptualizing social impacts is as changes to one or more of the following:

- people's way of life – that is, how they live, work, play and interact with one another on a day-to-day basis;
- their culture – that is, their shared beliefs, customs, values and language or dialect;
- their community – its cohesion, stability, character, services and facilities;
- their political systems – the extent to which people are able to participate in decisions that affect their lives, the level of democratization that is taking place, and the resources provided for this purpose;
- their environment – the quality of the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources;

- their health and wellbeing – health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity;
- their personal and property rights – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties;
- their fears and aspirations – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

And Definition from Business Dictionary defines “Social Impact” as:

*“Effect of an activity on the social fabric of the community and well being of the individuals and families.”*

### **Economic Corridors**

ISHIDA 2009, the economic corridor is a concept introduced at the GMS Eighth Ministerial Meeting in 1998 at a time when the GMS-ECP implementation was stalled by the Asian Currency Crisis. Economic corridors were born to help the area to rise above the difficulties after the crisis. The basic idea is to enliven economic activities along the major roads or the transport corridors. Concrete examples include the establishments of industrial estates on the borders, and the construction of telecommunication and electricity transmission cables, and natural gas pipelines and tourism activities along the corridors.

**Special economic zone and Specific economic zone in the Lao’s context in Bouatha Khatthiya, 2011:**

*Special economic zone: is a zone having a separate economic space with an investment and business environment which is specially favorable for investors, and fixed geographical boundaries more than 1000 ha, and being established pursuant to the conditions, order and procedures stipulated in legal document.*

*Specific economic zone: is a zone having a separate economic space with an investment and business environment which is specially favorable for investors, and fixed geographical boundaries, and being established pursuant to the conditions, order and procedures stipulated in legal document.*

**Table 2.2: Specific and Special Economic Zone - A Comparison**

Specific Economic Zone	Special Economic Zone
Fixed geographical boundaries.	Fixed geographical boundaries. A special economic zone may combine many specific economic zones. The areas must be over 1,000 ha.
Managing by an Economic Board (Chaired by developer)	Managing by a Management Board (Chaired by government) and an Economic Board (Chaired by developer).
The establishment of SEZ must be approved by NSEZC and signed the contract with the government.	
<b>3 types of investment</b>	<b>2 types of investment</b>
1. Government 100 percent 2. Joint venture (government and private sector) 3. Private own 100 percent	1. Government 100 percent 2. Joint venture (government and private sector)

Source: Bouatha Khatthiya, 2011

## 2.2 Research Methodology

### 2.2.1 Research Methods

Qualitative research methodologies used in this research by interviewing key informants (merchants, local government officials, village chiefs, villagers, and related persons) in the border economic zones of the Chiang Kong-Huaysai and of the Boten-Mohan. Then, the secondary data was collected from, Luang Namtha and Bokeo provincial offices, and the Lao Ministry of Commerce, Ministry of Planning and Investment, and related organizations.

Qualitative methods involved the researcher making observations on natural settings, reviewing the archives of written or image documents, interviewing key participants or informants, and collecting and describing artifacts. The results of these

data collection techniques are in the form of words or pictures, rather than numbers (Quartaroli, 2009). In term of qualitative methods used in this research, the data collection is based on literature review, observation, and interviews. On the one hand, literature review is the secondary data collected from libraries, provincial level offices, internet and related organizations. On the other hand, observation and in-depth interviews were the means of collecting primary data in the selected case studies as follow.

### **2.2.2 Primary Data**

There were about 76 villages on the R3 road from Bokeo to Luang Namtha (See Appendix 3: Village along R3 road).

#### **i. Research Sites Selection Bokeo Province**

I have chosen Huaysai District of Bokeo Province as my research site. Then, I selected the villages along the R3 road starting from Huaysai District.

In Bokeo Province, I selected five villages, namely:

1. Pa Oiy Village
2. Nong Kham Village
3. Na Luang Village
4. Pang Sa Lao Village
5. Sot Village

The primary data was collected by two methods: in-depth interviews together with observation. In the case of Bokeo Province, five village chiefs were interviewed for the social economic impacts from the R3 road (For villages' locations on the R3 road, see Appendix C1: Map of Thai Funded Section). Each case has its own characteristics as revealed in the finding in Chapter III.

#### **ii. Research Sites Selection in Luang Namtha province.**

In Luang Namtha, I chose Namtha District's villages along the R3 road (See Appendix C3: Village along R3 road) as follows:

1. Namt Chang Village

2. Hua Na Village
3. Nalue Village
4. Tin Tok Village
5. Na Tuei Village
6. Bo Piat Village
7. Boten Village

In Luang Namtha Province, there were three groups of case studies of villages. The first two villages Namt Chang and Hua Na are located in the Namtha Municipality. The reasons that I chose these villages, although they are not located along the R3 road, were the villagers and businessman have been using the R3 road as a main means of transportation for their materials and products. Also, the two villages represent a case of the adjacent communities along the R3 road.

Second, Nalue, Tin Tok, and Natuei Villages are ordinary villages on the R3 road from Luang Namtha municipality town to the Boten-Mohan, Lao-Chinese border checkpoint. These villages also represent the direct social economic impacts on their communities due to the availability of the R3 road.

Finally, the last two villages, Bo Piat and Boten, are located in the Boten Golden Special Economic Zone or Boten Golden City, the concession area at the Boten-Mohan border checkpoint. As the R3 road connects Thailand from Chiang Kong-Huaysai in Bokeo and China at Boten-Mohan in Luang Namtha, the R3 road also passes this special economic zone. Moreover, besides interviewing the abovementioned seven village chiefs, I had the opportunity to interview the Deputy Director of the Economic Broad of Boten Golden City, Dr. Chanpipak Kongchampa. He provided valuable information about Boten Golden Special Economic Zone.

In summary, there were 12 village chiefs and one executive of Boten Golden City. Therefore, in collecting primary data using in-depth interviews, there were 13 key informants. (See Appendix D: Key Informants Profile.)

### 2.2.3 Secondary Data

Besides collecting secondary data from literature review using libraries and on the internet, other sources of secondary data were derived from Bokeo and Luang Namtha provincial governmental offices.

#### **Bokeo Province**

- Bokeo Provincial Administration Office
- Provincial Industry and Commerce Division
- Provincial Planning and Investment Office
- Provincial Agriculture and Forestry
- Huaysai District Administration Office

#### **Luang Namtha Province**

- Luang Namtha Provincial Administration Office
- Provincial Industry and Commerce Division
- Provincial Planning and Investment Office
- Provincial Agriculture and Forestry
- Namtha District Administration Office
- Boten Golden City Economic Broad Office

These offices and organizations provided their reports and statistics related to the R3 road.

### 2.3 Limitations

Conducting this research had some limitations which could be summarized as follows: First, the research field is wide covering two northern provinces, Bokeo Province and Luang Namtha Province; hence, the 12 key informants from the villages are quite limited and can not represent all of the 76 villages on the R3 road. Second, the time and budget of the research is also limited. I could not cover many aspects in the social economic development, for instance,, health care and education. Third, the study covers a wide range of problems. In this case, rubber production is indirectly affected by the R3 road. Rubber tree planting could become one topic of further research. However, in

relation to the R3 road, mainly the exportation of the rubber production is to China using the R3 road, and I included some of the problems arising from rubber tree planting.

Finally, the secondary data from provincial offices was limited. I asked provincial police headquarter for border passing statistics in Bokeo and Luang Namtha Provinces. I have not received any information; although, the Heads of the Immigration Police Division in the two provinces asked their subordinates to provide the requested information. Moreover, the other reports and statistics were not detailed.



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จุฬาลงกรณ์มหาวิทยาลัย

## **CHAPTER III**

### **RESEARCH FINDING OF BOKEO PROVINCE**

#### **3.1 Thailand**

Thailand is Lao PDR's largest trading partner for both exports and imports. Thus, Thai trade policy and problems of Thai trade policy implementation are important for the Lao economy. When Lao PDR joined ASEAN, the tariff structure under AFTA agreements was applied to Lao exports and imports. The AFTA tariffs for the eligible exports from the Lao PDR are remarkably low. The more Lao products on the IL, the more these concessions can be accessed by Lao exporters and importers.

##### **3.1.1 The Chiang Kong-Huaysai Border**

Chiang Kong in Chiang Rai Province is 115 km northeast from Chiang Rai and 830 km from Bangkok along national route No.1. Chiang Kong is located 52 km east from Chiang Saen, a base for border trade with China, and 81 km from Mae Sai, on the border with Myanmar. There is a pier and an immigration checkpoint for passengers, about 100m down to the Mekong riverside from route No.1020. It takes about five minutes to cross the river by a small 10-passenger boat. Chiang Kong Port opened for cargo in December 2003 and it is located 500m away to the east from the passenger pier. Although this port is furnished with customs and quarantine facilities, it is comparatively small compared with Chiang Saen Port, mentioned below, and there are limited ferry and small ship services crossing to Laos, Piers for passengers and cargo are also located separately in Huaysai (Tsuneishi, 2009).

There are many small hotels and restaurants in both Chiang Kong and Huaysai to receive a fair number of tourists and backpackers. The road in Huaysai City is connected to R3A and reaches the Boten border crossing through Luang Namtha. Chiang Kong immigration checkpoint is an international checkpoint through which foreigners from third countries can pass, and the operating working hours are from 8 am to 6 pm. Huaysai immigration checkpoint is open from 8 am to 4 pm. There are two kinds of border passes



for Lao nationals, a one-time border pass (a single sheet of paper) and multiple-use border pass (like a small notebook). Although the one-time border pass is in principle usable for only one time over a period of three days, it can be extended to seven days, and further under negotiation if the holder visits a hospital in Chiang Rai Province of Thailand. The charge for extensions is 100 Baht per day (Tsuneishi, 2009). Although the one-time border pass can be issued not only for Lao nationals of Bokeo Province but also for all Lao nationals, it is usable only in Chiang Rai Province. Similarly, when Thai nationals visit Laos, a border pass can be issued, but it is usable only in Bokeo Province. If Thai nationals wish to visit other provinces of Laos, they must use a passport.

**Table 3.1.1 A: Entries and Departures at Chiang Kong Immigration Office (2005-2008)**

(Unit: Persons)

Year	Entry to Thailand				Departure from Thailand			
	Laotian	Thai	Other	Total	Laotian	Thai	Other	Total
2005	27,126	22,708	17,879	67,713	25,632	26,621	45,552	97,805
2006	23,830	29,780	20,401	74,011	23,346	32,230	54,296	109,872
2007	29,366	42,295	29,020	100,681	27,644	46,722	71,431	145,847
2008	20,631	43,354	22,342	86,327	18,187	47,237	52,584	118,008

Note: The Figures form 2008 indicate the number during the period January to August  
Sources: Cited in Tsuneishi, 2008

Departures and arrivals through Chiang Kong are shown in Table 5. About 200,000 persons pass between Laos and Thailand through Chiang Kong every year. Those entering Chiang Kong from Laos in 2007 were 100,681 persons, of which 71% were either Thai (42%) or Lao (29%). Those who used a border pass were 42,874 persons, which accounts for 43%. Those departing to Laos through Chiang Kong were 145,847 persons, of which 51% were either Thai (32%) or Lao (19%). Those who used a border pass were 49,843 persons (22,199 Thais and 27,644 Laos), accounting for 34% of the total number of people departing from Chiang Kong to Laos. 60% of all persons who entered and departed were Thai or Lao, and it is clear that most of them (in the case of

Thai, 40%) entered or departed on border passes. As for the number of cars passing through Chiang Kong in 2007, 2720 cars entered Chiang Kong from Laos, while 2827 cars departed from Chiang Kong to Laos. Although there seems to be some dispersion over the years, it is generally said that the numbers of persons and cars entering and departing through Chiang Kong checkpoint is increasing, indicating a vitalization of economic activities in the border region between Thailand and Laos.

**Table 3.1.1 B: Vehicles Cross Border at Chiang Kong-Huaysai from 2005 to 2008**

Year	Entry to Thailand	Departure from Thailand	Total
2005	1,733	1,828	3,561
2006	7,148	9,080	16,228
2007	2,720	2,827	5,547
2008	1,744	1,829	3,573

Note: The Figures form 2008 indicate the number during the period January to August  
Sources: Cited in Tsuneishi, 2008

Since the border trade between Laos and Thailand is mostly conducted in the Northeast of Thailand and the nearby areas of Laos, trade volumes in the Northern Thailand areas of Chiang Kong and Chiang Saen are rather scarce and ranked 7th and 9th in 2006 (Tsuneishi, 2008). Since the trade at Chiang Kong Port showed a very high growth rate of 61.2% in 2005 and 15.1% in 2006, the growth rate in 2007 declined to -10.6%. Exports in 2007 amounted to 870.9 million Baht, -18.1% compared with the figure for 2006, imports was amounted to 684.2 million Baht, up 1.0% compared with the figure for 2006 (Table 3.1.1 C). Although the port is used for trade with Laos and Yunnan Province, trade between Thailand and Laos has accounted for 95% of the trade in recent years. Compared with Chiang Saen port, trade at Chiang Kong port is smaller and the scale and facilities of the port are poor. Exports from the port are refined oil, cement, automobiles and parts, construction materials, daily commodities, and so on. On the other hand, imports from Laos include wood, lignite and processed coal, corn, and so on.

**Table 3.1.1 C: Border Trade at Chiang Kong Customs (2001-2008)**

(Unit: Million Baht)

Year	With Laos			With Yunnan			Total		
	Exports	Imports	Total	Exports	Imports	Total	Exports	Imports	Total
2001	482.3	287.3	769.6				482.3	287.3	769.6
2002	502.4	205.2	707.7				502.4	205.2	707.7
Growth rate (%)	(4.2)	(-28.6)	(-8.1)				(4.2)	(-28.6)	(-8.1)
2003	504.7	189.5	694.2				504.7	189.5	694.2
Growth rate (%)	(0.4)	(-7.7)	(-1.9)				(0.4)	(-7.7)	(-1.9)
2004	643.0	294.6	937.6				643.0	294.6	937.6
Growth rate (%)	(27.4)	(55.4)	(35.1)				(27.4)	(55.4)	(35.1)
2005	1,059.6	430.6	1,490.2	0.1	21.3	21.5	1,059.7	452.0	1,511.7
Growth rate (%)	(64.8)	(46.2)	(58.9)				(64.8)	(53.4)	(61.2)
2006	1,062.1	600.2	1,662.3	0.7	77.2	77.9	1,062.8	677.4	1,740.2
Growth rate (%)	(0.2)	(39.4)	(11.5)	(385.7)	(261.7)	(262.7)	(0.3)	(49.9)	(15.1)
2007	855.1	614.7	1,469.8	15.8	89.5	85.3	870.9	684.2	1,555.1
Growth rate (%)	(-19.5)	(2.4)	(-11.6)	(2227.9)	(-10.0)	(9.5)	(-18.1)	(1.0)	(-10.6)
2008	789.1	481.2	1,270.3	12.0	59.0	71.0	801.1	540.3	1,341.3

Note: The Figures form 2008 indicate the number during the period January to July

Sources: Cited in Tsuneishi, 2008

Chiang Rai and Chiang Mai have the largest populations outside Bangkok among NSEC areas in Thailand, with 1.3 million and 1.6 million people, respectively. The population in the other provinces is comparatively smaller, ranging from 483,000 in Tak to 984,000 in Nakhon Sawan. The Northern provinces are sparsely populated, with the highest population density in Chiang Rai at 111 persons per sq km and the lowest in Tak at 56 persons per sq km. Population density increases toward Bangkok, rising to over 4,000 persons per sq km in Bangkok and its surrounding areas from just below 300 persons per sq km in Ayutthaya. In terms of rural-urban composition, the Northern provinces are mostly rural, becoming more urbanized toward Bangkok and its surrounding areas. Around one fourth of Thailand's population lives in the areas of influence of NSEC.

### 3.2 Bokeo Province Profile

Bokeo province is located in north-western Lao PDR and has a total area of 6,196 Km squared. The province borders Thailand in the west- about 145 Kilometers (48 kilometers by land and 97 kilometers by river), Myanmar in the north separated by the

Mekong River- approximately 98 kilometers, Luang Namtha Province in the north-east- 100 kilometers and Oudomxay Province- about 110 kilometers, and Xayaboury Province in the south- about 35 kilometers.

Bokeo Province consists of five districts: Huaysai, Ton Pheung, Meng, Parktha and Pha Oudom Districts. The population is 158,683 people, of which 79,516 people are female. The population density is 26 persons per square kilometer.

The population of Bokeo Province consists of 13 ethnic minorities: Kimmu, Lu, Lao Hmong, Lamet, Lahu, Yuan, Ilmeuyn, Tai, SamTao, Akha, Phunoi, and Tai Nua. Each ethnicity has a variety of traditions and cultures, as well as unique ways of living. The bulk of the population lives along the riverside and plains; their main occupations are agriculture, animal breeding, and doing business. However, most of the ethnic minorities live in the mountainous area of the province; they have limitations in accessing education, healthcare services, and other public services.

**Table 3.2: Economic Components from 2005 to 2008**

Sectors	Economic Components (Percentage)			
	2005/06	2006/07	2007/08	2008/09
Agriculture-Forestry	51.21	50.8	49.3	48.0
Industry	17.96	18.3	19.4	19.0
Service	30.83	31.0	31.3	33.0

Source: Bokeo Provincial Social-Economic Development Plan 2006-2010 Summary, and 2011-15 Provincial Social-Economic Development Plan

Macroeconomic conditions in the period of the 2006-2010 implementation period of the Sixth National Social-Economic Development Plan (VI NSEDP), saw provincial average economic growth at 7.5 percent annually; the inflation rate remained in single digits. The main objective of the NSEDP is to reduce and eradicate the poverty of the Lao people who mostly live in the remote and mountainous areas, in particular, in the northern part of Laos. The household consumption index increased from 0.82 million kip in 2003 to 1.3 million kip in 2008; in addition, the Gross Domestic Product (GDP) per

Capita in 2010 was almost 1,000 US dollars (998.14 US dollars). Due to these improvements, the entire provincial household poverty rate has been reduced from 38.17 percent in 2005 to 11.19 percent in 2009 with the average poverty reduction rate of five percent per annum. Economic components of Bokeo Province have gradually changed in proportion. The decreasing of agriculture and forestry resulted from the increase in the service sectors; mainly in the tourism industry.

### 3.3 Trade

#### 3.3.1 Domestic Trade

From 2006-2010, the domestic trade expanded fairly well as evidenced in the creation of markets, shops (retail and whole-sale). Presently, there are 1,272 business units including 1,228 shops, 34 markets (increased by three from the last five years). Moreover, there are 27 temporary markets that open on a certain day of the week in the local communities.

#### 3.3.2 International Trade

Within five years, the export value of the province had steadily increased by an average of 28.63 percent per year. The porportion of these exports were from agriculture products such as corn and animals which accout for about 63 percent of the total export volume. Within 2008, the export value was 9,092,000 US dollars which is anine percent increase from the previous year; however, the 2009 import value was almost 13,350,300 US dollars. The trans-border products doubled from 2008 to 2009 due to the increase of food products valued at about 7.5 million US dollars in 2009 from less than 1.5 million US dollars in 2008. Thanks to the accomplishment of the R3 road in early 2008, the trans border products from Thailand to China doubled in 2009. (See Table 3.3.2 A: Bokeo International Trade from 2006 to 2009.)

To support this research's hypothesis that: **“The R3 road unevenly benefits Thailand, Lao PDR, and Yunnan Province (PRC), with Lao PDR suffering most social impacts.”**, I used the trans-border trade figures between 2008 and 2009. The trans-border products from Thailand to China via R3 road from Chiang Kong-Huaysai in

Bokeo Province to Boten-Mohan in Luang Namtha Province was doubled and even more than the combination of export and import value. This figure indicated that the trans-border trade between Thailand and China by using the R3 road obviously benefits Thailand as soon as the R3 road construction was finished in February 2008.

**Table 3.3.2 A: Bokeo International Trade from 2006 to 2009 (Unit: US dollar)**

Year	2006	2007	2008	2009
Export	5,491,667.00	7,038,078.00	9,092,046.00	10,960,000.00
Import	15,757,654.00	8,336,186.00	13,350,299.00	18,244,337.00
Trans-border Trade	1,733,508.00	1,246,425.00	12,635,307.00	27,142,800.00

Source: International Trade Annual Report, Various Issues, International Trade Office, Industry and Commerce Office, Bokeo Province

Imports and exports are stably increasing. However, most of the export products are natural resources such as minerals and timber that are not sustainable and will become depleted. The promising export products are agricultural products which covered about 77 percent in 2009. This proportion of agricultural products also indicated high demand from Thailand and China, especially corn which was valued just above 4 million US dollars in 2009.

**Table 3.3.2 B: Export Products Composition in 2009 (Unit: US dollar)**

No.	Items	2009	Percentage (%)
1	Agricultural Products	8,497,097.00	77.53
2	NTFPs	1,727,027.00	15.76
3	Industry and Handicraft	534,964.00	4.88
4	Wood Products	104,142.00	0.95
5	Minerals	93,280.00	0.85
6	Other Products	3,494.00	0.03
	<b>Total</b>	<b>10,960,004.00</b>	<b>100.00</b>

Source: 2009-2010 International Trade Report, International Trade Office, Industry and Commerce Office, Bokeo Province

Non-Timber Forest Products (NTFPs) were the second highest export products. NTFPs, including herbal ingredients used in Chinese traditional medicines for which demand is strong and other sources are limited. Sustainable export of these products depends, of course, on stemming the current rate of deforestation. Over-harvesting of NTFPs is more likely if villagers perceive that the habitat of the products, the forests themselves, is at risk from continued logging. NTFPs are harvested mainly by women and girls and provide income that women control. This income is likely to be used to improve the health, education and future opportunities for children (UNDP Lao, 2006).

The current rate of harvesting of NTFPs may not be sustainable. Commercialization of production of some of the products such as cardamom has begun and experimentation with commercial production of other NTFPs is underway. Finally, local collectors of NTFPs may be the last to know when demand for some of the products has become price inelastic – that, for example, Chinese buyers of herbal medicine ingredients would in fact be willing to pay more than they currently pay. The Government may need to help reduce this lack of information among collectors and local sellers of high-value NTFPs.

Markets in agriculture are also characterized by problems of asymmetric information - one actor knows more than another in a transaction. A Chinese buyer of NTFPs (particularly of ingredients for Chinese herbal medicine) knows much more about final market prices and premiums for quality than a Lao NTFP collector or other seller. As a result, returns to the collectors are lower and rural poverty higher than they otherwise might be. Chinese buyers are increasingly seen in NTFP markets, often buying directly from collectors and from first-stage Lao middle-men.

Because Bokeo Province borders with Chiang Rai Province, Thailand, the main country for its export is Thailand covered nearly 58 percent. The second largest export destination was China through the R3 road connecting Bokeo to Luang Namtha Province and to Yunnan Province, PRC. The export value to China was almost 4.5 million US dollars in 2009. It was obvious that the R3 road facilitates the exporting of products to China via Boten-Mohan border checkpoints.

**Table 3.3.2 C: Bokeo Export to Countries in 2009 (Unit: US dollar)**

No.	Countries	2009	Percentage (%)
1	Thailand	6,330,459.00	57.76
2	China	4,424,417.00	40.37
3	England	119,900.00	1.09
4	Italy	85,224.00	0.78
	<b>Total</b>	<b>10,960,000.00</b>	<b>100.00</b>

Source: 2009-2010 International Trade Report, International Trade Office, Industry and Commerce Office, Bokeo Province

In table 3.3.2 D , Bokeo mainly imports products for projects and investments which amounted to approximately 11 million US dollars or 62 percent of its overall imports. However, Bokeo relies heavily on Thailand for its consumer goods, that are valued at nearly 6 million US dollars or 32.76 percent of its imports.

**Table 3.3.2 D: Import Composition in 2009 (Unit: US dollar)**

No.	Items	2009	Percentage (%)
1	Products for Projects and Investments	11,380,329.00	62.38
2	Consumer Goods	5,977,470.00	32.76
3	Products for Industry	450,284.00	2.47
4	Grant Aid	245,159.00	1.34
5	Temporary Imports	191,059.00	1.05
	<b>Total</b>	<b>18,244,301.00</b>	<b>100.00</b>

Source: 2009-2010 International Trade Report, International Trade Office, Industry and Commerce Office, Bokeo Province

There are three importomh countries to Bokeo Province; Thailand covers the highest ratio of 72 percent, and China 27.2 percent. By using the R3 road from Luang



Namtha to Bokeo, the imported products from China compensated the imports from mainly Thailand in the past.

**Table 3.3.2 E: Bokeo Import by Countries in 2009 (Unit: US dollar)**

No.	Countries	2009	Percentage (%)
1	Thailand	13,130,144.00	71.97
2	China	4,962,952.00	27.20
3	Singapore	151,205.00	0.83
	<b>Total</b>	<b>18,244,301.00</b>	<b>100.00</b>

Source: 2009-2010 International Trade Report, International Trade Office, Industry and Commerce Office, Bokeo Province

The top 5 trans-border products from Thailand to China passed through the R3 road from Chiang Kong-Huaysai in Bokeo Province, to Boten-Mohan in Luang Namtha Province, in 2009, were first fuel (51 percent), fruits and food (28.31 percent, agricultural products, NTFPs and others for less. If we look in to the second and the third trans-border products, there is potential for Lao to subsidize these products. I mean that Laos can also increase its production of agricultural products to export to China.

**Table 3.3.2 F: Trans-Border Products Composition in 2009 (Unit: US dollar)**

No.	Items	2009	Percentage (%)
1	Fuel	13,866,914.00	51.09
2	Fruits and Food	7,683,989.00	28.31
3	Agricultural Products	2,701,684.00	9.95
4	NTFPs	1,975,685.00	7.28
5	Others	914,528.00	3.37
	<b>Total</b>	<b>27,142,800.00</b>	<b>100.00</b>

Source: 2009-2010 International Trade Report, International Trade Office, Industry and Commerce Office, Bokeo Province

### 3.4 Investment

#### 3.4.1 Public Investment

Within the past five years (2006-2010), Bokeo Province's investment focused on social-economic development totaled 237.72 billion Kip; including: Village Development Fund and Flood Solving Fund. The provincial investments were categorized in: Domestic Fund 89.26 billion Kip or 37 percent, and International Fund 148.46 billion Kip or 63 percent of the entire investment.

**Table 3.4.1: Bokeo Province Public Investment within 5 years (2006-2010)**

(Unit: Million Kip)

No.	Items	Total	Domestic	International	Percentage
	<b>Total Investment</b>	<b>237,722.58</b>	<b>89,262.58</b>	<b>148,460.00</b>	<b>100</b>
i	<b>Economic Sector</b>	<b>180,031.00</b>	<b>52,712.00</b>	<b>127,319.00</b>	<b>75.74</b>
1	Agriculture-Forestry	9,837.00	9,837.00		4.13
2	Trade&Industry	241.00	241.00		0.10
3	Infrastructure	153,401.00	26,082.00	127,319.00	64.52
4	Mineral-Energy	16,552.00	16,552.00		6.96
ii	<b>Social Sector</b>	<b>32,905.58</b>	<b>11,764.58</b>	<b>21,141.00</b>	<b>13.84</b>
1	Education	18,219.91	8,192.91	10,027.00	7.66
2	Healthcare	13,332.67	2,218.67	11,114.00	5.60
3	Information	150.00	150.00		0.06
4	Welfare	1,203.00	1,203.00		0.50
iii	<b>Others</b>	<b>24,786.00</b>	<b>24,786.00</b>	<b>0.00</b>	<b>10.42</b>

Source: Bokeo Provincial Social-Economic Development Plan 2006-2010 Summary, and 2011-15 Provincial Social-Economic Development Plan

### 3.4.2 Foreign Direct Investment

Foreign Direct Investment (FDI) plays a crucial role in not only the Lao economic development, but also the provincial level economic development. Bokeo, a mountainous remote province has relied heavily on foreign investment and promoted international cooperation with foreign countries and attracted their investment to the province. These investments have contributed in establishing the development of the fundamental economy, creating employment opportunities for locals and generating incomes within the province. There are: Chinese motorbike manufacture, leather bag factory, gemstone excavation manufacture, DorkNgiewKham Travelling Project in Tonpheung District, ACC Green Sheet Project at the 4<sup>th</sup> Mekong Thai-Lao Friendship Bridge, Agriculture Products Cultivation Project and so on. These investments totally value 178.23 million US dollars.

**Table 3.4.2: Bokeo FDI and Domestic Investment 2006-2009 (Unit: US dollar)**

Year	2006	2007	2008	2009
FDI	146,838,150.00	144,164,150.00	6,946,000.00	17,950,000.00
Domestic	5,061,000.00	3,111,000.00	1,750,000.00	5,497,739.00

Source: Annual Investment Report, Various Issues, Department for Planning and Cooperation, Bokeo Province

Moreover, Bokeo has exerted investment promoting policies in order to attract foreign investors such as: amending the Investment Law, improving the investment's document procedures to One Door Procedure, Authority Decentralization to District Level for Investment Approval and Management.

Tonpheung District, Bokeo Province is invested into by a Chinese company, DokngiewKham Co.Ltd, under the project name: King Romans of Los Asean Economic & Tourism Development Zone. The project consists of a casino and businesses related to the casino such as two 18 hole golf courses, five to six hotels with 1,200 rooms each, entertainment places, accommodations, an education institute, hospital, trading center,

transport station, warehouse for distribution, industrial factory, an agricultural products processing factory, agricultural areas and so on; under a concession period of 75 years and an 86 million US dollars initial investment.

### 3.5 Agriculture

#### 3.5.1 Agriculture-Forestry

There were 25,191 hectares of paddy field in 2009 resulting in a 44.1 percent increase from 2005. In 2009, there were 1,924.47 hectares of irrigated paddy field, and the entire rice production was 91,042 tons or 567 kilograms/person within the province. Therefore, rice production exceeds the provincial demand and remains for the provision of 34,000 tons. Bokeo has excess rice production which can be exported to China by using the R3 road to Luang Namtha Province and to Yunnan Province, PRC, through Boten-Mohan border checkpoint. The demand for rice in China is very high due to the rice flour production to supply their domestic consumption of Chinese people.

**Table 3.5.1 A: Rice Area and Yield between 2005 and 2009**

No.	Types	2006		2009	
		Area (Ha)	Yield (Ton)	Area (Ha)	Yield (Ton)
1	Seasonal Rice	13,019.00	54,637.00	14,422.00	63,298.00
2	Irrigated Rice	600.00	1,962.00	1,924.00	8,562.00
3	Highland Rice	3,858.00	7,650.00	8,845.00	19,182.00
	<b>Total</b>	<b>17,477.00</b>	<b>64,249.00</b>	<b>25,191.00</b>	<b>91,042.00</b>

Source: Agriculture and Forestry Development Report from 2006-2010, Provincial Agriculture and Forestry Office, Bokeo Province

One of the provincial agricultural priorities is to stop slash and burn cultivation practices in the mountainous areas and create jobs for the people to earn their living from their traditional cultivation practices. The area of slash and burn cultivation decreased from 835 hectares in 2006 to only 66.29 hectares in 2010. In order to keep on supporting the local people, the provincial government has promoted: Rubber Tree Plantations, Teak, Industrial Tree and NTFP Cultivation.

**Table 3.5.1 B: Rubber Tree Plantation Area and Yield in 2009**

Actual Rubber Planting Area (Ha)	Tapping Area (Ha)	Rubber Yield (Ton)	Planting Year	Started Tapping Year
24,090.00	20.65	29.86	2001-2002	2009

Source: Rubber Tree Plantation Report from 2001-2010, Provincial Agriculture and Forestry Office, Bokeo Province.

In the case of Rubber tree plantation, Bokeo farmers and agro-business started to plant rubber in 2001. In 2009, the total area of rubber tree planting was 24,090 ha. Only 20.65 ha have been tapped and could produce just about 30 tons of latex rubber.

**Table 3.5.1 C: Domestic and International Rubber Tree Plantation Investment**

No.	Company	Type of Concession	Concession Land (Ha)	Actual Plant (Ha)	Concession Period	Approved Year
<b>I</b>	<b>Domestic</b>		<b>3,750.00</b>	<b>2,179.90</b>		
1	LS	2+3	3,000.00	381.62	30	2007
2	Industry Promotion	2+3	500.00	1,688.39	30	2007
3	Mai Tha	2+3	250.00	110.00	30	2007
<b>II</b>	<b>International</b>		<b>17,900.00</b>	<b>11,637.70</b>		
1	Leui Ling	2+3	1,500.00	1,027.80	25	2007
2	Jing Shen	2+3	3,000.00	1,896.60	30	2007
3	Lao-Jin Shue	2+3	3,000.00	1,217.40	20	2006
4	Li Hang	2+3	1,000.00	183.00	30	2007
5	Yunnan	2+3	3,000.00	1,169.40	30	2007
6	Ja Fong	2+3	3,000.00	4,312.00	30	2007
7	Pao Sheng	2+3	1,500.00	287.00	30	2008
8	Ter Shan	2+3	1,500.00	793.00	30	2008
9	Wang Vi Go	2+3	400.00	751.50	30	2008

Source: Rubber Tree Plantation Report from 2001-2010, Provincial Agriculture and Forestry Office, Bokeo Province.

Type of concession 2+3, the first two from Lao farmers are land and labor, and the second three from the company are production inputs, techniques, and the market. There are 12 companies that have invested in rubber plantations; among which three companies are domestic Laotian companies, whereas, nine companies are Chinese investors.

Irrigation Systems: the irrigation system in Bokeo Province is not so spread out due to its demographic geography of mostly mountainous areas. However, there are possibilities in constructing a small irrigation system, reservoir, dam with an overflow system to support water in the low land area. Presently, there are 1,452 irrigation channels which can provide water to 14,728 hectares. There are 101 permanent irrigation channels and 1,351 primary irrigation systems.

**Table 3.5.1 D: Agriculture Products' Area and Yield between 2006 and 2009**

No.	Types	2006		2009	
		Area (Ha)	Yield (Ton)	Area (Ha)	Yield (Ton)
1	Corn	6,629.00	35,553.00	20,719.00	111,381.00
2	Sesame	1,174.00	3,177.00	496.00	1,928.00
3	Peanut	412.00	1,306.00	1,019.00	3,050.00
4	Soybean	348.00	487.00	1,104.00	1,652.00
5	Vegetable	320.00	1,633.00	419.00	2,395.00
6	Taro and Potato	150.00	828.00	107.00	415.00
7	Cassava	91.00	558.00	-	-
8	Job's Tear (Fruit)	37.00	137.00	496.00	1,928.00
9	Ginger	34.00	202.00	67.00	481.00
10	Garlic	31.00	41.00	3.00	5.00
	<b>Total</b>	<b>9,226.00</b>	<b>43,922.00</b>	<b>24,430.00</b>	<b>123,235.00</b>

Source: Agriculture and Forestry Development Report from 2006-2010, Provincial Agriculture and Forestry Office, Bokeo Province

Agricultural products are also in the priorities of the agriculture strategy. The Provincial Agriculture and Forestry Office (PAFO) has promoted corn and maize and bean and vegetable cultivation. This is indicated in statistics from 2006 where the production area was 14,139 hectares and increased to 24,477.8 hectares in 2009 which

was a 71.12 percent increase. The most prominent product is corn that covers an area of 20,718.5 hectares and 111,381 tons of yield.

Currently, there are 71 farms which is an increase of 21 farms from 2006. Moreover, there are now 153,735 livestock or about a 50 percent increase from 2006. The increasing of livestock and poultry is due to the demand from domestic consumption. However, if there is suitable promotion from government, animal breeding is very promising in Bokeo and can be exported to Thailand and China by using the R3 road.

**Table 3.5.1 E: Livestock and Poultry between 2006-2009**

No.	Animals	2006	2009	Comparison (%)
1	Buffalo	21,217	28,378	33.75
2	Cow	27,488	48,043	74.78
3	Horse	256	356	39.06
4	Pig	48,456	67,303	38.90
5	Goat	4,843	9,655	99.36
<b>Total</b>		<b>102,260</b>	<b>153,735</b>	<b>50.34</b>
6	Poultry	407,529	671,126	64.68

Source: Agriculture and Forestry Development Report from 2006-2010, Provincial Agriculture and Forestry Office, Bokeo Province

### **Opportunities**

Bokeo Province borders many countries and has international checkpoints of the North-Western Lao PDR. The R3 road serves as the transportation facility that connects nations and the GMS. Because of the suitable location, Bokeo will be a cross-roads for domestic and international transportation, as well as the linkage to the regional trade, investment, and tourism in the GMS.

Bokeo has resources such as land, atmosphere, and labor that are suitable for agricultural cultivation and animal breeding. There are many rivers flowing through the province including: NamTha River, NamYu River, NamYorm River, NamKeung River, NamTin River, and many others that are able to support irrigation, fishing and hydropower.

Prominently, there are eight plains that are very appropriate for cultivation and breeding animals and agricultural production, namely: TongPaohaow- 11,600 hectares, Tong Ngua Deng- 14,600 hectares, Tong Pa Oudom- 5,400 hectares, Tong Jiangtong- 800 hectares, TongNamMeung and Tong Phadum- 2,300 hectare, and Tong NamYu and LongNamkha- 109 hectares.

Besides, on the one hand there are plains along the rivers mentioned above that occupy the total area of 12,200 hectares. On the other, there are hills and mountainous areas that are felicitous for industrial wood plantations, fruit trees, and animal breeding; especially, cattle. Bokeo owns many precious minerals: gemstones, gold, iron, zinc, saltpeter, and manganese.

### **Obstacles**

Bokeo is a small mountainous province that has many obstacles in social-economic development. Although some of the infrastructure has been improving, it is limited and obsolete. The R3 road that connect Bokeo to Luang Namtha Province is not fully well constructed. Communication between district level and village level is difficult. The province lacks a budget for infrastructure improvements such as civil works, roads, irrigation, electricity, telecommunications, and public offices. The industry and business are small-scale ones.

## **3.6 Social Impacts**

In Bokeo Province, I chose five villages in Houysai District along the R3 road as case studies on social economic impacts arising from the R3 road. In the case studies, I interviewed the village chiefs and observed the situation in the villages.

### **3.6.1 Case Study 1: Pa Oiy Village**

Pa Oiy Village is located in Huaysai District and is in the district municipality. It is only two kilometers away from the center of the district or from the Huaysai international border checkpoint opposite Chiang Kong District. It marks the starting of the R3 road in Bokeo Province and was the first village I conducted interviews. (Author Interviewed on: January 13, 2011) (See Appendix D)



Mr. Bounthan Sengpaseuth is the village chief who provided the information as follows:

The demography of Pa Oiy Village consists of 203 households, 231 families, 15 units, 1100 villagers, and 548 females. Most of the villagers are farmers, merchants, or workers. First the village chief was asked about the positive impacts of the road.

After finishing the R3 road construction, transportation is faster and the road is smooth with no dust. These conditions attract the investment of foreign investors, mainly Chinese companies.

Second, he talked about the negative impacts of the road:

- (1) The number of accidents has increased, most of them are motorbikes; because the road is better, motorists ride faster. Accidents happen at the curve of the road in the village. The curve has pattern poles (short poles with black and color which are placed along the curve in the road). These pattern poles cause severe injuries to the motorists. The village chief said, "it is better to remove those poles, we do not need them, if there were no poles, the motorbikes would go directly into the rice fields which would not cause them that severe of injuries. Our village is in the Huaysai municipal area, I think it is not suitable to put those poles in the city area."
- (2) There is a problem with the drainage systems which affect the local villagers very heavily in the rainy season. The water conduits are too small to carry the water flow; therefore, two households were heavily affected when water washed away 2-3 meters of their land. Moreover, as water is not discharged to the stream, it deluged three houses which were located in the low land nearby. However, until now, this problem has not been solved. Another problem is that there is no drainage between the road and the local villagers' houses. In this case, the villagers have to buy water drainage systems and install them for their own houses, otherwise, their vehicles cannot be placed in the house area.

- (3) The compensation for the villager's land caused by road construction is not fair. Most of the villagers who lost no more than five meters of their land would not be compensated.

Third, Mr. Bounthan addressed the coming of the Chinese market and the Chinese motorbike manufacture that is located within the village:

The Chinese market is the major problem of Pa Oiy Village. This market is located at the three junctions of the road or at the KM 3 of R3 road from Huaysai district center. The market was established in 2006. Although the official name of the market's land owner is a Lao businessman, it is indeed owned by a Chinese merchant. The market traders are all Chinese; hence, all of the products sold in the market are imported from China through the R3 road from Boten-Mohan Border checkpoint in Luang Namtha Province. Yet, there is a variety and availability of products from the Lao people; especially, to Bokeo residents, the market has caused many problems to Pa Oiy Village. The problems of this market were as follow:

- (1) The governance of the market is solely dependent upon the market's owner. After establishing the market, the village chief tried to collect the statistics of the Chinese traders within the market; however, he was refused by the market owner. The market owner told Mr. Bounthan that those Chinese marchants were directly under control of the provincial immigration office who had already collected the statistics of the Chinese population of the market. In this case, the village authority could not control or even know the exact number of foreign residents in the market. Moreover, this market is considered to be independent of the village authority in terms of tax payment, contribution to the village and other requirements as a villager or temporary village resident.
- (2) The system of the market itself causes many environmental problems. First, the shops in this market are shophouses, so the Chinese traders stay in their own shops during the night time. There are no public or market toilets in the market and the village chief could not imagine how they dispose of their

human waste. The second problem is the garbage disposing place. At the back of the market, there is a stream where the Chinese market left their garbage. The other garbage sites are at the outside road and the corners of the market. The village authority reported this to the Huaysai district and the Provincial Urban Management and Development Office, yet, there has been no solution up until now. The traders do not only participate in village activities and development, but they cause problems to the local community as well.

- (3) The other problem is stealing, and there were many cases that the village chief mentioned.. For instance, some of the local teenagers, including those from the nearby village, stole objects in Pa Oiy Village. The popular object for them is an automobile's battery. When the thief was arrested, he confessed that he sold the stolen object to the Chinese in the market. The reason was that if he sells it to the Lao people, they will first know that he is a thief and second, normally, the Lao people will not buy the stolen things for fear of the Law. Hence, the thief usually sells to the Chinese at a very low price. Although the village authority has gotten the confession, the Chinese deny and argue with the village authority. Mr. Bounthan said: "If there is buyer, the thief will be eager to steal and sell to them, and if we cannot enforce the Lao law on them, we cannot solve this problem. In the case of Oudomsay Province, if the Chinese or foreigners are found guilty, they will be expelled permanently from the province. But this has not happened in our province yet." Another case is if the Lao people steal goods from the Chinese shops, they will seize and beat the thief in front of their shop, instead of sending them to the the local authority or police.

The Chinese motorbike manufacture causes similar problems such as participating in village activities and development, and employing many Chinese people working in the factory. However, the most crucial issue is the air pollution. All of the inputs for the manufacturing are imported from China through the R3 road from Boten-Mohan Border checkpoint in Luang Namtha Province. The garbage from the manufacturing are material

containers, oil, and paint. The company does not use the garbage pick up provided by the Provincial Urban Management and Development Office. The company burns that garbage and the odor and smoke from this process causes environmental problems for the local community. When Mr. Bounthan wants to meet the director of the manufacturer, he sometimes has to wait for thirty minutes to an hour,, and is then not even allowed to meet the director.

In the sense of FDI, the host country is expected to provide resources and labor or employment opportunities. In addition, the host country will benefit from the technology transfer by the investment from another country in order to develop and acknowledge new technology from the developed country. However, this manufacturer not only uses the materials from China, but also imports unskilled labor from its own country. These unskilled laborers rent a house or room and stay in Pa Oiy Village. And in the same manner, they do not participate in the village authority and activities. The number of Chinese workers cannot be counted due to their unregulated ability to go back and forth between Laos and China.

### **3.6.2 Case Study 2: Nong Kham Village**

Nong Kham Village is located on about the 30th kilometer of R3 road and has 118 households, 126 families, 663 villagers, and 302 female. Most of the villagers are farmers and workers. In particular, they plant rubber trees by themselves (meaning they use their own land and fund) or they plant under the Chinese investor's support (meaning the local people provide labor and land, the Chinese investor supports seedlings, equipment, and techniques). (Author Interviewed on: January 13, 2011) (See Appendix D)

Mr. Bounyeng Duangmala is the village chief who provided the information as follows:

First the village chief was asked about the positive impacts of the road:

The road makes transportation faster, and people can access the hospitals, markets, and education for their children. Mr. Bounyeng said "There are more buses and mini trucks transporting between Bokeo and Luang Namtha province. We can use these

buses and it is cheaper and faster.” In the past, there were few buses providing transportation services between Bokeo and Luang Namtha. The R3 road condition helps facilitate the transportation not only for trans-national transport, but also short distance travelling of the local communities along the road.

The villagers sell NTFPs directly to the company’s purchasing unit that comes to the village. The village chief reported: “Our villagers collect NTFPs and sell it for alternative income besides agricultural production. When there is a company coming directly to our village to buy NTFPs from villagers, we earn more income.” In the past, when the villagers want to sell their NTFP products, they had to go to the Huaysai District market. And this cost them not only transportation costs, but also time for going and selling NTFPs in the market. Thanks to the R3 road, the NTFPs are being sold directly to companies. Therefore, villagers gain more income, have a stable market for their products, reduce costs from transportation, and have more time to do other things.

Second are the negative impacts on local people:

There is a problem with flooding during the rainy season because there is no drainage system. Since the road is better, motorists drive faster and accidents have been increasing which mostly jeopardizes animals and children.

Although, some local people can earn more money by selling NTFPs, the others suffer from poverty due to the R3 road. First, the popularity of rubber tree planting is wide-spread in Bokeo Province and in local communities in particular. Normally, rubber trees take at least seven years to give latex rubber. This means during the six years, the farmer cannot earn any income from their rubber plantations. Although in the first and second year, the farmer can plant rice, corn or other plants together in the rubber tree plantation, the production yield decreases from the average production due to the rubber trees use of soil nutrients. When the villager plants more rubber trees, the land for other agriculture products decreases which is mainly rice production for local consumption. Also, the land for animal breeding decreases because animals cannot be bred in the rubber tree plantations.

Moreover, with the availability of the R3 road, the village's land prices have doubled. Thus, some of the villagers sell their lands to outsiders, mostly those who are living in the Huaysai District center. In this case, the buyer just buys the land and leaves it undeveloped; some of them consider buying land as a money saving method. Therefore, those lands do not generate any opportunity for the locals. In contrast, if the land is used for doing business, the villagers can get employment opportunities or supply some resources for the businesses.

Finally, local people have to wait for rubber tree production and have less land for agriculture so there are now rice shortages in the village. First, according to Mr. Bounyeng Duangmala: "Some of the villagers who lack rice, borrow some from their relatives or buy some from their neighbours. In the last couple of years, more people have suffered from rice shortages and have to buy from the other village nearby or in markets. Although this problem is not severe, it threatens the sustainable food security of the local community. The village's teenagers have turned from farmers to workers to earn more money to support the family living.

However, there are alternatives for villagers to increase their income and earn their living. The village chief suggested: "Although our village is located in a mountainous area and has limitations of land for planting agricultural products, we have the potential to breed animals; especially, cattle because there is some unfruitful land. Most villagers breed cattle and sometimes sell to the provincial market. If we breed more cattle, we can earn income from this in order to buy rice and earn our living. But we desperately need funds and support from the government such as:

- First, long term loans: Presently, the lending period from Agricultural Supporting Bank is one year with a 15 percent interest rate. We cannot pay back in this period because animal breeding takes at least two years for cattle to reproduce. So, if there is a three year period loan with a low interest rate, we will borrow and increase our cattle's breeding.
- Second, support from DAFO and PAFO: villagers need support in breeding the animals to increase production. First, they need techniques and advice

from technical staff, and second they need medicine, vaccines, and disease control for the animals.

- Finally, if the villagers increase the number of animals, they would like the government or private sector to ensure the market. The village chief put in frankly saying that they need a sustainable market for the cattle.”

This solution has the most potential for the villagers to tackle rice shortages and the limitations of the land. If this happens, the village’s teenagers will not need to work outside their home town and be away from their family. In addition, the NTFP collection is not a sustainable income source. If people increase NTFP collection, it will be depleted rapidly.

### **3.6.3 Case Study 3: Na Luang Village**

Na Luang Village is located 43.5 kilometers away from Huaysai District Center. The village has 132 households, 167 families, 688 villagers, and 345 females. Most of the villagers are farmers. There is 145 ha of paddy rice field and 25 ha of orange plantations. (Author Interviewed on: January 13, 2011) (See Appendix D)

Village chief: Mr. Singkham PhomPanya

First, Mr. Singkham talked about the positive impacts from the R3 road:

The road provides opportunities for the local community to turn their agricultural products from local consumption to market and exporting products. Agriculture in the village is a very prominent income source for the villagers. First, is rice production, since the village has 145 ha of paddy rice, thus, they have excess rice production. Rice is sold to provincial markets, and there are Lao merchants who use trucks to come to the village and purchase rice from villagers. These merchants said they sell the rice to Chinese people in Luang Namtha Province where the demand for rice is very high. The Chinese want rice in order to process rice powder for Chinese people’s consumption.

Second, is the 25 ha of orange plantations (small sized oranges) which yield 250 tons a year. According to the village chief, a farmer could earn 580 million kip a year from orange production or 2,320 kip a kilogram. This price is far cheaper than the

imported oranges from both Thailand and China. The price of oranges from Thailand was from 8,000 to 12,000 kip a kilogram in the Bokeo provincial market. Whereas, the price of Chinese oranges ranges from 8,000 to 15,000 kip. Therefore, orange production in Na Luang Village offers the most potential for a rising income for the villager and subsidizes imports from Thailand and China. However, Mr. Singkham said: “We want a permanent market for our production, especially, for oranges. Orange production is not high now due to the market situation. The middle man buys our products at a cheap price. During the harvesting period, our orange price falls sharply because all of the farmers want to sell their product before it becomes spoiled.” By having a sustainable market and a guaranteed price for farmers, orange production will increase.

Third, the village also has potential for animal breeding. Presently, there are 258 oxen and 143 buffalo. I asked: “Why don’t villagers increase the number of these animals?”, Mr. Singkham answered: “We just inherited our cattle from our ancestors; although, some of the villagers who want to raise animals buy some from the other villagers, they raise them in the natural way. And, the number of the cattle increases due to traditional breeding. In addition, we sell our cattle when we need money on certain occasions such as for our children’s education or when we need to buy something like a motorbike or tractor.”

In this case, I interpreted that if there was motivation, policy, markets, and support from the government or private sector, the villagers will raise more cattle for selling and as their alternative source of income. The demand for cattle within Bokeo Province is not high, but other markets such as nearby provinces or international markets have to be identified. Although, animal breeding along the R3 road villages is not of the international standard, the products can be sold in domestic markets and exported to Thailand and China by using the R3 road that connects Thailand and Laos at the Chiang Kong-Huaysai border checkpoint in Bokeo Province and through Boten-Mohan border checkpoint between Luang Namtha Province and Yunnan Province.

Moreover, Na Luang’s villagers plant rubber trees, sweet corn and industrial wood such as teak and eaglewood. Because the geographical character of this village is



very favourable for agriculture, a critical sustainable development strategy is deadily needed. For instance, this village can be developed as a model village to other villages along the R3 road, which has potential in transportation, and all villages have similar potentials.

However, together with the positive impacts, the R3 road also has specific negative impacts on the Na Luang Village as follows:

First, as to the specific and suitable landscape of the village and the accomplishments of the R3 road, the land price of the village has increased almost ten fold compared with the year 2005. Mr. Singkham said: "There are investors and wealthy people who live in Huaysai District and purchase land from the villager, especially the lands beside the R3 road. However, those spots have not been developed yet. It seems that the landlords want to save money by buying land and/or selling it for profit in the future." Due to the good price, some of the villagers sold their land in order to purchase other things such as motorcycle, tractor, or to buy agricultural land in the other areas which is cheaper than the land near the R3 road.

Second, the road's construction cut the natural mountainous water system which flowed from the mountain to the village. This system was funded by Japan International Cooperation Agency (JICA) in 2004. It was not until the middle of 2008 after the finishing of the R3 road construction that villagers were able to get clean water again. Moreover, there was a 15 meter deep dam along the road before the construction of the R3 road, and local people used to use the water from this dam for irrigating their rice fields. When the R3 road came, it filled up the dam and took away the water. Until now, there is no solution or alternative water resources for Na Luang village.

Finally, the village chief suggested: "Although the rice production in our village is enough for our consumption, we heavily rely on the seasonal rice production or rainfall. We want a dam for irrigation, because there are land areas in our village that can be used as paddy rice field."

Irrigation in the high lands and mountainous areas is costly compared to the economic costs. Therefore, as indicated previously (in the title 3.4 Agriculture) only 101

irrigation projects are permanent. Although the cost of an irrigation system is very high, sustainable food security for the province and the country is one of the highest priorities of the Lao government. In my opinion, a feasibility study has to be dedicatedly done before any construction in order to earn the greatest benefits from the public investment.

#### **3.6.4 Case Study 4: Pang Sa Lao Village**

Pang Sa Lao Village is located about 71 kilometers away from Huaysai District Center. The village has 101 households, 121 families, 647 villagers, and 343 females. Most of the villagers are farmers. The Pang Sa Lao Village tribe is of the Lamet ethnicity, a Lao Theung group. (Author Interviewed on: January 14, 2011) (See Appendix D)

Village chief: Mr. Sikeo Saenkhamwang

I started asking the village chief about the advantages or positive social economic impacts from the R3 road for Pang Sa Lao Village. He pointed out some of them as follows:

The village has enjoyed the availability of better transportation from the R3 road. Because the village's location is in the middle of the road from Bokeo Province to Luang Namtha Province, transportation in the past was very difficult for the local people in this area. Mr. Sikeo said: "In the past, there were very few buses travelling back and forth from Bokeo to Luang Namtha and to the capital, Vientiane.. When our villagers wanted to travel, we waved for a ride from the military trucks. But now, there are many buses and modified trucks in use for short distance transportation." In the middle of the mountainous area between Bokeo and Luang Namtha Province, transportation was clumsy. There were two buses a day, and when people missed these buses, they had to wave for a ride from the travellers; the kindest motorists were government vehicles and military trucks.

Another important point is the alternative income earned from selling villagers' agricultural products. The village chief said: "Our village is far away from Huaysai District market. Before the pavement of the road, villagers sometimes went to the city and sold their products. But it was not worth going to sell at the city market because the

bus fee was high and our products such as vegetables and forest products were cheap. So, at that time, we decided to sell in front of our houses waiting for the travellers to stop and buy. Nowadays, we plant corn, rubber trees, and vegetables, and we can sell them by using buses to go to Huaysai city market.” The R3 road creates more opportunities for local people to gain more income from their production. When the case is in the rural mountainous area, the social economic impacts on the local communities are explicitly revealed.

In addition, the accessibility to public services is very significant to villagers. Mr. Sikeo added: “Now we can go to the hospital in the city at anytime. Some of our villagers own Hyundai trucks. So we ask them to send the patient to the hospital and give them some money for fuel and the service. Ten years ago, when a villager was ill, especially in the night time, he/she had to wait till the morning to go to hospital.” The road, in this case the R3 road, has crucial meaning to the people who live far away from the city where the important places are located. Among the villagers, the hospital for patients is the most important.

Finally, I questioned Mr. Sikeo about the negative impacts arising from the R3 road; then, he raised similar problems as the aforementioned cases: “The road is very good to our village, but the thing we want the state to improve is the drainage system. It affects our village in the rainy season.” The most mentioned problem about the road is the technical problem on its drainage system. People’s houses are usually located lower than the road surface. If the drainage system cannot fully discharge the water, especially during heavy rainfall, the water will become stuck and deluge over the land area of the lower houses and some times even flood the villager’s house. In my opinion, due to the mountainous landscape in the village, it is hard to make the water flow in one direction. However, this problem also occurred in a lowland village in the case of Pa Oiy Village. Therefore, the problem of drainage systems that has been affecting the villagers along the R3 road is crucial and needs attention from the government authorities.

### 3.6.5 Case Study 5: Sot Village

Sot Village is located 83.7 kilometers away from Huaysai District Center. It is the last village on the R3 road of the Thai funded section in Huaysai District, Bokeo Province. The village has 50 households, 62 families, 220 villagers, and 155 females. Most of the villagers are farmers. The ethnicity of Sot Village is Lamet. (Author Interviewed on: January 14, 2011) (See Appendix D)

Village chief: Mr. Somchan Keopaseut

Sot Village is the smallest and furthest along from this case study of villages on the R3 road in Bokeo Province. Villagers have enjoyed the coming of the R3 road at Sot Village. The villagers plant rice, corn, and rubber trees. The rubber tree area is about 50 ha and was planted two years ago. Therefore, the farmers are expecting income from their rubber in five years time. Presently, thanks to the R3 road, the farmers in Sot Village have better economic opportunities from selling their agricultural products. First, Bounhom Khanthavong, an agricultural company, has come to the village and promoted corn planting among the villagers. This company promotes corn planting and also purchases the production from farmers in Bokeo Province and sells it to Thailand. Mr. Somchan said: "There are 48 families planting corn in our village. The price of corn ranged from 800 to 1,000 kip a kilogram." Thus, this is not only an economic opportunity for the villagers, but also the stable market for their production. It is obvious that the R3 road lowers the transportation costs for many companies, including vehicles going from Thailand to China and from China back to Thailand.

Second, rice production in Sot Village is one of the promising cash crops. Most of the villagers plant glutinous rice. The village chief reported: "There are trucks owned by the middlemen coming to our village and purchasing our rice. Villagers who have a rice surplus sell their production to these merchants." I asked: "Where are these merchants from?" He answered: "They are from Luang Namtha Province." Now, the full answer to the question in Chapter IV as to the purchasing of rice was revealed. Because of the R3 road, the market demand for rice in China for rice flour products, creates Lao middlemen from Luang Namtha to Bokeo Province. The village chief added: "The farmers can sell

their rice at 2,500 kip a kilogram.” This price is approximately the same in the Huaysai district market. Therefore, Sot village farmers can sell their products directly from their village.

Finally, the sustainable income from their agriculture products increases their standard of living. In the past, when they wanted to sell their products, they had to go to the Huaysai district market by bus, so this included the cost of transportation. Moreover, when they arrived in the market, they had to sell their products at the price offered by rice traders, and this was often at a lower price. Although they were not satisfied with the price, the villagers had to sell their rice because they did not want to pay for the bus to carry their rice back to the village. Ultimately, the R3 road not only increases villager economic opportunities, but also an advantage in negotiation for their product price.

However, Mr. Somchan also mentioned about the negative impacts from the R3 road. He said: “The lorry trucks carrying lignite coal create noise and dust from the road. Another point is the accidents.” Sot Village is located about 30 kilometers away from the lignite coal mine which is situated on the R3 road in Nam Ngen Village, Viengphoukha District, Luang Namta Province. Hence, there are many lorry trucks transporting lignite coal to Huaysai District before exporting it to Thailand. In addition, the R3 road condition in the village is not good; it has holes and dust due to both the construction problems and natural disasters, mainly flooding. This complemented by the drainage system problems makes the situation severe. Nevertheless, a construction company has been repairing and reconstructing the R3 road in the Thai section. By 2011, the problem of dust from the R3 road will be addressed. But a solution to the noise from the lorry trucks is still dim.

### **3.7 General Observations**

Although the number of case studies were too small to represent all of Huaysai District in particular and Bokeo Province as a whole, these villages have revealed a number of social-economic impacts on the local people from the R3 road.

The benefits arising from the R3 road in accordance to the cases are better transportation, less time consumption in transportation, cheaper transportation costs, more opportunities for income, and the accessibility of services. In particular, the villages located in the remote mountainous area, have more economic opportunities within their villages. They not only can produce agricultural products, but also get market access and support from companies which come directly to the village and buy their products.

However, the negative impacts from the R3 road on the five case studies can be observed as:

First, the physical road condition that has negative impacts such as:

- Loss of land and unfair compensation;
- Road drainage system;
- Road accidents; and
- Increasing land prices.

Second, the impacts coming from the availability of the R3 road are:

- Chinese immigrants and foreign direct investment.

The suggestions to these problems are given in the final chapter of this research together with the findings of chapter IV on Luang Namtha Province.

## **CHAPTER IV**

### **RESEARCH FINDING OF LUANG NAMTHA PROVINCE**

#### **4.1 Yunnan Province, People's Republic of China**

##### **4.1.1 Yunnan Province and Guangxi Autonomous Region**

The population of Yunnan Province stood at 44.3 million as of 2004. It has the largest number of ethnic groups in the PRC, with 26 of the country's 56, representing around 38% of the province's population. About 70% of the population lives in rural areas. The proportion of the population living below the poverty line in Yunnan Province was estimated to be 8%, compared to 13.4% for the PRC as a whole, while the literacy rate of 85% is lower than that for the PRC as a whole (99%). The NSEC areas in Yunnan Province covered by the western route of NSEC (Kunming–Chiang Rai–Bangkok route) consisting of Kunming, Yuxi Municipality (Yuxi), and Xishuangbanna Dai Autonomous Prefecture (Xishuangbanna) have a combined population of nearly 8 million. Around 35% of the population in Xishuangbanna belongs to the Dai ethnic group, with other ethnic groups scattered widely in the prefecture. In the central sub corridor (Kunming–Ha Noi–Hai Phong route), the NSEC areas in Yunnan Province, which includes Honghe Hani and Yi Autonomous Prefecture (Honghe), have a combined population of around 9 million. Nearly one third of the population of Yunnan Province lives in the areas of influence of NSEC.

The total population of Guangxi was 49.6 million as of 2005, with a population density of 210 persons per square kilometer (sq km). Cultural minorities constitute 38.2% of the population. Around two thirds of the population lives in rural areas. The proportion of the population living below the poverty line was estimated to be 9.8% compared to 13.4% for the PRC as a whole. The literacy rates in Guangxi of 97% and Nanning at 98% are at par with that of the PRC. Nanning is the center of science and technology, and education and culture in Guangxi, having 54 research institutes, 10 colleges, and 50 trade schools. The NSEC areas of the Eastern sub corridor (Nanning–Ha Noi route) in Guangxi

include Chongzuo, in addition to Nanning. Nanning has a population of 6.6 million, of whom around 60% are rural residents. Thirty-five ethnic groups live in Nanning, with the Zhuang people making up 56.3% of the total population. Chongzuo, with a population of 2.3 million, is home to one of PRC's largest Zhuang populations, accounting for 88% of its total population. Around one fifth of the population of Guangxi lives in the areas of influence of NSEC.

#### **4.1.2 The Boten-Mohan Border**

The Boten border crossing (Luang Namtha Province in Laos) is 57 km northeast from the center of Luang Namtha City along R3A. At Nateuy, located 19 km before the Mohan border (Menla Province, Xishuangbanna), R3A from Luang Namtha meets with national route. In a location about 100 m before the Mohan border checkpoint when proceeding from Boten, there is a stone border monument. The distance between the two immigration offices at Boten and Mohan is 2 km. Behind the Boten immigration office, there is a brown colored building which is a hotel and casino (The Royal Jinlun Hotel-Casino Complex) developed by a Chinese investor on a concessional basis aiming for tourists from China and Thailand. In December 1993, the Chinese and Lao governments approved the Mohan-Boten gate as the first international border gate allowing foreigners of third countries to pass. The opening hours of Boten border gate are 7:00 am to 4:00 pm for persons from third countries while it is also open from 6:00 pm to 7:00 pm for Lao and Chinese nationals. Mohan gate is also open from 8 am to 5 pm (China time is one hour ahead of Laos time) while it is also open from 6:30 pm to 8:30 pm for Lao and Chinese nationals (Tsuneishi, 2009).

Lao nationals can obtain a border pass if they simply have identity cards. Lao nationals may enter Xishuangbanna on a border pass usually for 10 days, but travel is limited to Xishuangbanna only. Through negotiation, the border pass can be extended to up to 20 days maximum and it is also possible to extend it further if the pass holder visits hospitals. Moreover, it is possible to obtain a 6-month and a one-year pass, respectively, in the case of merchants and people studying in China. Handling charges for making up the border pass are 35,000 Kip per pass and the same charge is necessary in the case of



extensions. On the other hand, Chinese people can enter the four northern provinces of Luang Namtha, Bokeo, Udom Xai and Pong Sali for 10 days. Moreover, depending on the situation, it is possible to extend the pass for 10 days. Travel to locations beyond the four provinces requires a passport. The border pass (written in English) for people from Yunnan Province is a small black and white notebook. Border passes are issued even for people who are not residents of Yunnan Province, and these look similar to passports.

Concerning land transportation, Laos concluded a land transportation agreement with China in 1994 (Mekong Institute, 2008) and Laos allows Chinese and Thai trucks to enter Laos. Lao vehicles are entering China carrying agricultural products and lumber. Although the agreement allows trucks from Thailand to enter Luang Namtha, they are actually scarce and most of them go only as far as the port in Bokeo. Vehicles from Vietnam come to Luang Namtha to carry construction materials to Bokeo. In fact, since systems, regulations and guidelines restricting weights differ according to the destinations in Thailand, Vietnam and China, and it is required to meet the rules in the destination, trucks from the destination are often used. Foreign cars traveling in Luang Namtha are mostly passing by and the majority of them are for tourist use, while trucks are scarce. When it comes to trucks, trucks traveling from Thailand to China outnumber those traveling from China to Thailand because China uses waterway more than land transportation. Laos has a national policy to develop the country as transit base in the preparation and institutionalization of logistics such as the single stop, and it is planning to set up a new customs house at Boten.

At present, Laos has been implementing a strategy for logistics along R3A according to the advice of GMS-related conferences and ADB. According to statistics of the border gate in Yunnan Province, the number of persons entering and departing through Mohan gate was 354,040 in 2006 and this figure is smaller than Ruili (5,558,621 persons) bordering with Myanmar, and Hekou (3,502,175 persons) bordering with Vietnam. However, thanks to the opening of R3A, the number of people and vehicles passing through the gate is clearly increasing (Table 4.1.2). There are 12 first-rank borders in Yunnan Province and the growth rate of Mohan gate in 2006 showed a

significantly high rate of 29.6%, compared with the average growth rate of 4.0% at all 12 border gates.

**Table 4.1.2: Entries and Departures at Border Gates and Trade in Yunnan Province (2006)**

Names of Gates	Mohan	Jinghong port	Total of 1st-rank gates (12)	Deluo	Total of 2nd-rank gates (8)	Total
People (persons)	353,040	35,700	11,943,851	250,857	3,067,675	15,011,526
(Annual growth rate, %)	(29.6)	(-3.3)	(4.0)			
Departures	180,012	18,433	5,913,973	124,851	1,651,480	7,565,453
(Annual growth rate, %)	(29.9)	(-8.2)	(3.0)			
Entries	173,028	17,267	6,029,878	126,006	1,416,195	7,446,073
(Annual growth rate, %)	(29.3)	(2.4)	(5.1)			
Transportation (Car, Ship)	41,505	2,701	1,241,200	61,747	472,197	1,713,397
Departures	21,734	1,352	624,976	32,262	250,226	875,202
Entries	19,771	1,349	616,224	29,485	221,971	838,195
Trade value (million USD)	163.24	94.75	2,410.49	37.47	317.74	2,728.23
Exports	117.9	52.04	1,760.51	29.73	164.09	1,924.60
Imports	45.34	42.71	649.98	7.74	153.65	803.63
Cargo transportation (tons)	235,640	85,331	3,453,541	121,250	1,276,186	4,729,727
(Annual growth rate, %)	(74.1)	(-17.0)	(9.1)			
Exports	89,709	42,410	1,856,262	49,987	269,830	2,126,092
(Annual growth rate, %)	(66.7)	(-27.7)	(15.2)			
Imports	145,931	42,921	1,597,279	71,263	1,006,356	2,603,635
(Annual growth rate, %)	(79.0)	(-2.7)	(2.8)			

Sources: Cited in Tsuneishi, 2008

## 4.2 Luang Namtha Province Profile

Luang Namtha Province is located in the North-Western part of Lao PDR, it borders with: PRC in the North, Myanmar in the West, Bokeo Province in the South, and Oudomsay province in the East. Luang Namtha is mountainous which has a total area of 9,325 square kilometers; in which, 85 percent is mountainous and 15 percent is plains. In 2010, the population of Luang Namtha Province was 162,747 people, 82,432 were females. There are 355 villages, 29,345 households, within five districts: Luang Namtha, Sing, Long, Vieng Phukha and Nalae; about 45.55 percent of the population are low land rice farmers, high land rice farmers- 26.60 percent, and other occupations- 27.85 percent.

The GDP growth of Luang Namtha Province from 2006-2010 was 7.8 percent on average. However, the province heavily relies on the agriculture-forestry sector which covers about 67 percent of GDP; whereas, the industry-handicraft and the service sector share only 16 percent of the provincial Growth Domestic Product. In 2010, the overall GDP of Luang Namtha was 936 billion kip, which resulted to 670 US dollars GDP per capita, increasing 83 percent from 390 US dollars in 2005 (exchange rate: 1\$=8,500 kip)

## **4.3 Trade**

### **4.3.1 Domestic Trade**

The total internal trade value is 295,056 million kip and there are now 1,843 business entities that registered with the provincial Industry and Commerce Office with the total registration fund of 307,462 million kip. These business entities are categorized as follow:

- Agriculture and Forestry Sector: 50 entities with registration fund of 84,487 million kip.
- Industry Sector: 143 entities with 72,879 million kip registration fund.
- Trade Sector: 763 entities with 23,348 million kip registration fund.
- Service Sector: 878 entities with registration fund of 119,941 million kip.
- Luang Namtha Province has 10 markets.

Domestic trade has been gradually increasing due to the characteristics of Luang Namtha with small number of population. However, the province plays a very crucial role in international and trans-border trade among Thailand, China, and Lao PDR.

### **4.3.2 International Trade**

The main destinations of the Luang Namtha exports are China, Thailand, and Vietnam. Surprisingly, although Luang Namtha borders China, the highest export destination in value is Thailand. Therefore, the use of R3 road from Luang Namtha to Bokeo as the means of export road of Luang Namtha Province is very beneficial.

**Table 4.3.2 A: Luang Namtha Export to Countries in 2009 (Unit: US dollar)**

No.	Countries	2009	Percentage (%)
1	Thailand	11,943,966.00	51.62
2	China	10,922,740.00	47.21
3	Vietnam	139,090.00	0.60
4	Cambodia	66,000.00	0.29
5	HongKong	60,255.00	0.26
6	MaCao	5,069.00	0.02
	<b>Total</b>	<b>23,137,120.00</b>	<b>100.00</b>

Source: 2009-2010 International Trade Report, International Trade Office, Industry and Commerce Office, Luang Namtha Province

From 2006 to 2010, the export merchandise was 57.37 million US dollars and import merchandise 157.37 million US dollars, whereas the trans-border trade is worth about 38 million US dollars. As soon as the R3 road was accomplished in February 2008, it was obvious that China has benefited from the trans-border trade from Yunnan province to Chiang Rai; or from Boten-Mohan border in Luang Namtha to Chiang Kong-Huaysai border in Bokeo.

**Table 4.3.2 B: Luang Namtha International Trade from 2006 to 2009 (Unit: US dollar)**

Year	2006	2007	2008	2009
Export	8,337,314.00	14,273,278.00	12,657,558.00	23,139,120.00
Total Import	24,626,638.00	25,670,122.00	43,089,510.00	46,510,070.00
LNT Import	6,072,600.00	6,722,771.00	10,438,574.00	8,244,280.00
Trans-border Trade	7,679,465.00	2,346,372.00	6,933,482.00	20,404,810.00

Source: Annual International Trade Report, Various Issues, International Trade Office, Industry and Commerce Office, Luang Namtha Province

When comparing the figures of trans-border trade was triple from almost 7 million US dollars in 2008 to nearly 20.5 million US dollars. It was also over 2 times of the Luang Namtha Province export to China. It is undeniable that the R3 road has contributed to the trans-border trade from China to Thailand across Bokeo and Luang Namtha provinces.

**Table 4.3.2 C: Luang Namtha Import Composition in 2009 (Unit: US dollar)**

No.	Items	Total Import		Use in the Province	
		2009	(%)	2009	(%)
1	Vehicle Spare Parts	15,200,360.00	32.68	2,860,710.00	34.70
2	Luxury Goods	8,131,259.00	17.48	174,865.00	2.12
3	Agricultural Materials	6,307,171.00	13.56	1,250,355.00	15.17
4	Construction Materials	5,442,860.00	11.70	1,341,776.00	16.28
5	Clothes and Consumer Goods	4,791,330.00	10.30	1,121,060.00	13.60
6	Electric Equipments	4,422,110.00	9.51	841,820.00	10.21
7	Foods	1,241,530.00	2.67	262,950.00	3.19
8	Office Supplies	622,730.00	1.34	133,474.00	1.62
9	Industrial Equipments	350,720.00	0.75	257,270.00	3.12
	<b>Total</b>	<b>46,510,070.00</b>	<b>100.00</b>	<b>8,244,280.00</b>	<b>100.00</b>

Source: 2009-2010 International Trade Report, International Trade Office, Industry and Commerce Office, Luang Namtha Province

Although the exporting value is quite high and has been increasing rapidly, when looking at the actual proportion of the exports merchandise from the Luang Namtha Provincial Industry and Commerce Division, the reasons behind are revealed. The structure of the main export products are only 2 products: first, minerals; mainly lignite coal from ViengPhoukha District of Luang Namtha Province, a city border with Bokeo Province on the R3 road, covers almost 70 percent of the overall exports (37.89 million US dollars or 68.58%); whereas, the second export is the agriculture products which is only 26 percent (16.37 million US dollars or 26.67%). According to the Department of

Geology, Viengphoukha Mine PCL of Thailand produced 222,423 t of lignite from the District in Luang Namtha Province

Luang Namtha as a Lao national border to Yunnan Province, PRC, acts as a door for imported merchandise from China to other provinces of the country. The main imported merchandise from China are vehicle spare parts, materials, equipments, and machineries. This import has been contributing to the countries development; especially, the equipment and material for infrastructure and industry development.

**Table 4.3.2 D: Luang Namtha Import by Countries in 2009 (Unit: US dollar)**

No.	Countries	2009	Percentage (%)
1	China	45,563,870.00	97.97
2	Thai	916,746.00	1.97
3	Vietnam	29,454.00	0.06
	<b>Total</b>	<b>46,510,070.00</b>	<b>100.00</b>

Source: 2009-2010 International Trade Report, International Trade Office, Industry and Commerce Office, Luang Namtha Province

The province relies heavily on importing products from China and Thailand. Within 5 years from 2006-2010, the value of the import merchandise is almost triple of the export in Luang Namtha. These imports are mainly: garments and consumer product (27.15%), the vehicles and spare parts (24.91%), construction materials (14%), and products for agriculture production (5.65%).

The top trans-border product from Thailand to China by using the R3 road from Bokeo to Luang Namtha Province is agriculture products. This indicated the high demand for food in Yunnan Province and nearby provinces of PRC. With this indicator, Luang Namtha Province could set strategy in agriculture cultivation for exporting to China. In addition, the second trans-border item was garments. Northern provinces; especially, Bokeo and Luang Namtha have potential for garment industry and the R3 road as transportation way to China.

**Table 4.3.2 E: Trans-Border Products Composition in 2009 (Unit: US dollar)**

No.	Items	2009	Percentage (%)
1	Fruits and Food	11,949,356.00	58.56
2	Garments	4,738,442.00	23.22
3	Luxury Goods	3,608,092.00	17.68
4	Vehicle and Spare Parts	108,920.00	0.53
	<b>Total</b>	<b>20,404,810.00</b>	<b>100.00</b>

Source: 2009-2010 International Trade Report, International Trade Office, Industry and Commerce Office, Luang NamTha Province

## 4.4 Investment

### 4.4.1 Public Investment

From 2006-2010, Luang Namtha Province invested in 291 projects, valued 708.7 billion kip; including: 146.7 billion kip domestic fund and 526 billion kip exotic fund (Vietnamese grand aid). These 291 projects were catagolized into:

1. Economic Sector: 146 projects valued 248,416 million kip or 71.93 percent
2. Social Sector: 48 projects valued 36,475 million kip or 10.71 percent
3. Others: 48 projects valued 55,742 million kip or 16.63 percent

### 4.4.2 Domestic and Foreign Investment.

The domestic and foreign investors are interested in doing business in Luang Namtha Province; especially, agriculture production. The provincial authority have endorsed totally 33 investment projects valued at 51.11 million US dollars. Foreign invesment are 47.92 million US dollars. And domestict investment are 3.19 million US dollars.

## 4.5 Agriculture

The total paddy field area is 18,087 hectares with the annual paddy yield of 68,350 tons or 420 kilogram per person per annum. In order to contribute in poverty reduction of the national strategy, the province has urged the local farmers: (1) to grow: sugarcane (2,321 hectares, yielded 137,748 tons), corn (3,803 hectares, yielded 15,365 tons), beans (370 hectares with production of 660 tons), melon (772 hectares, yielded 19,300 tons), and bananas 272 (hectares, yielded 2,320 tons); (2) to breed animals: 18,270 buffalos, 24,214 oxen, 68,733 pigs, 5,722 goats, and 350,608 fowls; (3) to plant industrial trees: rubber tree 27,838 hectares, teak 68 hectares, and eaglewood 145 hectares.

**Table 4.5 A: Agriculture Products' Area and Yield Between 2006 and 2009**

No.	Types	2006		2009	
		Area (Ha)	Yield (Ton)	Area (Ha)	Yield (Ton)
1	Corn	1,887.00	7,202.00	3,803.00	15,365.00
2	Taro and Potato	1,603.00	38,234.00	1,240.00	21,752.00
3	Vegetable	1,593.00	9,098.00	2,332.00	21,210.00
4	Sugarcane	1,031.00	59,725.00	2,321.00	137,748.00
5	Beans	312.00	442.00	370.00	660.00
6	Banana	255.00	1,922.00	272.00	2,320.00
7	Fruit Tree	261.00	1,273.00	373.00	1,501.00
8	Melon	62.00	1,422.00	772.00	19,300.00
	<b>Total</b>	<b>7,004.00</b>	<b>119,318.00</b>	<b>11,483.00</b>	<b>219,856.00</b>

Source: Agriculture and Forestry Development Report from 2006-2010, Provincial Agriculture and Forestry Office, Luang Namtha Province

Irrigation: in order to support water in agricultural production, it is needed to reconstruct the irrigation systems to work properly. In 2009, there were 1,144 irrigations which could support water for 4,350 hectares in dry season.



In Luang Namtha Province, a Chinese company is working with the Lao companies to encourage local farmers to grow rice for export to China. The companies are supplying farmers with rice seeds, fertiliser and pesticides. The rice crop is milled in the province then exported to China where it is processed into rice powder. The rice powder is in high demand in China for making noodles and other food products, according to Ms. Hiengphone Daengmany, an official from district's industry and commerce office. This year, the province's demand for rice is about 55,000 tonnes and the yield is 55,650 tonnes, resulting in a surplus of 650 tonnes. However, some of the province's main stock is being sold across the border illegally, leaving some rural families to face a severe shortage.

The situation of livestock and poultry in Luang Namtha is not favourable. As indicated in the table 4.5 B below; livestock and poultry between 2006 and 2009 was not increasing. Although the number of pig has been increasing 10 percent, the case studies revealed that the pig farms in Luang Namtha along the R3 road are owned by Chinese investors.

**Table 4.5 B: Livestock and Poultry between 2006 and 2009**

No.	Animal	2006	2009	Comparison (%)
1	Buffalo	22,566	21,517	(4.65)
2	Cow	24,645	24,214	(1.75)
3	Pig	61,975	68,733	10.90
4	Goat	5,890	5,722	(2.85)
<b>Total</b>		<b>115,076</b>	<b>120,186</b>	<b>4.44</b>
5	Poultry	323,640	350,608	8.33

Source: Agriculture and Forestry Development Report from 2006-2010, Provincial Agriculture and Forestry Office, Luang Namtha Province

**Rubber:** There is strong Chinese demand for latex. Rubber trees only grow in the south of China and most there are now old and at the end of their productive lives. It is now cheaper for China to import. With some technical help from China, rubber trees in

growing numbers have been planted in the north of the Lao PDR, particularly in Luang Namtha.

**Table 4.5 C: Industrial Wood Area from 2006 to 2009**

No.	Industrial Wood	Area (Ha)	
		2006	2009
1	Rubber Tree	12,585.00	25,533.00
2	Teak	65.00	68.00
3	Eaglewood	118.00	145.00
<b>Total</b>		<b>12,768.00</b>	<b>25,746.00</b>

Source: Agriculture and Forestry Development Report from 2006-2010, Provincial Agriculture and Forestry Office, Luang Namtha Province

Besides industrial wood, NTFPs are the major products for exporting to China. However, the NTFPs are natural resources. With over collection from local people, it will deplete rapidly. I suggest that the PAFO and DAFO provide implant technique of NTFPs for local people. So they can plant and harvest NTFPs instead of directly gathering them from forests.

**Table 4.5 D: Rubber Latex and NTFPs Export between 2006 and 2009**

No.	Types	Export (Ton)	
		2006	2009
1	Rubber Latex	200.00	3,243.00
2	NTFPs	701.00	1,225.00
<b>Total</b>		<b>901.00</b>	<b>4,468.00</b>

Source: Agriculture and Forestry Development Report from 2006-2010, Provincial Agriculture and Forestry Office, Luang Namtha Province

**Opportunity:**

Luang Namtha Province has many potentials in supporting the social-economic development of the province and the country as a whole. First of all, there are many rivers such as Namtha, Namthung, NamFa, Nam Ma, NamLong; which have capacity in building hydropower and support irrigation for agriculture. Second, the province has high density of forest covering 589,349 hectares or 63 percent of the province's total area. In addition, there are conservation forest covering 222,400 hectares and district conservation forest of 14,730 hectares. Moreover, there are production forests amounting 44,799 hectares that produce many important timbers for local usage and exports as wood products. Third, the significant factor that contributes in the agriculture is the annual rainfall from 1,000 mm to 1,500 mm. The climate in the province is suitable for agriculture and animals breeding for instance: industrial tree, fruit tree, crops and cattle breeding. Fourth, there are plenty of natural mineral resources: coal, zinc, bronze, gold, and iron which can support the social-economic development of the province. Finally, Luang Namtha has the R3 road that not only connects the provincial level transportation, but also links the GMS.

**Obstacle:**

However, Luang Namtha also has many obstacles that hinder provincial development. To begin with, Luang Namtha population are scattered on the mountainous area, they also heavily rely on nature. The province has limited infrastructure and budget. The industry in the province is the infant industry which is not able to compete with the neighbouring countries. Finally, human resource development is the major issue in not only supporting the province's organization, but to be employed in the businesses by local or foreign investor as well.

## **4. 6 Social Impacts**

In Luang Namtha Province, I chose seven villages in Namtha District for the case studies. The first two villages are located away from the R3 road in order to represent the adjacent communities that also have impacts from the road. The following three villages are located along the R3 road on the way to Boten-Mohan border checkpoint. Finally, the last two villages, Bo Piat and Boten village represent the case studies in special economic zones on the R3 road.

### **4.6.1 Case Study 1: Namt Chang Village**

Namt Chang Village is located on the outskirts of the Luang Namtha municipal town away from the R3 road about four kilometers. The village has 193 households, 198 families, 1025 villagers, and 425 females. Most of the villagers are farmers. There are two ethnicities in this village: Lao Sung (the Hmong or highland Laotian) and Lao Theung (the middle land Laotian who speaks the Mon-Khmer language). (Author Interviewed on: January 19, 2011) (See Appendix D)

Village chief: Mr. Khum Kuayvileuth

The village has been involved with the coming of a Chinese company and businessmen in the village. First, the ThongLy company, a Chinese own entity, supports the local villagers in planting rubber trees. According to Mr. Khum, presently, there are approximately 200 ha and some of the plantations can produce raw rubber. The company sells the equipment set to villagers in through a buying on installment method. This kind of buying on the installment is not fair for the farmer. Mr. Khum said. "The ThongLy company buys rubber from villagers and collects money for the equipment. For every 100 Chinese Yuan, the company cut two Yuan for the equipment set that the company sold to the farmer." When I asked the village chief, "How long does the farmer have to pay for that?" Mr. Khum answered, "Until the company is gone." Consequently, there is no exact price for the equipment set, the farmers have to pay for an unlimited price. The price that the company buys rubber from local farmers ranges from 10-14 Chinese Yuan a kilogram. Consequently, living conditions have developed due to the income from selling

rubber. But the increasing number of rubber plantations reduces the land area for rice production. Mr. Khum said, "About 40 percent of the villagers have to buy rice for their consumption." In the year 2009, due to the world economic turmoil, the demand for rubber from China decreased. Consequently, farmers could not sell their rubber production at a good price; the company stopped buying rubber because it could not sell to the Chinese either. This means that the rubber tree plantations are not a sustainable income source for farmers; although, almost 40 percent of the villagers have mainly relied on rubber production and agriculture.

Second, because the location of the village is not far from the Namtha district center, there are three fish-raising ponds, two of which breed pigs together with the fish ponds. These two pig farms and fish ponds are owned by Chinese and create environmental impacts on the village. The Chinese came to the village and rented the land for doing business. The severe case is the farm which is located near the village primary school. The farm creates a bad odor that has been affecting not only the children in the school, but also the adjacent houses. According to the village chief, "The owners of the farms have not participated in the village activities and development. They do not pay any taxes to the village, but they go directly to the district. Moreover, they ignore the complaints and the village authority." He added that the village had submitted the letter of this problem two times already; still, there was not any solution or action yet. Although they pay tax directly to the district, the Chinese should contribute to the village because the farms are located within Namt Chang Village. In my opinion, the villages located in the near district center and the province center, should not have pig farms should not be allowed to operate within them. The Chinese's disregard of the local authority always happens to the village where they come to stay. The district administration office has to enforce the law and their authority over the Chinese to recognize the importance of the village authority; otherwise, the sense of living together will not happen.

Finally, my suggestion is that the district industry and commerce office and the District Agriculture and Forestry Office (DAFO) have to monitor the businesses; in this

case, it is Thonly company which sells equipment for harvesting rubber and buying rubber from villagers and the farms in the village. In the long run, sustainable food security and income sources have to be identified. The practice of monoculture, for instance, rubber trees, depends on the demand from China.

#### **4.6.2 Case Study 2: HuaNa Village.**

HuaNa Village located in the suburbs of the Namtha municipal town, eight kilometers away from the city, connects with the R3 road through a connecting road for about three kilometers. The village has 98 households, 95 families, 465 villagers, and 225 females. Most of the villagers plant rubber trees and rice. All of the villagers are Khmu, a Lao Theung ethnicity. (Author Interviewed on: January 19, 2011) (See Appendix D)

Village chief: Mr. Kham Onh Thailahuk

The reason that I chose this village, although it is located quite far away from the R3 road, is to look into a case besides those located along the R3 road. Moreover, the R3 road has impacts on the villages that are connected to it by a connecting road, and thus, HuaNa Village represents this example. Some of the business, coming with the availability of the R3 road, is located in the suburban area. In the case of HuaNa Village, there are three issues to be analyzed: rubber trees, the Chinese business, and suggestions from the village chief.

First, rubber tree growing is the most popular for provinces in the northern part of Laos, especially in Luang Namtha province. HuaNa Village has been influenced by this popularity as well. According to Mr. Kham Onh, there were about 32 ha of rubber tree plantations. Most families who have lands plant rubber trees, and 39 families have tapped their rubber and sold it to a Chinese company. HuaNa Village has a low land area which is opposite from the other side of the hills, separated by the dusty road. The paddy rice area is about 10 ha and the high land rice area is about 15 ha. Thus, the villagers do not rely on only rubber trees for their income; moreover, they have enough rice for their own consumption. Mr. Kham Onh said, "Only five percent of the villagers buy rice from their neighbours. The income from rubber is promising in our village."

However, the rubber trees have environmental impacts on the local community. The use of imported pesticides and herbicides creates environmental impacts on the land and water. Mr. Kham Onh said, "The chemicals are very dangerous and poison the streams in the valley. The villagers used to use water from the streams to drink in the past, but now they cannot use it due to the chemicals from the rubber tree plantations. During the use of pesticides and herbicides, we cannot even get closer to the area, its odor is very strong." In the rainy season, the rain washes the land and carries those chemicals in to the lower areas, mainly the streams and rivers. Now, the most wanted help is with water supply. In my opinion, this can be considered as a trade off between the income from rubber and the spoilage of the streams in the mountains near the village. Although there are alternatives such as well and ground water, in the long run, these water sources are not sustainable for the villagers. Moreover, it is necessary for the village to test the water quality from ground water before using it.

Second, the Chinese business in HuaNa Village causes trouble for the villagers. There are three kilns in the village, two at the end of the village and one at the entrance of the village beside the village road. These kilns have less than 10 workers each; there are some unskilled Chinese workers working in the kilns. But there is no exact number of Chinese workers and the village authority has never investigated the kilns. There are also Lao workers from other places such as from Oudomxay Province and a nearby village. The most important issue occurring in these kilns, which have been affecting the villagers, is the smoke from lignite coal combustion. All of these three kilns have been using lignite coal as their fuel due to its cheaper price than wooden logs. In ViengPhuka District, Luang Namtha Province, there is a lignite coal mine which is mainly exported to Thailand and some to China by using the R3 road. Although the cost for lignite coal as fuel is very cheap and thus reduces the kilns' production costs, it has been affecting the local communities around it mainly HuaNa village.

During the processing time, there is black smoke and bad smells from the kilns. I asked the village chief, "Have you ever informed the district administration office?" Mr. Kham Onh answered, "We sent a formal letter twice and there was no action from the

office, and we cannot talk with the Chinese and the Laotian land owner who rents the land to the Chinese. The land owner said that the village authority had to deal with the Chinese. But we cannot get the Chinese to listen or to respect the village authority.” In addition, I noticed that the soil which was used for bricks was dug within the kiln area. So, I suppose that when the land is getting deeper, the kiln will move to another place within Namtha District or places that are located near the main road, the R3 road. Presently, the villagers cannot raise pigs or poultry. I asked, “Do you know why your animals die?” He replied, “We do not know, it may be caused by the use of chemicals from our rubber trees or it may be the lignite coal smoke.”

Finally, I asked “What is your suggestion for the improvement of your village living standard?”, the village chief said. “Now, we want water and we want the district or province to solve the problem of those kilns.” In my opinion, the establishment of any firm or factory has to be delicately studied for the impacts and feasibility. In this case, the Chinese rent the land of the local people and gain the benefit from not only the suitable location near the R3 road, but also the cheaper material soil for bricks, and the cheaper lignite coal for brick firing. The district administration office and provincial administration office have to first allocate or provide the specific land area for each kind of firm and factory; otherwise, they have to solve the problem after it has affected the local people already. In addition, they have to enforce the existing laws on the environment, investment, and natural resource usage. In this case, it is the excavation of soil for industrial production. The firm has to apply and pay for the excavation of any natural resource including soil for brick production.

Then, water is one of the most important factors for humans and animals. Hence, the natural water resources such as streams and rivers must be preserved by all means. As indicated previously, water was poisoned by chemicals from rubber tree planting. The Province Agriculture and Forestry Office (PAFO) and DAFO in particular have to investigate and control the use of pesticides and herbicides by the farmers together with finding other alternative ways such as cutting grass instead of using herbicide and using natural substances such as some herbs to expell insects from their farms. I am aware that



these suggestions have been mention many times, but to enforce and put it into action requires both budget, human resources, and time. However, the most important step is to launch activities. Although this is only a case study of HuaNa Village, I trust that there are many similar problems occurring and affecting other villages. Therefore, in order to develop the country into sustained development, the problems affecting the village level have to be addressed.

#### **4.6.3 Case Study 3: Nalue Village**

Nalue Village is located 10 kilometers away from Namtha District Center, near the three junctions on the R3 road, the first one is from Bokeo Province, the second heads to Boten-Mohan border checkpoint, and the last one goes to Namtha District center. The village has 52 households, 74 families, 368 villagers, and 145 females. Most of the villagers are of the Lao Theung ethnicity. (Author Interviewed on: January 19, 2011) (See Appendix D)

Village chief: Mr. Huammy Torduangyord

I started asking Mr. Huammy about the positive impacts from the R3 road. He mentioned some of the benefits as follows:

- The road passes through the village, but from the past to the year of the road construction 2006, there were no houses and thus, there was no resettlement. Due to this reason, most of the villagers who have land along the R3 road decided to move to these spots in order to earn trade opportunities and comfortable living conditions. There is no doubt that some sold their land due to the sharply rising land price because of the R3 road.
- The transportation is very convenient because people use less time to get to the center of the province, markets, state office, hospital, school, and event the provinces nearby. Moreover, Mr. Huammy said, “The bus terminal has moved from the suburbs of Namtha District to a location on the R3 road since 2008 (the completion year of the road). This improves the transportation for the local community and reduces the transportation costs.” I observed that this bus terminal not only attracts small business such as guest houses, restuarants,

shops, markets, but also provides employment opportunities to the local people from adjacent villages.

- Mr. Huammy added, “There is now a primary school for our children and there is a high school about three kilometers away from our village.” Therefore, the coming of the R3 road helps create the opportunity for local children to attend school. Moreover, there is a vocational school located in Nalue Village. I interpret that the construction of the R3 road helps Luang Namtha Province, especially the Namtha District, to increase the level of urbanization. As important places such as bus terminals, schools, a vocational school, and market have spread outside the Luang Namtha downtown area. This process of urbanizing the suburban areas not only reduces the population density in the downtown, but also increases income distribution throughout the whole district.

However, beside these benefits, there are disadvantages occurring in Nalue Village due to the R3 road. First, as mentioned in the case of Pa Oiy Village, Bokeo Province, the better the road is, the faster the motorists drive. Most Nalue Villagers live on the Luang Namta District side; whereas, on the opposite side of the road are their agricultural lands such as paddy rice fields and orchards. Among this type of land, the primary school is located on this side of the road. Villagers have worried about their children on the way to their school. “Although, presently, there have been no severe accidents and casualties yet, we want the cars to drive slower and pay more attention to the students in the school area” said Mr. Huammy. To address this problem, the traffic regulations and measures have to be enforced. Normally, the construction of a road has to include road traffic signs on the important or specific places such as schools, hospitals, bus stops, junctions, and so on. In this case, the school construction finished after the completion of the R3 road, so there are no proper traffic signs yet. Therefore, every concerned party namely: villagers, the village authority, traffic police, and the Transport and Civil Work Provincial Office have to report or request for the installation of traffic signs (school area signs, speed limitation signs, and so on) for the school or any other similar cases.

Second, is the coming of business from both domestic and foreign investors. In the case of Nalue Village, there is a chicken farm operating in the village. The land owner is a wealthy person living in Namtha District. He bought the land from a villager and planted teak a decade ago. Recently, the land owner rented some part of his land to the Chinese businessman to operate the chicken farm. The village chief said "I do not know how large the farm is, it is located together with teak trees. But it has been affecting the way of living and the villagers a lot." The problem can be categorized as follows:

- The chicken farm blocks a local trekking way for the farmers. Usually, in the remote areas and the agriculture lands, there is no fence to separate the plots. Land owners use land mark poles given by the district officials on the measuring day which were agreed to by the nearby land owners. This means that farmers can walk through others' land to their farms. When the chicken farm came, villagers could not walk through this land anymore. They now have to take other ways which are much longer. Eventually, the sense of living together, harmony, and unity will be gone. The Chinese who operate the farm do not participate in the village activities and development. In addition, he/she does not respect and contribute to the village in ways such as taxes and farm operation fees.
- Normally, the investors always seek for markets and cheaper resources (land, labor, and raw materials) or factors that can lower the cost of production in the host country. In the opposite way, the host country usually expects employment opportunities, investment, capital flows, technology transfer, the use of local materials, and cheaper products. In the case of the Chinese investors in Luang Namtha Province, it is true that they seek for lower costs of production, namely rental land fees. But the hidden agenda that heavily reduces their costs, which does not usually happen in the city area, developed countries or even in their own country, are environmental costs. The Chinese discharge waste from the farm to nearby lands, including the paddy rice fields of Nalue villagers. That waste made the rice die and caused complaints from the villagers. Although the Chinese finally agreed to compensate for the rice,

it does not mean they stopped discharging the waste. In fact, they find other spots because of the cost of a waste treatment system is very high. Without paying any kip or yuan for waste treatment, the profit from selling chickens is very high..

Finally, what Laos and Luang Namtha Province in particular, are expecting is employment opportunities and technology transfers. However, the use of local materials has not happened yet. The Chinese employ unskilled Chinese workers from their country. So, the local Lao villagers cannot learn from them and technology transfer will not occur. As in the case of rubber tree planting, the materials are imported directly from China through border checkpoints using the R3 road to transport to the farm. These include fodder, vaccines, and equipment for the farm. Ultimately, it is not sustainable not only for the province and the country as a whole, but also for the local community whose daily lives are with these kinds of businesses.

#### **4.6.4 Case Study 4: Tin Tok Village**

Tin Tok Village is located on the R3 road, 35 kilometers away from Luang Namtha municipal town. The village has 97 households, 113 families, 506 villagers, and 249 females. Most of the villagers plant sweet corn, highland rice, and rubber tree. All of the villagers are of the Khmu ethnicity. (Author Interviewed on: January 20, 2011) (See Appendix D)

Village chief: Mr. Somchit Khamsai

Tin Tok is a small village in the middle along the way from the center of Luang Namtha Province to the third junction at NaTuei Village. Travelling from Luang Namtha, the road on the left goes to Boten-Mohan, Lao-Chinese border checkpoint, and the right hand side goes to Oudomsay Province and to the capital, Vientiane.. Its location is not very favourable for agriculture or industry because of the mountainous landscape. Although the livelihood of the people has not changed much due to the R3 road, the road has social-economic impacts on the living conditions of the Tin Tok villagers.

During the construction of the road, 10 families in Tin Tok Village were resettled. This was not a problem because the construction company cleared the land for those families, each of which received 88 square meters (or 8x12 m). After the finishing of the R3 road, the village has had more opportunities for agriculture. The most promising cash crop for Tin Tok Village is sweet corn. Mr. Somchit said, "All villagers grow sweet corn because there is a company coming to our village, sells us sweet corn seed, and promises to buy our production when we finish harvesting. Last year the total sweet corn yield of Tin Tok farmers was 60 tons. The company bought sweet corn for 1,000 kip a kilogram. Therefore, this kind of agricultural production helps improve our village standard of living due to the increasing income from selling sweet corn."

Besides rubber trees, sweet corn farming is one of the promising cash crops for the local people. The R3 road creates better opportunities for not only the coming of investments like the company, but also a permanent market for selling this agricultural product. The demand for sweet corn is still very high from Thailand and China; although, in 2010 Thailand stopped importing sweet corn from Laos due to its cheaper price compared to the price in Thailand of eight Baht a kilogram (2,000 kip). The reason why the Thais halted importing corn from Laos was to help their own farmers and to hold the domestic corn price. However, demand from China is still high compared to the production in Laos. In the same condition as rice, the demand for sweet corn for processing into corn flour is for Chinese consumption. Thanks to the R3 road, this agricultural product and others reach the Chinese market, especially through the Boten-Mohan border checkpoint.

However, the process of selling sweet corn seeds and purchasing back the yield from farmers is not fair. The village chief added, "Although we can sell our production at 1,000 kip per kilogram, in the beginning we bought corn seeds from a company for 28,000 kip (about 100 baht) a kilogram." Therefore, it is not fair for the farmers when comparing the price of the seeds and the harvesting of the corn. In this case, the local state offices, mainly DAFO and PAFO, and the Provincial Industry and Commerce Office have to monitor, investigate and set the proper price for both farmers and the

company. I asked, "Why do the farmers not plant more other cash crops?" Mr. Somchit replied, "We can plant beans, winged beans, or other cash crops, but we need stable markets for our production." In this stage, sweet corn planting has a stable market for the villagers, even though they sell it at low prices. Besides the market for farmers, the support from government organization is needed in terms of funding, technical support, advice, policy, and other public services. Because the availability of the R3 road improves transportation and attracts investment, without government support, the local people can barely rely on themselves and the companies. There are many projects initiated by the government to support the farmers in the entire country and in Luang Namtha Province, but each location and villages have their own special characteristics and potentials. So, if there is suitable supports for specific areas, it will foster and increase the production and people's living standards as a whole.

#### **4.6.5 Case Study 5: NaTuei Village**

Na Tuei Village is located on the three junctions of the road as mention in the second paragraph of the previous case study. It is about 20 kilometers away from the Boten-Mohan border checkpoint. The village has 347 households, 385 families, 1,533 villagers, and 786 Females. Most of the villagers plant rubber trees and rice and some of them are merchants. There are two groups of people, the Lao Theung and Lao Loum. (Author Interviewed on: January 20, 2011) (See Appendix D)

Village chief, Mr. Khamphery Chittamang, mentioned that because of its suitable location, Na Tuei Village has gained more social-economic benefits from the R3 road. As the connecting point from Luang Namtha to Bokeo Province by the R3 road and to the capital, Vientiane, by the N13 road, this village is larger than most of the villages on the R3 road, except those located in the municipal area of Bokeo Province and Luang Namtha Province. There is a police post, warehouse, and car-park for lorries. Hence, the village has three guesthouses and many small restaurants and shops. Some of the owners of these small business are from other places, especially from Namtha District. Besides doing small business, villagers grow sweet corn and rubber trees.

In the village, there are five Chinese families who rent lands and houses from Lao villagers and open shops near the village market. All of the products sold in their shops are from China through the Boten-Mohan border. These Chinese people live peacefully with the local people and participate in the village activities and development. This is the first case in this study where the Chinese respect the local authority and participate in the village life. It is totally different from the case of Pa Oiy Village in Huaysai District, Bokeo Province where the Chinese businessmen rent the land, shops, and market spaces to the other Chinese merchants. In Na Tuei, the Chinese traders opened shops near the village market to sell Chinese products to local communities and travellers on the R3 road. In this sense, they are members of the local market with the other Lao merchants and live together with harmony. In this case, the coming of foreigners to live in the local communities not only contributes to village development, but also provides accessibility to products from China.

The problem arising within Na Tuei Village is access to clean water from the Namthung River flowing from the Chinese mountains through the Lao-Chinese border. The situation in this river is very severe in Na Tuei Village. Although the causes that make it unusable happen upstream in Boten Village and Bo Piat Village within the Boten-Golden Special Economic Zone, villagers can not use the water for daily life as in the past. It is not related directly to the R3 road which passes the village, but the R3 road passes Boten and Bo Piat where there are Chinese communities, businesses, and factories located. For the case of these two villages, this has been put into the next topic on the case study of the villages in the border special economic zone.

#### **Boten Golden Special Economic Zone Profile:**

Dr. Chanpipak Kongchampa, Deputy Director of Boten Golden Special Economic Zone, General Director of Casino Management Activity in Boten Golden City. (Author Interviewed on: January 21, 2011) (See Appendix D)

In the past, there were three villages: Bo Kuea, Bo Piat, and Boten, located within this special economic zone. The villagers lived and earned their living by relying on nature and agriculture. Until 2002, the Lao government had studied and sought ways to

improve the people's living standard in the border area. Finally, the Prime Minister's Decree No. 162/PM, dated on October 8, 2002, endorsed the establishment the "Luang Namtha Border Trading Zone" in the total area of 1,640 Ha. The absolute right to administrate this concession land was given to the foreign investor 100 percent under the Boten Golden Concession Project Agreement, dated on December 9, 2003. In order to increase the special characteristics and the development in this area, the government of Lao PDR, agreed to elevate the Boten Golden Concession Zone into the "Boten Golden Special Economic Zone", under the Prime Minister's Decree No. 089/PM, dated on February 2, 2010.

**The Objectives of Boten Golden City are:**

- Set up a competitive Special Economic Zone (SEZ) legal system and guidelines.
- Open door policy for SEZ development in all sectors in the country.
- Set up SEZ based on the Market Driven Method.
- Simplify process for investors to invest and operate (One Stop Service).
- Develop SEZ based on equity, accountability, sustainability and preserving environment.

Boten Golden Special Economic Zone or the Boten Golden City is located in Namtha District, Luang Namtha Province. It borders Mohan Special Economic Zone, PRC. The total concession land is 20 square kilometers or 1,640 ha within the concession period of 99 years starting from December 2003. In 2003, there were 200 people living in Boten Golden City, but by late of 2009, the number increased to 8,000 people. However, starting from May 2010, the number sharply decreased to 1,500 people. The hotel room rental rate also decreased from the prosperous years from 95-100 percent to 5-10 percent at present. Most of the businesses and shops had closed down. The main reason for the decreasing of both the population and businesses in Boten Golden City were: (1) in May 2010, the Chinese stopped providing VISA at the border checkpoint; and (2) the most severe reason was in early December 2010, the PRC cut the internet system and telephone service that was provided from the Chinese side. The Chinese government's



displeasure with Boten Golden City was due to the internal problems of the casinos, which not only affected the development of the SEZ, but also threaten the Lao-Chinese relationship. Moreover, the problems represented the failure of the administration of Boten Golden City by the foreign investors who originally from a land-based Hong Kong company.

In this research, I selected two villages from the total of three villages which are located on the R3 road in Boten Golden City, namely: Bo Piat Village and Boten Village to represent the situation in this SEZ..

#### **4.6.6 Case Study 6: Bo Piat Village**

Bo Piat Village is located within the Boten Golden Special Economic Zone. It is about seven kilometers away from the Boten-Mohan border checkpoint. The village has 98 households, 107 families, 506 villagers, and 249 females. Most of the villagers plant rubber trees and rice. All of the villagers are of the Pa Na ethnicity which are those who can speak Chinese. (Author Interviewed on: January 21, 2011) (See Appendix D)

Village deputy chief, Mr. Sengjoy Phommany, provided information that besides growing rubber trees and rice, the villagers are workers and transport service providers who own modified small trucks for local transportation along the R3 road and to border areas. Other villagers become workers for the Chinese businesses such as at Tobacco Factory, kilns, hotels and casinos within the special economic zone. Because most of the villagers can speak Chinese, they have a priority to earn more money than being an unskilled worker. They can be the interpreter for the Chinese in the hotels and casinos. For those who become unskilled workers, they could also earn 50,000 kip or about 50 Chinese yuan a day (almost 200 baht), which is almost two times the normal wage for a Lao worker of 30,000 kip a day (about 120 baht). This normal wage for unskilled labor is applied for those who work in the rice fields, farms, road construction, and building construction. Mr. Sengjoy said, "Our villagers who work for the Tobacco Factory earn 600 yuan a month." The coming of the investment in the area created employment opportunities for local people. Besides working on their farms, villagers earn more income and improve their standard of living. In addition, the R3 road provides better

transportation conditions for them in accessing the market and services. In particular, most products and services are available in the Boten Golden City area.

This rapid development comes with negative impacts on the local people. During the beginning of the development area of Boten Golden City, Bo Piat Village was resettled from three to four Kilometers to seven Kilometers away from the border. This caused many problems for the way of living in terms of social economic impacts on the people. First, the new area that Bo Piat Village was moved to did not have enough land for agriculture. In the old location, the people used to have their temporary land spots in the hill areas which they occupied and grew crops. When they had to move to the other place, they could not move those lands; moreover, they had to find and clear new spots for cultivation. I asked, "Did the project compensate the villagers for land and resettlement?" Mr. Sengjoy said, "The project paid for the permanent land and houses. For wooden houses, it was one square meter for 150,000 kip, concrete houses were one square meter for 400,000 kip, and permanent land was one square meter for 5,000 kip. And we did not get compensation for the agricultural lands on the hills and mountains, although we had occupied them for a long time."

Because the agricultural land on the mountains was not permanent land, the project did not compensate the villagers. The villagers had annually earned a living from those lands from their cultivation no matter if they sold the yeild or used it for their family's consumption, it had certain value which could be evaluated into money. I strongly recommended that every feasibility study of projects must include things of value to the people, so they can get suitable compensation. In addition, the village deputy chief added, "The project promised to compensate for the primary school in the previous location, but they have not compensated or built the new one for us yet. In the resettlement period, we decided to move the wooden school building to a new village location and settle the materials as a temporary school for our children. The project paid for the school movement cost. Notwithstanding, during the movement, some materials were damaged, and the temporary school for our children is being used even now." In the rural areas, the school for their children's education is very important for villagers. The

differences between the concrete buildings such as hotels, trade centers, casinos, and businesses, in just a nearby area of four kilometers away, compared with the underdeveloped local communities nearby, is not compatible.

Another problem for Bo Piat Village was the water problem which had two aspects. The first one was potable water. In the past, there were two main sources of potable water in the three villages in Boten Golden City: water from the Namthung river flowing from the mountainous areas of the border between Laos and China, and the natural water from mountains near the villages. Presently, the condition of the Namthung River is very bad; it is a dark color and smelly. The reason for this degradation of water quality in the river was caused by dumping waste upstream.. This waste was from daily consumption in the special economic zone and communities living along the river. Finally, the only useful purpose of the river is to water the villagers' gardens. Another possible remaining source of water was natural water from mountains. Currently, rock excavation by using explosives in the mountainous area near the village, threaten the only remaining water resources in the area. Mr. Sengjoy said, "One day, the Chinese blasted the mountain for rock, and it accidentally cut the water tube to our village, then we didn't have water for a day or more. Although the Chinese fixed the tube for us, they do not stop excavating the rock in the area."

The second water problem was floods. Because the new village location is in the low lands along both sides of the Namthung River, in the rainy season, the village is affected by floods. The floods that annually affect Bo Piat Village are not severe, but they cause difficulties for the people, mainly in transportation within the village due to water and mud. The cost of the flood also increases the people's expenditures after the deluge. Therefore, the new village location due to resettlement for the project is not only unsuitable for the villagers, but also creates problems in their daily lives.

In conclusion, both land and water resources are the most important issues for humans. In order to improve the people's standard of living these problems have to be solved as soon as possible. First, in the allocation of lands or finding lands for villagers, so that they can earn a living through cultivation. Second, the sustainable use of water for

communities, the quality of water in the Namthung River and the natural mountain water have to be addressed. The prohibition of dumping waste in the river must be enforced. In addition, any activities threatening the natural water resources from the mountains have to be banned. In my opinion, these suggestions are already in the governmental officials' minds, the only thing needed is to implement and put them into action properly and timely.

#### **4.6.7 Case Study 7: Boten Village**

Boten Village is located within the Boten Golden City and it is the nearest village to the center of the special economic zone and Boten-Mohan border checkpoint. Boten has 237 households, 291 families, 998 villagers, and 460 females. Most of the villagers plant rubber trees and rice and become workers in the special economic zone. All of the villagers are of the Lue ethnicity which are those who can speak Chinese. (Author Interviewed on: January 21, 2011) (See Appendix D)

Village deputy chief: Mr. Khamtoun Keovongphet

Because Boten Village is located near both the center of Boten Golden Special Economic Zone and Bo Piat Village, it has similar impacts like those that happened to Bo Piat Village. Besides the cultivation of crops, Boten villagers work for the businesses in the Boten Golden City. Some of them who were lucky got work in the casino and earn much more money than the unskilled workers. Most of the unskilled workers from Boten Village and other villages got jobs like: washing dishes, washing clothes, cleaning, and becoming security guards at the hotels or casino.

Boten Village was resettled beyond the previous location of Bo Piat Village about five kilometers away from the center of Boten Golden City. Due to the fact that the population of Boten Village is more than the other two villages, the problem of land for cultivation is severe in this village. The income from working for the Chinese businesses is used for buying rice. Mr. Khamtoun said, "About 70 percent of villagers have to buy rice for their consumption because the people do not have enough land for cultivation." The present location near Boten Village used to be the Bo Piat villagers' cultivation land and still belongs to some Bo Piat villagers. So, if Boten villagers want to use or occupy

the spots near their village, they have to pay some amount of money to the Bo Piat land user in order to earn the right to use the land. In the past, the elderly people used to work in the gardens, farms, and go to collect forest products near the border area. They are now staying at home and waiting for their descendants to earn a living for the whole family.

The water from the river is severely degraded and cannot be used as usual. In the past, people used the water in the river for washing clothes, taking showers, watering gardens, and raising animals. Now, pigs and chickens are decreasing due to the quality of the river. The village deputy chief said, "When we water our vegetables, there is a strong smell attached to our plants and we don't want to eat it."

Besides the water pollution, Boten Village has suffered from air pollution from the garbage dumping site of Boten Golden City. The dumping site is located three kilometers away from the Chinese business center and two kilometers away from Boten Village. It is located on the right hand side when going from Na Twei three junction to the border and only 15 meters from the R3 road. This garbage was burned daily and its smoke had a very strong smell. Mr. Khamtoun added, "Besides the water pollution that was caused by the garbage and waste, the dumping site is very stinky. We had asked them to move to the other side of the road where there is a valley deep inside the forest and far away from the river, still, they did not move it."

The other small source of income for villagers is to sell their agricultural products in front of Chinese markets. The products they sell are vegetables from their farms and gardens and forest products such as bamboo shoots, mushrooms and so on. However, there were Chinese products imported from China including vegetables, meat, chicken, beef, and ingredients for cooking. When there are the same products from the villagers, the Chinese merchants lower their products price at the same or lesser than the price being offered by local people. Mr. Khamtoun said, "The villagers sometimes slaughter their pigs for their family's consumption and sell the rest to the other villagers and in front of the Chinese market. When there is villagers' pork being sold there, the Chinese reduce their pork from 25 yuan (32,000 kip) to 12-15 yuan. And this happens to similar products from villagers and those the Chinese are selling in their shops." This kind of

behaviour is the so-called “dumping” market strategy. The strategy of this trade is to destroy the local production and fully occupy the market for certain products.

In my opinion, the coming of Boten Golden City has had more negative social-economic impacts on the adjacent local communities. This is against the government policy to trackle and eradicate poverty in the rural border villages. Although villagers have better access to the markets, healthcare, education, services, and job opportunities, the establishment of this special economic zone needs greater attention to the local people. In addition, both the Management Board (Chaired by a government representative) and Economic Board (Chaired by a developer) have to solve the problem affecting the environment and local people’s living conditions. Otherwise, the last objective set up by the government to “Develop SEZ based on equity, accountability, sustainability and preserving environment,” cannot be accomplished.

#### **4.7 General Observations**

According to the social economic impacts arising from the R3 road both directly and indirectly in the local communities along the road in Namtha District, Luang Namtha Province can be summarized as follows:

The positive impacts of the R3 road on the adjacent communities are very important, mainly better transportation from their villages to the district center. The accessibility to education for children, healthcare services, and other services in the city, are the explicit benefits to rural communities along the R3 road. Moreover, better economic opportunities by the investment directly into villages, the access to market for their agricultural products, helps increase the living standards of villagers.

However, the R3 road also has negative impacts on villages, especially in the case studies above. First, is the physical problems of the road that creates negative impacts. The drainage systems of the road which not only causes road degradation, but also causes floods of villagers’ houses. Then, road accidents have been increasing.

Second, In Luang Namtha Province, the impacts on the R3 road are mostly impacts from the coming of foreign investors and development along the road, including:

- Rubber tree planting;
- Chinese business;
- Local authority power; and
- The special economic zone.

The details of these impacts have been discussed above in case studies; however, my suggestions to these problems are given in the last chapter.



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## **CHAPTER V**

### **CONCLUSION**

#### **5.1 Conclusion**

The national objectives are to sustain and increase broad-based economic growth, to eliminate mass poverty, meet the Millennium Development Goals (MDGs), and graduate from least developed country (LDC) status by 2020. The National Growth and Poverty Eradication Strategy (NGPES) and expanded exports are central features of the 2006-2010 Five Year Development Plan.

With assistance from the governments of the PRC and Thailand, the ADB intends to implement the Greater Mekong Sub-region: Northern Economic Corridor Project (the Project). The project of the R3 road construction which was accomplished in February 2008 is one of the infrastructure development priorities of the Lao government to transform the land-locked nation to land-linked nation in the northern mountainous area of Bokeo and Luang Namtha provinces. The road promotes trade, investment, and service-based industries such as tourism and logistics among Thailand, Lao PDR, and PRC under the concept of the GMS.

In addition, although roads are being improved, the national economy is highly fragmented, with food in surplus areas unable to be moved to deficit areas. In certain instances, it is cheaper to buy imported goods than to buy from distant Lao suppliers. Therefore, Bokeo Province imported food from Thailand via the Chiang Kong-Huaysai border checkpoint for provincial consumption. In the case of Luang Namtha Province, the Boten-Mohan border checkpoint is considered to be the most important trade gate between Laos and China. Hence, its value is very high because products from China are transported to other provinces throughout Lao PDR.

Beside the wider objective of using the R3 road for national development, another objective is to solve poverty in the rural mountainous areas of Bokeo Province and Luang Namtha Province. Consequently, the R3 road has positive impacts on local communities



along the road. This also shows that this study has fulfilled its two objectives. For objective number one: economic development benefits are arising from the R3 road on Lao PDR.

First, the road itself provides:

- Better transportation within Bokeo Province, Luang Namtha Province, and to other provinces;
- Cheaper transportation costs;
- More public transportation services such as buses and modified trucks for transportation;
- The accessibility of education, healthcare services, and other services;
- Accessibility to markets; and
- As a result, these factors increase people's standard of living.

Second, the road attracts investment and increases income earnings for local people:

- Agriculture and agro-industry, including food processing and contract farming, will see higher earnings as already seen in the case of corn and rubber tree cultivation;
- Employment opportunities for local people in the investment projects; and
- Cottage industries linked to tourism and involving the participation of local communities.

All of the above-mentioned points are the benefits and potentials from the R3 road connecting Thailand, Lao PDR, and Yunnan Province in China. In particular, the second positive impact from this infrastructure development project is that it can create economic opportunities for local people who live near the R3 road in Bokeo and Luang Namtha Provinces.

Objective number two of this study, to look into social impacts of the R3 road on Lao PDR, is exposed from five case studies in Huaysai District, Bokeo Province, and seven case studies in Namtha District, Luang Namtha Province. Although the second

objective and research scope is set to focus on social impacts on the two provinces, the results from twelve villages include further information on environmental impacts that are related to social impacts. These were caused by activities, development, Chinese businesses, and migrants in the research area.

### **Social Impact from the R3 Road on Bokeo Province**

First, the physical road condition that has negative impacts such as:

1. Unfair land compensation during the road construction caused complaints from villagers especially in the case of Pa Oiy Village which is located only three kilometers from Huaysai municipality.
2. The increase of road accidents due to better road conditions, so motorists drive faster. This problem not only threatens local people's property such as cows, buffalo, pets, and buildings, but jeopardizes lives of both the motorist and villagers, especially children.
3. The problem of the drainage system by the road has caused flooding and road degradation, particularly during the rainy season. This issue happens in both Bokeo and Luang Namtha provinces.
4. The completion of the R3 road also increased the land price along the road. The land price increased ten fold from 2005 to 2010 in the case of Na Luang Village according to the author's interview with Na Luang Village Chief. Although some villagers sold land near the R3 road and bought agricultural land away from the road, some wanted to use money for other things such as buying a motorbike, tractor, or for their children's education. Now, many plots belong to wealthy people from the city who do not develop the land and sometimes sell the land for profit. Finally, villagers have less land along the R3 road and have to farm further from their village.

Second, the impacts coming from the availability of the R3 road:

1. Chinese business, as in the case of Pa Oiy Village, Huaysai District, that has a Chinese market and Chinese motorbike manufacturer operating in the

village, causes both social impacts and environmental impacts on the local community. The social impacts from these two Chinese businesses are: (1) the Chinese migrants and traders do not participate and respect the village authority; therefore, the village chief cannot control and record the actual statistics of the Chinese people living in the village, cannot collect tax and fees for business operation, and finally, the Chinese people do not contribute to the village development (2) Crime is increasing because Chinese merchants buy stolen objects from thieves, who are Lao teenagers in the village or villages nearby. The thieves cannot sell stolen items to the Lao people who will know that he/she is a thief, and Lao people are afraid of being guilty. When a thief was arrested, he confessed that he sold stolen things to Chinese merchants in the market, but when the village authority wanted to enforce the law on the Chinese who bought the item, the Chinese argued and denied the case.

2. Another problem with the Chinese business is environmental impacts on the local community. In the case of the Chinese market, the garbage is not properly managed. Chinese traders dump garbage at the back corners of the market and into a stream behind it. In the case of the Chinese motorbike manufacture, the company burns their garbage with materials containing oil and paint. This caused air pollution in the village.
3. The rubber tree plantations in Bokeo Province threaten food security and change villagers occupations. When farmers in Bokeo Province plant more rubber trees, the land for other plants, mainly rice, corn, and other cash crops, becomes reduced because rubber trees takes at least seven years to produce latex rubber and can be sold for income. Therefore, during six year before the farmers can sell their rubber production, they have to find other income sources. Moreover, when they have less land to plant rice, and other crops, some villagers have to borrow rice from their relatives or buy it from other villagers. When the situation gets severe, villagers have to buy rice from other

villages or from markets. Another problem is villagers' occupations. Some of the village teenagers have to become workers or go to work in other cities in order to earn more money to buy rice.

### **Social Impacts from the R3 Road on Luang Namtha Province**

First, the physical problems of the road create negative impacts. The drainage systems of the road not only causes road degradation, but also causes floods of villagers' houses. Then road accidents have been increasing.

Second, the impacts coming with the availability of the R3 road:

- Rubber tree planting threatens food security of the local people due to the lack of land for other agriculture, mainly high land rice. Moreover, rubber tree plantations create environmental impacts from the use of pesticides and herbicides. The use of these chemicals spoils water resources in the mountains, especially streams in valleys. During the rainy season, rain washes these chemicals onto the land surface they flow to lower areas and streams. Presently, most streams are not potable, but they were in the past.
- Chinese business also impacts Luang Namtha Province, mainly through living with local people, social problems, and environmental problems. The cases of kilns and chicken farms create environmental impacts on local communities and complaints from villagers. In the case of chicken farms in Nalue Village, these affect local people's lives and their agricultural land, the rice fields.
- The Local authority's power is similar to the case of Bokeo Province; however, in NaTuei Village, Chinese migrants and traders live harmoniously with local people. They also participate in village activities and development. Therefore, from 12 case studies, Natuei Village is the only one that Chinese people recognize the local authority's power.
- The special economic zone, Boten Golden City, has negative social economic impacts on villagers within its area since its establishment. The problem started during the resettlement of Boten and BoPiat villages. This

changed the people's way of life, reduced land for agriculture and income for the elderly people. All these issues are occurring due to the establishment of this special economic zone.

This research has hypothesized that **“The R3 road unevenly benefits Thailand, Lao PDR, and Yunnan Province (PRC), with Lao PDR suffering most social impacts,”** and findings from the study support the hypothesis because:

First, the trade value between Thailand and Laos occurring at Chiang Kong-Huaysia border checkpoint in Bokeo Province is one-sided, since Thailand obviously has a trade surplus over Laos. Moreover, the trans-national trade from Chiang Rai to Yunnan Province by using the R3 road from the beginning of 2008 to the end of 2009 increased more than two times over 2008 alone. And this trans-border trade value was higher than the combination of Lao imports and exports in Bokeo Province.

Second, when we look at the trans-border trade from Yunnan Province back to Chiang Rai via Boten-Mohan border checkpoint in Luang Namtha Province in 2009, the trade volume tripled from 2008. Thanks to the R3 road, this explicit figure reveals the benefit of the R3 road to Yunnan Province, PRC and Chiang Rai Province, Thailand.

Finally, the social impacts on the local Lao communities along the R3 road have been revealed in five case studies in Bokeo Province and seven case studies in Luang Namtha Province. Therefore, all of the findings from this research significantly support the hypothesis.

## **5.2 Suggestions**

### **5.2.1 Suggestions for R3 Physical Impacts**

The negative impacts from the R3 road do not have to be long term issues. With collaboration and a working process from the local authorities, district authorities, and at the provincial level, those problems can be solved because the province has departments, offices, organizations and laws covering almost all aspects. The only things needed are procedures, an exercise of the authorities' power, and enforcement of the existing laws.

- (1) The problem of losing land and unfair compensation happens in most parts of the country. As indicated in the Northern Economic Corridor Project Plan by ADB, the number of households that had to be compensated with the actual amount of money due to the loss of the exact land area caused by the R3 road construction were written in the report. The problems that create local communities' complaints are the implementation of the project and the transparency of the compensation procedures. As mentioned in Pa Oiy Village, some of the villagers did not receive compensation for their land because the road passed only 2-3 meters through their land. For the construction company or others who were not affected by the road construction, they considered it just a small land area to trade-off for a better road; whereas, this created displeasure for the villagers who lost these lands. The construction of the Fourth Thai -Lao Mekong Friendship Bridge between Chiang Kong-Huaysai, Chiang Rai Province and Bokeo Province for the area's development clearly needs a study on its feasibility, impacts, and cost-benefit of this project, since Bokeo provincial officials and local people lack information of the project in their province.
- (2) The drainage system beside the road is not the only problem for road degradation, but the problem of flooding nearby houses is another problem. The road must have a proper drainage system to discharge water from the road surface to the culverts and water conduits. The capacity of the road to discharge water will increase the durability of the road because the road is higher than the areas housing villagers. Since no drainage system exists or there is not a proper one, water will accumulate rapidly and cause a deluge of water into villagers' houses. Normally, when constructing a road, the proper drainage system is constructed together with the road and other necessary traffic signs.
- (3) Road accidents, which have increased, are also threatening the communities along the road. Although the statistics from the provincial traffic police offices are not high, it does not reflect the actual accidents happening on the road.

For instance, road accidents happening with two or more vehicles are often investigated by the traffic police because the motorists often cannot solve the problem and come to a final solution that is acceptable by both parties. In this case, the accident is recorded in the statistics. For those who make a solution without the aid of the police, which often happens, the accident will not be recorded in the formal accident statistics. The reason why the motorists try to solve the problem by themselves is that if they call the traffic police, the vehicles will be seized and placed in the police office's car park or warehouse until the case is solved. Therefore, most people need to use their vehicle and decide not to call the police. Finally, the case in Pa Oiy Village was that an accident happened involving a lone motorist, and the motorist was severely injured by the pattern poles. In my opinion, these kinds of road accidents happen due to the motorists, but are not mainly caused by the road. It is true that when the road is better, motorists drive faster; however, the traffic police only enforce the law on those who violate it.

- (4) The increase of land prices along the R3 road is a major problem affecting the livelihood of the local people. Most of the villages along the R3 road have limited land for cultivation due to its mountainous geography. Upon the completion of the R3 road, people who lived in the city bought lands along the road as an investment for future profits. Therefore, some villagers who need funds for agricultural investment and other expenditures, decided to sell their land. The transference of the ownership rights was not the major problem, but the actual problem is that villagers have less land for agriculture, and the lands that were sold have not been used and developed. Finally, the land in local communities now belongs to people who live far away, and they do not create and develop the land. The solution to this problem might be in the law on land use and tax. For instance, if the land owner leaves land undeveloped for more than three years, the land tax will increase. This measure indirectly forces land owners to develop their land.

The solutions for these negative impacts on local people arising from the R3 road construction depend on the responsibility of the local authorities. Formally, the village level has to report to the district level and the provincial level for solutions. However, in case studies, it was shown that although village authorities reported to the district administration office, the procedure was too clumsy and still had not been solved.

To accomplish this notion, the workplan, strategy, task allocation and budget have to be set. Although the provincial administration office has both an annual and middle term plan (2011-2015) and a long term plan to 2020, a detailed action plan at the village level and district level must be made. Moreover, to ensure an effective outcome, the monitoring and investigating of implementation has to be done together with the task implementation.

### **5.2.2 Suggestions for Developments on R3 Road Area**

#### **Rubber Tree Planting**

It is no doubt that rubber products have been transported to China by using the R3 road. Chinese companies coming to invest in rubber tree plantations, and other companies that purchase rubber products have less transportation costs due to the R3 road. As the availability of the road not only lowers the transportation costs, but attracts investment too. In Luang Namtha, one of the most prominent investments is in rubber tree plantations, especially Chinese investors and local people who plant rubber by themselves.

Much research has been done on the impacts of rubber tree planting in the areas of social economic impacts and environmental impacts; however, I have included some of the problems occurring in the villages in this research case study. One of the most important threats to local people is food security for their families because rubber tree plantations are monocultures, and it takes at least seven years to sell the latex rubber. During this period, rubber farmers have to find other work to earn more income to cover what they had earned from their lands before planting rubber trees. These previous plantings consisted of crops such as highland rice, corn, vegetables and so on. In the case studies, it was found that the villages with many rubber plantation areas, have been facing rice shortages because they have less land to plant rice.



It is also true that there are many families who have earned a high income from their rubber plantations and this has encouraged other villagers to plant rubber trees. However, they rely on demand from China. As indicated during the world economic turmoil of 2009, the demand for rubber sharply decreased and it heavily affected the rubber tree farmers. Therefore, other crops' cultivation such as corn, rice, and cassava, are the alternative choices for not only local consumption, but also for sustainable incomes.

Besides, the environmental problems from rubber production are getting more severe due to the use of pesticides and herbicides. These chemicals are affecting the natural water resources near local communities. Because clean water is the most important for both humans and animals, the preservation of water resources has to be carefully implemented. The alternatives and solutions for this problem are: the use of natural pesticide from herbs, experiments of water quality, and the limitation of the use of chemicals.

Moreover, rubber purchasing processes by Chinese companies have to be carefully investigated. In the case of Namt Chang Village, the company sold rubber equipment to the villagers and unfairly collected money from them. I suggested that the DAFO official investigate and monitor the contract between farmers and the company in order to ensure fairness, as well as solve the existing problem in the equipment buying process. I assume that there are similar problems in other villages that sell rubber products to Chinese companies.

#### **Chinese Business**

Besides rubber plantations, there are a number of Chinese businesses invested in Luang Namtha Province. It is undeniable that those Chinese investors have used the convenience of the road for transporting their materials and products. Foreign direct investment (FDI) must be beneficial to both the host country and the investors alike. For the host country on the one hand, the expected advantages from FDI are technology transfers, employment opportunities, selling materials, cheaper products, and capital movement. However, these notions have not been accomplished with the Chinese

investment in Bokeo Province and Luang Namtha Province. On the other side, the investors are expecting more markets, cheaper inputs (labor, materials, and land), policy facilitation, and promotion from the host country. So far, they enjoy free environmental costs for waste disposal from the local communities. Moreover, the production inputs are imported from China through the R3 road. Ultimately, if there is no strategy for this problem, Luang Namtha Province and the Lao PDR as a whole, will gain less advantages from this FDI.

### **Local Authority Power**

The strength of local communities depends on the power of local authorities. Village authorities are the first level in addressing problems within communities. If authority is strong and they can enforce their power, there will be less problems in the village and less issues for higher authorities to respond. So far, the villagers respect their own authorities; however, new comers, the investors, do not follow and participate in the village activities and development. Thus, this creates impacts on villagers in terms of social, environmental, and economic problems. The suggestion to this problem is that the district administration office has to solve this problem by encouraging the foreigners to participate and respect the village authorities. Otherwise, there are problems reported at the district level and they have to solve these problem themselves. There are governmental obligations and regulations that residents of a village have to participate in village activities and development as well as respect the local authority, no matter if the resident is native or a foreigner.

### **Special Economic Zone**

Boten Golden City comes to mind when thinking of ambitious goals for Luang Namtha Province and country development. However, this special economic zone creates more negative impacts on local people than advantages. First, the location of Boten Golden City is in the upstream of Namthung River; the pollution from wastes are heavily affecting the local communities along Namthung River, mainly Boten, Bo Piat, and Na Teui villages. Second, the income of the local people has been decreasing due to the loss of land and accessibility to the forest nearby. Presently, elderly people have to stay at

home and have no income, but in the past they used to gather forest products and work in the farms. When there is a limitation of land, the income from these sources is gone. Although, the special economic zone creates some employment opportunities for the village's adolescent youth, some of them become unskilled labor such as cleaners, security guards, and so on. Although, those who can speak Chinese may have a chance for working in a hotel or casino as interpreters. Third, market opportunities for local people is limited because most products are imported from China and sold in Boten Golden City, including vegetables and meat. Finally, the R3 road that passes their village facilitates travellers and trucks to the special economic zone, but the development goals of Boten Golden City will not be met.

I strongly suggest that a prudent study on the establishment of future special economic zones is done before the projects begin. In particular, the development project within the area adjacent to the Fourth Thai -Lao Mekong Friendship Bridge in Huaysai District, Bokeo Province, will create opportunities and development for the province. This will help the Northern Laos by using the R3 road and the Friendship Bridge and will generate the highest advantages for local people and the country as a whole.

### **5.3 Suggestions for Future Research**

Because this research has been conducted on the impact of the R3 road in Lao PDR in particular, Bokeo Province and Luang Namtha Province, it covered many development activities along the road. Therefore, in order to get deeper understanding on specific issues, further research can be conducted on the following topics:

1. Rubber tree plantations versus food security: It is suggested that further research be conducted on this topic to find out the impacts from rubber tree plantations on the food supply of farmers. It has been revealed in these research findings that farmers who plant rubber have to wait seven years to earn income from selling latex rubber; however, during this seven years, while they have used their land for rubber, the land for rice and other crops decreases. Therefore, in case studies for this research, some villagers have to buy rice for their consumption.

2. Study on agro-business and sustainable development: Because the main income of the rural people, especially in Bokeo and Luang Namtha provinces is derived from agriculture production, there are companies coming to support people in planting cash crops. In this research, corn is one of the promoted cash crops by companies for export to Thailand and China. However, as indicated in the case studies for this research, contracts between companies and farmers are not fair. Therefore, an in-depth study on this issue is needed.
3. Chinese investment in Laos: Is this a cost or benefit to the Lao people? The Chinese investment in this study has negative impacts on local communities. However, I did not study about other benefits that these investors contribute in the development of provincial economic growth or Lao economic development. Thus, a study on this topic is needed because the amount of Chinese investment in Lao PDR has been sharply increasing.
4. Special economic zone development: The Lao government is planning on establishing more special economic zones throughout the country. One of the most interesting ones is in Bokeo Province which is the special economic zone near the construction area of the Fourth Thai-Lao Mekong Friendship Bridge between Chiang Kong and Huaysia. This Mekong River bridge aims to support the R3 road in linking the GMS region which comes together with the special economic zone to promote investment in Bokeo Province. In this research, the case of Boten Golden City as a special economic zone in the area bordering Yunnan Province, China is problematic. The problems of this special economic zone are not only affecting the relationship between the Lao PDR and China, but also have negative impacts on three villages that had to be resettled from the project site.

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GMS: [www.adb.org/GMS/](http://www.adb.org/GMS/); [www.gmsbizforum.com](http://www.gmsbizforum.com)

[www.visit-mekong.com](http://www.visit-mekong.com); [www.gms-eoc.org](http://www.gms-eoc.org)

[www.gms-ain.org](http://www.gms-ain.org)

ASEAN Secretariat: [www.aseansec.org](http://www.aseansec.org)

Ministry of Commerce, Yunnan Province <http://www.bofcom.gov.cn/>



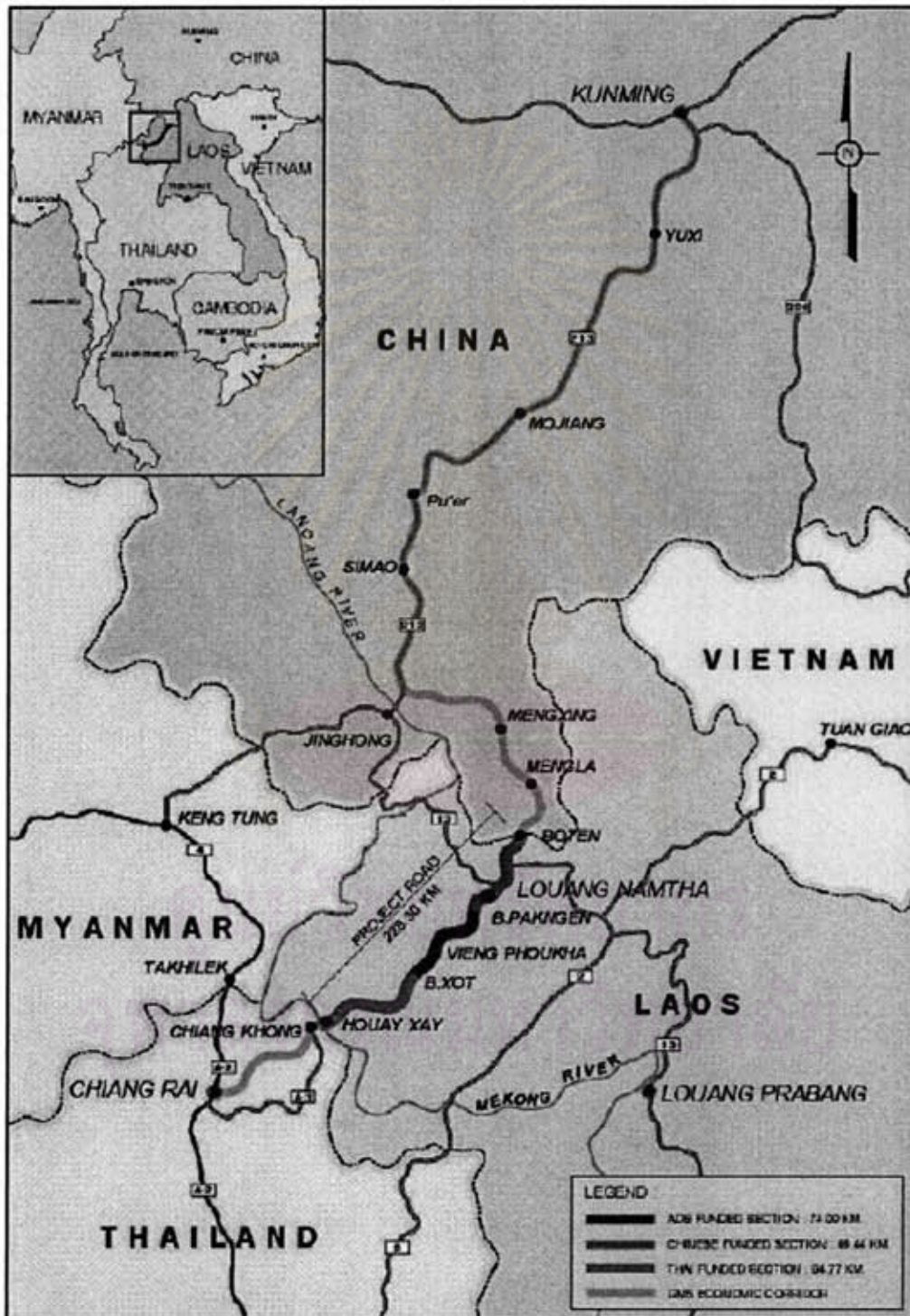
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**APPENDICES**

ศูนย์วิทยทรัพยากร  
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**APPENDIX A**  
**NORTHERN ECONOMIC CORRIDOR PROJECT**



**APPENDIX B**  
**VILLAGES ALONG R3 ROAD**

No.	Village	Km
	<b>Houai Sai District, Bokeo Province</b>	
	<i>Thai Section</i>	
1	Khon Keo <i>Houayxai Bypass</i>	
2	Bor Keo <i>Houayxai Bypass</i>	
3	Pa Oiy	5.5
4	Ou Dom <i>Houayxai Bypass</i>	5.7
5	Pak Hao Neua	6.5
6	Mok Ka Chok	7.5
7	Nam Ho Tai	8.7
8	Mai Phu Kha	9
9	Pa Sang	9.5
10	Na Le	10
11	Nong Ngeun	11.5
12	Thong Seng Chan	12
13	Mai Ni Nyom	12.5
14	Sai Cha Leun	13.5
15	Nam Toi	14.5
16	Mai Hia	15.3
17	Don Nyeng	
18	Mai Nyang	
19	Nam Chang	16.5
20	Phong Thong	
21	Bo Lek	17.5
22	Pang Pot	18.5
23	Nam Pu	21.3
24	Nam Ma	22
25	Nam Deua	25.5
26	Don Phao	27
27	Phi Mon Sin	29.5
28	Nong Kham	30
29	Na Luang	43.5
30	Nam Thoung	52
31	Na Ngam	60.5
32	Nam Seo	64
33	Don Chai	68
34	Houai Ha	69
35	Pang Sa Lao	71
36	Tha Fa	73.5

<b>ViengPhukha District, Luang Namtha Province</b>		
<i>Thai Section – ADB Section</i>		
38	Nam Phe	93.5
39	Phu Lan	97
40	Jri	99
41	Pang Sai	103.5
42	Nam Ngeun	108
43	Phon Thong	109.7
44	Nam Fa	112
45	Lam mon	114.5
46	Kam Pon	118
47	Nam Mang/Vieng Pphukha	
48	Thiao/ Vieng Pphukha	121
49	Dong Viang/ Vieng Pphukha	
50	Nong Kham	124.5
51	Nam O	128.5
52	Nam Eng	131.5
53	Phu Lan	135.5
54	Nam Sing	140.5
55	Nam Loung	141.5
56	Ta Long	142
57	Prang	144
<b>Namtha District, Luang Namtha Province</b>		
58	Khoua Soung	147
59	Tha Se	152
<i>ADB Section – China Section</i>		
60	Chaleunsouk	162.5
61	Namleu	
62	Donmoun	173
63	Phonsaisawang	
64	Naleu	
65	Mai	
66	Poung/Donle	
67	Nanoi	
68	Bomphieng	
69	Ta Van	185.5
70	Nam Deng	196
71	Houai Dam	202.3
72	Houai Hom	204.5
73	Na Teui	208.5
74	Tin Tok	210.5
75	Bo Piat	223.5
76	Bo Ten	226

## APPENDIX C.1

### MAP OF THAI FUNDED SECTION



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## APPENDIX C.2

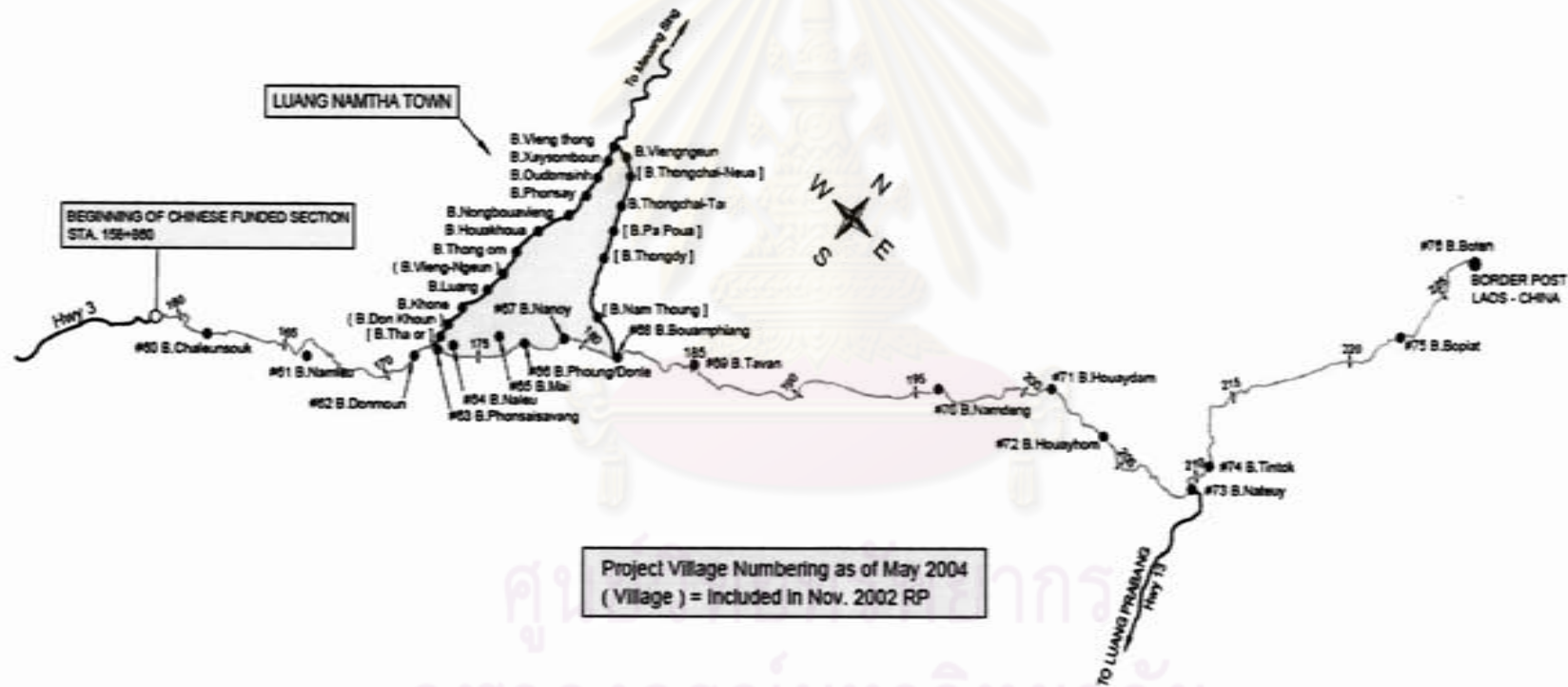
### MAP OF ADB FUNDED SECTION



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## APPENDIX C.3

### MAP OF CHINA FUNDED SECTION





## **APPENDIX D**

### **KEY INFORMANTS PROFILE**

#### **I. Village Chief in Huaysai District, Bokeo Province.**

1. Mr. BounThan Sengpaseuth

Pa Oiy Village Chief, Mobile: (85620) 5568 3148, 9998 8149

Interviewed on: January 13, 2011

2. Mr. Bounyeng Duangmala

Nongkham Village Chief, Mobile: (85620) 9610 8806

Interviewed on: January 13, 2011

3. Mr. Singkham Phompanya

Na Luang Village Chief, Mobile: (85620) 9891 2552

Interviewed on: January 13, 2011

4. Mr. Sikeo Saenkhamwang

Pang Sa Lao Village Chief, Mobile: (85620) 5432 4847

Interviewed on: January 14, 2011

5. Mr. Somchan Keopaseut

Sot Village Chief, Mobile: (85620) 5625 4522

Interview on: January 14, 2011

#### **II. Namtha District, Luang Namtha Province.**

1. Mr. Khum Kuayvileuth

Namt Chang Village Chief, Mobile: (85620) 9700 0607

Interviewed on: January 19, 2011

2. Mr. Kham Onh Thailahuk

HuaNa Village Chief, Mobile: (85620) 5519 5372

Interviewed on: January 19, 2011

3. Mr. Huammy Torduangyord

Nalue Village Chief, Mobile: (85620) 5641 6184

Interviewed on: January 19, 2011

4. Mr. Somchit Khamsai

Tin Tok Village Chief, Mobile: (85620) 2398 8951

Interviewed on: January 20, 2011

5. Mr. Khamphery Chittamang

Natuei Village Chief, Mobile: (85620) 9990 5797

Interviewed on: January 20, 2011

6. Mr. Sengjoy Phommany

Bo Piat Village Deputy Chief, Mobile: (85620) 5493 1715

Interviewed on: January 21, 2011

7. Mr. Khamtoun Keovongphet

Boten Village Deputy Chief, Mobile: (85620) 9892 0984

Interviewed on: January 21, 2011

### **III. Boten Golden City (Boten Golden Special Economic Zone)**

1. Dr. Chanpipak Kongchampa

Deputy Director of Boten Golden Special Economic Zone, General Director of Casino Management Activity in Boten Golden City .

Mobile: (85620) 2223 7878, 9802 2266,

E-mail: kongchampa@yahoo.com.cn

Interviewed on: January 21, 2011

## BIOGRAPHY

Alomlangsy Rajvong was born on October 18, 1984, in Vientiane Capital, Lao PDR. He received B.E from Faculty of Economic and Business Administration, National University of Laos in September, 2007. He worked as a research assistant at Environment Research Institute in the Water Resources and Environmental Administration, Prime Minister's Office for one and a half year. After receiving a scholarship from Rockefeller Foundation in late 2009, he is studying the Master program in Southeast Asian Studies at Chulalongkorn University, Thailand.



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