List of Pictures

List of Photos

Acronyms

AEA	Agricultural Extension Agency
AIT	Asian Institute of Technology
CDM	Clean Development Mechanism Funds
CMI	Community Managed Irrigation
CPC	Committee for Planning and Cooperation (called SPC until July 2001)
CSC	China-Southeast Asia Terrestrial Cable
CTF	Competitiveness Task Force
DCA	Department of Civil Aviation
DLFO	District Livestock and Fishery Office
DOE	Department of Electricity
DOI	Department of Irrigation
DRF	Drug Revolving Fund
ECB	External Commercial Bank
EGAT	Electricity Generating Authority of Thailand
EIA	Environment Impact Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ETL	Entreprise de Telecommunications Lao
EdL	Electricite du Laos
FAO	Food and Agriculture Organization of United Nations
FAO	Food and Agriculture Organization of the United Nations
FIAT	Farmer Irrigated Agriculture Training
FIMC	Foreign Investment Management Committee
FOMACOP	Forest Management and Conservation Project
FORCAP	Forest Conservation and Afforestation Project
FSC	Food Supply Company
FSEW	Farming Systems Extension Workers
GMS-BF	Greater Mekong Sub-region Business Forum
GOL	Government of Lao PDR
GSM	Global System for Mobile Communications
HH	Household
HTMP	Heavy Transport Management Program
Ha	Hectare
ICRAF	International Center for Research in Agro-Forestry

IDD	International Direct Dialing
IEE	Initial Environmental Evaluation
IFC	Project Development Facility
IMP	Integrated Pest Management
IPP	Private Investment
ISIC	International Standard for Industrial Classification
ITTO	International Tropical Timber Organization
ITU	International Telecommunications Union
JBIC	Japan Bank for International Cooperation
LIS	Lao Industry Standard
LLDC	Least among Less Developed Countries
LNCCI	Lao National Chamber of Commerce and Industry
LSFP	Lao- Swedish Forestry Program
LTC	Lao Telecommunications Company Limited
Lao-IRRI	Lao-International Rice Research Institute
MAF	Ministry of Agriculture and Forestry
MCTPC	Ministry of Communications, Transport, Post and Construction
MFA	Multi Fiber Agreement
MOE	Ministry of Education
MOIH	Ministry of Industry and Handicraft
MOLSW	Ministry of Labor and Social Welfare
MRC	Mekong River Commission Secretariat
NAFRI	National Agriculture and Forestry Research Institute
NBCA	National Biodiversity Conservation Areas
NDB	Nordic Development Fund
NEAP	National Environmental Action Plan 2000
NRS	National Reconnaissance Survey
NSO	National Statistics Office
NTEC	Nam Theun 2 Electricity Consortium
NUOL	National University of Laos
OPEC	Organization of Petroleum Exporting Countries
PC	Power Companies
PHC	Primary Health Care
PLFO	Provincial Livestock and Fishery Office
PPA	Power Purchase Agreement
PRONAM	Provincial Natural Resource Management System

PSEs	Private Sector Enterprises
RDC	Regional Development Committee
RMF	Road Maintenance Fund
SALT	Sloping Agricultural Land Technology
SEIR	Sectorial Environmental Impact Regulations
SIDA	Swedish International Development Cooperation Agency
SIRAP	Sustainable Irrigated Agriculture Project
SMEs	Small and Medium Scale Enterprises
SPC	State Planning Committee (reorganized as CPC since July 2001)
SPRE	Southern Provinces Rural Electrification
STEA	Science, Technology and Environment Agency
TE	Terminal Exchange
UNHCR	United Nations High Commission for Refugees
UXO	Un-exploded Ordnance
WIP	Woodworking Industrial Park
WUG	Water Users Group

I. SOCIAL DEVELOPMENT PLAN

CHAPTER I

SOCIAL DEVELOPMENT PLAN

I-1 DEMOGRAPHY

I-1.1 Population Distribution Pattern

1) Population Distribution in Lao PDR

Major demographic data of Lao PDR, based on the 1995 national population census, are summarized in Table I1-1. Total population in Lao PDR was 3,584,803 in 1985 and 4,574,848 in 1995. This is a 27.1% increase in a decade, or 2.47% annual growth, which is one of the highest growth rates among Southeast Asian nations.

Nearly 83% of the total population reside in the rural area. The average urban ratio of 17% represents a low level of industrialization. The central part has the largest urban ratio where the capital city of Vientiane Municipality is located. The urban ratios of SKR provinces are lower than the average of Lao PDR.

In Lao PDR, the definition of an urban area is based on the following criteria:

To be classified as an urban village, the village must satisfy at least three out of five conditions listed below. Any village that cannot satisfy these requirements is considered to be a rural village.

- There is a market in the village.
- There is a road for motor vehicles to access the village.
- The village must lie in the municipal vicinity where the district or provincial authority is located.
- The majority of households in the village are electrified.
- There is tap water supplied to the majority of households.

Quoted from National Population Census 1995

The population distribution pattern in Lao PDR is illustrated in Figure I1-1.

Table I1-1 Major Demographic Data by Province 1995

Province	Population	Area (km^2)	HH size	Urban Ratio	/km^2
North	**1,492,663**	**96,925**	**6.4**	**10%**	**15**
Phongsaly	152,848	16,270	6.0	7%	9
Luangnamtha	114,741	9,325	6.0	16%	12
Oudomxay	210,207	15,370	6.6	16%	14
Bokeo	113,612	6,196	5.8	5%	18
Luangprabang	364,840	16,875	6.3	11%	22
Huaphanh	244,651	16,500	7.3	7%	15
Xayaboury	291,764	16,389	6.3	8%	18
Center	**2,173,168**	**95,784**	**6.6**	**25%**	**23**
Vientiane Mun.	524,107	3,920	6.3	64%	134
Xiengkhuang	200,619	15,880	7.4	6%	13
Vientiane Province	286,564	15,927	6.7	17%	18
Borikhamxay	163,589	14,863	6.2	6%	11
Khammouan	272,463	16,315	6.5	13%	17
Savannakhet	671,758	21,774	6.7	14%	31
Xaysomboon SR	54,068	7,105	6.7	7%	8
South	**909,017**	**44,091**	**6.4**	**10%**	**21**
Saravane	256,231	10,691	6.7	7%	24
Sekong	64,170	7,665	6.7	16%	8
Champasack	501,387	15,415	6.2	11%	33
Attapeu	87,229	10,320	6.5	5%	9
TOTAL in 1995	**4,574,848**	**236,800**		**17%**	**19**
Census in 1985	**3,584,803**	**236,800**		**-**	**15**

Source: Population Census 1995

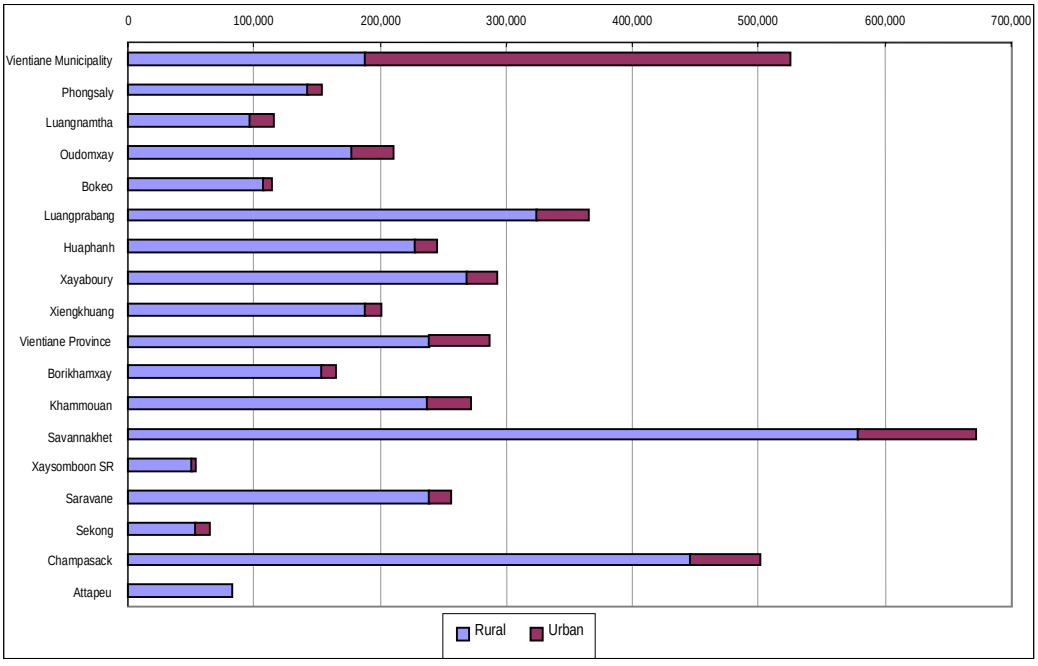


Figure I1-1 Rural and Urban Population by Province (1995)

Figure I1-2 shows the share of the urban population and size of each province. It demonstrates the following characteristics of SKR provinces:

- Savannakhet is the most populated province with 15% of the total population. Its share of the urban population is 14%, which is comparatively high according to Lao PDR standards, but well below the rates of Vientiane Municipality.
- Khammouan is an "average province" in terms of size. Its share of the urban population is 13 %, which is above the mean.

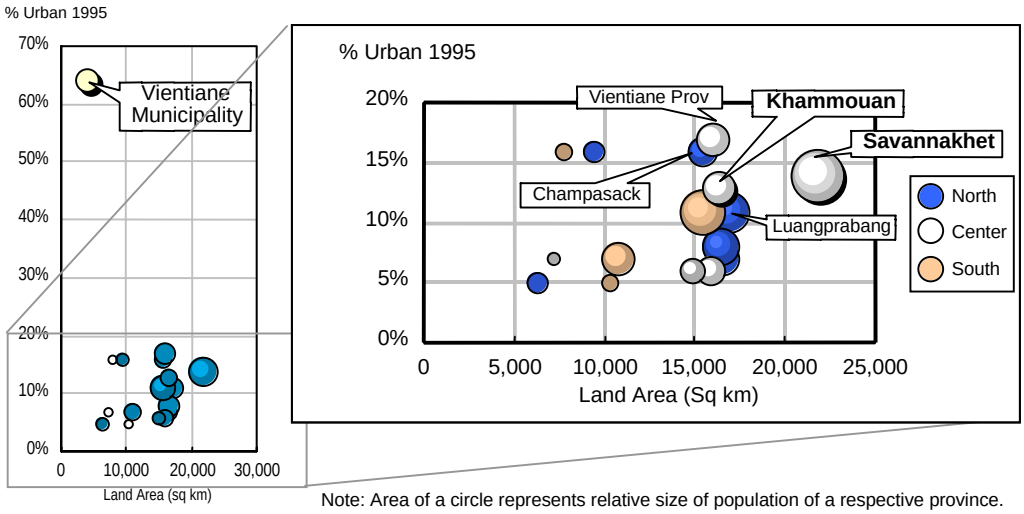


Figure I1-2 Share of Urban Population and Size of Provinces

2) Population Distribution in SKR

In 1995, there were nine districts in Khammouan and 13 districts in Savannakhet. The number of districts in Savannakhet has increased due to administrative sub-divisions. Currently, there are 15 districts in Savannakhet. The 1995 census, therefore, does not provide data for current administrative areas. These two new districts are listed below.

Table I1-2 New Districts in Savannakhet

Name of the District	Code Number	Origin District before Sub-division	Area (km^2)*
Xaiphouthong	14	Khantabuly	449
Phalanxai	15	Atsaphonethong	998

*: GIS measurement

Judging from the 1995 census, the population distribution in SKR is characterized by the following:

- Despite a clear tendency that the Mekong coastal flat area has a larger population than the mountainous east, the latter accommodates a significant number of the population,
- Urban population is concentrated in the Mekong coastal area,
- Khantabuly has the largest urban population, even before the sub-division of the more agriculture dependent Xaiphouthong district.
- Urban population in Khammouan is mostly concentrated in the capital town (Thakhek), while there are several districts with larger urban population surrounding the capital town of Savannakhet (Khantabuly).

The population distribution of SKR provinces is summarized in the following table and figures.

Table I1-3 Population Distribution by District (1995)

	Urban	(%)	Rural	(%)	Total	Area 95	/km^2
SKR	**136,883**	**14.5**	**807,338**	**85.5**	**944,221**	**38,089**	**24.8**
Khammouan	**36,605**	**13.4**	**235,858**	**86.6**	**272,463**	**16,680**	**16.3**
1. Thakhek	25,768	37.7	42,664	62.3	68,432	981	69.8
2. Mahaxay	1,166	5.1	21,816	94.9	22,982	1,404	16.4
3. Nongbok	7,154	18.3	31,990	81.7	39,144	344	113.8
4. Hinboun	1,993	3.9	48,785	96.1	50,778	3,042	16.7
5. Nhommalad	238	1.1	21,369	98.9	21,607	1,573	13.7
6. Boualapa	0	0.0	19,115	100.0	19,115	3,282	5.8
7. Nakay	0	0.0	15,635	100.0	15,635	4,278	3.7
8. Xebangfay	0	0.0	19,862	100.0	19,862	907	21.9
9. Xaybouathong	286	1.9	14,622	98.1	14,908	869	17.2
Savannakhet	**100,278**	**14.9**	**571,480**	**85.1**	**671,758**	**21,409**	**31.4**
1. Khantabuly	62,247	49.8	62,649	50.2	124,896	1,131	110.4
2. Outhoumphone	10,957	15.9	58,068	84.1	69,025	1,082	63.8
3. Atsaphangthong	3,959	8.1	44,784	91.9	48,743	1,699	28.7
4. Phine	2,603	6.3	38,391	93.7	40,994	3,370	12.2
5. Xepone	2,309	6.5	33,422	93.5	35,731	2,263	15.8
6. Nong	1,647	9.8	15,076	90.2	16,723	1,698	9.8
7. Thapangthong	1,973	8.2	22,038	91.8	24,011	2,161	11.1
8. Songkhone	5,223	6.4	76,641	93.6	81,864	1,635	50.1
9. Champone	3,131	3.6	83,419	96.4	86,550	1,050	82.4
10. Xonnabuly	1,358	3.9	33,244	96.1	34,602	1,206	28.7
11. Xaibuly	3,536	8.2	39,400	91.8	42,936	896	47.9
12. Vilabuly	502	2.0	24,058	98.0	24,560	1,765	13.9
13. Atsaphone	833	2.0	40,290	98.0	41,123	1,453	28.3

Source: Population Census 1995

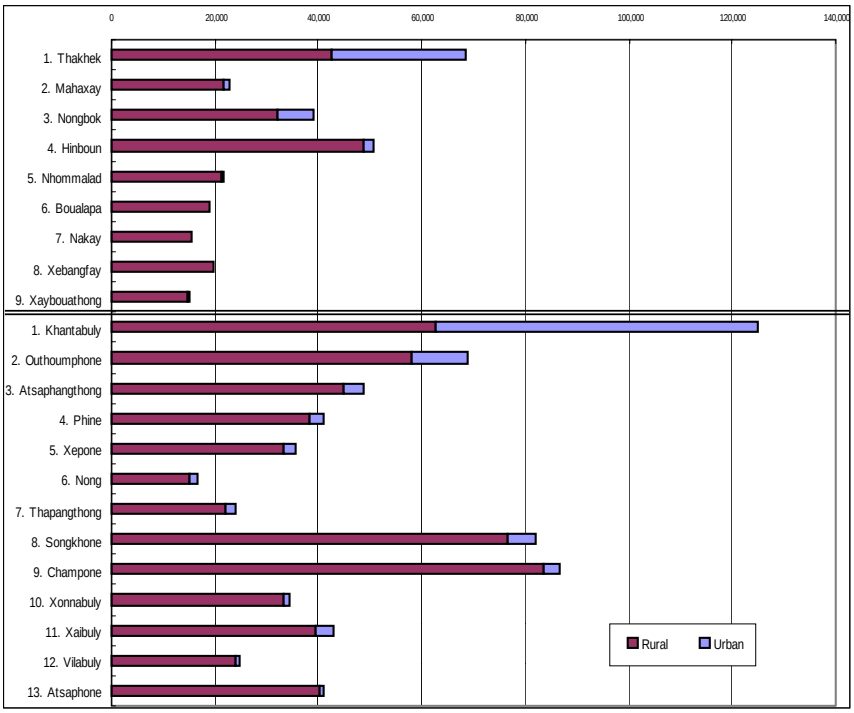


Figure I1- 3 Rural and Urban Population by District (1995)

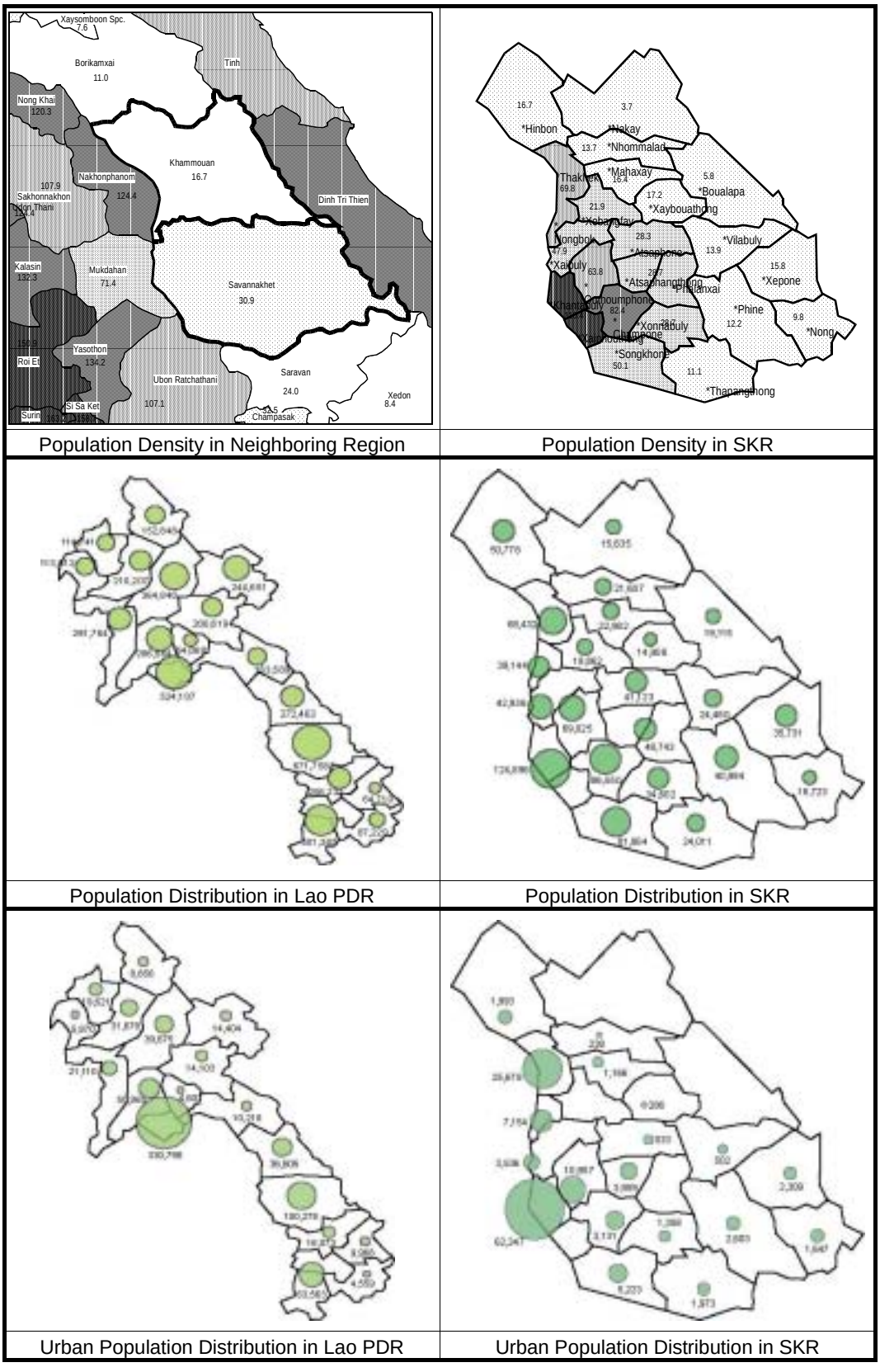


Figure I1- 4 Population Distribution Pattern in SKR

I-1.2 Age Group Structure

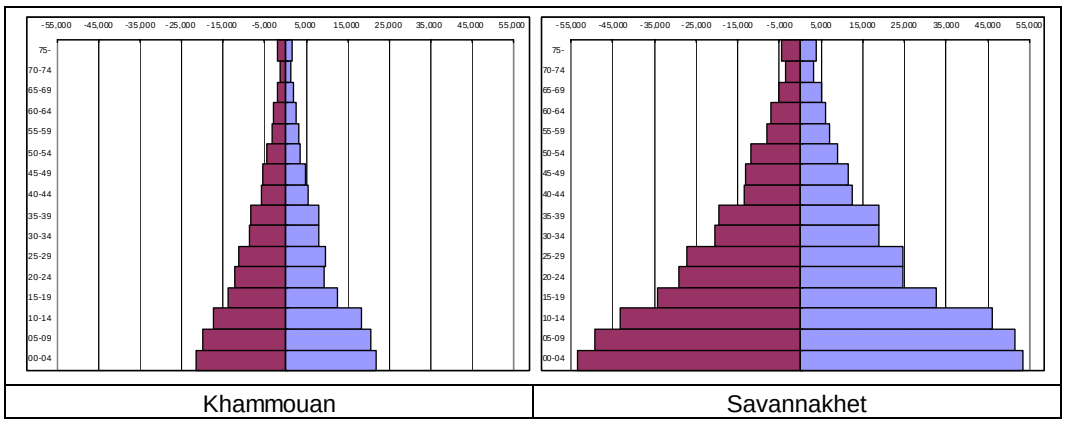
Both provinces in SKR show similar age group structure, having a large proportion of young people below age of 15 as illustrated below. Major characteristics are summarized as follows:

- The structure in Savannakhet is quite similar to that of entire Lao PDR, and
- Khammouan has a larger share of population aged between 15 to 59 (more than 10 points).

Table I1- 4 Age Group Structure

	Lao PDR	(%)	KMN	(%)	SVN	(%)
Total	**5,084,500**	**100.0%**	**225,611**	**100.0%**	**671,746**	**100.0%**
Over 60	**290,400**	**5.7%**	**11,480**	**5.1%**	**38,230**	**5.7%**
75-	63,400	1.2%	3195	1.4%	8221	1.2%
70-74	51,200	1.0%	2534	1.1%	6910	1.0%
65-69	75,700	1.5%	3761	1.7%	9786	1.5%
60-64	100,100	2.0%	5185	2.3%	13313	2.0%
15-59	**2,548,800**	**50.1%**	**137,957**	**61.1%**	**336,655**	**50.1%**
55-59	122,100	2.4%	6450	2.9%	15361	2.3%
50-54	148,200	2.9%	8247	3.7%	20675	3.1%
45-49	174,600	3.4%	10141	4.5%	24448	3.6%
40-44	202,500	4.0%	11407	5.1%	25924	3.9%
35-39	296,100	5.8%	16552	7.3%	38468	5.7%
30-34	313,300	6.2%	16488	7.3%	39247	5.8%
25-29	379,700	7.5%	20817	9.2%	51791	7.7%
20-24	406,000	8.0%	21409	9.5%	53869	8.0%
15-19	506,300	10.0%	26446	11.7%	66872	10.0%
Under 15	**2,245,300**	**44.2%**	**76,174**	**33.8%**	**296,861**	**44.2%**
10-14	668,000	13.1%	35631	15.8%	89437	13.3%
05-10	775,900	15.3%	40543	18.0%	100710	15.0%
00-04	801,400	15.8%	43646	19.3%	106714	15.9%

Source: Population Census 1995



Source: Population Census 1995

Figure I1-5 Population Pyramid

I-1.3 Ethnic Diversity

1) Ethnic Groups in Lao PDR

Lao PDR is a multi ethnic nation with more than forty ethnic groups. The census classified them into three major groups, i.e.) Lao Sung, Lao Theung, and Lao Loum. These ethnic groups are briefly described below.

Lao Loum (Lowland Lao)
Lao Loum constitutes the majority of the population (66%) and comprises several ethnic groups that began to move from the north to the Southeast Asian peninsula about 1,000 years ago. Lao Loum speaks languages of the Tai-Kadai family. Lao Loum prefer to live in lowland valleys and are engaged mostly in paddy cultivation.

Lao Theung (Midland Lao)
Lao Theung, of Austro-Asiatic origin and probably the autochthonous inhabitants in Lao PDR, having migrated northward in prehistoric times, account for about 24% of population. Originally, Lao Theung were paddy rice cultivators, but were displaced into the uplands by migrations of Lao Loum. The cultural and linguistic differences among the Lao Theung sub-groups are greater than other groups. Lao Theung ranges from Kammu and Lamet in the north, to Katang and Makong in the center, to Loven and Lawae in the south.

Lao Sung (Upland Lao):
Lao Sung makes up about 10% of the population. Lao Sung are Miao-Yao or Tibeto-Burmese speaking people who continued to migrate into present Lao territory from the north within the last two centuries. Lao Sung are the most highland group living on the tops or upper slopes of the northern mountains, growing rice and corn in swidden fields. Some of these villages have been resettled in lowland sites since the 1970s. Hmong are the most numerous Lao Sung group, with villages spread across the uplands of all the northern provinces. Mien (Yao), Akha, Lahu, and other related groups are considerably smaller in numbers and tend to be located in rather limited areas of the north.

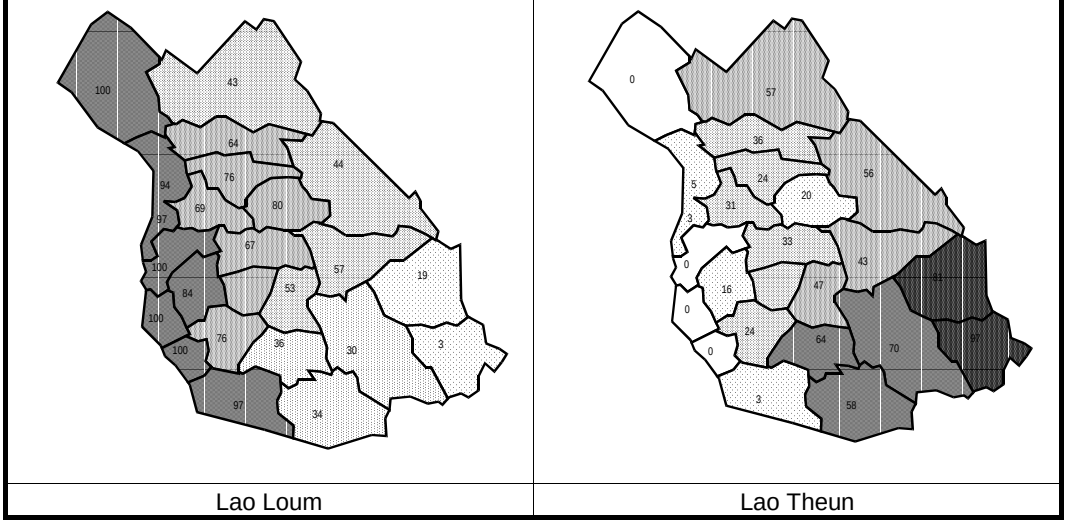
2) Ethnic Groups in SKR

District level composition is summarized in Table I1-5. In both provinces, Lao Loum are the majority group followed by Lao Theung. Lao Sung group is small in SKR. Khammouan has a larger proportion (78.9%) of Lao Loum compared to Savannakhet (61.7%), while there are more Lao Theung dominant districts in Savannaket. A distribution pattern of Lao Loum and Lao Theun is illustrated below. The Mekong coast districts are generally dominated by Lao Loum, while the eastern part of Savannaket is densely inhabited by Lao Theung.

Table I1-5 Ethnic Group Composition in SKR

	Villages where majority is **Lao Loum**		Villages where majority is **Lao Theung**		Villages where majority is **Lao Sung**	
Khammouan	**627**	**78.9%**	**167**	**21.0%**	**1**	**0.1%**
Thakhek	129	94.2%	7	5.1%	1	0.7%
Mahaxay	65	76.5%	20	23.5%	0	0.0%
Nongbok	70	97.2%	2	2.8%	0	0.0%
Hinboun	166	100.0%	0	0.0%	0	0.0%
Gnommalath	47	63.5%	27	36.5%	0	0.0%
Boualapha	36	43.9%	46	56.1%	0	0.0%
Nakai	28	43.1%	37	56.9%	0	0.0%
Sebangphai	34	69.4%	15	30.6%	0	0.0%
Xaybouathong	52	80.0%	13	20.0%	0	0.0%
Savannakhet	**915**	**61.7%**	**566**	**38.1%**	**3**	**0.2%**
Khanthabouly	94	100.0%	0	0.0%	0	0.0%
Outhomphone	89	84.0%	17	16.0%	0	0.0%
Atsaphone	66	67.3%	32	32.7%	0	0.0%
Phine	35	30.4%	80	69.6%	0	0.0%
Sepone	30	18.6%	131	81.4%	0	0.0%
Nong	2	2.6%	75	97.4%	0	0.0%
Thapangthong	26	35.6%	44	60.3%	3	4.1%
Songkhone	160	97.0%	5	3.0%	0	0.0%
Champhone	128	75.7%	41	24.3%	0	0.0%
Xonnabouly	35	36.5%	61	63.5%	0	0.0%
Xaibouly	89	100.0%	0	0.0%	0	0.0%
Vilabouly	57	57.0%	43	43.0%	0	0.0%
Atsaphonthong		#DIV/0!		#DIV/0!		#DIV/0!
Xaiphouthong	63	100.0%	0	0.0%	0	0.0%
Phalanexai	41	52.6%	37	47.4%	0	0.0%

Source: IRAP



Lao Loum | Lao Theun

Source: IRAP

Figure I1-6 Ethnic Group Distribution in SKR

I-1.4 Population Growth and Prospects

1) Projections at National Level

The annual population growth rate of Lao PDR was close to 2.5% over the period from 1985 to1995. According to NSC, the most recent population survey suggests that the growth rate rose to 2.8% in 2000.

There are three different sets of population projection. The first two sets are those made as part of the technical annex of the 1995 Census Report prepared by NSO. Scenario 1 assumes that the annual population growth rate remains at the same level of the period of 1985-95 (2.5%). Scenario 2, on the other hand, assumes a decreasing rate of population growth immediately after 1995. The last projection is the most recent one made by NSC in 2000. This projection has increasing growth rates up to the year 2000 based on the actual result.

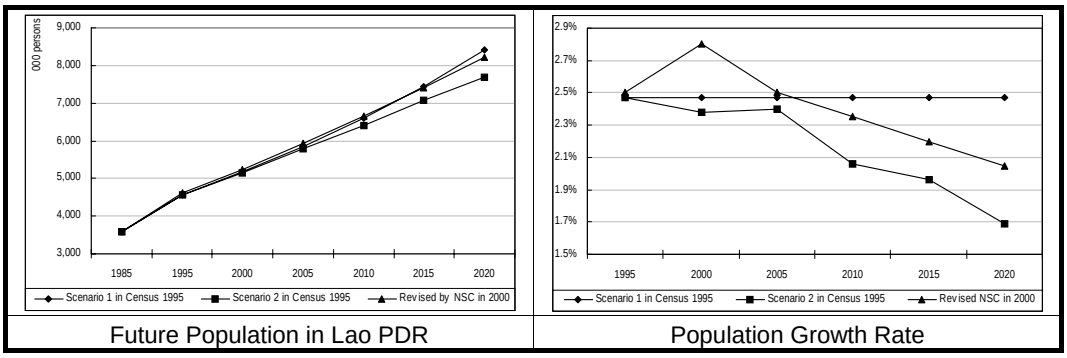
These existing population projections are compared in the following table and figures.

Table I1-6 Population Projections

(Unit: 000 persons)

	Census		Projection				
	1985	1995	2000	2005	2010	2015	2020
Scenario 1 in Census 1995	3,585	4,575	5,168	5,838	6,595	7,451	8,417
Growth Rate	-	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Scenario 2 in Census 1995	3,585	4,575	5,146	5,793	6,415	7,069	7,687
Growth Rate	-	2.5%	2.4%	2.4%	2.1%	2.0%	1.7%
Revised NSC in 2000	3,585	4,612*	5,234	5,921	6,651	7,415	8,207
Growth Rate	-	2.5%	2.8%	2.5%	2.4%	2.2%	2.1%

*: Result of the latest count of the 1995 census.



Future Population in Lao PDR | Population Growth Rate

Figure I1-7 Population Projections

For the study purposes, the latest projection alternative, or “Revised Projection by NSC in 2000”, is adopted as the national level projection for its accuracy reflecting the real situation in recent years, as well as policy commitment by various sector

authorities. The following set of social development indicators were adopted as parameters for the computation in this projection:

Table I1-7 Major Social Indicators for National Population Projection

	1995	2000	2010	2020
Total Fertility Rate	5.6	4.5	3.5	3.0
Maternal Mortality Rate	656	490	250	130
Infant Mortality Rate	104	85	40	20
Children Mortality Rate	170	127	60	30
Contraceptive Prevalence Rate	3	25~30	50~55	60~65

Source: National Population and Development Policy of Lao PDR, 1999, SPC

2) Population Projection in SKR

(1) Total Population

Given the large area and population size of SKR, as well as immature economical integration within the nation, it will be safe to assume that the population growth rates in SKR will follow the same trend adopted in the national population projection conducted by the Population Statistics Department of NSC. The projected population in SKR is presented in Table I1-8. In line with the projected figures, the total population will reach 1.7 million or increase by nearly 57% in the target year of 2020, compared to 2000.

Table I1-8 Population Projections in SKR

	1995	**2000**	**2005**	**2010**	**2015**	**2020**
Savannakhet	671,758	763,257	860,484	970,097	1,077,592	1,196,939
Khammouan	272,463	309,215	348,553	392,896	436,432	484,792
SKR	944,221	1,072,471	1,209,037	1,362,993	1,514,024	1,681,731

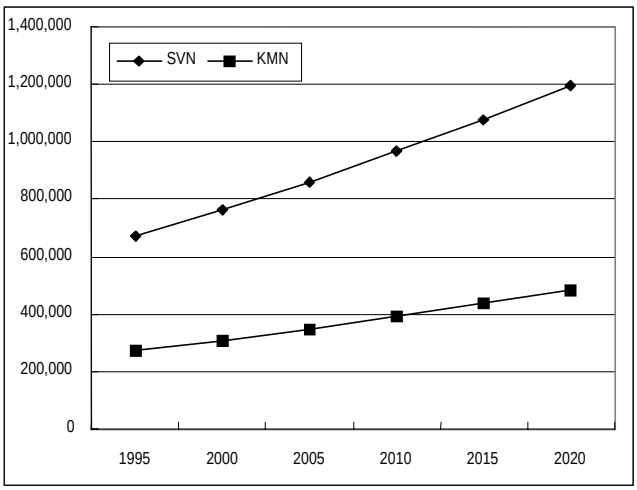


Figure I1-8 Population Projection in SKR

(2) Rural-Urban Distribution

Since no chronicle data is available, the trend analysis cannot be conducted for rural-urban distribution projection. Because of foreseeable changes in industrial climate ignited by completion of the New Mekong Bridge, it will not be suitable for SKR to adopt indicators used for the national level projection. In the study, the following steps have been taken for the projection of rural-urban distribution in SKR.

(i) Projection of urban employment

The number of total employment is projected in conformity with the macroeconomic framework. Employment of urban-based services and industries was projected from the production level, through value added productivity in each year assumed in the macroeconomic framework.

(ii) Projection of economically active population

The number of urban economically active population is projected on the basis of the number of employment in conformity with an acceptable level of unemployment rate and committed level of the school attendance rates. The latter rates are assumed to be the same level of national average, which is used for national macroeconomic framework analysis, conducted in the study.

(iii) Projection of urbanization ratio

Urbanization ratio is calculated for each year, as percentage of urban economically active population over total economically active population. It is assumed that migration toward the urban areas from the rural areas could be individually made, rather than by family. Computation results are presented in Figure I1-9:

(iv) Projection of urban population

Urban population is projected using the urbanization ratio inferred by the above method. Total population is simply multiplied by the urbanization ratio for each year.

(v) Projection of rural population

Rural population is calculated as the remainder of urban population. Urban population is subtracted from the total population.

Projected rural and urban population is summarized in Table I1-9. Future urban population in SKR may reach to 300,000 in the targeted year of 2020. It is nearly double the level of 2000.

Table I1-9 Projected Future Rural-Urban Distribution

	1995	2000	2005	2010	2015	2020
SKR	**944,221**	**1,072,471**	**1,209,037**	**1,362,993**	**1,514,024**	**1,681,731**
Urban	136,883	164,778	196,821	233,894	277,952	330,322
Rural	807,338	907,693	1,012,216	1,129,099	1,236,072	1,351,409
Savannakhet	**671,758**	**763,257**	**860,484**	**970,097**	**1,077,592**	**1,196,939**
Urban	100,278	120,835	144,348	171,440	203,676	242,020
Rural	571,480	642,422	716,137	798,657	873,916	954,920
Khammouan	**272,463**	**309,215**	**348,553**	**392,896**	**436,432**	**484,792**
Urban	36,605	43,944	52,473	62,454	74,276	88,302
Rural	235,858	265,271	296,080	330,442	362,155	396,490

Source: JICA Study Team estimates

The urban population ratio, however, may remain within the range of 20% of total population in SKR, reflecting the pace of development in urban-based services and industries. The following figure illustrates composition of rural-urban population distribution in SKR.

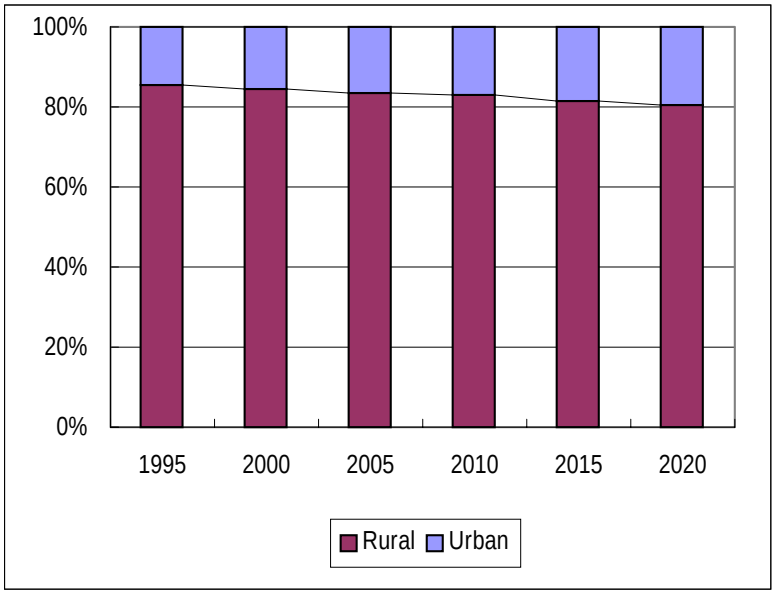


Figure I1-9 Projected Rural-Urban Ratio

(3) Primary Cities Urban Population

The future urban population will mainly be concentrated in the provincial capital cities, which are categorized as the Primary Cities of SKR. This will be especially true in Khammouan, since there are no candidate towns showing strong growth other than Thakhek. In Savannakhet, on the other hand, some of the migrants will be dispersed into three prominent towns situated close to Khantabuly. As a policy of SKR development, this trend is encouraged, and named as the “Khantabuly Metro Link Towns” (hereinafter refferd as the Metro).

The urban ratio in the rural areas, with the exception of Thakhek and the Khantabuly Metro, is at the level of 5.3 to 5.4% of the rural population as shown in the table below. These ratios will become larger in the future reflecting the growth in inner-land core towns that are located at major traffic node points.

Table I1-10 Average Urban Share in Rural Districts (1995)

	Urban	%	Rural	%	Total
SKR	136,883	14.50%	807,338	85.50%	944,221
Khammouan	36,605	13.43%	235,858	86.57%	272,463
Thakhek	25,768	37.65%	42,664	62.35%	68,432
Rest of KMN*	**10,837**	**5.31%**	**193,194**	**94.69%**	**204,031**
Savannakhet	100,278	14.93%	571,480	85.07%	671,758
Khantabuly	62,247	49.84%	62,649	50.16%	124,896
Metro*	76,740	32.40%	160,117	67.60%	236,857
Rest of SVN*	**23,538**	**5.41%**	**411,363**	**94.59%**	**434,901**

In the study, the following assumptions are made for projecting the future population of primary cities:

- Inner-land urban population ratio will increase to 7% based on the current urban ratio of Savannakhet with the exception of Khantabuly.
- The rest will converge into the primary cities.
- The share of the rest of the Metro towns other than Khantabuly will reach 25% of the total urban population in the Metro.

Projected population of primary cities are presented in the following table and figure. By 2020, the urban population in Thakhek and the Metro will become nearly double the level of 2000, while that in Khantabuly will increase by 60%.

Table I1-11 Primary Cities Urban Population

	1995	2000	2005	2010	2015	2020
KMN Total	272,463	309,215	348,553	392,896	436,432	484,792
KMN Urban	36,605	43,944	52,473	62,454	74,276	88,302
Thakhek	**25,768**	**28,483**	**33,303**	**38,880**	**45,908**	**54,367**
Rest of KMN	10,837	15,461	19,170	23,574	28,368	33,935
SVN Total	671,758	763,257	860,484	970,097	1,077,592	1,196,939
SVN Urban	100,278	120,835	144,348	171,440	203,676	242,020
Khantabuly	**62,247**	**74,405**	**84,893**	**96,249**	**106,906**	**118,675**
Metro	**76,740**	**82,672**	**97,021**	**113,234**	**133,632**	**158,234**
Rest of SVN	23,538	38,163	47,327	58,206	70,043	83,786

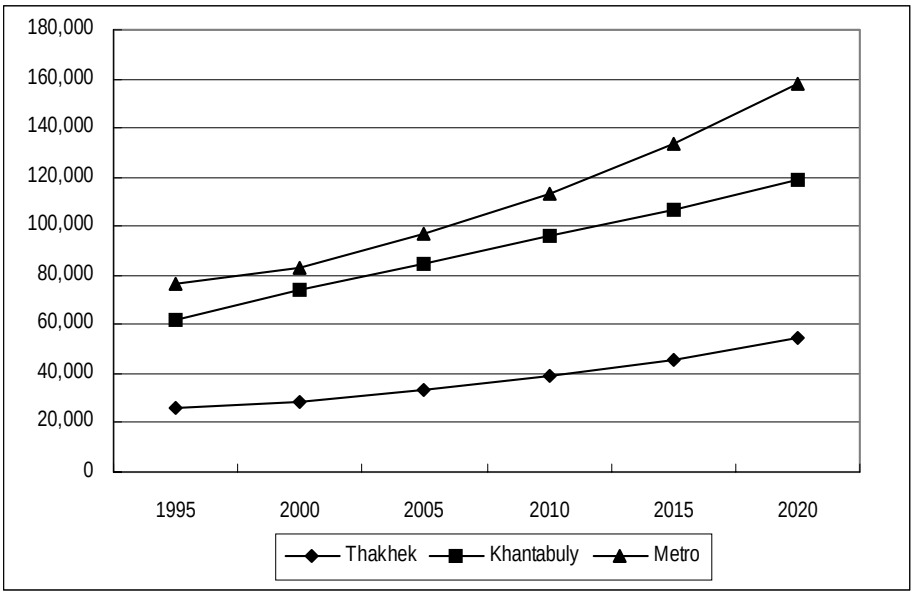


Figure I1-10 Primary Cities Urban Population

I-2 HEALTH SECTOR DEVELOPMENT PLAN

I-2.1 Overview

1) Health Status

In Savannakhet province, the infant mortality rate (IMR) was 80/1,000 (1995), and the mortality rate of children under five years old was 129/1,000 (1997-1998). The maternal mortality rate (MMR) was 656/100,000 (1995). The average life expectancy was 55 years old for males and 57 years old for females. In Khammouan province, IMR was 83/1,000 (1995). The total fertility rate (TFR) was 5.2 in Savannakhet and 5.4 in Khammouan for 1995. Since the national average of TFR for the term 1995-2000 was 4.6, it appears that women in the two provinces have 4 to 6 children on an average and that health conditions for both mothers and newborns are unsatisfactory, particularly due to multiple deliveries. Although some of these figures are better than the national average, they clearly indicate that development of the health sector is urgently needed in the Savannakhet and Khammouan region (SKR).

Table I2-1 Health Status in SKR

	Lao PDR	Savannakhet	Khammouan
Infant Mortality Rate	104/1,000 (1995)*	80/1,000 (1995)*	83/1,000 (1995)*
Under 5 Mortality	116 (1998)**	129/1,000 (1997-98)	N/A
Maternal Mortality Rate	650/100,000 (1995)**	656/100,000 (1995)	N/A
Average Life Expectancy	male=49.8,female=52.3 (1995)	male=55,female=57 (1997-98)	
Total Fertility Rate	4.6 (1995-2000)	5.2 (1996-1999)***	5.4

Source: Savannakhet Health Dept., Khammouan Health Dept.,

* State Planning Committee

** The Households of Lao PDR, 1999,

*** State Planning Committee, Primary Report of the Reproductive Health Survey

In 1999, the total population of Savannakhet was 748,652, with a population growth rate of 2.73%. As the population under fifteen years old accounted for 44.1 % of the total population, rapid growth of population is predicted to continue. In Khammouan, the total population was 302,203 in 1999, with a population growth rate of 2.5% between 1985 and 1995. Therefore, a continual rapid population growth is expected here also.

Access to Clean Water and Household Latrines

In Savannakhet, people's access to piped water or protected well was 66%. However, the quality of the water from wells and hand pumps is not checked regularly. This figure was better than the national average. In Khammouan, the access was 38%, lower than those for Savannakhet and the national average.

The rate of households without latrine was higher in the two provinces than the national average. In Savannakhet, 89% of households did not have a latrine. In Khammouan 86% of households did not have a latrine.

Table I2-2 Household's Access to Clean Water and Sanitation Facilities

(%)

	Lao PDR	Urban/Rural	Savannakhet	Khammouan
Piped water or protected well	50	77/45	66	38
Households without latrine	71	25/80	89	86

Source: "The Households of Lao PDR", 1999, SPC

2) Common Diseases

Common diseases in SKR are mostly infectious diseases, which are typical in the so-called LLDCs, such as malaria, diarrhea, and parasite diseases. Most of these are preventable in relatively simple and inexpensive ways. Some of them indirectly occur due to malnutrition and the inadequate living conditions caused by poverty.

For these diseases, the Health Departments of the two provinces have conducted control programs, but restraints due to limited financial and human resources hindered effective implementation. Basic information about hygiene, such as boiling drinking water and washing hands, have been disseminated by the health education activities of the Health Departments with limited results. Unhealthy habits remain, and the task of preventing infectious diseases has yet to be completed. Common diseases recorded at health facilities at different levels are shown in the tables below.

Table I2-3 Common Diseases in Savannakhet

Savannakhet Provincial Hospital 1999

10 Main Diseases of Out-Patient		Main Causes of Death	
1	Acute Respiratory Infection	1	Malaria
2	Cold	2	Pneumonia
3	Gastritis	3	Encephalitis
4	Pneumonia	4	Dengue
5	Tonsillitis	4	Heart Disease
6	Dysentery	5	Asthma
7	Diarrhea	5	Bronchitis
9	Malaria	6	Apoplexy
10	Injury	7	Jaundice
		7	Liver Disease

Source: Savannakhet Health Department

Champhon District Hospital (Oct. 98- Sep. 99)

	Out-patients		In-patients
1	Malaria	1	Malaria
2	Influenza	2	Influenza
3	Gastritis	3	Upper Respiratory
4	Tooth Disease	4	Diarrhea
5	Respiratory Infection	5	Traffic Accident

Source: Champhon District Health Office

Table I2-4 Common Diseases in Khammouan

Mahaxay District Hospital (Oct. 98- Sep. 99)

	Out-patients	%		In-patients	%
1	Cough	32.9	1	Malaria	81.2
2	Malaria	28.5	2	Other diseases	5.8
3	Parasite	15.1	3	Injury	5.6
4	Other diseases	11.4	4	Pneumonia	1.9
5	TB	8.1	5	Diarrhea	1.9
			6	TB	1.0
			7	Stomach Disease	0.4

Source: Khammouan Province, Mahaxay District Health Office

Nadua Village Health Post

1	Malaria
2	Diarrhea
3	Head Ache
4	Fever
5	Cold

Source: Nadua Health Post

3) Health Service Structure

The two provinces have almost the same structure for health service provision; the highest level is the Provincial Hospital, then the District Hospital at the district level, and the Village Health Post (VHP) at the village level. Under VHPs, there are Village Health Volunteers (VHVs) and Traditional Birth Attendants (TBAs); in local villages[1]. In Savannakhet Province, two District Hospitals have been upgraded in remote areas to the Inter-district Hospitals under the World Bank's Health Sector Reform Project. They have some functions similar to the Provincial Hospital.

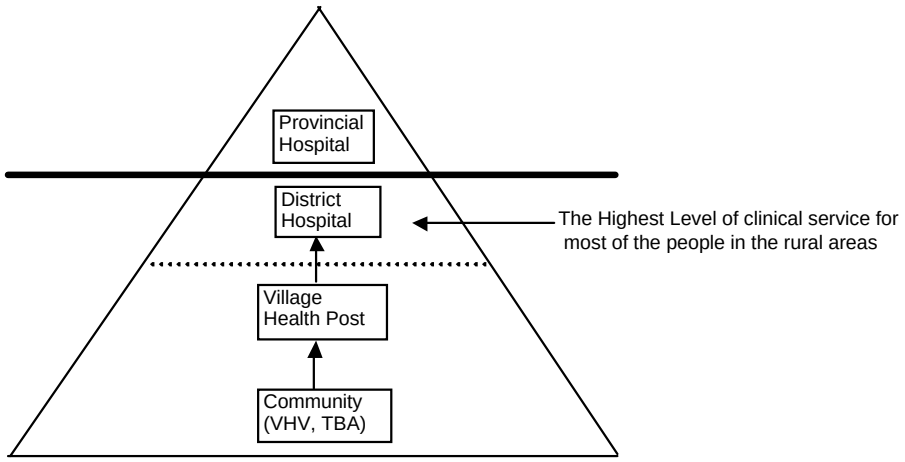


Figure I2-1 Basic Structure of Health Service in SKR

[1] There is another kind of volunteers, the Village Health Communicators whose role is limited to provide information about health issues. VHVs also play the role to similar to VHCs. Because of their limited and duplicated role, the VHCs are included in the description of VHVs in this paper.

Basically, patients are not required to pay for the services provided at these health facilities, but have to buy the medicine necessary for the treatment. The number of these health facilities and number of beds they provide are shown below.

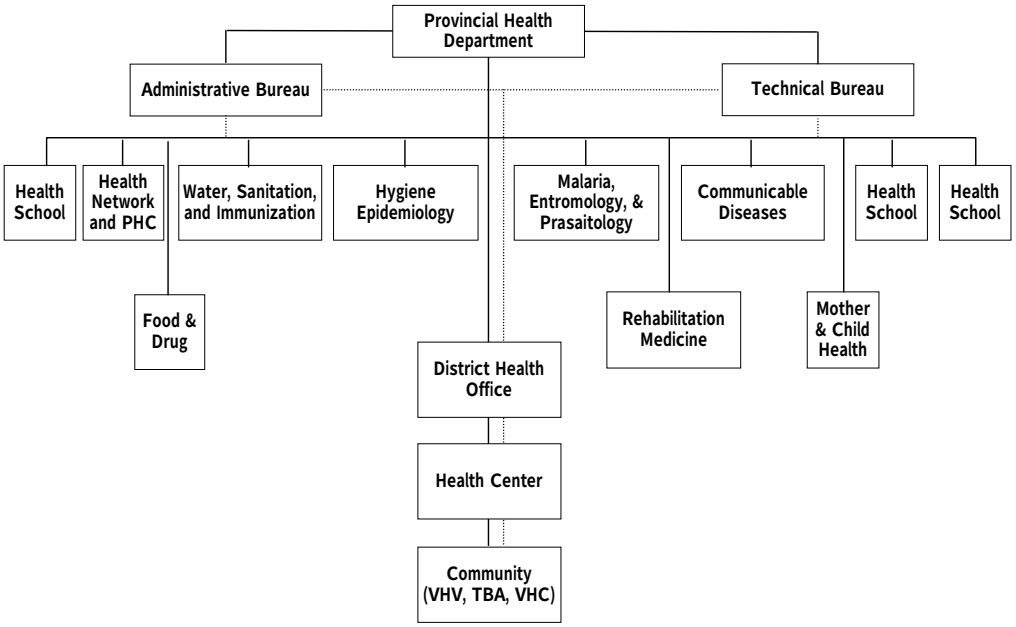
Table I2-5 Number of Health Facilities in 1999

	Savannakhet		Khammouan	
	Health Facility	Bed	Health Facility	Bed
Provincial Hospital	1	200	1	142
District Hospital	14*	235	9	140
Village Health Post	73	116**	59	118
Private Clinic	23 (2)	N/A	12 (3)	N/A

( ) dental clinic, *=Including "Inter-district Hospital",**=data for 1998

Source: Savannakhet Health Department, Khammouan Health Department

The Health Departments have more or less similar organizations. For reference, the Health Department in Savannakhet is organized as shown below.



Source: Savannakhet Provincial Health Department

Figure I2-2 Savannakhet Provincial Health Department Organization Chart

The number of staff for the Health Department is basically decided by the central government. The number of staff and their educational background are shown in the following.

Table I2-6 Staff of Health Department 1999 (Savannakhet)

Doctor	328	Dentist	29	Nurse	590	Pharmacist	58	Other Technical Staff	62	Others/Contract	135
Post Graduate Degree	7	Bachelor's Degree	7	Secondary Degree	37	Bachelor's Degree	17	Bachelor's Degree	1	Bachelor's Degree	1
Bachelor's Degree	109	Secondary Degree	22	Primary Degree	553	Secondary Degree	14	Secondary Degree	58	Secondary degree	23
Secondary Degree	212					Primary Degree	27	Primary Degree	3	Primary Degree	39
										No Degree	12
										Contract	60

Source: Savannakhet Health Department1999

Table I2-7 Staff of Health Department 1999 (Khammouan)

Doctor	152	Dentist	7	Nurse	447	Pharmacist	61	Other Technical Staff	122	Others/Contract	59
Post Graduate Degree	1	Bachelor's Degree	3	Secondary Degree	25	Bachelor's Degree	10	Secondary Degree	51	Secondary degree	3
Bachelor's Degree	55	Secondary Degree	4	Primary Degree	422	Secondary Degree	10	Primary Degree	68	Primary Degree	25
Secondary Degree	96					Primary Degree	41			No Degree	17
										Contract	39

Source: Khammouan Health Department1999

The population covered by one doctor was 2,282 in Savannakhet and 1,988 in Khammouan[2]. The population covered by one dentist was 25,815 in Savannakhet and 43,171 in Khammouan. One nurse covered 1,269 in Savannakhet and 676 in Khammouan. It is obvious that the number of health staff is quite small for the total population. There is no recent national level data for the same kind, but when these figures are compared with the national average in 1995, it is concluded that the situation in the two provinces is worse except that relating to the number of nurses in Khammouan.

Table I2-8 Number of Population Covered by Health Staff

	Lao PDR		Savannakhet	Khammouan
	Number (1996)	Population Covered by One Personnel	Population Covered by One Personnel	Population Covered by One Personnel
Doctors	2,812	1,629	2,282	1,988
Dentist	196	23,373	25,815	43,171
Nurse	4,934	928	1,269	676

Note: The total population 4,581,258 was for 1995. Figures for Savannakhet and Khammouan were for 1999.
Source: Ministry of Health, "Statistic and Data of Public Health", Savannakhet and Khammouan Health Depts.

The ratio of doctors to nurses was 1:1.2 in Savannakhet and 1:2.9 in Khammouan. The number of nurses is critically small in relation to the number of doctors in Savannakhet. The level of educational background varies even among one job

[2] The population used in these calculations was 748,651 for Savannakhet, and 302,203 for Khammouan.

category, for example, there are pharmacists with three different levels of education; bachelor's degree, secondary degree and primary degree. This requires detailed differentiation of job descriptions among the job category. But since the job description is not clear, effective use of the entire capacity of one job category is very difficult.

4) Primary Health Care

Primary Health Care (PHC) is highly important to people living in the rural areas. The functions of PHC in SKR require further improvement. This implies the district health systems[3], which is the vehicle for PHC, are not functioning appropriately. Accessibility of the people to health facilities in the rural areas has not been secured. It should be noted that the average coverage of the population by health infrastructure was only 63% in Savannakhet.

Firstly, all villages do not have Village Health Post (VHP), though some villages have constructed their own VHP with their own resources. Therefore, one VHP has to cover several villages. Further, the access to the district hospitals is not easy. Some people have to walk long distances, use boats, Tuk Tuk and other mean of transportation. The transportation cost is a burden, opportunity cost is incurred. One measure introduced to cope with the accessibility issue in Khammouan province was the "mobile clinic" dispatched by the province under a JICA project. It played an import role, but due to the severe budget restraints in the province, it was stopped after the close of the JICA project.

The Drug Revolving Fund (DRF) introduced to PHC system has been successful in assuring a certain level of stock for drugs. 182 villages, 43 VHPs, 9 District Hospitals and Provincial Hospital had the DRF system in Khammouan in 1999; 294 DRFs existed at the district and village levels in Savannakhet. In the DRF system, people have to pay for drugs, and the price includes commission for the maintenance of the system. The rate of commission varies but is usually set rather low, like 10% of the wholesale price. The DRF system raised people's confidence in PHC and made people aware of their responsibilities to sustain the function of PHC.

In addition to issues of accessibility, the staff and patients of the VHPs as well as those of the District Hospitals often face a shortage of medical supplies, and

[3] The word "district" here does not necessarily correspond to the administrative unit, but is a specific word used in the context of study and analysis of a health system in the field of health. A district health system is made up of well-defined people living in a certain administrative and geographical area, all health facilities, public, private, and traditional, all health care workers, and support service institutes such as laboratories and research institutes regardless of their organization attributes (WHO).

problems concerning old buildings and outdated medical equipment which is difficult to repair or to find the appropriate spare parts.

Table I2-9 Number of Drug Revolving Fund

	Savannakhet	Khammouan
Village	N/A	182
Village Health Center	N/A	43
District Hospital	N/A	9
Provincial Hospital	N/A	1
Total	294	235

Source: Savannakhet and Khammouan Health Depts.

Issues of human resources at PHC are urgent. To develop the function of PHC so that it can contribute to the improvement of the health of the people, the participation of the people in the PHC is crucial. Generally in developing countries, the peoples' participation is realized in their volunteer work as the VHVs, the Village Health Committee and also involvement as traditional birth attendants (TBA). Their role includes not only providing health information to the people in the village and collecting very basic health data such as the number of births and deaths, but also raising awareness of people on health issues and encouraging them to change their behavior. In the case of TBAs, service provision such as supporting delivery is of course included in their role. VHVs, the Village Health Committee and TBAs exist in the two provinces, but are not functioning effectively for following reasons.

The number of VHVs is not enough in the two provinces. In Savannakhet, there were 1,321 VHVs for 1,543 villages with 114,466 households in total. Some villages do not have a VHV, and currently one VHV on average has to cover 86 households. In Khammouan, the number of VHVs is 376 (planned for 99-00) for 874 villages with 49,837 households in total. More than half of the villages in Khammouan do not have a VHV.

The importance of training of VHVs and TBAs was recognized by the Provincial Health Departments, and training was conducted for some of them by the provinces and NGOs. But the coverage of this training is not enough; in Savannakhet by 1999, most of 1,321 VHVs had undergone training at least once: 631 TBAs in the province had undergone some training in 1999. TBAs in three out of nine districts in Khammouan province had undergone some training in the past. The system of supervision for VHVs and TBAs is not strong enough, and therefore, they do not have to reflect what they have learned during their training on their daily works.

Under these circumstances, the people in SKR have a tendency not to use the health facilities frequently. Rather they buy drugs at market. This is partly because

the road access is seriously limited in the rural areas. Even in the areas where access to VHPs is not so difficult, and some people pay higher prices for drugs at market. One reason presumed is the shortage of supply at VHPs, they have less confidence in the low quality of services resulted by inadequate training, supervision and guidance.

As far as their physical access was assured, people have a tendency to use the Provincial Hospitals more than the District Hospitals. In Khammouan, in spite of the higher transportation costs for visiting the Provincial Hospital people have a tendency to use the provincial hospital more than district hospitals; whereas the average transportation cost for the Provincial Hospital was 32,800 Kip and that for the District Hospitals was 14,500 Kip according to the results of a social survey in this study. It is understandable that some people who visit the Provincial Hospitals really needed a higher level of care which the Provincial Hospitals can give. But it is very plausible that others who also visited did not need care at such a level provided, or could be treated at a lower level of care provided by the District Hospitals or even by the Village Health Posts.

In addition to the issues of shortage of the number of volunteers, the lower level of participation of village leaders and ordinary villagers has to be improved to promote entire villagers' understanding of their health problems, encourage them to change their behaviors, and to make VHVs and TBAs work more actively. Although the needs for regular supervision and advice for staff at the PHC area are recognized at the district and provincial levels, the mechanism for supervision and advice introduced has not actually encouraged staff to work more actively.

5) Secondary Level of Health Service

Savannakhet Provincial Hospital consists of 47 doctors, 80 assistant doctors, 141 nurses, 39 technical staff, 13 administrative staff and 14 other staff, totally 334. It has 200 beds. Khammouan Provincial Hospital holds 29 doctors, 48 assistant doctors, 99 nurses and administrative staff. In total, the number of staff was 187.

Table I2-10 Personnel and Beds of the Provincial Hospitals

	Savannakhet	Khammouan
Doctors	47	29
Assistant Doctors	80	48
Nurse	141	99
Technical Staff	39	N/A
Administrative staff	13	11
Other Staff	14	N/A
Total	334	187
Bed	200	147

Source: Savannakhet and Khammouan Health Depts.

Since the scale of Savannakhet Provincial Hospital makes it one of the biggest in southern Lao PDR, the hospital receives patients from the other southern provinces. The building facilities have been improved or newly constructed under the World Bank's Health System Reform Project, and new medical equipment has been installed.

Most of the departments of Khammouan Provincial Hospital have different small buildings spread out in the hospital compound, making it difficult for different functions of the hospital to work effectively and efficiently. For example a patient on a stretcher must be carried over unroofed and sometimes unpaved yard. It is easy to imagine the difficulties during the rainy season. The buildings are old, and so is a lot of medical equipment which is difficult to find parts for. The function of the medical equipment is limited. However, there is some equipment provided by donor-organizations which is relatively new.

The number of outpatients (person/times) of Provincial Hospitals was 33,691 in Savannakhet and 27,260 in Khammouan. Judging from the scale of the two hospitals, the level of number of the visits by the patients is not high. Their bed occupation rate was 56.6% in Savannakhet and 60% in Khammouan. This indicated that the number of beds exceeded the demand.

Table I2-11 Utilization of Provincial Hospital in 1999

Savannakhet Provincial Hospital				Khammouan Provincial Hospital			
Outpatient	Inpatient	Average No. of Days Stayed	Bed Occupation Rate	Outpatient	Inpatient	Average No. of Days Stayed	Bed Occupation Rate
33,691	11,832	4.9	56.6%	27,260	10,236	3.0	60.0%

Source: Savannakhet Health Department, Khammouan Health Department

6) Emerging Infectious Disease: HIV/AIDS

Due to the location of the two provinces boarding countries with high HIV infection rates and increasing HIV infection rates, HIV can easily be spread in SKR. The Provincial Committee on Controlling AIDS has been disseminating information against HIV by means of radio, TV and seminars. However, the actual dissemination is limited, particularly in the rural areas. For instance, the number of condoms distributed has been limited, compared with the sexually-active-population.

Savannakhet has a large portion of the number of the people infected with HIV and AIDS cases in the Lao PDR. By December 1999, the cumulative number of the people infected with HIV was 504 and AIDS case was 160. Fifty-four died of AIDS. In Savannakhet, by October 1999, the cumulative number of the people

infected with HIV increased to 233. Among this 77 people were found in one year from 1998 to 1999. This is quite alarming.

Table I2-12 Number of HIV Infection, AIDS Cases

	Lao PDR (from '93-Dec.'99)	Savannakhet (from '93-Oct.'99)
People with HIV Infected	504	233
AIDS Cases	160	90
Deaths by AIDS	54	42

Source: Savannakhet PCCA, NCCA of Lao PDR

The reason for this is largely attributed to the high mobility of people; Lao seasonal workers visit Thailand, and Vietnamese drivers and workers are visiting Savannakhet. The province introduced an individual consultation system and set up special teams of health staff at the district level for the care of the people infected with HIV.
In Khammouan, the total number of the people who were HIV positive was 6 out of 778 tested in 1998-99.

7) Budget

The total budget for the health sector in Savannakhet was about 2,560 Kip million for the fiscal year 1998-99, and the health budget per capita was only 3,418 Kip. For the same period, the actual health expenditure in Khammouan was about 1,460 Kip million, with a per capita expenditure of 4,833 Kip. The budget constraints for the health sector in SKR were severe.

Among budget items salaries accounted for more than half; 56.4% in Savannakhet and 59.0% in Khammouan. In addition, the Public Investment Fund, which is mostly used for infrastructure development, represents 19.1% (or 486.4 Kip million) in Savannakhet and 16.5% (or 242.2 Kip million) in Khammouan. There was not very much left for the health service provision.

The budgetary planning has been reviewed for the case of Khammouan province. It is noted first that budget planning is not fully deliberated against the severe restraints. For the fiscal year 1998-1999, the planned total budget was 1,090.8 Kip million, but the actual expenditure was about 1,460.7 Kip million, with a difference of nearly 33.9%. Increase in salaries was most notable (60%) including subsidies and overtime allowances, although generally budget for salaries is relatively easy to control. Secondly, any increases in budget are ostensibly hoped for, but consideration for the capacity of budget implementation is inadequate. For

instance, the planned budget for 1999-2000 (2,890 Kip million[4]) has been almost doubled from the actual spending in the previous fiscal year (1,460 Kip million). Large increases were planned for administration cost from 154.5 Kip million to 614.9 Kip million and public investments from 241.2 Kip million to 782.1 Kip million. Thirdly, careful budget allocations are needed to cope with the disease structure. The budget for preventive activities was 374.9 Kip million (13%) and that for treatment was 1,205.95 Kip million (42%). The ratio between the budgets for prevention and treatment was 1: 3.2. The budget allocation for prevention is quite small compared with the budget for treatment, judging from the disease structure in which still preventable disease is the main occurrence.

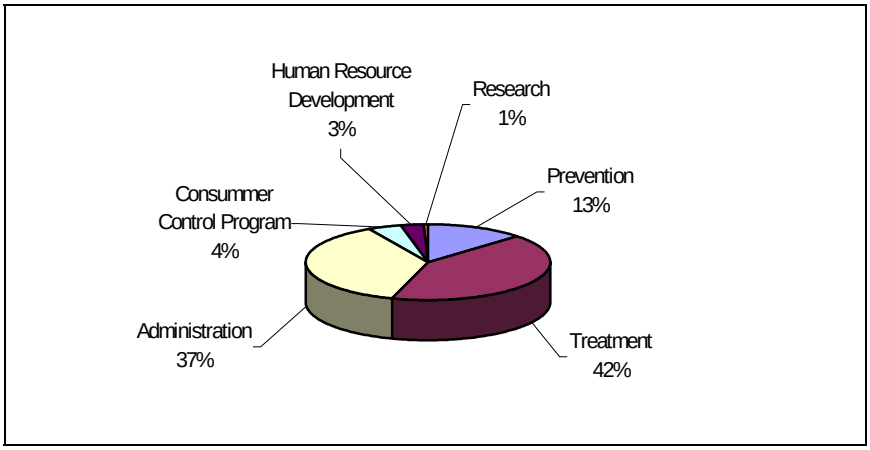


Figure I2-3 Budget Allocation, Khammouan Province

Among the preventive activities, the highest allocation was for vaccination (25%), then, malaria (20%), clean water and sanitation (19%), mother and child health (10%), as shown below.

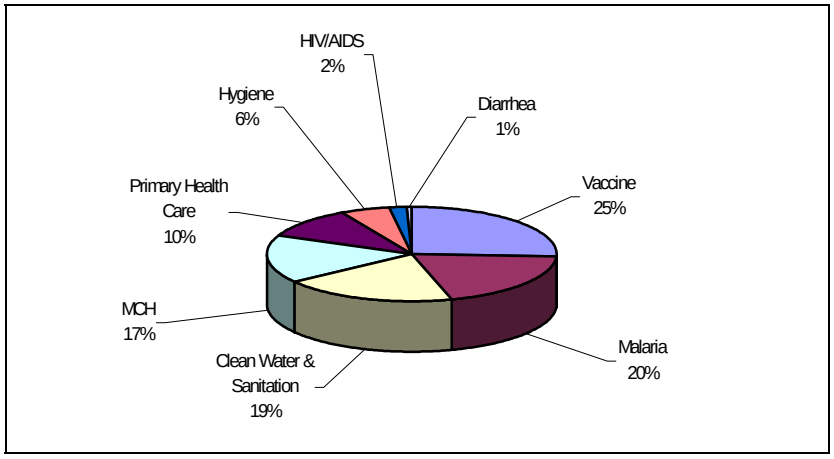


Figure I2-4 Expenditures in Khammouan Province

[4] These figures were taken from "Summary of Budget Implementation 1998-99 and Budget Planning for 1999-2000", No. 0265, prepared by the Health Department, Khammouan Province.

8) Human Resource

Various training for different job categories at different levels has been conducted by Health Departments. In addition, training has been conducted by international donors. However, the effectiveness of training has not been fully reflected on the management of Health Departments, including the management of health facilities. The same staff attended training courses multiple times, but learning from the trained was not shared or utilized at the trainee's working place. It is also noted that the training structure and curriculum are inadequate. Training should be followed by evaluation in improvement in job performance of trainees.

The two provinces have their nursing schools. The number of students has been increasing recently, but the number of working posts at health facilities has not been increasing accordingly. As a result, some graduates could not find working posts at health facilities. This is contradictory to the situation that an increased number of health staff for PHC is urgently needed. The underlying reason is that working for health facilities in the remote/mountainous areas is unpopular among health staff. Therefore, even though there are empty positions in such an area, they do not go and work there.

I-2.2 Health Sector Development Perspective

1) Objectives

The current poor health status and the low level of health services coverage require an increased level of inputs in both material and human resources to improve the situation. The low level of use of the health services is partly attributable to a lack of people's confidence in the quality of the services. This hinders enhancement of people's health status. Based on the review of the current situations, the objectives of regional health sector development towards 2020 are proposed as follows:

- To increase utilization of public health facilities, by strengthening the capacity of the district health systems which are vehicles for PHV[5][6]. This realizes building people's confidence in the health services and rising people's awareness and knowledge about health issues. The latter leads them to take

[5] The word "district" here does not correspond to the administrative unit in Lao PDR, but is a specific word used in the context of study and analysis of a health system in the field of health. For more details, please refer the section of this report titled "Strengthening District Health System".

[6] A district health system is made up of well-defined people living in a certain administrative and geographical area, all health facilities, public, private, and traditional, all health care workers, and support service institutes such as laboratories and research institutes regardless of their organization attributes (WHO).

appropriate actions to protect and promote their health. Promotion of people's participation is indispensable for strengthening the capacity of district health system in the rural areas.

- To improve health of children
- To improve reproductive health

These objectives are regarded as the most fundamental interventions for enhancement of the least developed health sector.

2) Development Scenario and Targets

Many factors contribute to bring about the health status of people, such as poverty, gender inequality, low level of education, environment, health system problems. Some of them are inter-related in a complex way. But in developing countries poverty and inadequate health services in terms of quantity and quality define it greatly. The access to facilities and their quality should be improved simultaneously, even in the remote, mountainous and isolated areas. People living in such areas should be able to enjoy higher levels of health services including secondary[7] care. In the most isolated areas, the health facilities there, either a health center or a district hospital, should provide higher levels of services than the standard of the same category of health facility elsewhere. They should consolidate a referral system through networking different levels of health facilities.

Establishment and improvement of health facilities should proceed strictly in the context of development of district health system, including human resource development. The capacity of a health system largely defines the success or failure of the so-called vertical programs in the health sector (e.g., malaria control and child health programs). Also, the district health system is the foundation for preventive interventions which are necessary for SKR where infectious diseases are common. Therefore, the district health systems should be strengthened.

The insufficient/low levels of awareness and knowledge of the people about health leads to a low demand or non-use of health services in SKR. Therefore, health education is to be promoted to increase their awareness and knowledge about health.

The health status of the most vulnerable groups in SKR, i.e., younger children and pregnant women is in the world's worst status. Interventions in child health and reproductive health should be implemented in a form of vertical programs with in

[7] It should be noted that the contents of primary, second, and tertiary care are not strictly defined internationally. Rather, they are contextually defined by the level of medicine in a country.

the district health system, in parallel with the improvements in the district health system. It is widely recognized that these interventions in public health are relatively cost-effective.

Benchmarks for health sector development in SKR are proposed on the basis of three factors. Firstly, in SKR the health sector is regarded as less developed. Secondly, the health indexes requiring complex procedures in their collection should not be used for measuring the development of the sector. Thirdly, the so-called outcome index appears to be more suitable than the input-output index, because the qualitative improvement which is urgently necessary in SKR is reflected more in the outcome index.

Table I2-13 Targets for Sector Development

	2000	2005	2010	2020
Infant Mortality Rate	70/1,000	60/1,000	40/1,000	20/1,000
Children Mortality Rate Under 5 Years Old	127/100,000	80/100,000	60/1,000	30/1,000
Maternal Mortality	550/100,000	490/100,000	250/100,000	130/100,000
Delivery with professional attendant	N/A	Urban 30%, Rural 20%	Urban 60%, Rural 50%	Urban 100%, Rural 100%
Total Fertility Rate	5.3	4.5	3.5	3.0
Immunization coverage (% of no. of children in ages designated for immunization)	Urban 40%, Rural 30%	Urban 70%, Rural 60%	Urban 100%, Rural 80%	Urban100%, Rural 90%
Bed Occupation Rate	58% (Provincial Hospitals)	Urban 65%, Rural 50%	Urban 70%, Rural 60%	Urban 80%, Rural 70%
Clean water use rate	50%	55%	60%	60-70%
Latrine use rate	10%	46%	50%	70%

Infant Mortality Rate and Mortality of Children Under 5 Years Old

The outcome indexes of the health sector in SKR are relatively well if compared with other provinces in Lao PDR. The current IMRs of SKR (2000) is estimated to be at 70/1,000, which is better than the national average at 85/1,000. It is proposed that the target of IMRs be set at 40/1,000 in 2010 and 20/1,000 in 2020. Benchmarks for the Mortality of Children Under 5 Years Old are set to be 60/1,000 in 2010 and 30/1,000 in 2020, or down from 127/1,000 in 2000.

MMR, Delivery with professional attendant and Total Fertility Rate

In 2000, the government announced its policies for reproductive health and set the national targets. The current MMR[8] in SKR at 550/100,000 ranks as one of the

[8] It should be noted that collecting accurate MMR in developing countries is regarded as a challenging issue.

world's worst rates. It is planned that MMR will be improved to the level of 250/100,000 by 2010 and 130/100,000 by 2020.

Immunization Coverage

The current immunization coverage rates for SKR and Lao PDR are shown below. The average immunization rate is 60.5% in Savannakhet and 29.6% in Khammouan, with an average of 33%. It is planned that rates will improve to 80% in 2010 and 90% in 2020 in the rural areas, and 100% in 2010 in the urban areas. In order to achieve these targets, the Health Departments of SKR have to make increased efforts.

Table I2-14 Immunization Coverage

	Lao PDR (1996)	Savannakhet (1999)	Khammouan
DPT	39.0	61.2	33.0
BCG	48.0	60.2	39.0
Polio	50.0	68.4	35.0
TT (pregnant women)	29.0	51.0	20.0
TT (women age from 14-45)	18.0	61.6	21.0
Average	36.8	60.5	29.6

Source: Date for Lao PDR=Ministry of Health, "Statistic and Data of Public Health",

Data for Savannakhet= Savannakhet Health Dept, Data for Khammouan from Khammouan Health Dept.

Bed Occupation Rate

This index shows the level of use of inpatient services most accurately. Due to various restraints in the access to health facilities and a lower level of people's confidence in the health services, bed occupation rates have been relatively low. For example, the bed occupation rate is 58% in provincial hospitals. It is planned that these rates will be improved to 70% by 2010 and 80% by 2020 in the urban area.

Access to Clean Water and Latrine

The current access rate to clean water is 66% in Savannakhet and 38% in Khammouan, with an average of 50%. The target for the clean water access rate is set for 60% in 2010 and 60-70% in 2020. The target for the latrine use rate is proposed to be 50% in 2010 and 70% in 2020. These targets reflect the expectation that in SKR infrastructure development for water supply will be accelerated in SKR and that latrines for household use will be increased by overall economic growth.

3) Strategies for Health Sector Development

In order to achieve the proposed objectives, the following strategies are formulated, with the future population increases in view:

- To encourage people to use public health facilities through enhancement of their quality of service, assuring the availability of health commodities such as drugs. A limited level of cost-sharing is to be introduced.
- To ensure the access to health services by employing outreach activities.
- To improve and establish health facilities to increase the access.
- To assign some health facilities to provide a higher level of service in the areas where people's access is found difficult.
- To increase IEC activities to broaden people's knowledge about health issues and change their practices in the family and community care.
- To introduce some incentives in order to assure personnel in the remote areas.
- To empower people to protect and promote their own health by means of participatory approaches.
- To enhance efforts to realize safe motherhood. To include adolescents and young in the target group. To deal with HIV/AIDS and STI urgently which incurs higher possibilities of HIV infection.
- To adapt IMCI[9] as an effective and responsive approach towards childhood diseases.
- To ensure access to clean water and sanitation through promotion of participatory approaches.

To attain the proposed benchmarks, the following three programs are proposed as prioritized development programs:

- Strengthening District Heath System
- Improving Reproductive Health
- Improving Child Health

[9] IMCI covers diarrhea, ARI, measles, malaria, and malnutrition which are the main killers of children under age five. Approach of IMCH emphasize improvement on case management of these diseases and involvement of family and community practices in more improved ways (WHO).

I-2.3 Priority Development Programs for SKR

1) District Health System Strengthening Program

(1) Background

The core health system for protecting and promoting the health of the people in a certain administrative and geographical area should be the district health system [10] where primary care at health posts and secondary care at the first referral hospital are provided[11]. First of all, the quality of service of the district health system should be assured. Although the two provincial hospitals in SKR are not equipped sufficiently in terms of the scale and the contents of their services, the district health systems positioned under each provincial hospital should be strengthened with higher priorities than these two provincial hospitals. Furthermore, these provincial hospitals and Provincial Health Departments are expected to provide proper supervision and guidance to the district health systems. Secondly, participation of the people living within the district health systems in the process of strengthening the systems should be encouraged. This is particularly important in rural and remote areas where the approach of PHC plays a key role in improving the health of the people. The district health services have the following constraints:

- Lack of people's confidence in the quality of the health services has resulted in low level use of these health facilities.
- Access to health services, particularly to secondary care, is troublesome for a large part of the population.
- Outreach services training, and supervision from the provincial level, have been discouraged for financial reasons.
- A shortage of medicine and supplies has deteriorated both the quantitative and qualitative aspects of services and lessened the people’s motivation to use these health services.
- Use of the public health services has been discouraged by old health facilities and out-of-date medical equipment.
- Bypassing the designated lower levels of health facilities and visiting upper levels of health facilities will increase when feeder road development is implemented.

The urban areas in SKR are characterized as follows:

- There is generally better health status in the urban areas than other areas in the target areas due to better access to health services, both public and private.

[10] Please refer to 2.1 4) PHC footnote 3.

[11] It should be noted that the administrative level of health facilities such as the village, district or provincial level does not correspond to the level of primary, secondary, or tertiary care.

Access of the people to the higher levels of health facilities is much easier than remote areas.

- In the future, people in these areas will increasingly visit the provincial hospital more often, thus bypassing health facilities in the district health system, even when their health conditions are not serious. This will cause over-crowdedness at the provincial hospitals as well as incur higher costs than the same treatment provided by the district health system.
- According to the future prediction of population increase as well as economic growth, the number of private health facilities is expected to increase.
- Access to the health services on the opposite side of the Mekong River in Thailand is expected to become easier.

The rural area in SKR has constraints as follows:

- Remoteness, geographic elements, and a huge amount of rains in the rainy season hinder the access of the people to the health system.
- Irregular and sporadic supervision and fewer opportunity of re-training have affected the quality of services and discouraged health staff in the rural areas. Old health facilities and obsolete health equipment has also discouraged the motivation of patients to use such health services.
- Professional health staff are reluctant to work in the rural area, as no incentive is granted.

(2) Objectives

The objectives to strengthen the district health system are defined as follows:

- To strengthen the district heath systems in terms of human resources and infrastructure in order to provide adequately qualified health services,
- To promote utilization of public health services through strengthening health education and outreach activities, and
- To ensure referral systems and to adapt it in the areas such as remote areas where special arrangement are necessary.

(3) Strategies

Main common strategies for the urban and rural areas are as follows:

- Assuring quality of services.
- Assuring supervision and guidance from the provincial level.
- Increasing outreach activities with emphasis on high priority areas.
- Ensuring logistics by increasing capacity of procurement and participation of the people through drug revolving funds and cost-recovery mechanisms.

- Establishing referral system.
- Improving environmental sanitation.

Short-term Strategy

For strengthening the services in the urban areas in SKR, it is proposed that the following strategies be applied in the short-term:

- To develop human resources, both technical and management, and to increase outreach activities to facilitate access to the health services. This has effects to enhance people's awareness of health issues, also.
- To increase IEC activities to broaden knowledge about health issues and change practice of family and community care.
- To promote infrastructure development in close coordination with the future referral system.
- To promote community participation and its empowerment for promotion of community care.

Short-term strategies for the rural areas do not differ from the urban areas, except for the following:

- To strengthen human resources in the remote/mountainous/isolated areas by training frontline health staff, increasing the number of personnel, or altering staff with higher qualified staff.
- To provide staff working in such areas with incentives.
- To promote community participation and empowerment of local people. To enhance TBA and VHVs training.

Long-term Strategy

For strengthening the services in the urban areas in SKR, it is proposed that the following strategies be applied in the long-term:

- Technical and management staff should be retrained regularly.
- The management capacity should be strengthened.
- Management at the district level should be strengthened.
- Cost-recovery mechanism other than DRF should be established.
- A program for regular maintenance and improvement of health facilities should be set up after the infrastructure development is completed.
- Healthy environmental sanitation should be ensured.

Long-term strategies for strengthening the district health system in the rural areas do not differ from the urban areas, except for the following:

- A hardship allowance scheme should be introduced in order to strengthen human resources in remote/mountainous/isolated areas.
- A cost-recovery mechanism should be introduced, reflecting specific needs of the poor people.
- Participation of the people in planning and implementing health programs and activities.
- A scholarship should be established for ethnic students to become technical health staff working in their villages.

(4) Proposed Action Program for District Health System

Action programs are proposed to strengthen the district health system as shown below.

Table I2-15 Action Program for Strengthening District Health System

Core Areas: *Quality Assurance, *Capacity Building, *Outreach Activities, *Ensuring Logistics, *Participation of people, *Infrastructure Development, *Referral System, *Environment Sanitation		
Urban	Short-Term	Long-Term
Intermediary Benchmarks	Raising BOR at hospitals to 65%.	Raising BOR at hospitals to 80%.
	100% of staff in management and technical areas are trained.	100% of staff are retrained regularly.
	100% of positions are reviewed for their necessary qualifications, and human resource plan is made.	100% of the plan is implemented. Human resources in management is strengthened.
	Increasing outreach activities by 50%.	
	Increasing number of villages having DRF by 50%.	100% of health facilities are operated with cost-recovery mechanism (DRF, or alternative: national health insurance scheme), establishing exemptions of the poor and other specific groups.
	100% of villages are covered by IEC activities for increasing knowledge and awareness of the people about prioritized health issues and changing their practices.	
	50% of infrastructure development with provision of necessary medical equipment is accomplished in the areas with urgent needs.	100% of infrastructure development with necessary equipment is accomplished in the areas with urgent need.100% of hospitals designated to provide higher level of services are strengthened in terms of infrastructure. Regular improvement of infrastructure
	Increasing people's access to clean water and household latrines by 60%	80% of people has access to clean water and household latrines.
Main Projects	Conducting training of staff in management and technical areas.	Conducting training of staff in management and technical areas. Strengthening management of district and "interdistrict hospitals" designated to provide higher level of services.
	Reviewing necessary qualifications and number of staff for positions in management and technical areas, and making a plan for adjusting assignment of personnel according to the result of the review.	Continuing the adjustment of personnel assignment and recruiting personnel more appropriate to posts.
	Ensuring logistics by increasing capacity of procurement and participation of people (DRF).	Introducing clear and transparent cost-recovery mechanism
	Increasing outreach activities with emphasis on high priorities areas.	
	Increasing IEC activities for the people for protecting and promoting their health.	
	Promoting participation of the people in implementations of health activities.	Promoting participation of the people in planning and implementations of health programs.
	Infrastructure development with provision of equipment in the areas with urgent needs.	Strengthening operation and management of infrastructure and equipment.
	Establishing referral system.	Ensuring referral system. Strengthening management of district and "interdistrict hospitals" designated to provide higher level of services.
	Strengthening capacity of basic health data collection.	Operating and managing MIS. Establishing surveillance system.
	Increasing people's access to clean water and sanitation facilities.	Ensuring healthy environmental sanitation.

Rural	Short-Term	Long-Term
Intermediary Benchmarks	Raising BOR at hospitals to 50%.	Raising BOR at hospitals to 70%.
	100% of staff in management and technical areas are trained.	100% of staff are retrained.
	Increasing outreach activities by 50%.	
	100% of positions are reviewed for their necessary qualification and current personnel assignment and plan for revision is made.	100% of plan of revision of personnel assignment is implemented.
	Increasing number of villages having DRF by 50%.	100% of health facilities have mechanism to assure supplies by such as DRF, 100% of health facilities are operated with cost-recovery mechanism (alternative: national health insurance scheme), establishing exemptions of the poor and other specific group
	100% of VHVs are trained.	
	100% of village leaders are covered by workshop about improvement of health in village.	
	100% of villages are covered by IEC for increasing knowledge and awareness of the people about prioritized health issues and changing their practices.	
	70% of infrastructure development is accomplished in the areas having urgent needs.	100% of infrastructure development is accomplished in the areas with urgent needs. 100% of hospitals designated to provide higher level of services are strengthened in terms of infrastructure.
	Increasing people's access to clean water and household latrines by 60%.	70% of people has access to clean water and household latrines.
Main Projects	Conducting training of staff in management and technical areas, with emphasis on training of frontier health workers.	Conducting training of staff in management and technical areas. Strengthening management of district and "interdistrict hospitals" designated to provide higher level of services.
	Increasing outreach activities with emphasis on high priorities areas.	
	100% of positions are reviewed for their necessary qualification and current personnel assignment and human resource plan is made. Number of personnel or qualifications for positions are implemented in areas having urgent needs.	100% of human resource plan of revision is implemented.
	Providing incentives for health staff working in remote/mountainous/isolated areas.	Introducing hardship allowance for health staff working in remote/mountainous/isolated areas.
	Ensuring logistics by participation of people (DRF), cost-recovery measures	Introducing clear and transparent cost-recovery mechanism being reflected specific situations of the area
	Conducting training of village health volunteers, and educational workshop village leaders including those of existing women's group	
	Increasing IEC activities for the people about protecting and promoting their health.	
	Promoting participation of the people in planning and implementations of health programs and activities	Promoting participation of the people in planning and implementations of health programs and activities
	Infrastructure development and provision of medical equipment according to specific needs of the area	Strengthening operation and management of infrastructure and equipment. Strengthening management of district and "interdistrict hospitals" designated to provide higher level of services
	Establishing referral system	Assuring referral system. Strengthening management of district and "interdistrict hospitals" designated to provide higher level of services.
		Creating scholarship for ethnic minority students to become a doctor or nurse to work at their villages.
	Strengthening capacity of basic health data collection.	Operating and managing MIS
	Increasing people's access to clean water and sanitation facilities.	Ensuring healthy environmental sanitation.

(5) Recommendation

Function of VHVs

The function of VHVs is emphasized in disseminating information and raising awareness of people in the community. Their role should be retained as a supportive one for professional health workers, particularly in clinical fields. This considers with one of the objectives, i.e., to increase access to health services by strengthening the health system and building the confidence in the health services. Here the quality of health services must be assured by professional health workers, instead of VHVs in rural, remote, isolated and mountainous areas.

Vulnerable Areas

Savannakhet Province

In Savannakhet, the World Bank "Health System Reform and Malaria Control Project" (1994 -2001) has introduced a health zoning system. This zoning system defines accessibility of the people to health services, as well as qualitative aspects of the health services. By 1998, the Project established 133 zones in 16 districts.

Characteristics of zoning for the World Bank project are:

1 Zoning does not necessary follow the current administrative zoning.
2 The population served in a zone ranges from 2,000 to 10,000.
3 Each zone should have DRF.
4 Health services should be reached within 2 hours by means of local transportation.

The World Bank plan involves an idea of establishing "interdistrict hospitals" in main towns in order to serve people in the remote areas. The "interdistrict hospitals" are expected to provide services at a level closer to the level of Provincial Hospital. According to this idea, in Sepone and Champone districts, the district hospitals will be upgraded to the "interdistrict hospitals". The World Bank's selection of Sepone as an interdistrict hospital site accords with the SKR special development framework. On the other hand, Champone district is relatively close to Kanthabuly district where Provincial Hospital is located. It is likely that people in neighboring districts of Champone (e.g., Outhomphone and northern part of Xaiphounthon) will use Provincial Hospital bypassing the upgraded interdistrict hospital.

The following table shows that more than half of the zones in Phalanxai, Xonebouly, Nong, Thapangthong, Phine, Vilabouly, Sepone, and Atsaphone have no health center. Out of these zones, Phalanexai, Thapangthong Xoneboury, Nong, Phine and Sepone will be served by the World Bank project (i.e., upgraded

Sepone district hospital to an interdistrict hospital). Consequently, it becomes clear that the central area needs additional input to assure satisfactory health services.

Table I2-16 Health Posts & Accessibility to Health Services in Savannakhet

District	Number of Health Posts in 1998	Accessibility of Health Services 1999(%)	Population in 1998
Phalanxay	2	36	26,466
Thapangthong	-	41	27,421
Xonnabuly	3	44	43,968
Nong	3	55	18,437
Phine	3	60	44,833
Xepone	3	60	38,246
Virabuly	2	63	26,450
Atsphone	3	63	45,205
Atsaphangthong	4	68	33,329
Xayphouthong	5	83	39,998
Songkhone	10	88	77,343
Xaybuly	10	89	47,012
Champone	20	97	92,096
Khanthbuly	11	100	97,327
Outhoumphone	5	100	68,759
Average, Total	84	78	726,890

Source: Savannakhet Statistic Book 1998, Savannakhet Health Dept. 1999

On the other hand, the roads between Vilabouly and Sepone, and between Nong and Sepone are planned for improvement. With this and the above analysis in view, the area extending to the southern area of the central plain requires special consideration in regards to betterment of access to the health services. The area encompassed by the boarders of Phine, Thapangthong, and Xonebouly districts is relatively remote from the interdistrict hospitals in Sepone and Champhone, as well as from the district hospitals. Therefore, it is recommended that this particular area be selected for improvement of access to the higher level of health services.

Khammouan Province

In Khammouan province, there are geographically isolated areas during the rainy season. The Health Department acknowledges Boulapa, Nakay, and Xaybouathongare districts as geographically isolated. People in these districts have significant difficulties even in access to the district hospital. According to the IRAP accessibility data in 1998, there are sub-districts in Nakay and Boulapa where people take more than 1,000 minutes, or 16 hours to a district hospital. These sub-districts do not have any professional health workers.

Table I2-17 Average Travel Time to Clinic in Khammouan

District	Av. Time (minutes)	District	Av. Time (minutes)
Boulapa	343	Hinboun	234
Nakay	707	Xebengfay	199
Mahaxay	331	Nongbok	106
Xaybouathong	343	Nhommalad	207
Thakhak	54		

Source: IRAP District Accessibility Profile

In Boulapa, Nakay, Mahaxay, and Xaybouathong districts, there are only two to three health centers on which 8,000 to 10,800 people depend per center as shown below.

Table I2-18 Health Posts and Population by District in Khammouan

District	Number of Health Posts in 1999	Population in 1998	Population covered by a health center
Boualapa	2	21,624	10,812
Nakay	2	16,873	8,437
Mahaxay	3	24,637	8,212
Xaybouathong	2	16,314	8,157
Thakhek	13	73,553	5,658
Hinboun	12	54,778	4,565
Xebangfay	5	21,408	4,282
Nongbok	11	42,197	3,836
Nhommalad	7	23,447	3,350
Average, Total	57	294,831	6,368

Source: Khammouan Statistic Book 1998 and Khammouan Health Dept.

It is clear from the tables above that Boulapa, Nakay, Xaybouathong, and Mahaxay districts have difficulties in access to the district health system. The district capital of Xaybouathong is expected to grow as centers in the rural area under the special development framework. Therefore, it is recommended that the district hospital be upgraded in Xaybouathong by increasing the level of utilization and number of health personnel, and strengthening health personnel and equipment.

2) Reproductive Health Improvement Program

(1) Background

In SKR, MMR is established as around 550/100,000, or one of the world's worst rates. The reasons for this high rate are:

- Pregnant women who undergo antenatal care have been quite small in number. Usually, antenatal care contributes to reduction of mortality and morbidity by pregnancy, finding out high-risk pregnancies.

- The rate of delivery at health facilities or that of delivery with trained supporters have been low.
- The total fertility rate 7.1[12] is one of the highest in the world. This in turn implies higher risks of death related to pregnancy.
- The population structure of Lao PDR resembles a pyramid with the younger generations forming its wide base. They are vulnerable in protecting their reproductive health without having sufficient information including that about HIV/AIDS.
- The infection rate of HIV in Savannakhet is the highest among provinces in Lao PDR. Possibility of further increases in the HIV infection rate is high as population movement will grow among the neighboring countries with high HIV infection or increasing HIV infection.
- Access to health services is disturbed by the inadequate health facilities and the insufficient levels quality of services; e.g., bad roads, and other physical conditions such as remoteness, mountainous terrain, and rains.

In the urban area, the following are major constraints:

- Population in the urban area will increase more rapidly than in the rural area. It is likely that young people of reproductive age will move to seek job opportunities.
- Risks of HIV infection will be higher in the urban areas, due to the increase in international movement and growth of service provisions including entertainment and the sex industry.

In the rural areas, major constraints are the following:

- In the rural areas, access to health services is not easy, and it is highly probable that the reproductive health of pregnant women is worse than in the urban areas.
- Ethnic minorities living in the mountainous areas have difficulties in obtaining the necessary information due to difference in languages. Their religious beliefs, culture, and patriarchy differ from the matriarchy of the Lao Lum, and gender inequality have the potential of posing difficulties for them to adopt appropriate actions and methods.

(2) Objectives

The objectives to improve reproductive health are listed below.

- To decrease MMR,
- To ensure safe motherhood by birth spacing or family planning, and

[12] UNICEF Lao Office (2000). In the "Primarily Report of the Reproductive Health Survey" by State Planning Committee TFR (1996-1999) was stated as 4.9.

- To empower adolescents so that they can protect and improve their reproductive health.

(3) Strategies

Short-term Strategy

For improvement of reproductive health in the urban areas in SKR, it is proposed that the following strategies be applied in the short-term:

- To strengthen the capacity for essential obstetric care (EOC)[13] through retraining of staff, and to increase the capacity for comprehensive EOC at designated district hospitals.
- To conduct IEC regularly for pregnant women, their spouses, and the community leaders particularly those of women's groups.
- To conduct IEC on family planning.
- To encourage local women's groups to participate in awareness raising and IEC on family planning.
- To provide clinical family planning services and to increase choices of contraceptives.
- To make consultation for family planning and supply of contraceptives available.
- To initiate sex education and IEC on HIV/AIDS at schools and working places.

Short-term strategy for improvement of reproductive health in rural areas does not differ from that for the urban areas except for the following:

- To enhance training and retraining of health staff at health posts.
- To carry out IEC for pregnant women, their spouses, and community leaders to raise awareness of protecting health of pregnant women.
- To ensure limited provision of clinical family planning services.

Long-term Strategy

For improvement of reproductive health in the urban area in SKR, it is proposed that the following strategies be applied in the long-term:

- To strengthen the capacity for EOC at health facilities through retraining of staff and to increase capacity for comprehensive EOC.
- To conduct IEC regularly for pregnant women and their spouses.
- To promote sex education and IEC on HIV/AIDS at schools and working places.

[13] Essential obstetric care means the short list of services for saving the live of the majority of women with obstetric complications (UNICEF, UNFPA, and WHO).

Long-term strategy for the improvement of reproductive health in rural areas does not differ from the urban area, except for the following:

- To enhance training and retraining of health staff at health posts.
- To ensure limited clinical family planning services.

(4) Proposed Action Program for Reproductive Health Improvement

Table I2-19 Action Program for Reproductive Health Improvement

Core Areas: *Safe Motherhood, *Family Planning, *Education of reproduction Health including HIV/AIDS, *STI Care		
Urban	Short-Term	Long-Term
Intermediary Benchmarks	*100% TBAs are trained, *50% of pregnant women undergo antenatal care at least 3 times	*100% of deliveries are conducted at health facilities
	*80% of the adolescents in school undergo sex education,	*100% of trained staff undergo retraining of obstetric care
	*100% of health staff and school teachers are educated and trained on IEC on HIV/AIDS	*Capacity for obstetric complications are increased.
	*70% of health staff of health centers are trained for the syndrome approach.	*TFR is down to 3.0 CPR.
Main Projects	Capacity building of health staff for reproductive health services	Capacity building of health staff for reproductive health services .Establishing and operating emergency obstetric care networks.
	IEC activities for pregnant women and their spouses about pregnancy and delivery. Awareness raising of community leaders about safe motherhood.	Regular IEC activities for pregnant women and their spouses about pregnancy and delivery.
	IEC and consultation about family planning and assuring a supply of contraceptives	Providing services of clinical family planning and increasing choices of contraceptives and assuring informed consent.
	Sex education and IEC on HIV/AIDS for the adolescents and young adults.	Sex education and IEC on HIV/AIDS for the adolescents and young adults in school and working place.
	Strengthening STI care	
	TBA training	
Rural	Short-Term	Long-Term
Intermediary Benchmarks	*100% TBAs are trained, 50% of pregnant women undergo antenatal care at least 3 times	*100% of deliveries are conducted with trained professional attendants.
	*80% of the adolescents in school undergo sex education	*100% of health staff of health centers are trained for obstetric care
	*100% of health staff and school teachers are educated and trained on IEC on HIV/AIDS	*TFR is down to 3.0
	*70% of health staff of health centers are trained for the syndromic approach.	*100% of health staff of health centers are trained for the syndromic approach.
Main Projects	Training of TBAs and health staff of health centers	Strengthening of capacity of health staff of health centers for obstetric care.
	IEC activities for pregnant women and their spouses about pregnancy and delivery. Awareness raising of community leaders about safe motherhood.	
	Conducting outreach activities by health staff for antenatal care family planning with support from volunteer village health workers	Providing consultation about family planning and assuring a supply of contraceptives
	Sex education and IEC on HIV/AIDS for the adolescents and young adults.	
	Strengthening STI care	

3) Child Health Improvement Program

(1) Background

In SKR, IMR in 2000 is estimated at around 70/1,000. Although IMR has been improved in recent years, it is still one of the highest among developing countries in Asia. Many deaths of young children could be prevented by immunization or relatively simple methods if diseases are diagnosed correctly at an early stage. Acute respiratory infections and diarrhea are the biggest causes of child death but would not be fatal if treated appropriately. The following reasons degrade the status of health of children and result in their high mortality:

- Coverage of immunization is unsatisfactory in SKR.
- Levels of knowledge and skills of health staff on child infectious diseases are poor.
- Access to health services is disturbed by the inadequate establishment of health facilities, insufficient levels of quality of services, and difficulties in access.
- Levels of knowledge of caretakers such as mothers is also poor, and this makes it difficulty for them to take appropriate measures for prevention and care of diseases including seeking professional health services.

In the rural areas, access to health services is not easy, and health of children is worse than in the urban areas. For the ethnic minorities, it is difficult to get access to necessary information and to take appropriate measures for protection and improvement of child health.

(2) Objective

The objectives to improve health of children in SKR are listed below.

- To improve child health through immunization, IMCI, and decrease in malnutrition,
- To strengthen capacity of the district health systems for child health with emphasis on capacity development of frontline health staff, and
- To empower caretakers, to involve communities, and to encourage them to prevent childhood communicable diseases, to seek health services and to provide appropriate family and community care.

(3) Strategies

Short-term Strategy

For improvement of health of children in the urban areas in SKR, it is proposed that the following strategies be applied in the short-term:

- To accelerate expansion of immunization with incorporation of micronutrients.
- To strengthen health service capacity, particularly those below district level for immunization and IMCI.
- To conduct IEC for families and community and to train caretakers in order to take appropriate action for childhood diseases.
- To encourage participation of community in promotional activities for child health.

Short-term strategy for child health improvement in the rural areas does not differ from the strategies applied to the urban areas, except for the following:

- To intensify and accelerate training of health staff on IMCI at health posts. These frontier health workers are responsible for diagnosis and care of different child diseases and for referral of sick children to the upper level health facilities when necessary.

Long-term Strategy

For improvement of child health in the long-term, it is proposed that the following strategies be applied in the urban areas:

- To conduct immunization regularly at fixed health facilities.
- To strengthen health staff capacity for IMCI and referral networks for IMCI.
- To conduct IEC for families and community and to train caretakers so that they take appropriate actions for childhood diseases.

Long-term strategy for child health improvement in the rural areas does not differ from in the urban areas, except for the following:

- To train health staff at health posts on IMCI.
- To conduct outreach activities for immunization where people's access to health facilities is difficult.
- To encourage community participation in activities for promotion of child health.

(4) Proposed Action Program for Child Health Improvement

Table I2-20 Action Program for Child Health Improvement

Core Areas: *Immunization, *IMCI, *nutrition		
Urban	Short-Term	Long-Term
Intermediary Benchmarks	*70% of children are vaccinated(DPT, BCG, Polio, Measles, and TT) and 70% of pregnant women or younger women in reproductive age undergo TT 3 times	*100% of children are vaccinated regularly at fixed health facilities
	*80% of health staff in charge of child health undergo training on IMCI	*100% of pregnant women or 100% of younger women in reproductive age undergo TT 3 times
	*70% of mothers and their communities are provided information on protection and promotion of child health in the context of IMCI	*100% of mothers and their communities are provided information on protection and promotion of child health in the context of IMCI.
Main Projects	Accelerating expansion of immunization and incorporating supplementation of micronutrients in the immunization.	100% of children are vaccinated regularly at specific health facilities
	Strengthening the capacity of immunization, particularly vaccine delivery, storage and data collection.	Establishing surveillance system.
	Capacity building of health staff for IMCI, particularly those working at below the district level	Regular educational activities for pregnant women and their spouses about pregnancy and delivery.
	Growth monitoring is conducted.	Capacity building of health staff for IMCI with strengthening referral networks.
	Increasing IEC to families and community on protection of child health in the context of IMCI. Conducting training caretakers for adapting family care methods such as ORT.	IEC to caretakers are conducted.
Rural	Short-Term	Long-Term
Intermediary Benchmarks	*60% of children are vaccinated(DPT, BCG, Polio, Measles, and TT) , *50% of pregnant women or 90% of younger women in reproductive age undergo TT 3 times	*100% of children are vaccinated regularly at either specific health facilities by outreach activities
	*50% of health staff in charge of child health undergo training on IMCI	100% of health staff in charge of child health undergo training on IMCI
	*70% of mothers and their communities are provided information on protection and promotion of child health in the context of IMCI.	*100% of mothers and their communities are provided information on protection and promotion of child health in the context of IMCI.
Main Projects	Accelerating expansion of immunization	Strengthening regular collective immunization program at fixed places, with having outreach immunization at places of health facilities where people's access to health facilities is difficult.
	Strengthening the capacity of immunization, particularly vaccine delivery and storage.	Trained health staff of health centers is retrained on IMCI.
	Capacity building of health staff for IMCI, particularly those working at health centers.	
	Growth monitoring is conducted.	Growth monitoring is conducted.
	Increasing IEC to families and community on protection of child health. Conducting training caretakers for adapting family care methods such as ORT.	Increasing IEC to families and community on protection of child health. Conducting training caretakers for adapting family care methods such as ORT.

It is highly possible that difficulties in transportation disturb necessary supplies to improve child health; therefore, efforts should be made to substitute them with locally available resources such as packages of ORS with salt, sugar, and clean water.

I-3 EDUCATION SECTOR DEVELOPMENT PLAN

I-3.1 Overview

1) Education System

The current education system in Lao PDR consists of formal and non-formal education. Formal education is divided into four levels; i.e., primary education (5 years), lower secondary education (3 years), upper secondary education (3 years) and tertiary education (3 to 7 years). Under the current education system, 5-year primary education is compulsory. Either general education or vocational education can be chosen at the upper secondary level. At the tertiary level, several courses are available; i.e., university, high technical training, technical training, vocational training, or teacher training course.

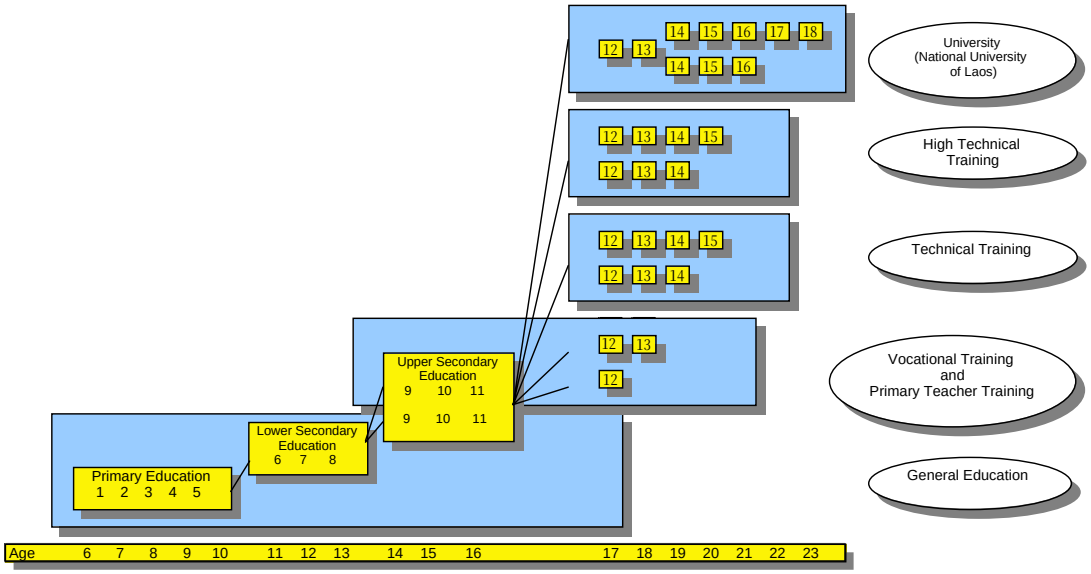


Figure I3-1 Current Education System in Lao PDR

2) Administration & Finance

<u>Central Administration</u>

Educational activities are under the jurisdiction of the Ministry of Education (MOE). MOE is responsible for planning the national education system, recommending education policy, and supervising all educational activities. MOE is also responsible for (i) curriculum development, (ii) textbook writing and publication, (iii) teacher education, (iv) higher education, (v) finance for education, and (vi) personnel management.

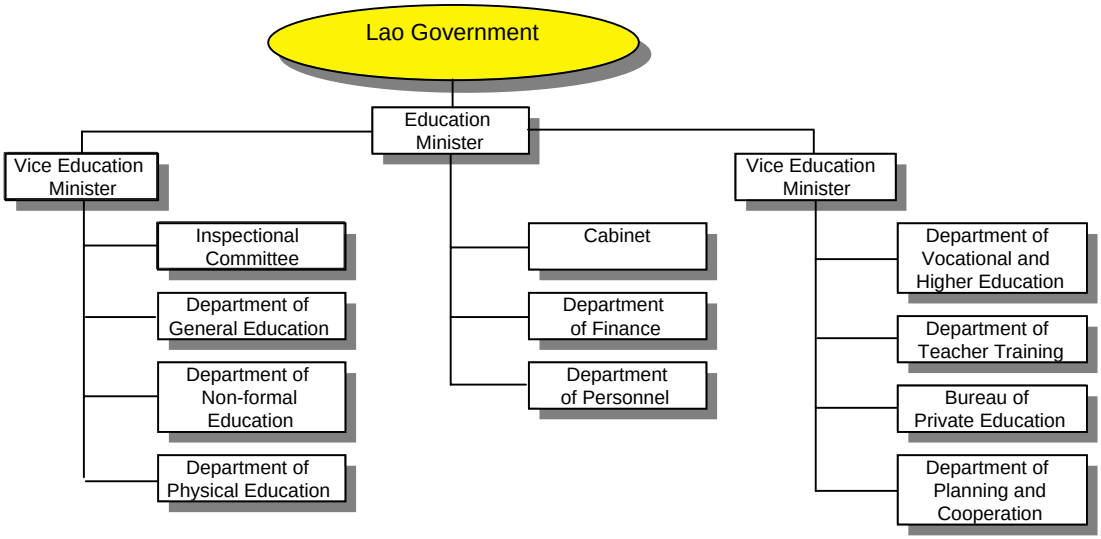


Figure I3-2 MOE Organization

Local Administration

The Provincial Education Service (PES) and the District Education Bureau (DEB) are organized in provinces and districts respectively. These offices are responsible for school building initiatives and vocational education. PES, particularly, has responsibility for implementing and supervising primary and secondary education in the provinces. PES participates in annual and multi-year education planning. Although PES is administered by MOE, it is managed to some extent by the provincial governor. Some education budgets are allocated by the governor who has discretionary funds. On the other hand, DEB assists schools and communities in their planning of primary and pre-primary education, and prepares a district plan for each academic year and school term.

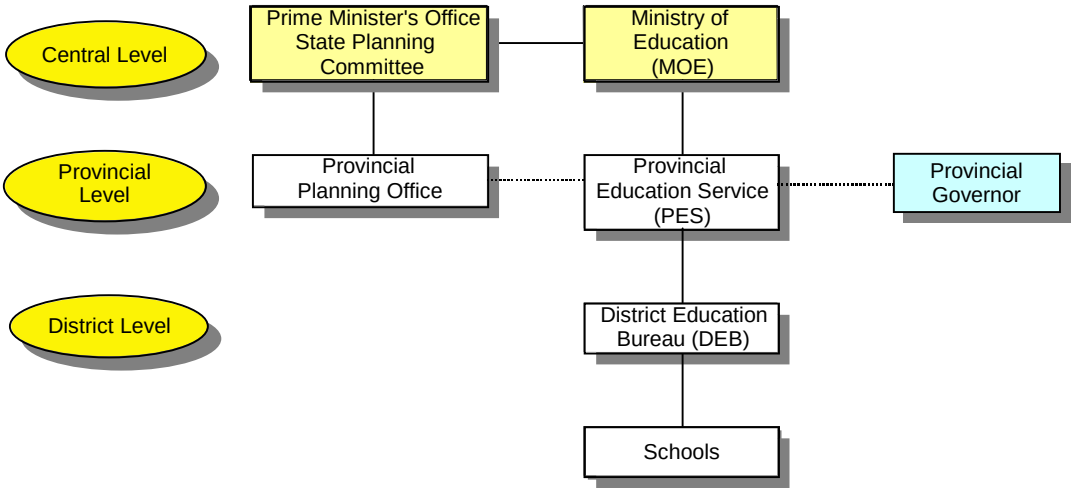


Figure I3-3 Educational Administration System

Finance

In the academic year 1997-98, the national education budget was 72.1 billion kip, equivalent to 2.1% of GDP or 13.3% of the governmental budget. The education budget per GDP fell within the range from 2.1% to 2.9% in the 1990s, except for 1994-1995. Although the nominal budget increased by nearly 300% from 1993 to 1998, the real amount of budget increased much less.

Table I3-1 Government Education Budget

	1993-94	1994-95	1995-96	1996-97	1997-98
Education Budget (billion kip)	24.3	49.0	46.6	64.4	72.1
Education Budget as % of GDP	2.2	3.4	2.7	2.9	2.1
% of Gov' budget	9.6	13.9	12.8	15.8	13.3

Source: Education Sector Development Plan, ADB

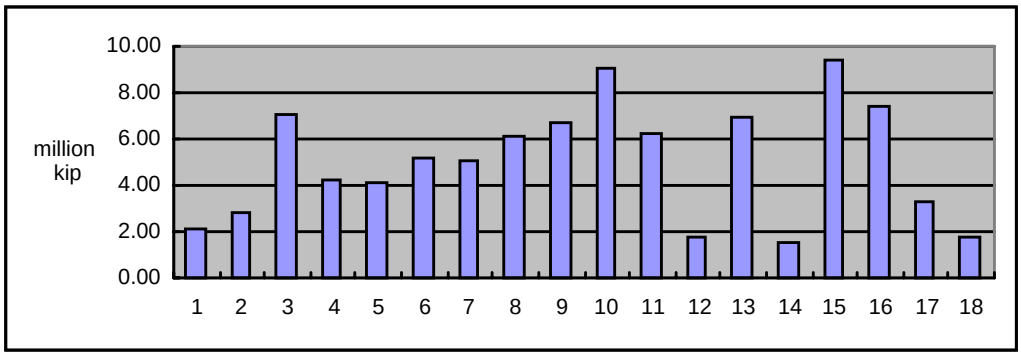
The education budget varies from province to province. For instance, Savannakhet has allocated 20% of the provincial budget, or 47 billion kip, for the last seven years. On the other hand, Khammouan has earmarked 2% of the total budget, or 5 billion kip. The education budget allocation per head widely differs among provinces. Vientiane and Sekon provinces show the highest allocation or over 9 million kip, followed by Champasak (7.4 million kip), Luangnamtha (7 million kip), and Savannakhet (6.9 million kip). Khammouan is the third lowest among 18 provinces with 1.8 million kip.

Table I3-2 Education Budget by Province

(Million Kip)

	Province	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	Total
1	Vientiane Municipality	1,494	2,732	3,059	4,000	0	55	23	**11,363**
2	Phonsaly	267	526	544	737	0	1,302	913	**4,289**
3	Luangnamtha	225	497	530	892	1,219	1,721	3,004	**8,087**
4	Oudomxay	277	929	538	861	898	2,030	3,260	**8,791**
5	Bokeo	243	485	634	964	767	582	1,070	**4,745**
6	Luangprabang	917	1,807	1,989	2,555	2,585	3,003	5,906	**18,761**
7	Huaphanh	563	1,128	1,256	1,751	1,753	2,006	3,899	**12,356**
8	Xayabury	845	1,757	1,807	2,514	2,371	2,944	5,468	**17,706**
9	Xiengkhuang	505	1,173	1,265	2,260	1,948	2,632	3,582	**13,365**
10	Vientiane	1,255	2,592	2,439	3,292	2,768	6,561	7,254	**26,160**
11	Borikhamxay	436	878	983	1,164	1,179	1,597	3,923	**10,159**
12	Khammouan	779	1,463	1,451	200	0	98	964	**4,955**
13	Savannakhet	2,035	3,823	3,720	5,246	4,770	10,757	16,340	**46,691**
14	Saravane	441	921	983	1,216	0	156	114	**3,831**
15	Sekong	156	303	313	434	642	1,900	2,268	**6,017**
16	Champasak	1,678	3,118	2,949	4,257	4,226	8,488	12,282	**36,997**
17	Attapeu	237	486	490	718	0	56	917	**2,904**
18	Xaysomboun	0	6	329	435	0	151	38	**958**
	Total	**12,353**	**24,625**	**25,277**	**33,495**	**25,125**	**46,036**	**71,227**	**238,137**

Source: Department of Finance, MOE



Source: Department of Finance, MOE

Figure I3-4 Education Budget per Head by Province (1993-2000 total)

3) National Education Development Plan

In 1996, the government issued the "Education Development Plan 1996-2000" as a direction for national education. The Plan highlighted the following issues:

- Expansion of compulsory education by 2000,
- Expansion of all levels of education,
- Increase in efficiency of primary and secondary education through reduction of dropout and repetition,
- Improvement of teacher education through organizational and curricular changes,
- Literacy training with an emphasis on skill training,
- Reform of curriculum in vocational education,
- Better monitoring and evaluation of projects under the Plan,
- More effective financial management and use of budgets,
- Improvement of management at each level of education, and
- Expansion of the private sector in education.

Further, MOE issued the "20-Year Perspective Plan (2001-2020)" and the "2001-2005 Five-Year Education Plan." Under these Plans, the government envisages some new strategies; e.g., multi-grade teaching, foreign language teaching from Grade 3, management of training, and support for women and ethnic minorities.

4) Basic Education

Primary Education

(1) Rapid Increase in Enrollment, But Still Low Enrollment Ratio

Primary schools provide 5-year compulsory education. Currently about 827,000 students are enrolled in primary schools. The enrollment has increased rapidly

since 1991, or at the average annual increase rate of 6%. This trend is also observed in Savannakhet and Khammouan provinces.

Table I3-3 Students in Primary Level

	1991	1992	1993	1994	1995	1996	1997	1998
No. of Students (Lao PDR)	561,928	637,359	681,044	724,114	762,489	786,404	820,913	827,664
% of Increase	-	13.42	6.85	6.32	5.30	3.14	4.39	0.82
Savannakhet	n.a	n.a	n.a	n.a	105,949	107,505	109,394	109,394
Khammouan	n.a	n.a	n.a	n.a	40,675	41,158	45,030	47,494
SKR Total	**n.a**	**n.a**	**n.a**	**n.a**	**146,624**	**148,663**	**154,424**	**156,888**
% of Increase	-	-	-	-	-	1.39	3.88	1.60

Source: IRAP

According to the 1995 Population Census, a net enrollment ratio of primary education was 55.1% over the country, while it was 55.4% in Savannakhet and 50.1% in Khammouan. MOE reported that this net enrollment ratio was elevated further to 76.4% in 1998.

Table I3-4 Primary Education Enrollment Ratio in 1995

(%)

	Lao PDR	Savannakhet	Khammouan
Net Enrollment Ratio	**55.1**	55.4	50.9
Gross Enrollment Ratio	**111.2**	106.8	100.9

Source: 1995 Population Census and IRAP

The enrollment ratio in Lao PDR is still much lower than those in other countries, as shown below. Even among the neighboring ASEAN countries, e.g., Malaysia, the Philippines, Cambodia, and Indonesia, it is clear that compulsory education in Lao PDR is not yet universal.

Table I3-5 Enrollment Ratio of Selected ASEAN Countries (1996)

(%)

	Lao PDR	Malaysia	Philippines	Cambodia	Indonesia
Net Enrollment Ratio	**76.4**	100.0	100.0	98.0	95.0

*Lao PDR's enrollment rate is in1998, and the other figures are in 1996.
Source: UNESCO

(2) High Rate of Dropouts and Repeaters

Another constraint of Lao education is a high rate of dropout and repetition. The annual dropout and repetition ratios were 19.3% and 24.4%, respectively[1]. The high dropout and repetition has caused lower enrollment. The ratios of dropout and repetition by province vary from 16% to 27% (dropout), and from 21% to 32% (repetition). In Savannakhet, the dropout ratio and repetition ratio were 22.5% and

[1] ADB, Education Sector Development Plan, 1999.

25.5%, respectively. In Khammouan, the dropout ratio was 20% and the repetition ratio was 24%. These ratios in SKR are slightly higher than the national average.

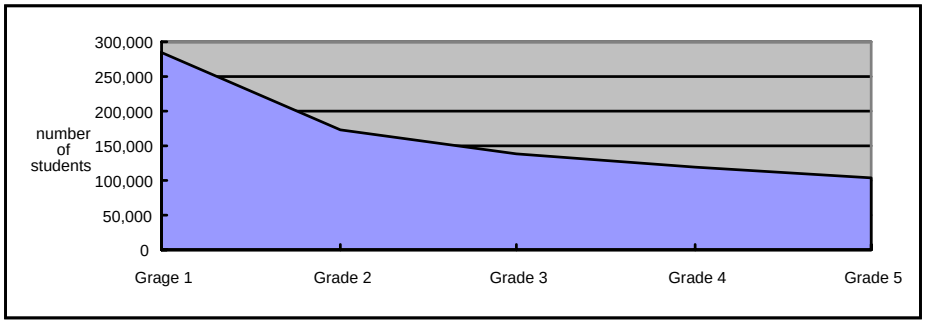
Table I3-6 Dropout and Repetition Ratio

(%)

	Lao PDR	Savannakhet	Khammouan
Dropout Ratio	**19.3**	22.5	20.0
Repetition Ratio	**24.4**	25.5	24.0

Source: ADB, Education Development Plan, 1999

Dropout and repetition usually occur in early grades, especially during grade 1 and grade 2. Approximately 40% of students in primary level either dropout or repeat before grade 2, as illustrated below.



Source: Education and Teacher Training in Lao PDR, by Y. Kiuchi

Figure I3-5 Students Continuing Until Grade 5

This high dropout appears to be attributable to many “incomplete” school across the country which cannot provide 5-year study due to limitation in teachers and facilities.

(3) Different Aged-Student at Primary Grade 1

Children aged 6 are required to enter primary school under the current Lao education system. However, this regulation is not strictly implemented, and children aged 7 or 8 often start to go to school in many places. As shown in the next table, the number of students between aged 7 and 8 indicates larger increase than the other age groups. This is also one of the major reasons for the lower enrollment ratio at the primary level.

Table I3-7 Number of Students by Age (1995)

Age	**Lao PDR**	Savannakhet	Khammouan
6	**37,485**	5,489	1,742
7	**66,543**	9,874	3,639
8	**83,359**	12,539	4,538
9	**85,425**	11,558	4,695
10	**104,862**	15,468	5,900

Source: 1995 Population Census

(4) Many Incomplete Schools and Damaged Facilities

In the rural areas, there are a significant number of “incomplete” schools, which cannot offer 5-year education, usually providing only 1- or 2-year study. Students who want to continue further study must go to other villages where “complete” schools are available.

Table I3-8 Incomplete Primary Schools (1998)

	Lao PDR	Savannakhet	Khammouan
No. of Primary Schools	**7,318**	1,133	520
No. of Incomplete Schools	**4,737**	703	340
% of Incomplete School	**65.0**	62.0	65.4

Source: ADB and IRAP

Notably, 65% of primary schools across the country are “incomplete” schools. Among these schools, approximately 45% of schools offer only 2-year study. The schools which offer less than three-year study account for 62% of the total number of incomplete primary schools. At provincial level, Savannakhet has a less number of “incomplete” schools than the national average, while Khammouan has more “incomplete” schools.

Table 13-9 Incomplete Schools (1998)

	Number	%
Schools offering only G1	821	11.2
Schools offering up to G2	2,097	28.7
Schools offering up to G3	1,395	19.1
Schools offering up to G4	424	5.9
Complete School	2,551	34.9
n.a.	30	0.4
Total	**7,318**	**100.0**

Source: ADB

The condition of school facilities is also important for primary education. There are currently three types of school building across the country; i.e., i) permanent building made of concrete, ii) semi-permanent building made of concrete, wood

and bamboo wall, and iii) temporary building of wood and bamboo. Permanent buildings account for 6%, semi-permanent buildings for 36%, and the remaining 58% of buildings are temporary. Among those buildings, 80% are not in an acceptable condition for studying, and 45% are clarified into "dangerous buildings" which are damaged seriously and require immediate renovation.

Table I3-10 Number of Primary School Buildings by Type and Condition (1998)

	Good	Poor	Bad	**Total**
Permanent Building	220	136	90	**446**
Semi-Permanent Building	635	1,121	1,113	**2,869**
Temporary Building	621	1,611	2,355	**4,587**
Total	**1,476**	**2,868**	**3,558**	**7,902**

Source: ADB, Education Development Plan, 1999

(5) Shortage of Primary Teachers

The number of teachers in primary level has been increased at the average annual rate of 3%, showing a teacher-student ratio unchanged largely since 1992.

Table I3-11 Teacher-Student Ratio

	1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
Lao PDR No. of Teachers	22,254	21,652	22,649	24,568	25,366	26,354	27,146	27,083
Teacher-Student Ratio	1:25	1:29	1:30	1:29	1:30	1:30	1:30	1:31
Savannakhet	n.a.	n.a.	n.a.	n.a.	3,861	3,871	3,924	3,924
Teacher-Student Ratio	-	-	-	-	1:27	1:28	1:28	1:28
Khammouan	n.a.	n.a.	n.a.	n.a.	1,204	1,339	1,434	1,509
Teacher-Student Ratio	-	-	-	-	1:34	1:31	1:31	1:31
SKR Total	n.a.	n.a.	n.a.	n.a.	5,065	5,210	5,358	5,433
Teacher-Student Ratio	-	-	-	-	1:29	1:29	1:29	1:29

Source: IRAP and Education and Teacher Training in Lao PDR, 2000, by Y. Kiuchi

According to the Education Offices in Savannakhet and Khammouan, the shortage of teachers in primary schools is a severe constraint, though the teacher-student ratio does not significantly differ from the national average. The shortage of teachers in SKR is mainly attributable to unequal distribution of teachers. Some places in the urban area deploy more teachers, while few teachers are allocated in the remote areas.

(6) Low Quality of Primary Education

Low quality of primary education is mainly attributed to (i) low quality of teachers, and (ii) shortage of teaching and learning materials. Low quality of teacher is a result of the low remuneration rates for teaching in the rural areas, where infectious diseases are still prevalent, and where the number of young people who wish to become a teacher is decreasing. Several measures have been taken in

this respect. For example, a quota system has been set up in teacher training colleges and the National University of Laos (NUOL).

Under the quota system, a certain number of students is recommended by the provincial governor, to receive scholarships, and in exchange for this benefit, they are obliged to become teachers in their home provinces after graduation. Another measure is to raise their salary by at the most 25% for teaching in the rural areas.

These incentives, however, are insufficient because almost half of quota system students do not become teachers, and the 25% salary hike has not been thoroughly implemented due to budgetary constraints. As a result, the province has to hire some new graduates from upper secondary schools temporarily, which is called “Teacher on Contract.” They are not recognized as formal teachers, and their salary is supported by local community where they are teaching. “Teachers on Contract” are substantial in numbers. It should be noted that many teachers who are currently teaching in schools possess only 5-year education plus 3-year training background because they became teachers before the current system started.

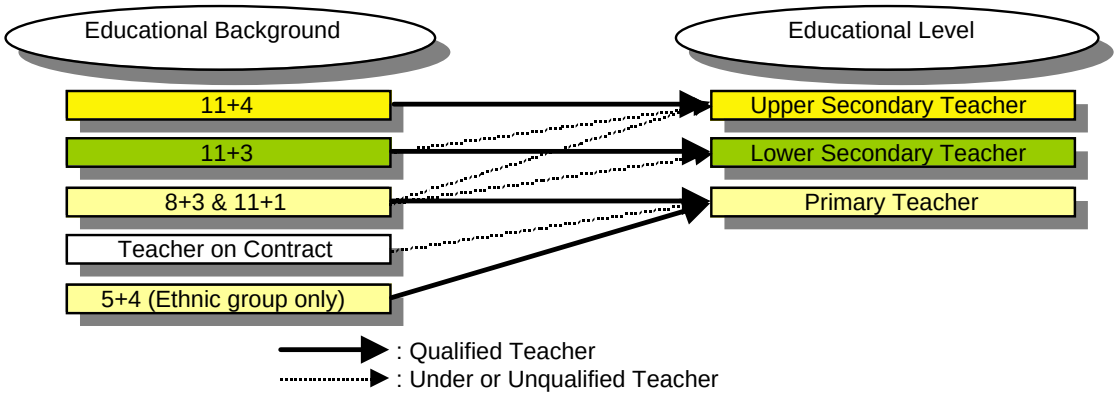


Figure I3-6 Structure of Qualified, Unqualified or Under-qualified Teacher

Table I3-12 Number of Under- or Unqualified Teachers by Province (2000)

	Lao PDR	Savannakhet	Khammouan
No. of Under-or Unqualified Teachers	**4,000++**	542	573
% to Total Teachers	**14.8++**	17.5	38.0

Source: Interview in the Provincial Education Office

The shortage of teaching and learning materials has significant impacts on educational activities. School equipment (e.g., desk, chair, blackboard, chalk, notebook, and pencils) as well as textbooks and teaching guidebooks, are in severe shortage. Through interviews at several local primary schools in Savannakhet and Khammouan municipalities, it is found that the number of

textbooks and teacher's guidebooks is insufficient and textbooks are usually returned to school for reuse after completing the grade. In the rural areas, most students are found to have no textbook.

Table I3-13 Publication of Textbook and Teacher's Guidebook

		Lao Language	Mathematics	World Around Us	Art	Physical Edu.	Music	Handicraft
Textbook for Students	Grade 1	O	O					
	Grade 2	O	O					
	Grade 3	O	O					
	Grade 4	O	O	O				
	Grade 5	O	O	O				
Teacher's Guidebook	Grade 1	O	O	O	O	O	O	O
	Grade 2	O	O	O	O	O	O	O
	Grade 3	O	O	O	O	O	O	O
	Grade 4	O	O	O	O	O	O	O
	Grade 5	O	O	O	O	O	O	O

Source: ADB, Education Sector Development Plan, 1999

Secondary Education

(1) Rapid Increase in Enrollment

At the secondary education level, the number of students has been increasing at the annual average increasing rate of over 10% since 1991.

Table I3-14 Secondary Level Students

		1991	1992	1993	1994	1995	1996	1997	1998
Lao PDR	Lower Secondary	88,914	114,441	105,497	117,896	123,937	138,361	153,794	169,691
	% of Increase	-	28.7	-7.8	11.8	5.1	11.6	11.2	10.3
	Upper Secondary	32,839	32,819	38,176	44,599	44,317	47,755	58,432	67,198
	% of Increase	-	-0.1	16.3	16.8	-0.6	7.8	22.4	15.0
	Total	**121,753**	**147,260**	**143,673**	**162,468**	**168,254**	**186,116**	**212,226**	**236,889**
	% of Increase	**-**	**20.9**	**-2.4**	**13.1**	**3.6**	**10.6**	**14.0**	**11.6**
Savannakhet	Lower Secondary	n.a.	n.a.	n.a.	n.a.	5,495	14,707	15,635	17,186
	Upper Secondary	n.a.	n.a.	n.a.	n.a.	5,246	6,106	5,836	5,696
	Total	n.a.	n.a.	n.a.	n.a.	**10,741**	**20,813**	**21,471**	**22,882**
	% of Increase	n.a.	n.a.	n.a.	n.a.	**-**	**93.8**	**3.2**	**6.6**
Khammouan	Lower Secondary	n.a.	n.a.	n.a.	n.a.	6,268	5,729	5,631	6,741
	Upper Secondary	n.a.	n.a.	n.a.	n.a.	2,089	1,859	1,963	2,241
	Total	n.a.	n.a.	n.a.	n.a.	**8,357**	**7,588**	**7,594**	**8,982**
	% of Increase	n.a.	n.a.	n.a.	n.a.	**-**	**-9.2**	**0.1**	**18.3**

Source: Education and Teacher Training in Lao PDR, Y. Kiuchi

This trend is also observed in Savannakhet and Khammouan. The number of secondary school students has increased since 1995. However, they show different increasing situations; e.g., Savannakhet indicated a huge rise during 1995 to 1996, and then increasing speed slowed down. On the other hand, Khammouan's increase was seen after 1997, which showed an 18.3% rise. This increased number of secondary students elevated the enrollment significantly. The gross enrollment ratio at the national level increased to 31.1% in 1998, while it was 20.5% in Savannakhet and 20.0% in Khammouan.

Table I3-15 Enrollment Ratio in 1995 and 1998

	Lao PDR		Savannakeht		Khammouan	
	1995	**1998**	1995	1998	1995	1998
Lower Sec. Edu.	**34.4**	**42.2**	10.3	29.4	29.6	28.4
Upper Sec. Edu.	**14.4**	**18.6**	11.7	10.7	11.8	10.6
Secondary Edu.	**25.2**	**31.1**	**10.9**	**20.5**	**21.4**	**20.0**

Source: 1995 Population Census and IRAP

(2) Little Opportunity to Access to Secondary Education

Though the number of students rose significantly, the number of secondary school has not increased. This means that only students who have access to secondary education can enroll. Most of the rural areas have no secondary school and students in these areas cannot enjoy secondary education.

Table I3-16 Number of Secondary Schools and Accessibility (1998)

	Lao PDR	Savannakhet	Khammouan
No. of Lower Secondary Schools	**621**	144	46
No. of Upper Secondary Schools	**199**	27	9
No. of Villages without access to Secondary School	**-**	509	308
% of these Villages	**-**	36.6	38.5

Source: IRAP and Education and Teacher Training in Lao PDR, by Y. Kiuchi

Savannakhet and Khammouan have many villages without secondary school and located far from villages with secondary schools.

(3) Significant Number of Dropouts and Repeaters

Many students drop out or repeat the same grade at the secondary level. It is reported that there are 19,000 dropouts and repeaters at the lower secondary level and 6,000 at the upper secondary level, which account for about 10% of total students at the secondary level.

Table I3-17 Dropouts and Repeaters in Lao PDR

	1993	**1994**	**1995**	**1996**	**1997**	**1998**
Lower Sec. Edu.	15,425 (14.6%)	9,318 (7.9)	13,217 (10.7)	11,235 (8.1)	15,295 (9.9)	18,629 (11.0)
Upper Sec. Edu.	2,235 (5.9%)	2,140 (4.8)	5,972 (13.5)	3,987 (8.3)	2,216 (3.8)	5,910 (8.8)
Total	**17,660 (12.3%)**	**11,458 (7.1)**	**19,189 (11.4)**	**15,222 (8.2)**	**17,511 (8.3)**	**24,539 (10.4)**

Source: Y. Kiuchi

(4) Inadequate Teaching Conditions

With a rapid increase in students at the secondary level, teaching conditions have become worse. It is because the number of teachers and classrooms have not increased but decreased in some provinces. The teacher-student ratio is 1:27 in lower secondary and 1:13 in upper secondary at the national average. In SKR, the teacher-student ratio is still relatively low at 1:13 to 1:11.

Table I3-18 Teacher-Student Ratio

		1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
Lower	Lao PDR	1:10	1:14	1:13	1:15	1:16	1:20	1:24	1:27
Secondary	Savannakhet	n.a	n.a	n.a	n.a	1:4	1:11	1:12	1:13
	Khammouan	n.a	n.a	n.a	n.a	1:10	1:11	1:11	1:13
Upper	Lao PDR	1:10	1:12	1:13	1:16	1:15	1:16	1:13	1:13
Secondary	Savannakhet	n.a	n.a	n.a	n.a	1:11	1:12	1:12	1:12
	Khammouan	n.a	n.a	n.a	n.a	1:11	1:10	1:10	1:11

Source: Y. Kiuchi

5) Higher Education

Post-secondary education is divided into three courses; i.e., (i) university education, (ii) teacher training education, and (iii) vocational & technical education.

University Education

Currently there is only one university in Lao PDR, the National University of Laos (NUOL), which was formed in 1995 through consolidation of various post-secondary institutions. NUOL now offers three levels of education; i.e., (i) Bachelor's degree course, (ii) technical diploma course, and (iii) middle technical certificate course. The Bachelor's course had 5,557 students, technical diploma course had 3,511 students, and middle technical certificate course had 559 students in 1998. The faculty and courses offered at present are as shown below.

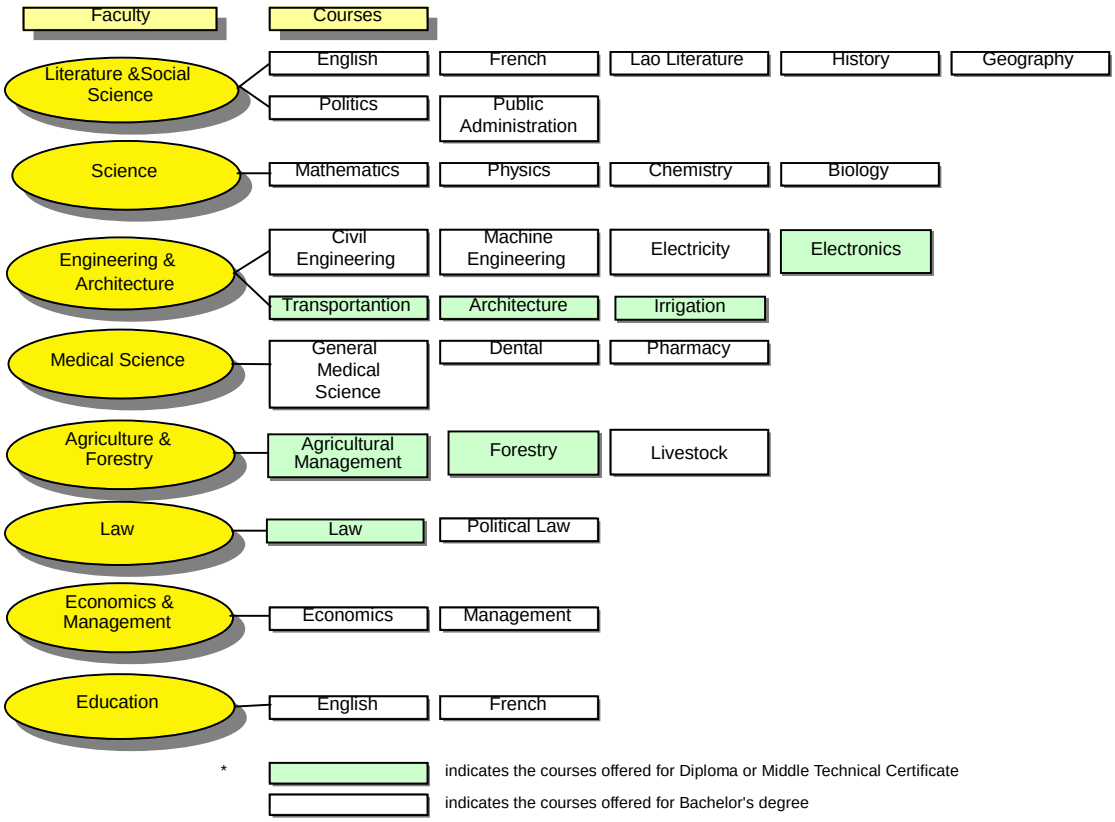


Figure I3-7 Faculty and Courses in NUOL

In the University curriculum, all students receive general education courses in the first two years, and they can study specific subjects from the third year. NUOL faces limited teaching equipment (e.g., computer, materials for scientific

experiment, and transportation for faculty staff). Most students do not have adequate textbooks and study-guidebooks. The libraries have empty shelves.

Only 10% of teaching staff possess more than a Bachelor's degree. They studied abroad to get degrees, such as in Australia, Japan, and Thailand. There are 104 staff without any degrees, accounting for 8.2% of total staff.

Table I3-19 Teaching Staff by Educational Background (1998)

	Ph.D.	M.A.	B.A.	Higher Dip.	Middle Dip.	Lower Dop.	None Degree	**Total**
No. of Teaching Staff	29	101	697	87	165	83	104	**1,266**
% of Teaching Staff	2.3	8.0	55.1	6.9	13.0	6.6	8.2	**100.0**

Source: NUOL 1998, S. Ikeda

Teacher Training Education

Teacher's training is divided into 4 levels; i.e., (i) pre-primary school teacher's training, (ii) primary school teacher's training, (iii) lower secondary school teacher's training, and (vi) upper secondary school teacher's training. It is also classified into (i) 1 year-training, (ii) 3 year-training, and (iii) 5 year-training types.

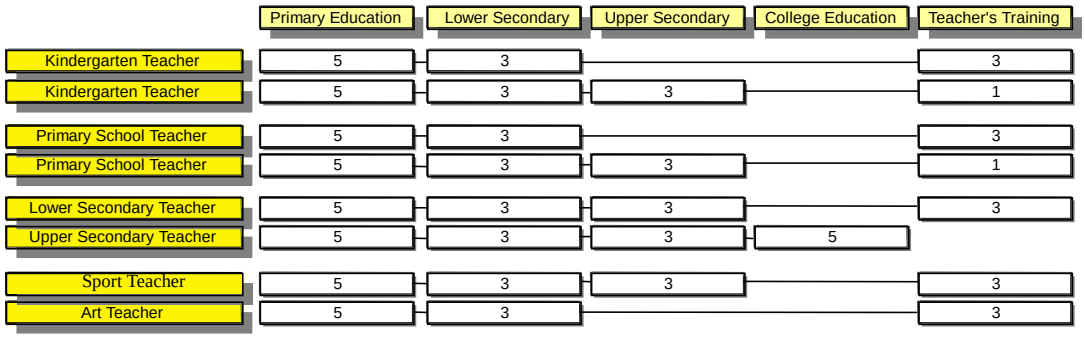


Figure I3-8 Educational Requirements for Teachers

The teacher training colleges have been established through the recent renovation and consolidation of colleges promoted under auspices of ADB. The college facilities have also been reconstructed by ADB loan. There are 10 teacher's training colleges and schools and one Faculty of Education in NUOL.

Table I3-20 Students in Teacher Training Education (1999)

	Pre-primary	Primary		Lower Secondary	Upper Secondary	**Total**
	8+3/11+1	8+3	11+1	11+3	11+5	
DongKhamxang TTS	130	-	176	-	-	**306**
Luangnamtha TTS	-	324	129	-	-	**453**
Salavan TTS	-	198	118	-	-	**316**
Khangkhai TTS	-	201	52	191	-	**444**
Ban Keun TTC	-	-	142	458	-	**600**
Luangphrabang TTC	-	174	158	449	-	**781**
Savannakhet TTC	-	-	149	472	-	**621**
Pakse TTC	-	-	92	392	-	**484**
Physical Education School	-	-	233*	-	-	**233**
Art Education School	-	129	-	-	-	**129**
NUOL	-	-	-	-	458	**458**
Total	**130**	**1,026**	**1,249**	**1,962**	**458**	**4,825**

* 11+3 is required.

Source: Ministry of Education

Teacher's training colleges also face severe shortage of materials, even though school facilities have been renovated. In libraries, there are only a few periodicals and books, and most shelves are empty. Classrooms for scientific experiments do not have adequate equipment.

6) Vocational & Technical Education

Vocational and technical education is supervised by various ministries; e.g., Ministry of Agriculture and Forestry, Ministry of Health, Ministry of Culture, Ministry of Finance, Ministry of Communication, Transport, Post and Construction, as well as MOE. It is classified into two categories based on qualification; i.e., (i) certificate level (3-year training for students who completed 8-year basic education, 8+3), and (ii) technical diploma level (3-year training for students who completed 11-year education, 11+3).

Table I3-21 Students and Teachers in Vocational Schools

	No. of Schools	No. of Students	No. of Teachers	Body of Supervision	Remarks
Certificate Level (8+3)					
Vocational School	6	1,539	135	Ministry of Education	1) Pakpasak, 2) Luangprabang, 3) Vientiane, 4) Khammouan, 5) Savannakhet, and 6) Champasak
Nursing School *1	5	374	59	Ministry of Health	1) Luangprabang, 2) Khammouan, 3) Savannakhet, 4) Champasak, and 5) Vientiane
Arts, Dance, and Music School *2	4	313	31	Ministry of Culture	1) Vientiane, 2) Luangprabang, 3) Savannakhet, 4) Vientiane Province
Sub-Total	**15**	**2,226**	**225**		
Technical Diploma Level (11+3)					
Technical School	9	2,765	306	Ministry of Education Ministry of Transportation	
Agricultural School	5	973	94	Ministry of Agriculture	
Arts, Dance, and Music School	4	155	38	Ministry of Culture	
Finance Training School	1	1,180	28	Ministry of Finance	
Medical & Nursing School	1	540	52	Ministry of Health	
Sub-Total	**20**	**5,613**	**518**		

*1: These Nursing schools require 11+2.
*2: Only Vientiane Province Dance and Music School requires 5+3.

Source: ADB and Y. Kiuchi

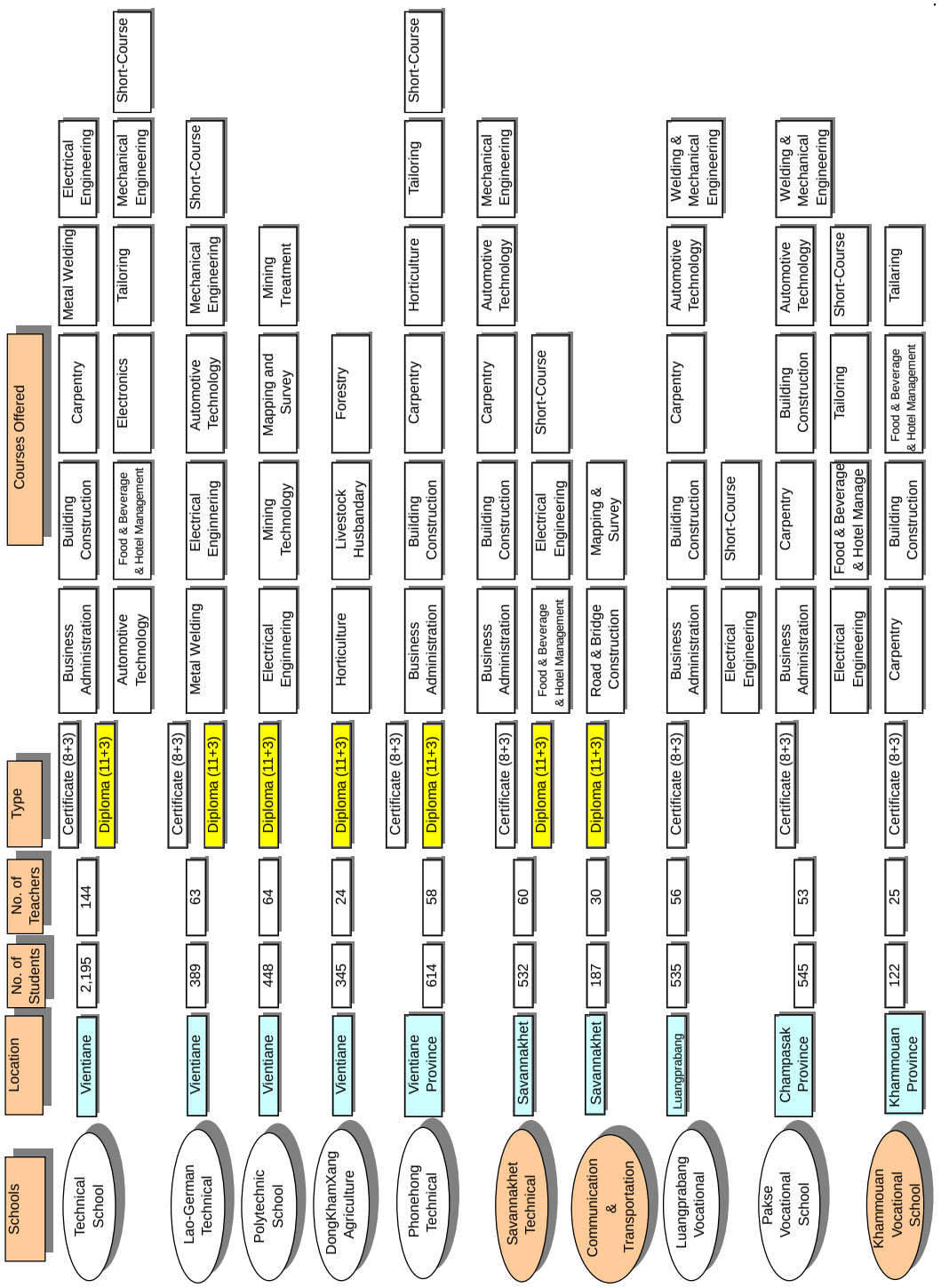


Figure I3-9 Vocational & Technical Education Institutes and Courses

There are 15 certificate level schools (post-lower secondary schools) and 20 diploma level schools (post-upper secondary schools), having a total capacity of 2,200 and 5,500 students, respectively. These numbers of students are small when compared to 40,000 lower secondary graduates and 17,000 upper secondary graduates annuanlly. This implies that only 6% of lower secondary graduates and 30% of upper secondary graduates can enjoy further study in vocational and technical education.

The quality of vocational and technical education is much to be improved. The skills and knowledge level of graduates are far from requirements by the private sector, resulting in most graduates being unemployed or help family businesses. It is attributable to the facts that (i) students do not receive adequate practical training due to severe shortage or lack of teaching equipment and materials, and (ii) teacher's teaching quality is low due to lack of teacher's training and skill upgrading opportunity.

Practical training is crucial for vocational and technical education. Vocational and technical schools face severe shortage of equipment and materials. The schools cannot follow modern innovation at the skill and technical level. Among 10 vocational and technical schools in Lao PDR, "Pakpasak Technical School" and "Lao-German Technical School," have acceptable conditions for vocational training. In the current vocational and technical education, there is no regulation on the qualification of teachers. Some teachers in vocational and technical schools graduate from such schools and become teachers right after graduation.

7) Non-Formal Education

Non-formal education is described in a formal proclamation issued by MOE in 1998. According to the proclamation, there are three major goals for non-formal education; i.e., (i) eradication of illiteracy among ethnic groups nation-wide, (ii) elevation of the primary and secondary levels of education for military personnel and police, and (iii) promotion of basic vocational skills for the educationally disadvantaged and low-income population. In addition, the proclamation identifies the target groups for non-formal education as illustrated in the following.

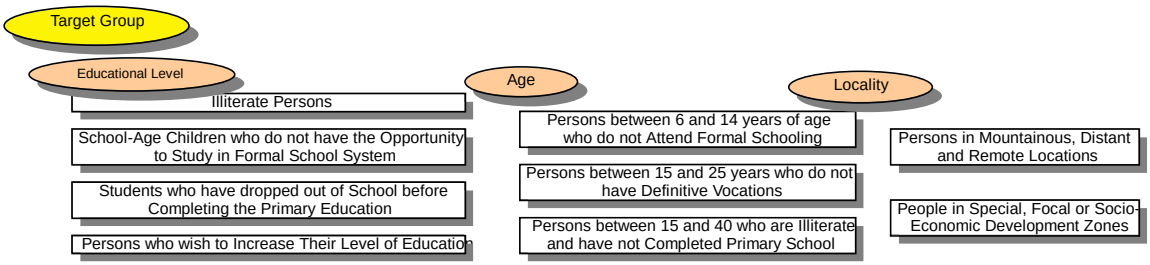


Figure I3-10 Non-Formal Education Targeted Group

Non-formal education is, at the central level, administered by MOE's Department of Non-Formal Education. At the local level, PES, DEB, and the Community Learning Centers are responsible for implementation of non-formal educational activities. The Community Learning Centers are set in villages and play an important role in directly implementing activities. There are currently 168 Centers nation-wide (27 in Savannakhet and 7 in Khammouan). Apart from MOE, the Ministry of Labor and Social Welfare (MOLSW) has also conducted some vocational training for local people. It has tried to set up the Employment Promotion Center in several provinces.

There are many illiterate people in the country, as much as 40% of population (1995). The illiteracy ratios in Savannakhet and Khammouan show approximately 4 percentage points higher than the national average.

Table I3-22 Literate Ratio (1995)

	Lao PDR		Savannakhet		Khammouan	
	No. of Literate	**% of Literate**	No. of Literate	% of Literate	No. of Literate	% of Literate
Male	**904,928**	**73.5**	124,937	70.2	50,609	70.7
Female	**632,201**	**47.9**	85,885	43.6	34,888	43.1
Total	**1,537,129**	**60.2**	**210,822**	**56.2**	**85,497**	**56.0**

*The figures indicate population aged over 15.

Source: Population Census 1995

The number of participants in non-formal education has increased significantly since 1991, totaling 365,000 during the period from 1991 to 1998. Especially, participants in the literacy program numbered 343,000 during the same period, equivalent to 34% of the total illiterate population.

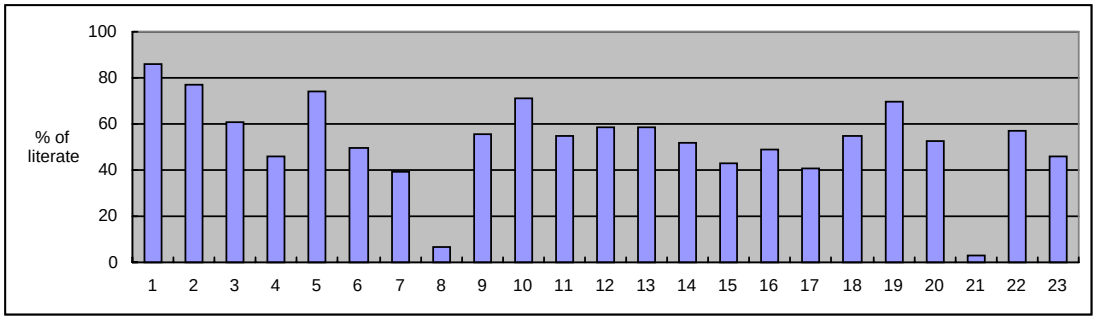
Table I3-23 Participants in Non-Formal Education (1991-1998)

	Lao PDR		Savannakhet		Khammouan	
	Total	**Female**	Total	Female	Total	Female
Literacy Program	**343,732**	**204,784**	41,590	26,028	16,382	10,548
Primary Edu. Program	**15,681**	**8,773**	2,682	1,485	15	0
Lower Sec. Edu. program	**770**	**130**	69	2	7	1
Upper Sec. Edu. Program	**1,731**	**371**	104	22	30	4
Vocational Program	**2,926**	**2,077**	10	0	140	18
Total	**364,840**	**216,135**	**44,455**	**27,537**	**16,574**	**10,571**

Source: ADB

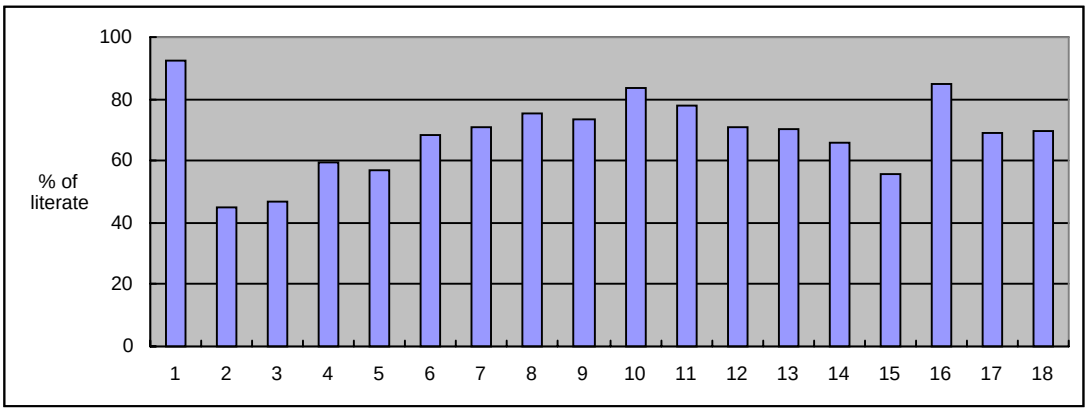
According to MOE, the illiterate population has decreased since 1997 as a result of expansion of the literacy program nation-wide. In 1998, some additional 75,000 people became literate, which was the largest number since non-formal education was initiated.

However, there is a huge gap between males and females, among ethnic groups, and among provinces. The female illiterate ratio (52%) is much higher than the male illiteracy rate (26%). In addition, ethnic majorities such as Lao, Phutai and Leu, have an illieracy rate of about 30%, while ethnic minorities like Musir and Kor, have an illiteracy rate as high as 90% of their population. The provinces with major cities, such as Vientiane, Luangprabang, Savannakhet and Pakse, have a relatively lower ratio of illiteracy.



Legend: 1. Lao, 2. Phutai, 3. Khmu, 4. Hmong, 5. Leu, 6. Katang, 7. Makong, 8. Kor, 9. Xouay, 10. Nhuan, 11. Taoey, 12. Tailieng, 13. Phounoi, 14. Lavae, 15. Katu, 16. Lamed, 17. Thin, 18. Alack, 19. Oey, 20. Ngae, 21. Musir, 22. Jeng, and 23. Yae.
Source: 1995 Population Census

Figure I3-11 Literate Population by Ethnic Group (1995)



* Figures from 1 to 18 indicate provinces, shown in Table I3-2.
Source: 1995 Population Census

Figure I3-12 Literate Population by Province (1995)

The regional and ethnic disparities of the literacy rate is attributable partially to unequal implementation of non-formal education. Under the current non-formal education system, the front-line of activities is the Community Learning Centers. However, the Center distribution appears to be at random. Some provinces have many Centers, such as 27 Centers in Savannkhet and 22 in Saravan. On the other hand, provinces like Borikhamxay and Bokeo have no Center. It is because the construction of the Centers largely depends upon clear request by local people.

Table I3-24 Community Learning Centers

Province	No. of Community Learning Centers
Vientiane Municipality	2
Phongsaly	1
Luangnamtha	18
Oudomxay	8
Bokeo	0
Luangprabang	4
Huaphanh	6
Xayaboury	12
Xiengkhuang	18
Vientiane Province	17
Borikhamxay	0
Khammouan	7
Savannakhet	27
Saravane	22
Sekong	6
Champasack	17
Attapeu	2
Xaysomboon	1
Total	**168**

Source: ADB

The number of Centers and the literacy rate are related each other; the more Centers in a province, the less illiterate the population. Therefore, provinces with a high illiteracy ratio need adequate non-formal education activities, including implementation of the Community Learning Centers.

I-3.2 Issues to be Addressed in SKR Education Development

1) Basic Education

Compared to a decade ago, the enrollment rate, educational facilities and number of teachers have significantly improved in Savannakhet and Khammouan Region (SKR). However, most of these improvements are observed in the urban area, such as Savannakhet municipality and Thakhek city. On the other hand, in the rural area, there still remain many villages without schools or only with incomplete schools.

Table I3-25 Basic School in SKR

	1994-95	1995-96	1996-97	1997-98
Savannakhet				
Primary Education				
No. of School	1,067	1,093	1,133	1,133
No. of Teacher	3,861	3,871	3,924	3,924
No. of Children	105,949	107,505	109,394	109,394
Lower Secondary Education				
No. of School	139	138	142	144
No. of Teacher	1,278	1,291	1,322	1,366
No. of Children	5,495	14,707	15,635	17,186
Upper Secondary Education				
No. of School	24	25	26	27
No. of Teacher	498	519	500	488
No. of Children	5,246	6,106	5,836	5,696
Khammouan				
Primary Education				
No. of School	450	456	492	520
No. of Teacher	1,204	1,339	1,434	1,509
No. of Children	40,675	41,158	45,030	47,494
Lower Secondary Education				
No. of School	46	47	47	46
No. of Teacher	601	531	535	519
No. of Children	6,268	5,729	5,631	6,741
Upper Secondary Education				
No. of School	9	9	9	9
No. of Teacher	194	183	201	197
No. of Children	2,089	1,859	1,963	2,241

Source: IRAP report, 1998

In terms of basic education, two major constraints are noted in SKR; i.e., (i) low enrollment, and (ii) low quality of education.

(1) Enrollment in Basic Education

According to the 1995 Population Census, the gross enrollment ratio in primary, lower secondary, and upper secondary education in Savannakhet province are 106.8%, 10.3%, and 11.7%, respectively. Khammouan also shows 100.9%, 29.6% and 11.8%, respectively. These ratios are significantly lower than the national average.

Table I3-26 Enrollment Ratio in SKR (1995 and 1998)

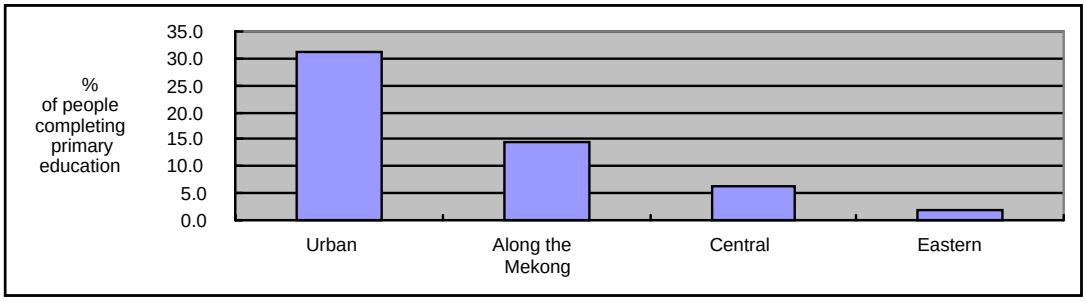
		Lao PDR		Savannakhet		Khammouan	
		1995	**1998**	**1995**	**1998**	**1995**	**1998**
Primary Education	(Net)	**55.1**	**-**	55.4	-	50.9	-
	(Gross)	**111.2**	**112.0**	106.8	102.3	100.9	109.3
Lower Secondary Edu.	(Gross)	**34.4**	**42.2**	10.3	29.4	29.6	28.4
Upper Secondary Edu.	(Gross)	**14.4**	**18.6**	11.7	10.7	11.8	10.6

*Figures in 1998 are estimated numbers.
Source: Population Census 1995.

Although recent data of the enrollment ratio are unavailable, the enrollment ratio at each educational level can be estimated on the basis of the number of students and population increasing rate, as shown above. The ratio in SKR does not indicate a clear improvement, though lower secondary enrollment increased in Savannakhet. The lower enrollment ratio in basic education is attributable to two factors; i.e., (i) low awareness of educational value, and (ii) high dropout and repetition of students.

Low Awareness of Educational Value

Many people, especially living in the mountainous areas (e.g., Vilabuly, Sepone, Nong and Phine in Savannakhet province, and Nakay and Boualapa in Khammouan province), do not realize that education improves their living standard. They still live in a closed economy, depending upon agricultural activities of self-sufficiency. A more important element is that these ethnic minorities speak different languages and keep different cultures. Children are important work forces who support family members. The area classification and the rate of people who complete primary education in SKR are shown below.



Source: IRAP

Figure I3-13 Rate of People who Complete Primary Education

	URBAN AREA	RURAL AREA		
	Municipality	**Along the Mekong**	**Central**	**Eastern**
Savannakhet	Khanthabuly	Songkhon Xaibuly Xaiphouthong	Outhoumphone Astaphangthong Thapangthong Champhone Xonnabuly Atsaphone Phalamxai	Phine Sepone Nong Vilabuly
Khammouan	Thakek	Nongbok Hinboon	Mahaxay Nhommalad Xebangfay Xaybouathong	Boulapa Nakay

Figure I3-14 Classification of SKR's Districts

In view of the fact that the eastern and central areas are low in education awareness, it is proposed to focus on these areas for improvement.

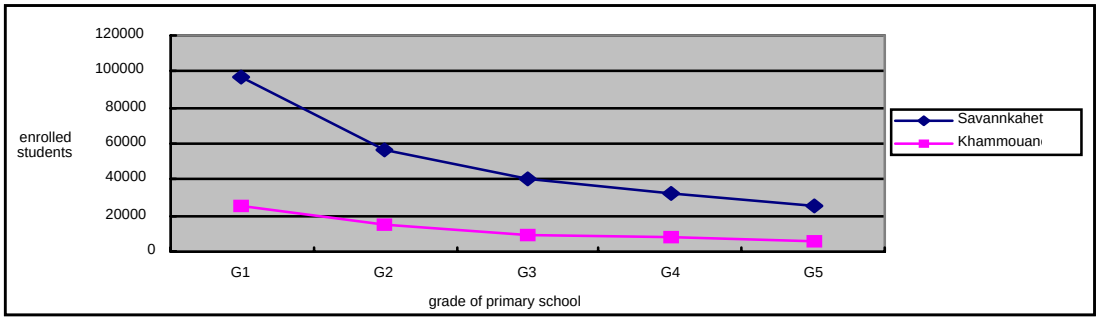
High Dropout and Repetition

High dropout and repetition of students is a crucial problem in basic education. Approximately half of students enrolled in primary school at grade 1 do not continue studying at grade 2, and only one fourth of students move up to grade 5.

Table I3-27 Dropout and Repetition Ratio in SKR (1998)

		Lao PDR	Savannakhet	Khammouan
Primary Level	Dropout Ratio	**19.3**	22.5	20.0
	Repetition Ratio	**24.4**	25.5	24.0
Lower Secondary	Dropout & Repetition Ratio	**11.0**	n.a.	n.a.
Upper Secondary	Dropout & Repetition Ratio	**8.8**	n.a.	n.a.

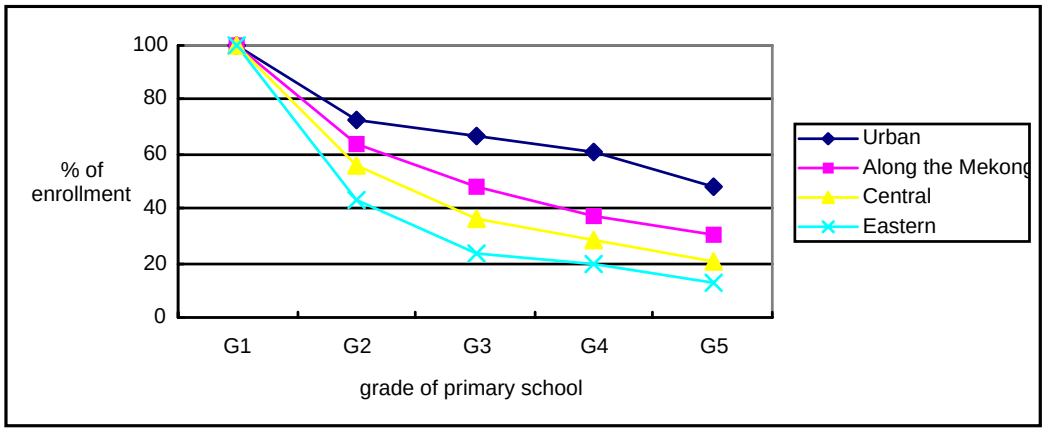
Source: Y. Kiuchi



Source: IRAP 1998

Figure I3-15 Change in Enrollment

The dropout and repetition ratios in the rural area are significantly higher than the urban area. The following graph shows the enrollment ratio of each grade by classified area. In the urban area, almost half of the students remain until grade 5. However, in the eastern districts, 85% of students at grade 1 drop out or repeat the same grade, and students remaining until grade 5 account for 13%.



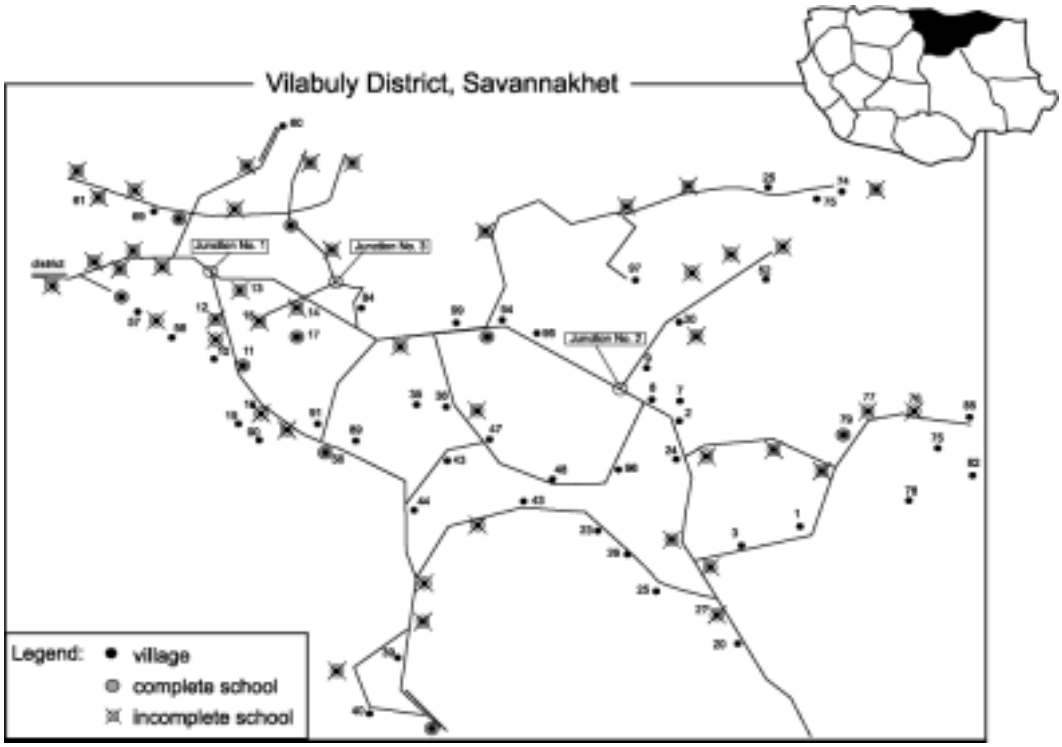
Source: IRAP, 1998

Figure I3-16 Remaining Students by Classified Area

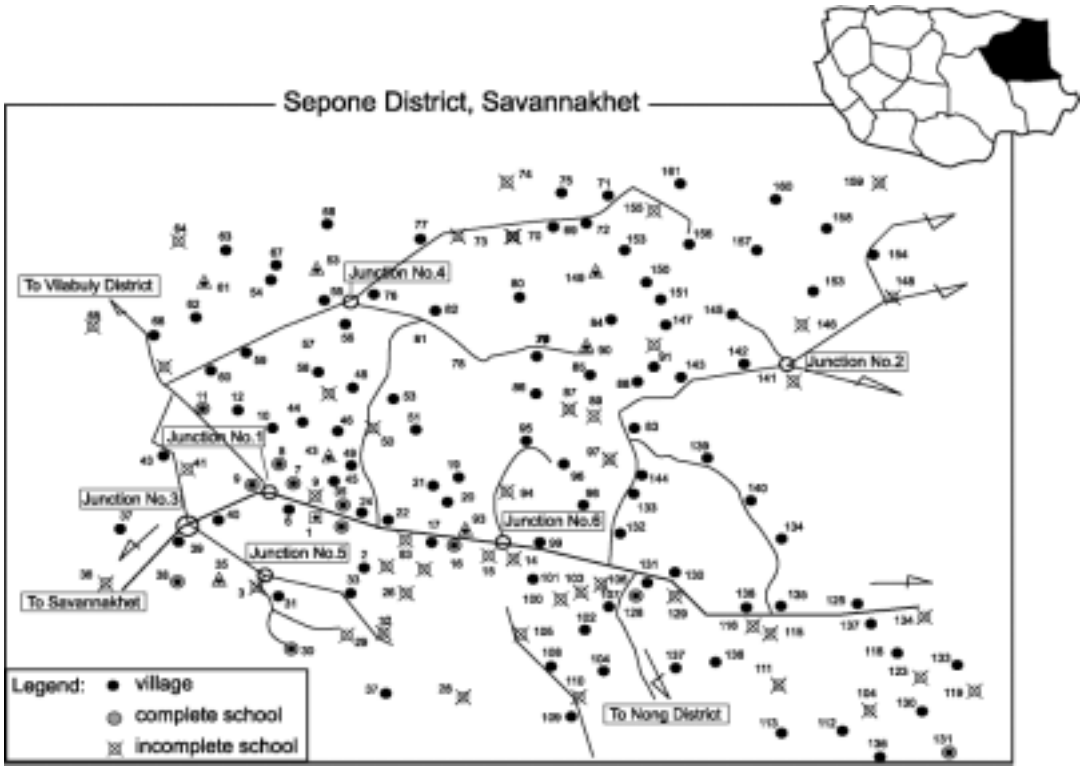
Major reasons for this high dropout and repetition in the rural area are (i) low accessibility to schools, and (ii) existence of many incomplete schools.

Lower Accessibility to Schools in the Rural Area

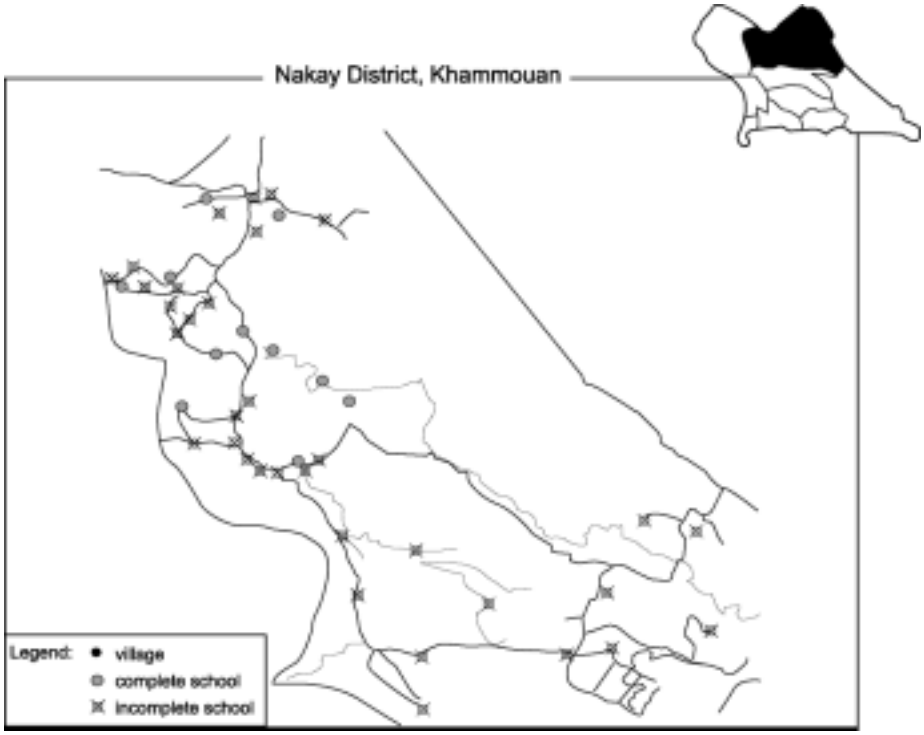
The school maps on the following pages indicate that there are many villages having no primary school or secondary school. Villages with no primary school total 476 or 31% of total villages in Savannakhet and 276 villages (or 35%) in Khammouan. In the eastern area, more than 50% of villages do not have primary schools, while in the urban area, such villages account for 32%.



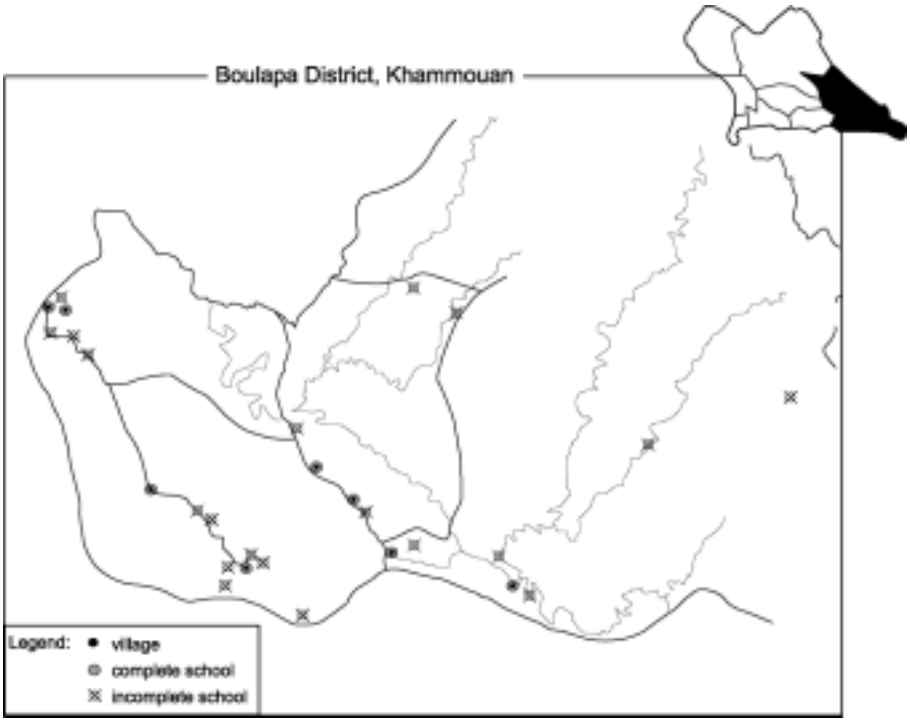
Picture I3-1 Map Marked Schools (Vilabuly)



Picture I3-2 Map Marked Schools (Sepone)



Picture I3-3 Map Marked Schools (Nakay)



Picture I3-4 Map Marked Schools (Boulapa)

Table I3-28 Villages with/without Primary Schools (1998)

		No. of Villages		No. of Villages without School		No. of Villages with Incomplete		No. of Villages with Complete	
Savannakhet	Urban	94	100.0%	27	29.0%	24	25.0%	43	46.0%
	Along the Mekong	317	100.0%	71	22.4%	138	43.7%	108	33.9%
	Central	672	100.0%	123	18.3%	376	55.9%	173	25.8%
	Eastern	453	100.0%	255	56.4%	168	37.1%	29	6.5%
	Total	**1,536**	**100.0%**	**476**	31.0%	**706**	46.0%	**354**	23.0%
Khammouan	Urban	139	100.0%	47	33.8%	51	36.7%	41	29.5%
	Along the Mekong	238	100.0%	71	29.8%	100	42.0%	67	28.2%
	Central	277	100.0%	87	31.4%	127	45.8%	63	22.7%
	Eastern	146	100.0%	71	48.6%	56	38.4%	19	13.0%
	Total	**800**	100.0%	**276**	34.5%	**334**	41.8%	**190**	23.8%
Total	**Urban**	**233**	**100.0%**	**74**	**31.9%**	**75**	**32.0%**	**84**	**36.2%**
	Along the Mekong	**555**	**100.0%**	**142**	**25.6%**	**238**	**43.0%**	**175**	**31.5%**
	Central	**949**	**100.0%**	**210**	**22.1%**	**503**	**53.0%**	**236**	**24.9%**
	Eastern	**599**	**100.0%**	**326**	**54.5%**	**224**	**37.4%**	**48**	**8.1%**
	Total	**2,336**	**100.0%**	**752**	**32.2%**	**1,040**	**44.5%**	**544**	**23.3%**

Source: IRAP

At the secondary level, 5 to 7 villages on an average have a school, and most students have to travel outside of their village for secondary education. Under the current condition, many villages have no access to any secondary school due to a lack of transportation and access roads. Villages without access to secondary schools number 542 (or 35% of total villages) in Savannakhet and 308 (or 39%) in Khammouan. Out of 850 villages without access to secondary education, 437 (or 51%) are located in the eastern area.

Table I3-29 Villages with/without Access to Secondary Schools (1998)

		No. of Villages		No. of Villages without Access to School		No. of Villages with Access to Schools	
Savannakhet	Urban	94	100.0%	4	4.0%	90	96.0%
	Along the Mekong	317	100.0%	47	14.8%	270	85.2%
	Central	672	100.0%	156	23.2%	516	76.8%
	Eastern	453	100.0%	335	74.0%	118	26.0%
	Total	**1,536**	**100.0%**	**542**	**35.3%**	**994**	**64.7%**
Khammouan	Urban	139	100.0%	13	9.0%	126	91.0%
	Along the Mekong	238	100.0%	70	29.5%	168	70.5%
	Central	277	100.0%	123	44.5%	154	55.5%
	Eastern	146	100.0%	102	70.0%	44	30.0%
	Total	**800**	**100.0%**	**308**	**38.5%**	**492**	**61.5%**
Total	**Urban**	**233**	**100.0%**	**17**	**7.3%**	**216**	**92.7%**
	Along the Mekong	**555**	**100.0%**	**117**	**21.1%**	**438**	**78.9%**
	Central	**949**	**100.0%**	**279**	**29.4%**	**670**	**70.6%**
	Eastern	**599**	**100.0%**	**437**	**73.0%**	**162**	**27.0%**
	Total	**2,336**	**100.0%**	**850**	**36.4%**	**1,486**	**63.6%**

Source: IRAP

These villages, having no primary school and no access to secondary school, obviously should be the targeted villages for basic education improvement in SKR.

Existence of Many Incomplete Schools in the Rural Area

In SKR, there are 1,040 villages having only an incomplete primary school in their village, which account for approximately 45% of the total number of villages. Further, most of these incomplete primary schools provide only two-year study,

and students have to travel to another village to continue basic education. Some students in the remote areas take 90 to 120 minutes to reach their school. This situation causes students to dropout.

(2) Quality of Basic Education

Quality of basic education in SKR still remains low. It was found through the field interviews that many primary school students, even at grade 5, cannot adequately calculate an easy mathematic formula. This is primarily attributable to two factors; i.e., (i) existence of many unqualified and under-qualified teachers, and (ii) severe shortage of studying materials (e.g., textbooks).

Unqualified and Under-Qualified Teachers

Currently, many temporary primary teachers called “Teacher on Contract” are mobilized. They are usually new graduates from upper secondary school having one-year contracts to supplement the shortage of teachers, with financial support from their respective community. They are classified into “unqualified” teachers. In addition, there are a huge number of teachers having completed 5-year primary education and 3-year teacher training. They were qualified teachers in the former education system. Under the current education system, however, primary teachers must have 8-year basic education plus 3-year teacher training or 11-year education plus 1-year training. Most teachers who were assigned before the new system are classified as “under-qualified” teachers. In SKR, it is estimated that these unqualified and under-qualified teachers amount to about 1,200, equivalent to 22% of total number of teachers.

Severe Shortage of Teachers

With a rapid increase in enrolled students in primary and secondary schools, shortage of teachers has become a serious problem in SKR and the country as a whole. In Savannakhet, 3,924 primary school teachers were teaching 109,394 students (1998). The number of students per teacher is 28. In Khammouan, 1,509 primary school teachers taught 47,494 students, with 31 students per teacher. The situations are different in Savannkahet and Khammouan. Savanakhet can meet the demand for the total number of teachers in the province, but a serious shortage is seen in the rural area. For instance, Outhoumphone, Atsaphangthong, Phine and Xonnabuly show that, the teacher-student ratio is more than 1: 30. These remote districts are recognized clearly as the areas of less deployment in teachers. On the other hand, Khammouan has faced a shortage in absolute numbers of primary school teachers. The average number of students per teacher amounts to 31.

Table I3-30 Teacher-Student Ratio in Primary Schools (1998)

Province	District	No. of Students per Teacher
Savannakhet	Khanthabuly	28
	Outhoumphone	31
	Atsaphangthong	30
	Phine	30
	Sepone	21
	Nong	26
	Thapangthong	28
	Songkhone	28
	Champhone	28
	Xonnabuly	31
	Xaibuly	29
	Vilabuly	26
	Atsaphone	26
	Xaiphouthong	24
	Phalamxai	28
	Sub-Total	**28**
Khammouan	Thakhek	33
	Mahaxay	32
	Nongbox	29
	Hinboon	35
	Nhommalad	27
	Boualapa	28
	Nakay	31
	Xebangfay	30
	Xaybouathong	30
	Sub-Total	**31**
Total		**29**

Source: IRAP

Training for Upgrading Under-Qualified Teachers

Under the current education system, five institutes or organizations are conducting teacher's training, including pre-service training and in-service training. Here, the "Network Teacher Development Center (NTDC)" and "Pedagogical Advisor" are the main actors for upgrading under-qualified teachers. According to an interview at the Education Offices in Savannakhet and Khammouan, 695 and 214 primary teachers respectively, received upgrading training as of 2000. There still remain 172 primary teachers who require upgrading training in Khammouan.

Table I3-31 Teacher Training Institutes and Organizations

Institutes/Organizations	Location	Training Type	Targeted People	Training Duration
Network Teacher Development Center (NTDC)	All Province	In-Service Upgrading Training	All Teachers (But Currently Primary Teachers with 5+3)	10 weeks for 2 years (5 weeks in each summer)
Pedagogical Advisor	Some Provinces	In-Service Upgrading Training	All Teachers	
National Research Institute Educational Science (NRIES)	Vientiane	Seminar	All Teachers Pedagogical Advisors Principals	10 days to 2 weeks
Teacher Development Center (TDC)	Vientiane (On the Campus of NUOL, Dang Dok)			
Teacher Training Department (TTD) Ministry of Education				

Source: Interview at each institutes

Table I3-32 Primary Teachers Receiving Upgrading Training

	Total No. of Teachers	Under-Qualified Teachers (Estimate)	No. of Teachers who ReceivedTraining	No. of Teachers who Need Training
Savannakhet	3,929	524++	695	n.a.
Khammouan	1,509	573	214	172

Source: Interviews in Provincial Education Offices (as of 2000)

Judging from the data above, most under-qualified primary teachers received upgrading training to some extent. However, some advice, supervision, and regular counseling are still required for those teachers. Besides, both provinces have never started training for under-qualified secondary teachers. Moreover, all teachers need some regular training to brush up their knowledge and exchange opinions. This level of training has not been conducted yet in Savannakhet and Khammouan. In this context, it is necessary for SKR to strengthen and upgrade teacher training schemes.

Teaching and Studying Materials

Educational materials (e.g., textbooks, teaching materials, and equipment for science experiments) are in severe shortage in SKR. At several visited schools in SKR, students have no textbooks or notebooks. The so-called “lecture-type teaching” is a usual scenery in most schools in SKR. In the urban area, some primary students have textbooks. According to a school principal, the school has a limited number of textbooks and they are returned to the school after completion in each grade. Teachers in the rural area do not have government-published teacher’s guidebooks, due mainly to limited distribution. Teachers usually teach based on their own experiences and continue the routine every year.

2) Vocational & Technical Education

In vocational and technical education, two main constraints are found in SKR; i.e., (i) severe shortage of schools, and (ii) low quality of vocational education.

(1) Opportunity for Vocational and Technical Education

Currently, four vocational and technical schools are operated in SKR; i.e., "Savannakhet Technical School," "Communication & Transportation School," "Savannakhet Art School" in Savannakhet, and "Khammouan Vocational School" in Thakhek. The "Agricultural School" in Savannakhet[1] and the "Forestry School" in Sepon, were closed down in 1995, due to budgetary constraints.

The number of students in upper secondary schools has recently been increasing rapidly. During the period from 1995 to 1998, the number of students in upper secondary school increased by 8%, from 7,335 to 7,973 in SKR. Every year, approximately 2,600 graduates are listed and most of them are willing to study more. Unfortunately, the study opportunity is limited, as the capacity for new entrants in the four schools together is only 330 students. Each school accepted as many students as possible, even beyond their capacity. For instance, "Savannakhet Technical School" currently accepts 651 students in spite of its adequate level of training for 300 students. It, therefore, faces a severe shortage of classrooms, practical rooms and dormitories[2].

At the Ministerial Meeting in August 2000, it was decided that "Communication & Transportation School" would be merged into "Savannakhet Technical School," in order to make school operation more effective. Likewise, it is expected that "Savannakhet Agricultural Training Center" be re-established into the School in the future.

1 This school became the Savannakhet Agricultural Training Center and offers training courses for the provincial agricultural officers and farmers. For the agricultural officers, a 18 month-course is provided with 100 participants, later divided into three subjects, livestock, planting and education. For farmers, a basic training course which lasts less than 1 week is provided three times a year (30 farmers in each term).

2 Currently new dormitories are under construction outside campus.

Table I3-33 Vocational & Technical Schools in SKR

Name of School	Qualification	No. of Students	No. of Teachers	Courses	Location
Savannakhet Technical School	8+3 11+3	532	60	Business Administration Building Construction Carpentry Automotive Technology Mechanical Engineering Food and Beverage and Hotel Management (Hospitality) Electrical Engineering	Savannakhet City
Communication & Transportation School	11+3	187	30	Road and Bridge Construction Mapping and Surveying	Savannakhet City
Savannakhet Art School	11+3	130	n.a.	Painting Curving Ceramic (Vase, Tea Cup, etc) Ceramic (Buddhist Temple etc) Pattern Art Metal Art	Surburb of Savannakhet
Khammouan Vocational School	8+3	122	25	Carpentry Building Construction Food and Beverage and Hotel Management (Hospitality) Tailoring	Thakek City

Source: Interviews

(2) Quality of Vocational Education

The quality of vocational education is another constraint in SKR. Graduates are not adequate for immediate employment in the private sector. This is attributable to three factors; i.e., (i) low quality of vocational school teachers, (ii) severe shortage of equipment and materials, and (iii) lack of a close relationship between schools and the private sector.

Quality of Vocational School Teachers

Currently, there is no criteria to become teachers in vocational and technical education. Most teachers graduate from technical schools and are then recruited by their former schools as teachers. Teachers are considered to be technicians rather than educators. Although they have a certain level of skills and technique, they are not always good teachers because they have never been trained to teach. For example, in Savannakhet Technical School, most teachers are graduates from this school. Some of them were educated in the former Soviet Union and some others had working experience in the private sector.

Further, due to budgetary constraints, re-training of teachers has not been regularly conducted. Recently, MOE's Department of Higher Technical and Vocational Education considers this issue seriously and has started several training courses in Vientiane. Savannakhet Technical School has also asked technical assistance from donor countries, and currently receives three Japanese Overseas Cooperation Volunteers (JOCV) as advisors.

Training Equipment and Materials

Vocational and technical schools lack equipment, instruments and materials, and count on support from several donors. Savannakhet Technical School received equipment from the government of Japan and Germany, and Khammouan

Vocational School depends on German support[3]. Most existing equipment, however, are old-fashioned and make lectures difficult. Further, there is a serious lack of teaching instruments, which limits practical exercises. Moreover, no textbook or guidebook written in Lao language is available.

Relation between Technical Schools and Private Sector

A linkage between vocational schools and private enterprises is unavailable in SKR, because of limited number of private enterprises and no co-operations between the education sector and the industrial sector. This situation makes quality of vocational and technical education inadequate. It is a long-argued criticism that vocational and technical school graduates cannot be immediate workers in the private sector, because their skill level is low and old-fashioned. To improve the student's skill level, for example, Thailand introduced a "Dual Vocational Training" scheme which creates a close relationship with the private sector and provide students with an intensive on-the-job-training (OJT) opportunity during their study period. This type of new system will be required to renovate the stagnant Lao vocational and technical education.

[3] Recently Luxembourg delegates visited the school and proposed contribution for building and renovating the dormitories.

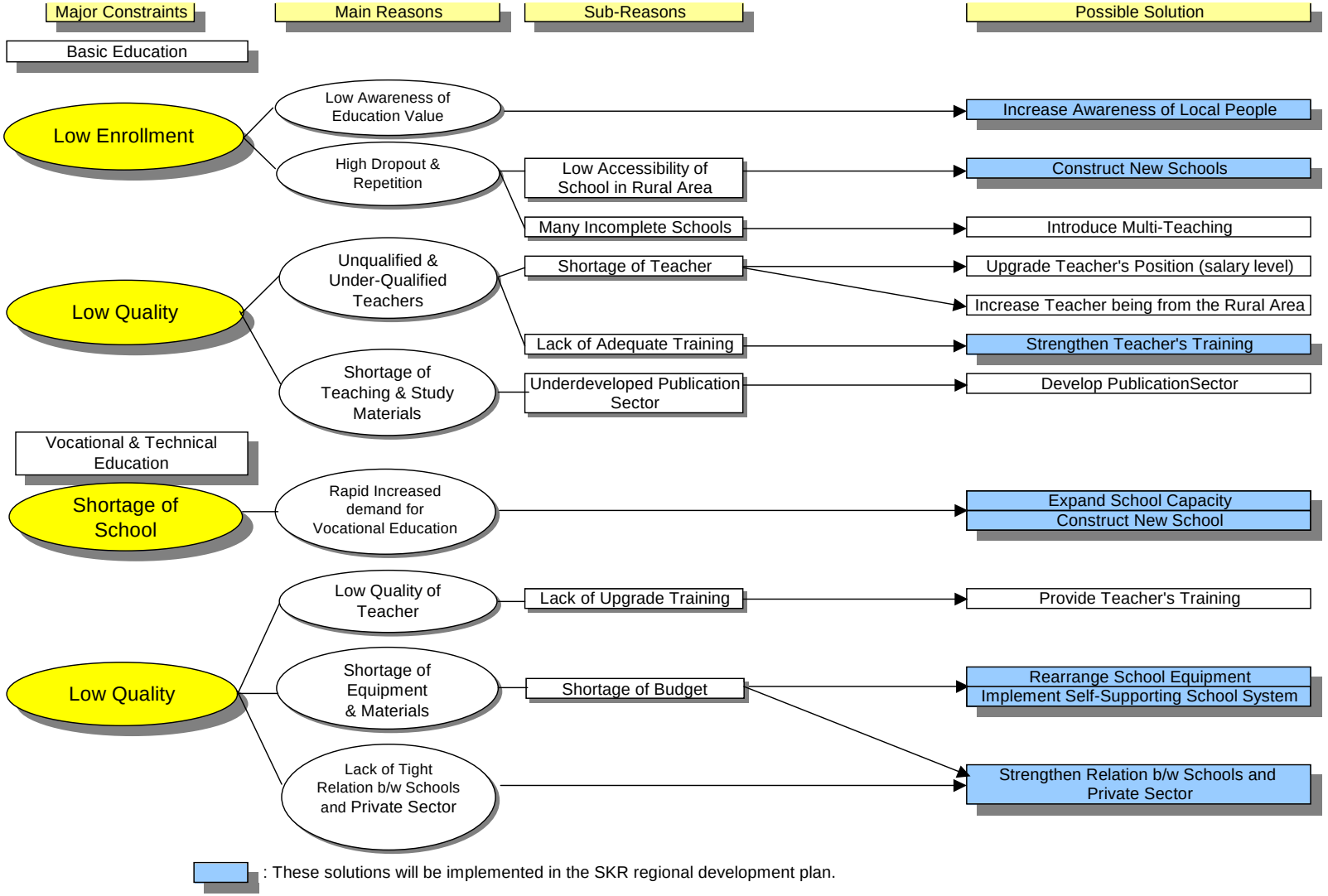


Figure I3-17 SKR Education Sector Problem Structure

I-3.3 Regional Education Development Plan

1) Development Objectives

As analyzed in the foregoing Chapters, SKR has a number of constraints in the education sector. The constraints are more acute in the rural areas. The regional education development plan will work out measures to mitigate such constraints one by one.

First, the SKR education development plan proposes **improvement of basic education**, in order to create affluent human resources possessing an adequate educational level. Development of fundamental human resources will elevate the quality of life by alleviating poverty and make future social and economic development easier.

Secondly, the SKR development plan aims at bringing up skilled workers, who can promote agricultural and industrial development in both rural and urban areas. A lack of skilled people prevents development in any sector, both social and economic. Lao workers are to be trained to build their own society and economy. This development plan, therefore, envisages the **improvement of vocational and technical education and the creation of skilled workers with adequate technical knowledge**. Technical schools, polytechnic and agriculture college will contribute to alleviate poverty, facilitate employment, enhance the quality of life, build up society, and improve the economy in the rural and urban areas.

Thirdly, Lao PDR possesses significant advantage in the variety of ethnicity and culture. To foster SKR development, especially in the tourism sector, **this cultural diversification must be maintained and further developed.** The SKR development plan is focused to create personnel who can pursue their own cultural heritages and appeal to people outside. A newly proposed college will be responsible for it.

2) Targets and Scenario

For improvement of basic education, an enrollment ratio is one of the most significant indicators to measure achievement. The enrollment ratio of primary school (grade 1 to 5) is currently 72% (net enrollment rate in 1996) and the enrollment of lower secondary school (grade 6 to 8) is 22% (net enrollment rate in 1996)[1]. There still remains nearly 30% of children who do not complete primary level education. Such a low enrollment ratio in basic education is directly related to the high dropout ratio and it is partly attributable to low accessibility to schools.

[1] UNESCO, World Education Report 2000.

This regional education development plan sets some targets to attain the enrollment ratio in basic education in the course of the plan period, as proposed below.

Targets in Basic Education

- ***Short-Term Scenario (2000-2005)***
  - *Enrollment ratio in primary school reaches more than 80%.*
  - *Enrollment ratio in lower secondary school reaches 40%.*
- ***Medium-Term Scenario (2006-2010)***
  - *Enrollment ratio in primary school reaches more than 85%.*
  - *Enrollment ratio in lower secondary school reaches 50%.*
- ***Long-Term Scenario (2011-2020)***
  - *Enrollment ratio in primary school reaches more than 90%.*
    By 2015, it aims that primary education becomes universal.
  - *Enrollment ratio in lower secondary school reaches 60%.*

Further, in view of the current situation and recent trend that students who want to undertake vocational and technical schools have been increasing, as well as in the light of their inadequate equipment and facilities, the SKR development plan aims to create a certain number of skilled people who directly meet the social demands. In this context, targets for vocational, technical and cultural education are proposed to be set as follows:

Targets for Vocational & Technical, and Cultural Education

- ***Short-Term Scenario (2000-2005)***
  - *Capacity of schools meets local demands.*
    (Savannakhet Technical School will accommodate 1,000 students.)
  - *New vocational and technical schools are set up to meet regional demands.*
    (Savannakhet Agriculture College and Khammouan Polytechnic are proposed.)
  - *Art & Culture College will be renovated at the current location in Savannakhet.*
    (The new college requires new buildings as well as renovation of the original buildings.)
- ***Medium-Term Scenario (2006-2010)***
  - *Capacity of schools is expanded step by step.*
    (Savannakhet Technical School will accommodate 1,500 students.)
  - *Qualified trainers and engineers are fostered from graduates of those vocational and technical schools.*

- ***Long-Term Scenario (2011-2020)***
  - *Local entrepreneurs are fostered, based on the human resources of graduates from those vocational and technical schools.*
  - *Local industries are promoted in cooperation with technical schools.*
  - *Linkage among Savannakhet Techincal School, Agriculture College, and NUOL is to be promoted.*
  - *Linkage between Savannakhet Art & Culture College and NUOL is to be promoted.*

Table I3-34 Scenario for SKR Educational Development Initiative

		2000-2005	2006-2010	2011-2020
Basic Education				
Enrollment	Primary Education	80%	85%	90%
Enrollment	Lower Secondary Education	40%	50%	60%
Accessiblity	Construction of Primary School	200 primary schools		
Awareness	Campaign			
School Lunch		model project (2-3 villages)	expansion of project	
Teacher's Training		unqualified & under-qualified teachers	all teachers	
Self-Supporting	Operation by Schools			
Vocational & Technical, Culture Education				
Savannakhet Agricultural College	Preparation			
	Open			
	Self-Supporting System			
	Linkage to NUOL			
Savannakhet Technical School	Preparation			
	Open	accept 1,000 students	accept 1,500 students	
	Self-Supporting System			
	Linkage to NUOL			
Savannakhet Art & Culture College	Preparation			
	Open	2003		
	Self-Supporting System			
	Linkage to NUOL			
Khammouan Polytechnics Self-Supporting	Preparation			
	Open			
	Operation by Schools			

3) Development Strategies

(1) Basic Education Development

To spread and improve basic education, it is indispensable to involve local people, particularly parents of children. First of all, it is necessary to make people in village communities understand educational values and the importance of basic education. Without support from the local community, basic education will not spread to every corner of the region. In addition, a participatory approach is crucial to maintain school operation under the limited support from the central and local governments. Therefore, a basic strategy to be applied for basic education development is **to follow the participatory approach at the village and district levels.**

Secondly, to keep the local interest in children's education at a higher level, some educational activities for adults, especially parents, should be conducted in parallel with education for children. These activities are, for example, a literacy class and a health education class. Through these activities, it is expected that schools can serve as community centers for all villagers. The second strategy

proposed is, therefore, **to produce a close-linkage between schools and communities**.

Thirdly, under the severe budgetary constrain in the central and provincial governments, schools cannot expect to regularly receive public budget. Distribution of teacher's salary is also delayed frequently at present. Most teachers have second and third jobs after school to earn cash income for their family. To overcome this situation, **schools are proposed to manage income generation activities in line with education activities**, e.g., planting vegetables and fruit, and raising animals in the school compound. The profit from these activities will be expended on teaching materials and/or school administration.

Fourth, to increase motivation of children to go to school and to strengthen incentives for parents to let children go to school, **a kind of reward like "free lunch"** is proposed as another strategy.

Last, SKR basic education development **focuses mainly on the eastern and central areas.** These areas show the lowest achievement in educational development in SKR, because they have long been neglected due to lack of physical accessibility to the areas and ethnic difference. Without the education improvement in these now-neglected areas, development of SKR cannot be achieved.

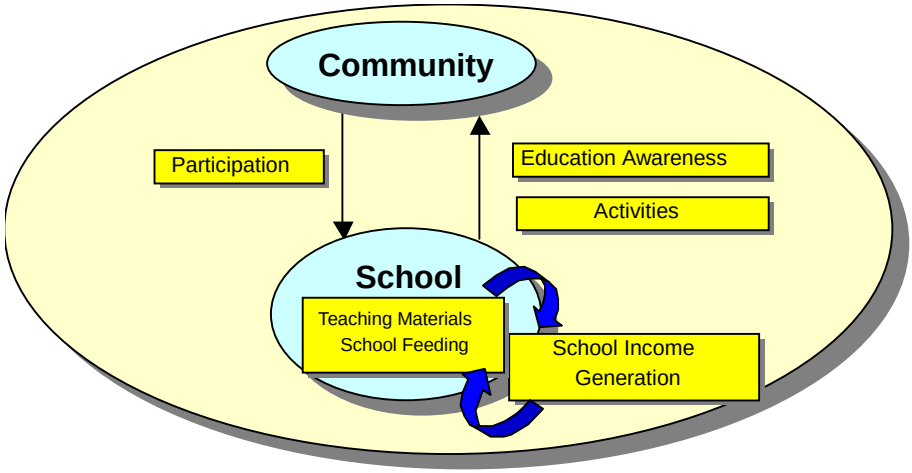


Figure I3-18 Basic Education Development

(2) Vocational & Technical and Cultural Education Development

Vocational and technical education is one of the most costly education programs. Modern technology is improving day by day, and new state-of-art equipment and facilities are introduced to the market one after another. Vocational and technical education has to closely follow this rapid change in technology and meet demands

of the private sector. The first strategy for technical education is **to create a close-linkage with the local private sector** in order to exchange up-to-date information and to keep up with modern technology.

Under the current budgetary constraints, it is difficult to maintain and operate technical schools by public expenditure. Therefore, the second strategy is **to apply the "self-supporting" system as much as possible**. The "self-supporting" system means that schools will generate their own income for operation through some profitable activities, such as selling their own products and offering their skills to local communities.

Thirdly, SKR faces a severe shortage of qualified skilled labor. One of the reasons is a lack of trainers and teachers. Skilled people tend to move to the private sector and do not remain in the education sector. Vocational and technical schools proposed herein should play a role not only to provide skilled person or experts to the private sector, but also to create trainers to hand down their technological knowledge and skills to future generations. Therefore, the third strategy is to promote the **creation of trainers as a key strategy under the development plan**.

Fourth, there are many people who want to gain some skills, but do not have opportunities for it. To meet their requirements, schools should be open to everyone. Schools must also contribute to development of their community. With this in view, it is proposed that **the vocational, technical and culture schools are designed to be community-based schools as much as possible**. For instance, schools are designed to offer short-term courses, tutoring services and in-service training for local communities and enterprises.

Last, culture education proposed herein focuses more on ethnic minorities. Most ethnic minorities have long been alienated from major activities of the region and country as a whole. They, for example, have a significant low school enrollment rate at all level and a higher ratio of illiteracy. **The culture education development envisages the diversity of the country's ethnicity and culture.**

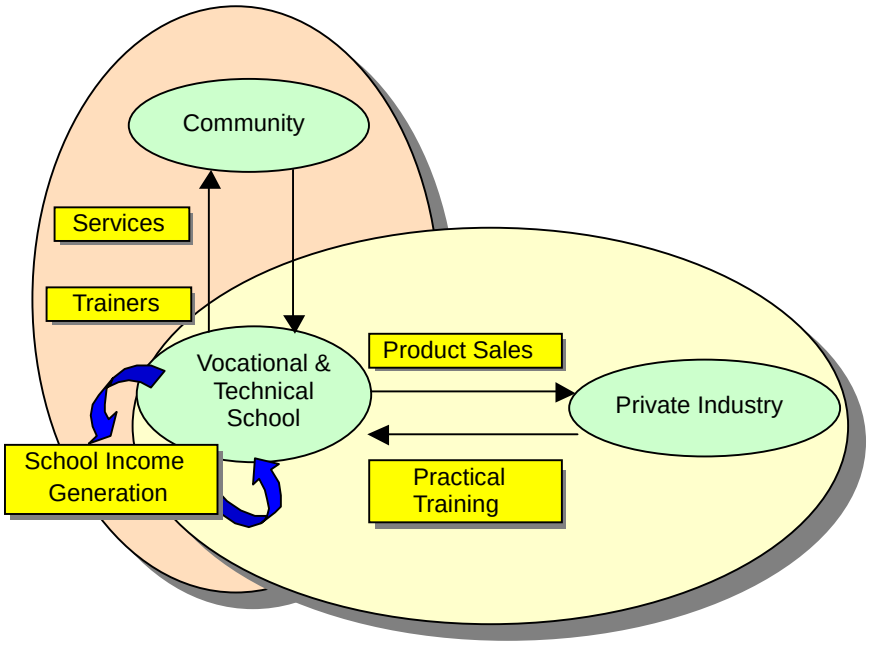


Figure I3-19 Vocational and Technical Education Development

4) Development Plans

Human Resource Development (HRD) Initiative in Rural Area

Basic Education Improvement Initiative

SKR faces many constraints preventing educational development as pointed out above. Low enrollment in basic education is one of the most crucial problems. This is attributable to several factors; i.e., the existence of villages without schools and with incomplete schools across the region, and low awareness of education value. Although the central and local governments recognize these constraints, it is difficult for them to provide these villages with financial supports under the tight budgetary situation. This regional education development plan initiates the basic education improvement program as the highest priority program. This plan will be designed initially as a model for SKR and be expanded nation-wide in the future. The basic education improvement program consists of four sub-programs;

(i) Accessibility improvement program,
(ii) Educational awareness campaign program,
(iii) School feeding program, and
(iv) Teacher's quality upgrading program.

While these sub-programs, at the initial stage, may be supported by donors, the future operation will be handed over to the government and each school body. To be self supported, the program is designed with income generation activities.

(1) Accessibility Improvement Program

Low enrollment at primary education is attributable largely to shortage in schools. SKR currently has 756 villages without primary schools and 1,040 villages with incomplete schools. Children living in these villages must travel to other villages with schools which becomes a large burden for them. Unless the current low accessibility to primary schools is overcome, the enrollment ratio of students in SKR and Lao PDR cannot be improved.

Based on a calculation of the targeted enrollment ratio at primary education, it is estimated that SKR needs 1,480 primary schools in 2005, 1,730 in 2010, and 2,320 in 2020. With the current number of primary schools (1,517) in view, SKR will additionally require about 220 primary schools by 2010, and 800 by 2020.

Table I3-35 Estimated Number of Primary Students and Schools (1995-2020)

		1995	2000	2005	2010	2015	2020
Lao PDR	Population Aged 6-10	685,628	774,760	875,478	989,291	1,117,898	1,263,225
	Primary Students	687,623	763,037	786,453	881,608	1,003,007	1,146,011
	No. of Primary Schools	7,789	7,630	7,865	8,816	10,030	11,460
	Student/School	98	100	100	100	100	100
Savannakhet	Population Aged 6-10	99,174	112,067	126,635	143,098	161,701	182,722
	Primary Students	105,949	92,943	102,904	122,016	142,389	164,471
	No. of Primary Schools	1067	929	1,029	1,220	1,424	1,645
	Student/School	99	100	100	100	100	100
Khammouan	Population Aged 6-10	40313	45554	51476	58168	65729	74274
	Primary Students	40675	42508	45046	51452	58887	67390
	No. of Primary Schools	450	425	450	515	589	674
	Student/School	90	100	100	100	100	100

Source: Estimated on the basis of figures from IRAP

Under the HRD Initiative for SKR, it is proposed that 200 primary schools be constructed by 2010. The focused area is the central and eastern areas in SKR, because basic education in these neglected areas is crucial for long-term regional development of SKR. Construction of proposed schools will be placed in the villages without schools and with no accessibility to other villages.

- **Justification**

  Lao PDR accorded educational development with the highest priority in its National Development Plan. In the “Education Development Plan 1996-2000” and the “20-Year Perspective Plan (2001-2020),” the government envisages expansion of compulsory education as a crucially important issue. To achieve one of the goals of the National Plan, improvement of accessibility to primary schools is indispensable.

- **Scope**

  The proposed program envisages to build 200 primary schools in SKR, especially focussing on villages without schools in the central and eastern areas. At the same time, newly constructed schools will have some functions of income-generation activities to maintain self-supporting schools. The income-generation activities will include, but not be limited to the following:

A) planting vegetables and fruit trees,
B) raising animals, including cows, pigs, and chicken,
C) planting commercially marketable trees, and/or
D) raising fish in ponds.

In view of geographical and meteorological factors in each respective area, the activity types will be selected for a school's income-generation.

- **Implementation Period**
  Construction of 100 primary schools will be completed by 2005. The remaining 100 schools will be scheduled for construction by 2010. The Primary Education Expansion and Improvement Program in Part 3, Chapter II, presents further details of the program for construction of 100 primary schools by 2005.

(2) Educational Awareness Campaign Program

Low enrollment in primary education is partly attributable to low awareness of educational values. Because parents do not understand educational value, they tend to force children not to go to school but to work. Especially, the awareness is relatively lower in the eastern and central areas in SKR. In these areas, people are culturally and ethnically different from the other areas. To spread educational awareness in these areas, it is proposed to hold seminars and to promote understanding of how effective education is for their lives. In Khammouan, such an activity has been initiated in several areas and reported to have significant effects.

- **Justification**
  Lao PDR has been trying to improve an enrollment ratio for compulsory education nation-wide. To achieve this, people's awareness of education must be improved, especially in rural areas.

- **Scope**
  The proposed sub-program will cover the following scope:
  - To focus on the areas where the enrollment ratio in primary education is low; e.g., the eastern and central areas, ethnic minority areas and mountainous areas,
  - To hold seminars by dispatching provincial officers,
  - To prepare brochures, posters and videos,
  - To broadcast TV programs for campaign,
  - To organize visits to model villages for local villagers, and
  - To hold adult education activities; e.g., literacy class and health care class.

- **Implementation Period**
  This campaign will be implemented mainly during 2000-2005. It will be more effective that this campaign program is executed together with the above proposed "Accessibility Improvement Program".

(3) School Feeding Program

Under the current situation, school lunch is offered to only kindergarten pupils through the governmental scheme. Classes at primary schools are usually conducted from 8:00 to 16:00, having a 2.5 hours lunch break (11:30-14:00). Most students go back home to have lunch, but some of them living far away from the school stop by a friend's house or street venders. During the interviews in the field, it was found that some children who cannot afford to have lunch tend to drop out. Therefore, offering school lunch for student is quite effective to raise basic education enrollment.

- **Justification**
  Such a school feeding program has been conducted in many countries and most of them are highly successful. This program is effective not only for education but also for enhancement of health care. Particularly, in the eastern areas, children have to take care of their younger brothers/sisters, and a feeding program appears to be indispensable. A part of the required cost may be covered by the income-generation activities at schools. Materials (e.g., rice, vegetables, fruit and meat) basically depend upon donations from communities and school-income generating activities.

- **Scope**
  The proposed program will encompass the following:
  - To organize a responsible body for school lunch in a village, including parents group (e.g., PTA and women's group),
  - To prepare facilities for cooking, and
  - To hold seminars for learning about adequate cooking methods and menu.

- **Implementation Period**
  At the initial stage, villages in the eastern districts will be provided with school feeding under the proposed plan for Primary Education Expansion and Improvement Program.

(4) Teacher's Quality Upgrading Program

This program consists of three main initiatives; i.e., (1) upgrading unqualified and under-qualified teachers, (2) enhancing qualified teacher's skills and knowledge, and (3) introducing a multi-grade teaching method for necessary teachers.

There are nearly 2,000 teachers without any teacher's training in SKR; 700 in Savannakhet and 1,220 in Khammouan. Training opportunities should be given to these teachers to upgrade their teaching skills. In addition, the current 8,000 teachers in SKR (5,433 primary teachers, 1,885 lower secondary teachers, and 685 upper secondary teachers) should have regular refresher training and

seminars. Currently Savannakhet and Khammouan have limited experience in training for unqualified and under-qualified teachers. On the other hand, to raise the enrollment ratio under the limited number of classrooms and teachers, an effective application of the multi-grade teaching method should be planned. This new method requires special teaching skills and study-materials. Although some rural schools have started this method, most teachers are not well-prepared. Some intensive seminars and training for multi-grade teaching should be introduced across SKR.

- **Justification**
  Educational quality is attributable mainly to a teacher's quality. Although the government is aware of it, appropriate measures has not been taken to improve the quality of teachers due to lack of capable personnel and severe budgetary constraints. Improvement of educational quality depends on improvement of teachers' quality.

- **Scope**
  The proposed program will encompass the following:
  - To strengthen the current "Network Teacher Development Center (NTDC)" by increasing personnel and finance (the number of personnel should be increased from 12 to 30).
  - To expand training courses (from once a year to three times a year).
  - To dispatch personnel to villages to have training and seminars.

- **Implementation Period**
  NTDC will be strengthened from personnel and finance points of view by 2005.
  Trainer's (pedagogical advisors) training will be organized and started by 2005.
  Training for unqualified and under-qualified teachers will be implemented by 2005.
  Training of multi-teaching method for all teachers will be implemented by 2005.
  Refresher training for all teachers will be conducted through 2000-2020.

In addition to qualitative improvement, the number of teachers should be increased to meet the requirement for additional teachers at the newly constructed schools. It is planned that the existing Savannakhet Teachers Training College will be expanded under the Primary Education Expansion and Improvement Program (refer to Part 3, Priority Program Study Report, Chapter II).

Picture I3-5 Primary School Classroom in Savannakhet

5) HRD Initiative in Urban Area

Currently SKR has four vocational and technical schools; three in Savannakhet and one in Khammouan. It is noted that the capacity of vocational and technical education is small, and the quality of education is relatively low. This type of education is important for SKR to create capable skilled personnel and to develop the regional economy. This initiative consists of four sub-programs as follows:

(i) Savannakhet Agricultural College,
(ii) Renovation of Savannakhet Technical School,
(iii) Renovation of Savannakhet Art School, and
(iv) Establishment of Khammouan Polytechnics.

While these sub-programs, at the initial stage, can be supported by donors, the future operation will be handed over to respective schools. Under the severe budgetary constraints in the central and local government, the proposed schools will be designed to be “self-supporting schools,” as far as possible, generating incomes for their own operations.

(1) Savannakhet Agricultural College

“Savannakhet Agricultural College” was operated until 1995, but it was closed down due to budget constraints. The school currently functions as an agricultural training center, offering training courses for government officers and local farmers.

In SKR, nearly 90% of people are engaged in the agricultural sector, and empowerment in agriculture should be the primary focus in formulation of the regional development plan. Agricultural development and its technology

improvement is a key for economic and social development, not only for SKR but for Lao PDR as a whole.

- **Justification**
  In SKR, nearly 90% of people are engaged in agricultural activity. Their way of cultivation is primitive and their productivity is still at a low level. Such a situation causes poverty in the rural area. To raise farmer's living standard, it is a key to improve their agricultural knowledge and technique. The agriculture college offers various training courses to improve agricultural productivity in crop cultivation, livestock, fisheries and forestry.

- **Scope**
  The proposed program will envisage the following:
  - To prepare land of about 500-800 ha to maintain a self-supporting scheme, cultivated land, livestock pastures and fish ponds,
  - To construct training facilities and dormitories,
  - To organize courses for crop cultivation, livestock, fisheries, agro-industry, forestry and irrigation. The college offers a practical-training centered curriculum.
  - Class size will be 50 students in each course and grade.
  - Qualification of applicant is at least a 11-year education background.
  - Certificates will be prepared for 11+3 diploma and short-courses.

- **Implementation Period**
  The College will open and start training by 2003. The Savannakhet Agricultural College Program in Part 3, Chapter III, presents further details of the proposed program.

(2) Renovation of Savannakhet Technical School

SKR currently has four vocational and technical schools. The total capacity is much smaller than the number of students who wish to study there. Among these schools, the Savannakhet Technical School is the most important. In spite of its capacity for 300 students, it accepted more than 600 students because of many applicants and strong demands. Therefore, the shortage of classrooms, equipment and dormitories is now a serious problem. To meet the demands, renovation of the Savannakhet Technical School is necessary. This renovation plan is proposed together with the "Transportation & Communication School," which is to merge into the Savannakhet Technical School.

- **Justification**
  In SKR, there are still limited number of industries due partly to lack of human resources. To have adequately skilled workers and technicians, the Savannakhet Technical School should be renovated as a center of region's technical and vocational education.

- **Scope**

  The proposed program will incorporate the following:

  - To arrange new compound for training
  - To merge the "Transportation & Communication School" and restructure its courses, incorporating road/bridge construction and maintenance course
  - To re-arrange the present courses to meet the requirement of industries
  - To create a close-linkage with local industries
  - To execute some school business activities (i.e., seminar, repair services, and products sales)

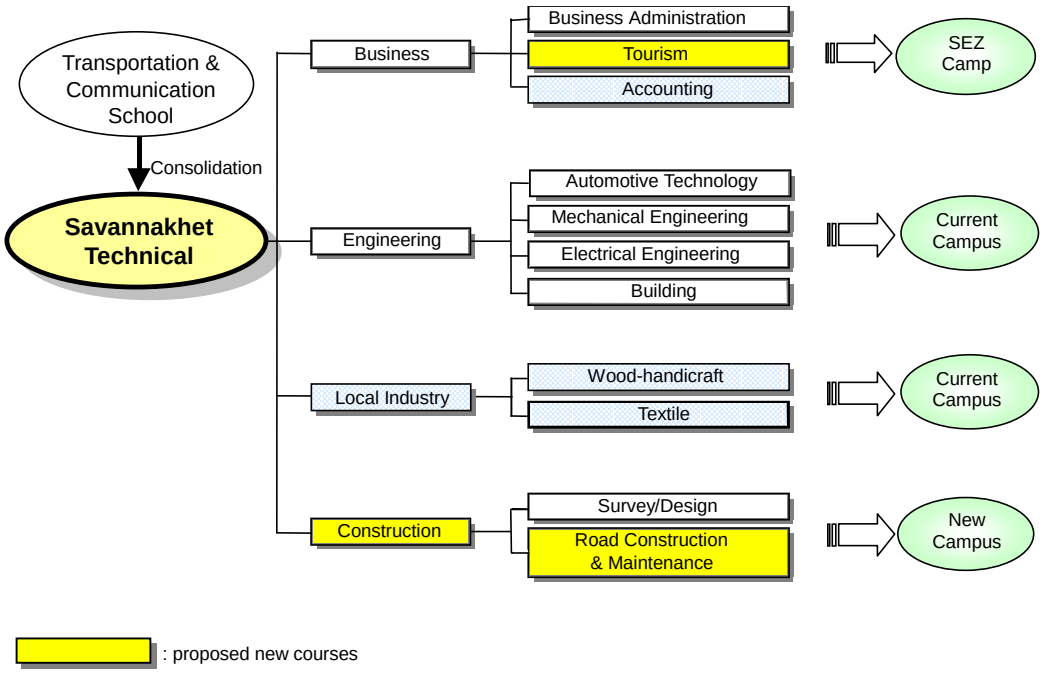


Figure I3-20 New Savannakhet Technical School System

- **Implementation Period**

  Construction of school facilities will be completed by 2003. The Savannakhet Technical School Renovation Program in Part 3, Chapter IV, presents further details of the proposed program.

Picture I3-6 Savannakhet Technical School

(3) Renovation of Savannakhet Art School

The Savannakhet Art School is one of the four art schools in Lao PDR. There are currently 130 students from various provinces. Due to the budgetary constraints, the school faces difficulties; e.g., lack of classrooms, teaching equipment and study-materials. Unless some reforms are conducted, the school cannot survive in the future.

By maintaining the Lao cultural heritage and spreading deeper recognition among people, the proposed renovation focuses also on modern arts and western style arts. Lao PDR has various ethnic minorities with their own cultures and languages. Focus on this cultural segment will make the country more attractive and competitive in the tourism industry. To achieve it, it is proposed that the Savannakhet Art School be changed into “Savannakhet Art and Culture College.” This new college will accept more ethnic minorities (preferably more than half of total students), give them opportunities to understand their own original cultures, as well as various different cultures, and create capable personnel to develop their villages and areas. In addition, the school is designed with various income-generation activities; e.g., sales of their products, in order to make it financially sustainable.

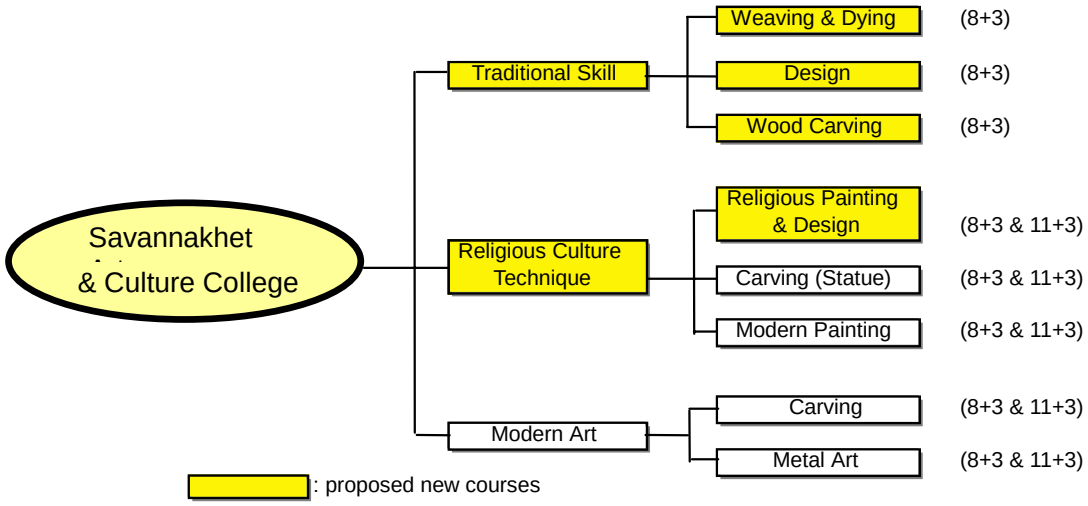


Figure I3-21 New Savannakhet Art & Culture College

- **Justification**

  Lao PDR has various ethnic minorities across the country. For a long time, this characteristic has been considered as a disadvantage, rather than an advantage. Cultural heritage is becoming one of the most attractive features of a country. The proposed renovation will contribute toward making these cultures flourish and maintaining the cultural heritage.

- **Scope**

  The proposed renovation program will include the following:
  - To change the name from “Savannakhet Art School” to “Savannakhet Art and Culture College”
  - To renovate and construct new facilities
  - To set three types of courses; 3-year diploma (11+3), 3-year certificate course (8+3) and short courses
  - To set three courses; traditional skills (e.g., weaving, wood carving and ethnic dancing), religious cultural technique (e.g., painting for temple) and modern arts
  - To make a linkage with the private sector to promote the school income-generation activities

- **Implementation Period**

  Construction and renovation of school facilities will be completed by 2005.
  Setting up new courses and curriculum will be completed by 2005.
  Making a linkage with the private sector will start from 2005.

Picture I3-7 Savannakhet Art School

(4) Establishment of Khammouan Polytechnic

Currently Khammouan has only one vocational center, called the "Khammouan Vocational School[2]." This school can accommodate 120 students. This capacity is relatively small if compared with the annual number of secondary school graduates of over 2,000. In Khammouan, small businesses and private enterprises are not developed well, and a mechanism for training is required.

- **Justification**
  Khammouan does not have polytechnics or vocational schools, except for the Khammouan Vocational School, and the local needs for vocational education have been increasing rapidly.
- **Scope**
  The proposed program will incorporate the following:
  - To select a new location for the school
  - To construct school facilities and arrange equipment
  - To set up courses based on local needs
  - To prepare instructors
- **Implementation Period**
  Construction of school facilities will be completed by 2005.
  The courses will be offered from 2005.

[2] Khammouan Vocational School was supported by the government of Germany and Luxembourg.