

Northeast Thailand in the Development Scheme of Thailand

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Introduction

The North East Region of Thailand covers an area of 105.5 million rai (or approximately 168,854.25 square kilometers or 16.88 million hectares, i.e. one rai equals 0.16 hectares), approximately one-third of the national total area. The North East is bordered by the Democratic Republic of Laos on the north and the east, the Democratic Republic of Cambodia, Prachin Buri and Nakhon Nayok of Thailand on the south and Saraburi, Lop Buri, Petchabun and Phitsannlok of Thailand on the west. The major part of the region is an elevated saucer-shape plateau which is divided by the Phu Phan Range into two basins, the Khorat basin to the south and Sakon Nakhon basin to the north. This plateau is bordered by hills to the west and south, by the Mekhong River on the north and east. The western portion of the plateau with a mean elevation of about 200 metres above sea level slopes gently to the south east.

The North East Region includes 19 changwats (provinces) of Thailand. These nineteen changwats are subgrouped in according to their geographical locations as follows;

The Upper North East ; the plateau being bordered by the Phu Phan Range and sloped toward to the Mekhong River, includes 6 changwats. They are Loei, Nong Bua Lam Phu (former district of Udon Thani), Nong Khai, Nakhon Phanom and Sakon Nakhon. There are important rivers such as Huang River, Loei River and Songkhram River in this part.

The Central North East ; the Chi River Basin, includes 6 changwats; Khon Kaen, Kalasin, Mukdahan, Chaiyaphum, Maha Sarakham and Roi Et. The main feature is composed of flat plain where the Chi River flows along this part.

The Lower North East ; the plateau and sources of tributaries of the Mun River, includes 7 provinces. They are Nakhon Ratchasima, Buri Ram, Surin, Si Sa Ket, Yasothon, Amnat Chareon (former district of Ubon Ratchthani) and Ubon Ratchathani.

The North East is known for its dry climate. Because of its location, mountain ranges in the southern part and the western part impede the climate from the sea resulting in less quantity of rain falls in the western part and much quantity in the eastern part. The annual precipitation in the region ranges from some 1,000 mm in the western most part to over 2,000 mm in the area along the Mekhong River, It rains a lot in Nong Khai, Sakon Nakhon and Nakhon Phanom and less in other provinces of the region. The climate of the North East is very hot in the hot season and cold in the cold season. The average temperature is 26°C - 27°C.

In 1995, the North East had a population of 20.663 million persons, approximately 34.7 per cent of the national total. The average density of the population was 122 persons per square kilometre, in comparative with 116 persons of the whole kingdom. The average growth rate of the population of the North East was 0.6 percent per year in 1995. Changwats with the population of over one million persons are Nakhon Ratchasima (2.467 million), Ubon Ratchathani (1.696), Khon Kaen (1.652), Buri Ram (1.458), Udon Thani (1.456), Si Sa Ket (1.396), Surin (1.345), Roi Et (1.291), Chaiyaphum (1.093) and Sakon Nakhon (1.057).

Because of its unfavourable weather conditions and depleted environmental conditions, the North East has become the poorest and the most backward region of Thailand over time. In 1993 the forest area of the North East is only 12.7 percent of its total land area due to illegal timber cutting, comparative with 26 percent of national average. The North East has problems of shortages of natural water resources and irrigation systems and poor soil quality unsuitable for agricultural production due to salinity from underground rock salt. The majority of the North East people are subsistence farmers, dependable solely on rainfed agriculture. Most

of them are poorer and more backward than those in other regions of the country because both of their productivity and product prices are very low. In 1995, yield per rai of major rice production of the North East was only 281 kilogram per rai in comparative with 350 kilogram per rai of the national average and 456 kilogram per rai of the Central Region. The North East rural people are mostly short of basic needs because of their low income and the insufficiency of the government provisions of basic services. There are higher incidence of poverty, malnutrition, poor health and illiteracy in the North East than those of other regions.

Over the past 30 years, the Thai government has pushed efforts in developing the North East. Plans and programs have been implemented to solve problems of dryness and poverty of the region and absorbed larger portions of the annual government budgets in absolute amount than other regions.

Unbiasedly, one can say that the present day situation in the North East is much better than the past. The North East has been developed in many areas over years. The North East has now better economic and social infrastructure, including highly developed highways network system, railways links, airports, telephone and other telecommunications services, as well as irrigational and power generating dams. The North East people have more basic services including water supply, hospitals and health centers, schools, colleges and universities. More job opportunities and other economic activities, including factory works and services, are offered to the North East non-farm labour force. Contrastingly to these recent developments, the large amount of the North East people are still migrating to Bangkok and other big cities to find employment in the dry seasons. The poverty incidence in the North East is still higher than those of other regions.

This paper attempts to review the past and present economic development of the North East and look for the opportunities and strategies for the future development of the North East under new political and economic conditions of the present days domestic and international environments.

The North East Economy

The North East has by far the lowest per capita income of the regions of the country. In 1994, the per capita income at current market prices of the North East was 20,235 Baht, while that of the Nation was 61,335 Baht. In the same year the per capita income of the North Region, the second lowest per capita income was 31,064 Baht and that of Bangkok and its vicinity was 186,167 Baht (Table 1). These figures show that the per capita income of the North East was approximately 33.0 percent, one-third, of the national average and only 10.9 percent of that of Bangkok and its vicinity (9 times lower). Consequently there are a high incidence of poverty and a high proportion of poor villages in the North East. In 1992, the poverty incidence of the North East was 22.7 percent, comparing with 13.7 percent of the Whole Kingdom.

Table 1. GDP, GRP, Per Capita at Current Market
Prices and Population of Thailand, 1994

	GRP (1000 BAHT)	POPULATION (1000 Persons.)	PER CAPITA (BAHT)
BANGKOK AND VICINITY	1,855,894,189	9,969	186,167
EASTERN	372,191,908	3,710	100,321
CENTRAL	162,855,403	2,856	57,022
WESTERN	152,443,097	3,312	46,028
SOUTHERN	308,084,613	7,743	39,789
NORTHERN	343,477,716	11,057	31,064
NORTHEASTERN	405,959,573	20,062	20,235
WHOLE KINGDOM	3,600,906,499	58,709	61,335

Source : National Economic and Social Development Board, National Income
Accounts Division.

The Gross Regional Product at current market prices of the North East was approximately 405,959 million Baht, approximately 11.3 percent of the Gross Domestic Product of the country (Table 2). The growth rate of the North East Gross Regional Product were 10.1 percent in 1995 and 6.3 percent per year during 1989-1995 (Table 3).

Changwats with highest Gross Provincial Product was Nakhon Ratchasima, followed by Khon Kaen and Ubon Ratchathani. (Table 4).

About 80 percent of the total population of the North East are engaged in the agricultural production. Meanwhile, the North East agricultural production is dependable on few crops, i.e., rice, cassave, maize, sugar cane and kenaf. However, the significance of the agricultural sector in the North East economy has been declining, while those of the trade, service, manufacturing and construction sectors have been increasing. In 1995, the share of the agricultural sector in the Gross Regional Product was only 19.0 percent in comparative with 30.3 percent in 1989.

On the other hand, the share of the wholesale and retail trade sector in the Gross Regional Product of the North East increased from 20.6 percent in 1989 to 21.3 percent in 1995. While those of the service sector and the manufacturing sector and the construction sector increased from 13.5 percent to 16.0 percent, and from 8.4 percent to 10.1 percent, and from 7.1 percent to 10.0 percent respectively during the same period.

The production of the manufacturing sector of the North East was mostly made by small-scale agro-processing industry. In 1993, there were 46,601 factories in the North East. Most of them small-scale rice millers, scatterly locating throughout the rice-growing plain, followed by food processing, tapioca products, non-metallic construction materials, and repairing, assembling and processing transportation spared part factories. Changwats of highly concentrating factories are Nakhon Ratchasima (7,693 factories or 16.5 percent), followed by Khon Kaen (4,746 factories or 10.2 percent), Udon Thani (4,659 factories or 10.0 percent) and Ubon Ratchathani (4,571 factories or 9.8 percent). Most of factories moving into the North East recently are either of industries producing to serve local market or

industries using local raw materials or utilizing cheap labor supply of the North East.

**Table 2 Gross Regional Product of the North East of Thailand at
Current Market Prices**

	UNIT : 1,000 BAHT					
	1989	1990	1991	1992	1993	1994
Agriculture	70,066,212	72,026,232	80,193,408	84,806,098	70,428,193	77,286,746
Crops	60,325,826	51,149,796	57,753,365	62,201,669	48,421,460	54,490,615
Livestock	9,122,609	9,431,263	10,097,523	9,661,314	9,632,330	9,969,792
Fisheries	961,726	1,280,822	1,230,822	1,246,199	1,147,846	1,063,986
Forestry	445,626	415,477	115,490	87,660	83,005	39,655
Agricultural services	4,609,626	4,836,486	4,936,662	5,348,804	5,067,479	5,474,332
Simple agri. processing products	4,690,000	4,912,681	6,059,546	6,269,452	6,076,084	6,258,366
Mining and quarrying	793,802	1,035,379	2,273,486	2,449,467	2,463,815	3,071,699
Manufacturing	19,459,140	21,050,355	25,358,031	27,652,581	34,373,906	41,303,115
Construction	16,342,591	20,963,787	25,565,133	27,362,378	27,983,275	40,600,460
Electricity and water supply	3,252,965	3,456,809	3,878,637	4,756,591	5,424,211	6,415,161
Transportation and communication	8,800,323	9,701,171	10,423,386	13,896,186	16,754,360	18,714,282
Wholesale and retail trade	47,564,971	56,052,147	62,084,368	68,605,066	75,674,508	86,652,912
Banking, insurance and real estate	5,887,766	6,777,589	8,390,089	10,901,692	14,376,239	19,815,968
Ownership of dwellings	12,760,579	13,770,059	14,617,380	14,611,504	15,819,788	17,484,241
Public administration and defence	14,903,507	17,919,300	20,444,747	24,875,089	26,564,958	29,745,000
Services	31,089,598	36,182,169	42,339,650	50,089,207	57,820,714	64,969,989
GRP	230,910,454	258,934,997	295,558,315	330,003,859	347,683,967	405,959,573
Per capita GRP. (BAHT)	12,110	13,481	15,208	16,792	17,501	20,235
Population (1,000 persons)	19,068	19,208	19,435	19,653	19,866	20,062

Source : National Economic and Social Development Board. National Income Accounts Division.

**Table 3 Gross Regional Product of the North East of Thailand at
Constant 1988 Prices**

Northeastern	UNIT : 1,000 BAHT					
	1989	1990	1991	1992	1993	1994
Agriculture	67,266,143	67,539,683	69,572,189	70,400,880	66,624,662	69,014,974
Crops	47,998,412	48,427,832	50,478,841	51,294,641	46,862,861	49,272,899
Livestock	9,451,181	9,222,058	8,953,133	9,337,705	10,568,000	10,492,553
Fisheries	927,669	1,026,624	1,110,018	1,013,158	964,755	965,704
Forestry	392,523	362,130	91,192	67,995	65,727	18,245
Agricultural services	4,298,285	4,297,507	4,283,161	4,457,416	4,140,401	4,258,383
Simple agri. processing products	4,198,073	4,203,532	4,655,844	4,229,965	4,022,918	4,007,190
Mining and quarrying	652,610	762,618	1,795,740	1,958,798	1,975,697	2,375,052
Manufacturing	16,586,753	18,241,262	20,583,363	23,297,848	26,896,354	29,317,496
Construction	15,296,868	17,977,367	20,156,081	19,948,969	19,120,421	26,160,967
Electricity and water supply	3,243,583	3,419,504	3,755,699	4,181,862	4,541,767	5,306,213
Transportation and communication	8,565,155	9,497,503	10,062,003	12,608,934	13,952,237	15,349,700
Wholesale and retail trade	45,661,194	49,267,733	52,793,126	54,360,662	58,626,063	64,281,524
Banking, insurance and real estate	5,592,773	6,078,187	7,116,810	8,881,880	11,336,451	14,861,025
Ownership of dwellings	12,351,716	12,681,395	13,022,585	12,645,777	13,111,690	13,793,520
Public administration and defence	13,209,764	14,363,109	15,348,496	15,620,098	15,378,311	16,261,296
Services	27,754,881	29,150,212	31,747,419	33,036,598	34,947,716	36,821,742
GRP.	216,181,440	228,978,573	245,953,511	256,942,306	266,511,369	293,543,509

Source : National Economic and Social Development Board. National Income Accounts Division.

Table 4 Gross Provincial Product (GPP), Per Capita at Current Market Prices and Population of the North East of Thailand, 1994

	GPP (1000 BAHT)	POPULATION (1000 Persons.)	PER CAPITA (BAHT)
KHON KAEN	51,281,704	1,710	29,989
AMNAT CHEORN	8,902,369	344	25,879
NAKHON RATCHASIMA	63,934,846	2,505	25,523
LOEI	13,116,203	564	23,256
CHAIYAPHUM	21,189,392	1,052	20,142
MUKDAHAN	5,585,083	279	20,018
UDON THANI	27,476,637	1,403	19,584
NONG KHAI	16,348,317	844	19,370
NONGBUA LAMPHU	8,883,216	463	19,186
UBON RATCHATHANI	30,673,666	1,625	18,876
ROIET	21,465,914	1,185	18,115
MAHA SAKHAM	16,696,343	925	18,050
SAKON NAKHON	17,925,338	995	18,050
KALASIN	16,003,744	889	18,002
NAKHON PHANOM	11,550,327	657	17,580
SURIN	22,021,582	1,281	17,191
BURI RAM	23,800,224	1,432	16,620
YASOTHON	8,864,317	556	15,943
SI SA KET	20,240,351	1,353	14,960

Source : National Economic and Social Development Board ,National Income Accounts Division.

There are high potentials for the manufacturing sector to grow further due to the government policies in promotion of regional industrial investment. The North East is classified as Zone 3 of the National investment promotion zones which investors will be granted more tax privileges and incentives than those of other zones. The North East also have many natural resources such as rock salt for chemecial industries in both Korat and Sakon Nakhon basins, potash for chemical fertizer industry in Udon Thani , Nong Khai, Sakon Nakhon, Khon Kaen, Roi Et and Chaiyaphum, and natural gas in Khon Kaen, Kalasin and Sakon Nakhon, barrite in Loei and Udon Thani and manganese and iron in Loei. These unexploited natural resources can be brought up to used as raw materials of promoted industries of the North East. The North East industrization will also be benefited from the opening of the Indo-China countries in the near future.

The tourism and service sectors are also the growing sectors of the North East due to the recent tourism promotion campaigns and the rehabilitation of ancient sanctuaries and temples in the Lower North East provinces and the government policies to open trade and other international and economic cooperations with the Indo China countries. Hence there are high potentials for tourism and service businesses of the North East to expand in the future. While the trade and construction sectors are growing pararelly with the growth of other sectors and the Regional Economy as a whole.

Past Development of the North East

Since the First National Economic Development Plan (1961-1966), through other five consecutive five-years plans, to the present Seventh National Economic and Social Development Plan (1992-1996), the development of the North East has been emphasized in all national plans and received large portions of the government budgets. In order to fight with the problems of backwardness and high poverty incidence of the region, resulting from the regional shortages of water resources and poor soil quality as well as shortages of basic economic and social infrastructures, including transportation and communication networks, power generation and social

services, including education and health services, the annual government budgets for the North East were emphasized on the following development plans;

- (1) The improvement of transportation networks; the construction and improvement of national and provincial highways, rural roads and bridges railways links and airport facilities,
- (2) The water resources development; the construction of irrigation systems; dams, reservoirs, weirs, water distributional canals, water pumping stations, river, canal and stream evacuation projects as well as the construction of the potable water supply and the artesian wells.
- (3) The improvement of the telecommunication networks, telephone and electricity,
- (4) The agricultural development, including soil quality development and agricultural technology development via agricultural extension services, credit and marketing arrangements and cooperatives and farmer grouping,
- (5) Regional industrial investment promotion, through tax privileges and incentives, credit provision programs, skills training programs and provincial investment plans,
- (6) The educational and occupational development; via school system and non-school system development programs;
- (7) The public health and nutritional improvement, via the expansion of the hospitals and health centers in rural areas and the family planning programs;
- (8) Quality of life development via the promotion of the civic and moral development programs,
- (9) Natural resources development and environment protection programs, land development and reafforestation projects,
- (10) Tourism development; tourism campaigns and rehabilitation of the ancient Ruins and tourism spots of the region.

Besides these general programs, there were also many special purposes rural

development programs in the North East in different period of time. They are such as the Land Settlement Projects, the Rural Community Development Programs, the Rural Job Creation Programs, the Green Esarn Program (the Green North East Program), the Provincial Development Program of the Member of Parliament's Budget, the Prosperity Decentralization Programs and the Tambon Council Development Programs. In 1993, the government allocated of the total budget of 156,182 million Baht for Rural Development and Prosperity Decentralization Plans. Out of this total budget, the North East received 50,144 million Baht or 32 percent of the total budget, while the Central received 48,505 million Baht or 31.5 percent, the North, 32,755 million Baht or 21.0 percent and the South, 24,808 million Baht or 15.5 percent. These rural development budgets initially aimed at the improvement of agricultural production and farm as well as the supplementary off-farm income, e.g. the direct employment of local people in the public projects, water resources development and the provisions of basic infrastructure; road, water supply, electricity, telephone and basic social services; schools, hospitals and health centers to the rural North East people.

Outcomes of past development in the North East can be summarized as follows;

(1) Water Resources Development

Although the government has accelerated the water resources development throughout the past 30 years, the North East is the still poorest region of Thailand. The rainfed rice production, the major occupation and income of the rural North East people, is still unstable due to shortage of supplement irrigated water supply during the dry season. Even in the area of existing reservoirs, farmers can not practice all year round cropping due to shortage of the water distribution systems. One major obstacle to the irrigation development in the North East is the insufficiency of suitable land areas for the reservoirs construction, while some existing suitable public lands were fully occupied by invaders.

In 1993, the total agricultural land area of the North East was approximately 57.6 million rai. There were approximately 3.9 million rai of irrigated areas of large

scale, medium scale, and small-scale reservoirs and one million rai of irrigated areas of 339 electrical water pump stations along Chi-Mun and Mekhong Rivers and their tributaries. The major large scale and medium scale irrigation dams of the North East are such as Nam Pong (0.26 million rai of irrigation area), Lam Pao (0.3 million rai), Huai Luang (0.08 million rai), Lam Takong (0.12 million rai), Lam Phra Plerg (0.06 million rai), Nam Oon (0.18 million rai) and Dome Noi (0.15 million rai). While the remaining 52.7 million rai of the region, over 90 percent of total agricultural land, were outside the irrigation networks and are short of water supply for household consumption and agricultural and livestock raising and other uses purposes. At present there is a proposed Mekhong-Chi-Mun Irrigation Project to link and to transfer water flow of the Mekhong River to the Chi River and the Mun River of the North East. If this project is materialized, it will benefit the North East a great deal.

(2) Transportation and Communication Networks

Highways.

The land transportation system in the North East has been highly developed in the past years. There are provincial highways and rural highways connecting to the major national highways of the regions. The highways network system of the North East link all provinces of the region and can be connected to those of the Indo-China countries. At present, the highways network system of the North East includes following major highways of the region;

- (1) Highway Nakhon Ratchasima - Khon Kaen - Nong Khai (the Friendship High), passing through the central part of region, northward and southward. This highway is connected to the Democratic People's Republic of Laos and the other Indo-China countries' highways network system through the Thailand - Laos Friendship Bridge across the Mekhong River in Nong Khai.
- (2) Highway Khon Kaen - Kalasin - Sakon Nakhon - Nakhon Phanom, connecting provinces of the Central and Upper North East on the east.
- (3) Highway Ban Pai - Maha Sarakham - Roi Et - Yasothon - Ubon Ratchathani, connecting provinces of the Central and Lower North East and the east.

- (4) Highway Khon Kaen - Chum Phae - Loei, connecting provinces of Central and Upper North East on the west and connecting the transportation system of the North Region.
- (5) Highway Nakhon Ratchasima - Buri Ram - Surin - Si Saket - Ubon Ratchathani, connecting provinces of the Lower North East.

There are highway of regional transportation under construction as follows;

- (1) Highway Sattahip - Phanom Sarakham - Kabin Buri - Nakhon Ratchasima, Ubon Ratchathani - Mukdahan, connecting the Eastern Sea Board to the North East, and the Indo-China countries in Mukdahan.
- (2) Highway Laem Cha Bang - Sa Keaw - Surin - Yasothon - Mukdahan, connecting the Laem Cha Bang deep sea port to the Lower North East.
- (3) Highway Nakhon Sawan - Chaiyaphum - Ban Pai - Maha Sarakham - Roi Et - Yasothon - Ubon Ratchathani - Chong Mek (Laos), connecting the eastern and western parts of Thailand to the southern Laos.

In the future, under the Mekhong River Sub-Regional Economic Development Cooperation Programs and under the support of the Asian Development Bank (ADB), the six member countries, including Cambodia, Vietnam, Myanmar, China, Laos and Thailand will construct the Indo-China highways network systems that pass through the North-East of Thailand as follows;

- (1) Highway Nakhon - Phanom - Tha Khek - Kham Kerd (Highway No.8. of Laos) to Vinh (Vietnam).
- (2) Highway Mukdahan - Suvannakhet (Highway No.9 of Laos) - Kwang Tri - Da Nang (Vietnam).

These highways network system allow the North East to connect all regions of the country and the Indo-China countries.

Railways.

At present, there are two railways routes in the North East. They are

- (1) The Bangkok - Nakhon Ratchasima - Nong Khai route, connecting provinces of Upper and Lower North East.
- (2) The Bangkok - Nakhon Ratchasima - Ubon Ratchathani route, connecting provinces of Lower North East.

In the near future, the Railways Authority of Thailand will construct the following railways routes;

- (1) Klong Sib Kaw - Kaeng Khoy, connecting the North East (Nakhon Ratchasima) with the Eastern Sea Board directly without passing through Bangkok.,
- (2) Railways link the Thai-Laos Friendship Bridge to Vientiane.
- (3) Railways route Nakhon Ratchasima - Roi Et - Nakhon Phanom.
- (4) Railways route Udon Thani - Sakon Nakhon - Nakhon Phanom.
- (5) Railways route Surin - Mukdahan - Nakhon Phanom.
- (6) Railways route Ubon - Ratchathani - Chong Mek (Laos).

Airports.

The North East has 7 commercial airports, in Khon Kaen, Loei, Ubon Ratchathani, Sakon Nakhon, Nakhon Ratchasima, Udon Thani and Nakhon Phanom. While Khon Kaen airport is the regional center for short flights connecting intra region provinces and connecting the North and the North East Regions, Ubon Ratchathani airport is the only international airport of the region. However, in the future, Udon Thani, Khon Kaen and Nakhon Ratchasima airports can be developed into the international airports to link with the Indo-China countries. At present, Buri Ram and Roi Et are also constructing their commercial airports.

Telephone.

The North East has a complete telephone network system connection throughout the region. There are telephone services in all major cities. However, these services are still insufficient. The Telephone Authority of Thailand has plans to install more telephone services to all villages of the North East. Moreover, at present, the mobile telephones of both 800 and 900 MXT systems have partially fulfilled the demand for telephone services of the high income groups and businessmen.

Electricity.

The North East has 8 electricity generation plants with the total installation capacity of 493.5 Megawatts, while the national installation capacity was 9,600 Megawatts. There are two high voltage electricity distribution systems, 115 kilowatts and 230 kilowatts, in the North East, connecting the electricity distribution systems between the North East and the rest of the country and between the North East of Thailand and northern Laos at the Nam Ngeum hydraulic electricity generation dam of Laos where Thailand purchases electricity from Laos and between the North East and southern Laos at the connection points between Nakhon Phanom - Tha Kack and Mukdahan - Suwannakhet where Thailand reexport electricity to Laos.

(3) Social Services

The development of social services in area of education and health services during the past 30 years having following results;

Primary Education.

At present, the North East has 13,256 primary schools with approximately 2.6 million students throughout the region. However, the majority of these primary students have low opportunity to their education to the secondary level due to the low income level of their parents.

Secondary Education.

The North East has 653 general secondary schools with approximately 0.2

million students and 101 vocational secondary schools with approximately 0.06 million students. These students mostly have good jobs after their graduation.

Higher Education. There are 16 higher education institutions and approximately 40,000 students throughout the North East. Major universities in the North East are Khon Kaen University , Ubon Ratchathani University and Sura Naree Technology University in Nakhon Ratchasima. The others are private or government colleges and institutions. The majority of government colleges are teacher training colleges. At present, there are plans of Chulalongkorn University to open its new campus in Si Sa Ket and Mahidol University in Amnat Chareon. While the National Institute of Development Administration (NIDA) has already opened its new campus in Si Kiew district of Nakhon Ratchasima and the two opened Universities of the country, Sukhothaimathirath University and Ramkhamhang University, have their liaison offices in all provinces of the North East.

Non-School Education.

There are skill training centers, occupational training schools and non-education centers in all provinces of the North East.

Health Services.

In the past, the North East people had lowest health standard in all regions since most of them were poor and uneducated and the government services were not sufficient. Consequently, there were high incidence of malnutrition among infants and children and high death rate of several diseases. However, the present days, the North East people received better health services through either government or private hospitals. Today, there are 243 hospitals and approximately 13,630 hospital beds throughout the region. There are provincial hospitals in all provinces and district hospitals in all districts. There are also 2,463 health centers in all tambons (subdistricts). In 1994, the North East had 1,848 doctors, 388 dentists, 483 pharmacists and 14,511 nurses.

In overall, the public health services in the North East are much better. The government had some satisfactory results in raising the standard of quality of life of

the rural poor people. The number of poor or backward villages in the North East had declined significantly. The incidence of poverty in the North East declined from 45 percent in 1975 to 22.7 percent in 1992. However, there are still demands for more public services either educational or public health services for the North East due to its large number of population in comparative with other regions. In 1994, the ratio of a doctor to patients in the North East was 1:10,885 patients, comparative with 1:4,259 patients on the national average and 1:899 patients in Bangkok.

New Opportunities and Strategies of Development for the North East.

While various government development efforts to overcome disadvantages of the North East had some satisfactory results, the North East still remain the poorest region of the country. Each year, especially during the dry season, large amount of the rural North East people migrated to Bangkok and other big cities of find employment since there are not sufficient jobs for them in factories, construction works and other service activities of the North East. In 1994, there were 1,749 thousand unemployed persons or 16.8 percent of the total labor force of the North East. While the national unemployment rate was only 4.2 percent of the total labor force. It was estimated that there were at least 562 thousand migrants of the North East in 1989., and 292 thousand or 52 percent of them moved to Bangkok and 205 thousand or 37 percent of them headed for the Central Region. Most of these migrants may not leave their home land if they can find employment in their towns. On the other hand, the North East people who are residing in Bangkok and other cities may return to their home towns if they can find better and higher income jobs near their homes.

Recent changes in the overall Thailand economic and social structures as well as changes in the world economic and political environment provide new opportunities and challenges of development for the North East. The North East economic development and people will be benefit from the following conditions;

(1) Domestic changes.

There are several changes in Thailand recently as;

(1.1) Thai economy has been growing rapidly in recent years at the average rate of 8-10 percent per year. The economic structure of Thailand has also gradually transformed to be more industrial-oriented in both the production and export. The share of industrial output in Gross Domestic Product increased from 26.7 percent in 1989 to 28.2 percent 1994. In 1994, the share of industrial export in total value of export was 82 percent. While the Thai economy has become more opened towards the direction of free trade and becoming a regional center of international trade, finance, business and tourism. The government policies have become more liberal and promote more private investment. These encourage industrial development in the overall country as well as in the North East. The North East is now in better position to expand its industrial production bases.

(1.2) The government has developed the Eastern Sea Board to be a new industrial base on the east coast with a deep sea port at Laem Cha Bang and Mab Tapud and a new U-Tapao international airport. This development will allow the North East a new gate to world markets through two newly constructed highways and a railways route connecting the North East and the Eastern Sea Board.

(1.3) The rapid growth of tourism in recent years generated income and employment throughout the country including the North East. There are also high potentials for further development in tourism sector.

(2) Changes in the World Situation

While world politics has moved towards more friendly relationships and mutual trade and economic cooperations. Thailand has become more opened to neighbouring countries, especially the Indo-China countries. These Indo-China countries are concentrating their great effort in recovering and strengthening their economics with cooperations from the international community, under these circumstances, there

are high potentials for Thailand to be a regional center of economic development cooperations, trade, finance, investment and tourism for the Indo-China countries (Cambodia, Laos, Myanmar, Vietnam and Yunnan of China). In this case, the North East of Thailand will be the gateway to these countries.

(3) Potentials of the North East

The North East has the following potentials for new development opportunities;

(3.1) Geographical Location. The North East is no longer a land-locked region. At present, the North East region has direct connection with the deep sea ports of Laem Cha Bang and Mab Tapud of the Eastern Sea Board. The North East has also the transportation and communication networks, especially good highways, to be connected with Indo-China countries, resulting in advantages of access to markets and raw materials sources in these countries.

(3.2) Factors of production : Land, Labor and Raw Materials. The North East has ample supply of cheap land, labor and raw materials. Natural resources of the North East are such as rock salt, potash, and natural gas in Khon Kaen, Kalasin, and Sakon Nakhon. These resources are sufficient for commercial purposes. There are also water resources for electricity generation in Laos, natural gas and petroleum in Vietnam, iron, potash, copper and etc., in Laos and Yunnan. These resources can be imported for industrial development of the North East.

(3.3) Tourism Resources. The North East has many beautiful scenery and cold weather mountains such as that in Loei and beautiful natural scenery cliffs and reefs along Mekhong, Chi and Mun Rivers. The North East of Thailand is also one of the world's ancient civilization center, Therefore, there are many interesting historical and cultural sites such as Phimai Sanctuary in Nakhon Ratchasima and Phanom Rung Castle in Buri Ram, candle festival in Ubon Ratchathani, elephant festival in Surin and Mekhong light-floating in Nakhon Phanom for tourism promotion of the North East.

New Opportunities

These new development conditions resulting from domestic and world changes and existing potentials of the North East provide new opportunities for the North East as follows;

(1) Opportunity to develop raw materials-oriented industry, using regional raw materials such as natural gas, potash, rock salt and raw material imported from sources outside region to produce cheap outputs for export, as well as to develop agro-industry in agricultural potential areas and small-scale industry to meet both domestic and international demands.

(2) Opportunity to do business, trade, investment and import of raw materials and resources from Indo-China countries for the industrial development of the North East and export of consumer goods to Indo-China countries and world markets.

(3) Opportunity to become a regional Co-ordinating Center for international financial, academic and technological assistances to rehabilitate the Indo-China countries.

(4) Opportunity to develop tourism activities to serve both domestic and international demands. The North East will become a regional tourism centers for both Thailand and the Indo-China countries. Therefore, there are many opportunities for development of tourism related business.

(5) Opportunity to promote agricultural development with emphasis on livestock development, especially cattle raising, for the food processing industry for domestic consumption and export.

New Development Strategies

Under new opportunities and dimensions of development, the North East economy will be more opened to the world markets. It is expected that these new opportunities will provide more employment and income to the North East people, through increases in government expenditure in basic infrastructure development especially highways and telecommunication networks and more private investments in agro-industry and materials-oriented industry, tourism and other business, trade,

finance and service sectors.

In order to achieve these expectations, the following development strategies were recommended in the Seventh National Economic and Social Development Plan (1992-1996);

(1) Promote development of industrial estates and centers using raw materials found in the region as well as from the neighbouring Indo-China countries. The industrial estates will be promoted to serve as major economic bases of the region, which will be linked with the international markets via the country's new economic gateway at the Eastern Seaboard. Nakhon Ratchasima will be the base of the engineering industry and agro-industry for export to the world market via Bangkok and the Eastern Sea Board. While Khon Kaen and Udon Thani will be bases of the agro-industry and mechanical and agricultural equipment industry and service industry, connecting with the Indo-China countries. New highways networks system and railway routes will be constructed to link the North East and the Eastern Sea Board. New industrial production technology development and skill development and training will be promoted.

(2) Develop regional business, trade and financial centers for the Indo-China countries. Udon Thani will be promoted to be a regional center for business, trade, and financial services for investment in the Indo-China countries and a regional base for imported raw materials from Indo-China countries for the industrial production in the North East. Nong Khai, Nakhon Phanom, Mukdahan and Ubon Ratchathani will be promoted to be gateways to border trade to be linked with the regional industrial and services bases. Regional highways network system, airport facilities and telecommunication systems and other infrastructures, i.e. electricity, water supply and telephone will be constructed or improved to link these provinces and the Eastern Sea Board and Indo-China countries. Industrial estates will also be promoted in these provinces. Customs rules and regulations and procedures will be improved to facilitate flows of raw materials, finished products and personnel across borders.

(3) Develop a co-ordinating center of foreign financial, technical and technological assistance to rehabilitate Indo China countries. Khon Kaen will be

developed as a regional center of trade, services, transport and education and training of the region so as to support and coordinate assistances to be granted to Indo China countries. Khon Kaen airport will be developed to be an international one. Telecommunication system and necessary infrastructures will be developed. Khon Kaen University Ubon Ratchathani University and Sura Naree Technology University will be technology transfer and training centers for Indo-China countries. Facilities, privileges and incentives will be provided to international offices and personnel to attract them to be located in Khon Kaen.

(4) Develop regional centers of tourism in the North East and Indo China countries. Support the promotion of tourism and improvement of infrastructures, roads, railways, airports, tourist ports, telecommunication networks, hotels and tourism objects in areas of historical, artistic and cultural attractions of the North East which will be linked with world-class destinations in neighbouring countries such as Khao Phra Wiharn and Angor Wat in Cambodia, Ubon Ratchathani and Mukdahan will be developed to be gateways of tourism to Cambodia and to be linked with the tourism circles of the Lower North East (Nakhon Ratchasima - Buri Ram - Surin - Si Sa Ket - Ubon Ratchathani - Mukdahan). Loei, Nong Khai, Nakhon Phanom and Mukdahan will be promoted to be centers to support tourism along the Mekhong River rims.

(5) Promote the agricultural development to serve agroindustry, through improving of exiting natural water resources and agricultural technology; introducing new crop varieties that are drought resistance and less water-intensive, fruit and vegetable, horticulture and livestock raising.

The success of these development strategies of the North East will be based on following two conditions;

(1) The cooperation between the government sector and the private sector in mobilizing efforts to develop the action plans. The private sector may lead in the investment in industry business, trade and services in the region, while the government sector will support the regional infrastructure development, provide investment privileges and cheap credit, improve rules and regulations that may impede investment and export and import as well as improve labor quality through

skill training.

(2) The development of the basic infrastructure in Indo China countries and Southern China to link with the North East. The Development of the infrastructure including the transportation networks especially international highways, railways, airports and river transportation and the telecommunication networks to link all major cities of six member countries of the Mekhong River Sub-Region, including Cambodia, Laos, Myanmar, Thailand, Vietnam and Yunnan of China, is the primary condition for the success of opening the new development dimension of the North East to Indo China countries and other countries in the future. These development projects required huge amount of investment in the participating countries. Without supports of the international development agency such as the Asian Development Bank (ADB), these development will not be materialized.

Concluding Remarks

Over the past years, various government programs have been implemented to develop the North East. However, the present day North East is still the poorest region of the country with high unemployment and migration rates. Under new domestic and international environment, there are new hopes for the North East economic development to go beyond its national border lines. If the North East is success in its role as an Indo-China regional center of business, trade, financial, technical and development cooperations, then not only the North East people will be better off from more employment and income in the region but also those in Indo China countries will be equally benefit from these new development dimensions.

Anyway, new development strategies require huge amount of capital investment and strong efforts of international cooperations, especially with Indo-China countries. In order to avoid any disappointments, the North East development planners can not ignore their basic development strategies of the North East, i.e., the improvement of existing natural water resources, especially the dreamed Mekhong-Chi-Mun Irrigation Project, the promotion of new agricultural

technology, via finding new economic and drought-resistance and less water-intensive crops, promotion of vegetable and horticulture and livestock-raising, creation of rural jobs in dry seasons, provisions of more basic services to rural people, the improvement of environment through soil fertility improvement and reafforestation, improvement of regional infrastructure, regional industrial investment promotion as well as skill training of its ample labor force to supply industrial and service sectors either in the region or outside the region including international markets. Without the improvement of such basic foundations, the North East economy will not achieve its real development targets.

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