

## **ANNEX 4**

# **SOCIO-ECONOMIC CONDITIONS**

# **ANNEX 4-1**

## **SOCIO-ECONOMY**

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## **1. INTRODUCTION**

Socio-economic study aims at understanding present conditions and future socio-economic framework until the project target year 2020. The frame is essential for other sectoral studies related to this current study, as a function of the basic information for formulating the projects proposed. This socio-economic study covers neither all aspects of socio-economic conditions of the Lao PDR nor includes any proposal for socio-economic planning. It aims to provide the figures for the use of working out the other relevant sectoral studies. This annex consists of six chapters/parts. The respective chapters include the following contents

Chapter two presents administrative conditions in the Lao PDR, Vientiane Capital City and the Study Area. The Study Area extends to seven Districts in the total nine Districts in Vientiane Capital City.

Chapter three mentions present social conditions in the study area. The chapter includes population, labour force, poverty condition, ethnic groups and health situation.

Chapter four presents economic situation in the study area. It includes national accounts, economic growth, foreign trade, public finance, official development assistance, external debt and outstanding, price indices, and household economy.

Chapter five states economic development plans of the country and the capital city. The respective governments have hitherto addressed the economic development plans. This chapter summarizes these plans in terms of items concerned to the projects in this study. In addition, national population and GDP are projected in this chapter.

In addition to five chapters in this Annex 4-1, Annex 4-2 presents management conditions of waterworks in Vientiane Capital City in recent years. It includes financial situation, management characteristics, water production cost, tariff system, and development plan.

## **2. ADMINISTRATIVE SITUATION**

### **2.1 Administration**

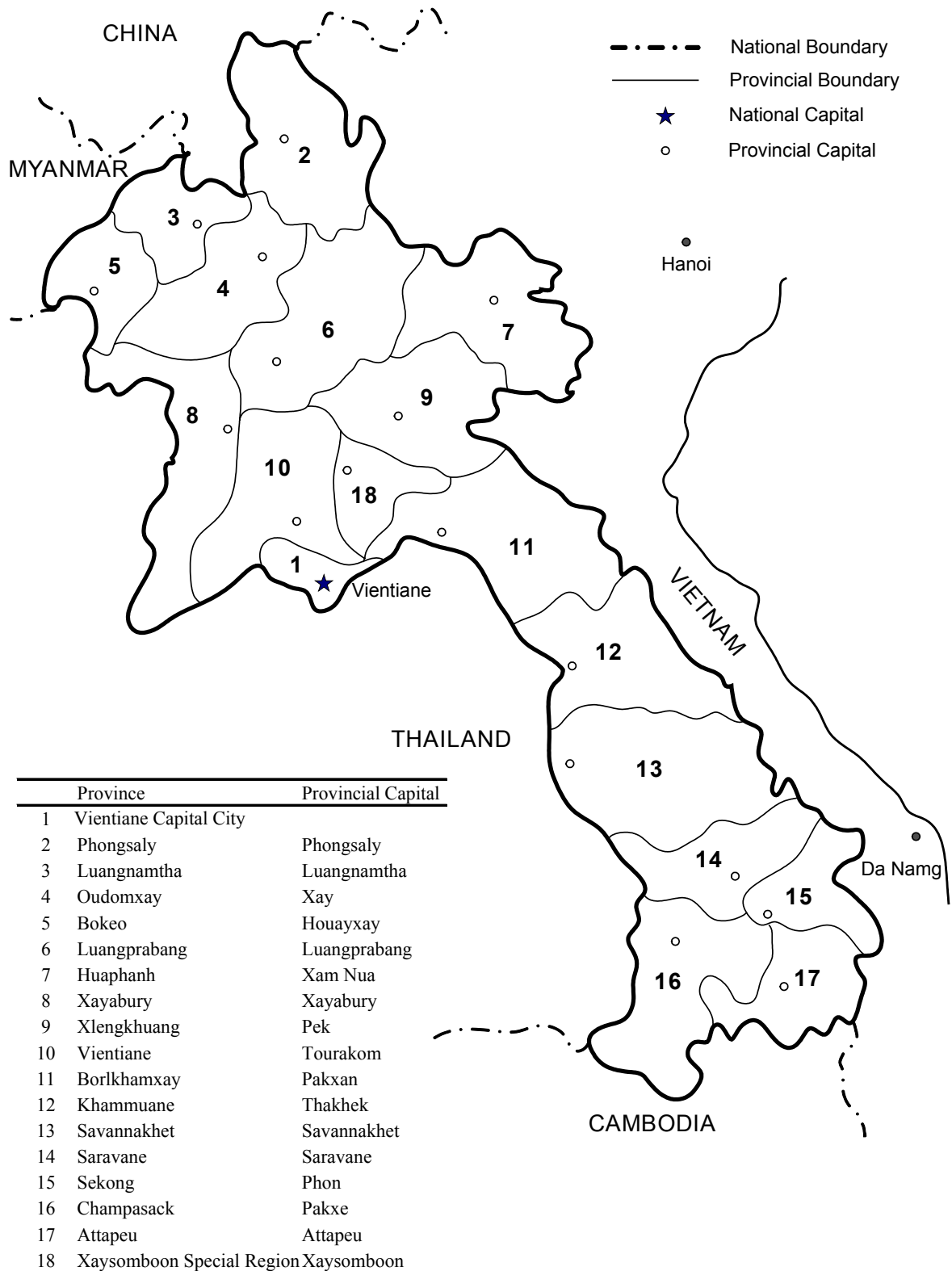
The Lao People's Democratic Republic (Lao PDR or Laos) is a landlocked country bordered on the north by China and Myanmar, on the east by Vietnam, on the south by Cambodia, and on the west by Thailand. The capital city of the Lao PDR is Vientiane located situated on a plain just northeast of the Mekong River, which is the major economic centre of Laos. The area of the whole nation is 236,800 km<sup>2</sup>.

The Lao PDR administratively consists of one capital city (Vientiane Capital City), 16 provinces and one special region (Xaysomboon Special Region). 16 provinces are composed of Phongsaly, Luangnamtha, Oudomxay, Bokeo, Lungprabang, Huaphanh, Xayaburt, Xiengkhuang, Vientiane, Borikhamxay, Khammuane, Savannakhet, Saravane, Sekong, Champasack, Attapeu. Figure 21-1 shows these administrative boundaries in the country. The country is generally fallen into four regions. The metropolitan region consists of Vientiane Capital City, Vientiane Province and Xaysomboon Special Region. The northern region comprises eight provinces of Phongsaly, Luangnamtha, Oudomxay, Bokeo, Lungprabang, Huaphanh, Xayaburt, and Xiengkhuang. The central region comprises two provinces of Borikhamxay and Khammuane. The southern region comprises five provinces of Savannakhet, Saravane, Sekong, Champasack, and Attapeu. However, this regional classification is not always fixed officially, because some reports use different classifications. Under these provinces, there are 142 Districts which have 10,873 villages as of 2001. Village is the smallest administration unit. Table 21-1 shows these administration structures.

### **2.2 Administrative Structure in Study Area**

The study area extends in Vientiane Capital City with an administrative area of 3,920 km<sup>2</sup> or 1.7% of the national territory. Among nine districts in Vientiane Capital City, the study area extends in six districts, i.e., Chanthabuly, Sikhottabong, Xaysetha, Sisattanak, Xaythany, and Hadxaifong Districts. In the "Upgrading and Expansion of Water Supply System in Vientiane Capital City, November 1999, Nam Papa Lao Capital City", the service area by Nam Papa Vientiane Capital City (NPVC) covers 152 villages in six districts among 486 villages in nine districts of the capital city. In this current study, the study area covers 200 villages in seven districts among 486 villages in the capital city. This structure is tabulated in Table 21-2.

Figure 21-1 Administrative Boundary Map of Lao PDR





**Table 21-1 Administrative Structure in Lao PDR: 2001**

Code	Name of Province	Number of Districts	Number of Villages	Number of Households
1	Vientiane Capital City	9	494	105,633
2	Phongsaly	7	598	26,800
3	Luangnamtha	5	403	23,034
4	Oudomxay	7	695	35,886
5	Bokeo	6	373	22,121
6	Luangprabang	11	950	65,620
7	Huaphanh	8	847	40,503
8	Xayabury	10	533	56,406
9	Xlengkhuang	7	528	32,881
10	Vientiane	12	583	58,677
11	Borlkhamsay	6	311	33,120
12	Khammuane	9	805	55,231
13	Savannakhet	15	1,543	126,361
14	Saravane	8	725	47,729
15	Sekong	4	273	13,207
16	Champasack	10	916	99,663
17	Attapeu	5	210	17,446
18	Xaysomboon Special Region	3	86	5,217
Total		142	10,873	865,535

Source: Table 09 in "Statistical Yearbook 2001, May 2002, National Statistical Centre, Committee for Planning and Cooperation"

**Table 21-2 Administrative Structure in Study Area: 2001**

Code	District Name	Number of Villages		
		Existing	In Service Area	In Study Area
0101	Chanthabuly	37	24	25
0102	Sikhottabong	59	38	43
0103	Xaysetha	51	17	22
0104	Sisattanak	40	38	43
0105	Naxaithong	55	0	6
0106	Xaytany	99	20	34
0107	Hadxaifong	57	15	27
0108	Sangthong	35	0	0
0109	Mayparkngum	53	0	0
Total		486*	152	200

Note: \* As of 2001, the number of villages increased to 494.

### **3. SOCIAL CONDITIONS**

#### **3.1 Population**

According to the 1995 census, the Lao PDR had a population of 4.57 million, as shown in Table 31-1. This population increased by 0.99 million as compared with the 1985 census. During ten years between these censuses, an average growth rate was 2.5% per annum.

A population of Vientiane Capital City in the 1995 census was 524,000, accounting for 11% of the national population. It has grown at annual rate 3.3% on average between the two censuses. Population density of Vientiane Capital City was 134 persons/km<sup>2</sup> as shown in Table 31-2, which was much higher than the national density of 19 persons/km<sup>2</sup>.

An urban population in Vientiane Capital City was 331,000 or 63% of the capital city population in 1995. Vientiane Capital City has been urbanized considerably, because the urban population in the country was 17% only and the second urbanized province was Vientiane Province having an urban population of 17.5%. Furthermore, since 44% of Vientiane Capital City was not born in the capital city, they immigrated into the capital city from other provinces. Thus, Vientiane Capital City is said to be obviously in the cityward drifting of population.

In the census, incidentally, an urban area is defined to satisfy at least three of the five conditions below. A village is considered as a minimum unit for the urban area. Then, any village not to satisfy at least three of the conditions below is defined as rural area.

- (a) There is a market in the village.
- (b) There is a road for motor vehicles to get access to the village.
- (c) The village must lie in the capital city vicinity where the district or provincial authority is located.
- (d) The majority of households in the village area electrified.
- (e) There is a tap water supply in service to the majority of households.

The number of households in Vientiane Capital City was 90,000 in the 1995 census. Then, an average family size was calculated at 5.8 persons per household, as shown in Table 31-2. Among nine districts, Xaysetha District recorded the largest family size of 6.0 persons per household. On the other hand, Hadxaifong District had the smallest one of 5.4 persons per household.

**Table 31-1 Census Population: 1985 and 1995**

Item	Census Population (1000)		Percentage Distribution (%)		Average Annual Growth Rate (%)
	1985	1995	1985	1995	'85-'95
<b>Lao PDR</b>					
1. Population	3,585	4,575	100	100	2.5
2. Male	1,757	2,261	49	49	2.6
3. Female	1,828	2,314	51	51	2.4
4. Urban	-	782	-	17	-
5. Rural	-	3,793	-	83	-
6. 10 Years & Over	2,453	3,157	68	69	2.6
7. Labour Force	1,501	2,221	42	49	4.0
8. Labour Participation Rate	61%	70%	-	-	-
9. Employed	-	2,166	-	47	-
10. Employment Rate	-	98%	-	-	-
11. Unemployment	-	54	-	1	-
12. Unemployment Rate	-	2.4%	-	-	-
<b>Vientiane Capital City</b>					
1. Population	377	524	100	100	3.3
2. Male	193	263	51	50	3.1
3. Female	184	261	49	50	3.6
4. Urban	-	331	-	63	-
5. Rural	-	193	-	37	-
6. 10 Years & Over	265	394	70	75	4.1
7. Labour Force	138	235	37	45	5.4
8. Labour Participation Rate	52%	60%	-	-	-
9. Employed	-	218	-	42	-
10. Employment Rate	-	93%	-	-	-
11. Unemployment	-	17	-	3	-
12. Unemployment Rate	-	7.2%	-	-	-

Sou Results from the Population Census 1995, April 1997, National Statistical Centre, State Planning Committee Population of Lao PDR, 1992, State Statistical Centre, Ministry of Economy, Planning and Finance

**Table 31-2 Population Density and Average Family Size at 1995 Census**

Country/Province Capital City/District	Census Population	Land Area (km <sup>2</sup> )	Density (Persons/ha)	Household Population	Number of Households	Family Size Persons/Family
<b>Lao PDR</b>	4,574,848	236,800	19.3	4,506,205 *1	748,529	6.0
(1) Urban	781,753	-	-	753,871 *1	128,519	5.9
(2) Rural	3,793,095	-	-	3,752,334 *1	620,010	6.1
<b>Vientiane Capital City</b>	524,107	3,920	133.7	508,884 *1	89,413	5.7
(1) Urban	330,798	-	-	319,136 *1	55,984	5.7
(2) Rural	193,309	-	-	189,748 *1	33,429	5.7
<b>Vientiane Capital City (including Collective Households)</b>				524,107 *2	90,133	5.8
1. Chathabuly	58,855	-	-	58,855 *2	10,203	5.8
2. Sikhottabong	74,251	-	-	74,251 *2	12,612	5.9
3. Xaysetha	75,255	-	-	75,255 *2	12,562	6.0
4. Sisattanak	58,178	-	-	58,178 *2	9,850	5.9
5. Naxaithong	44,104	-	-	44,104 *2	7,600	5.8
6. Xaythany	97,829	-	-	97,829 *2	16,512	5.9
7. Hadxaifong	64,962	-	-	64,962 *2	11,933	5.4
8. Sangthong	16,728	-	-	16,728 *2	2,928	5.7
9. Mayparkngum	33,945	-	-	33,945 *2	5,933	5.7

Source: Results from the Population Census 1995, April 1997, National Statistical Centre, State Planning Committee Population in Vientiane 1995

Note: \*1 Population in private households excluding collective households.

\*2 Population including collective households

### 3.2 Labour Force

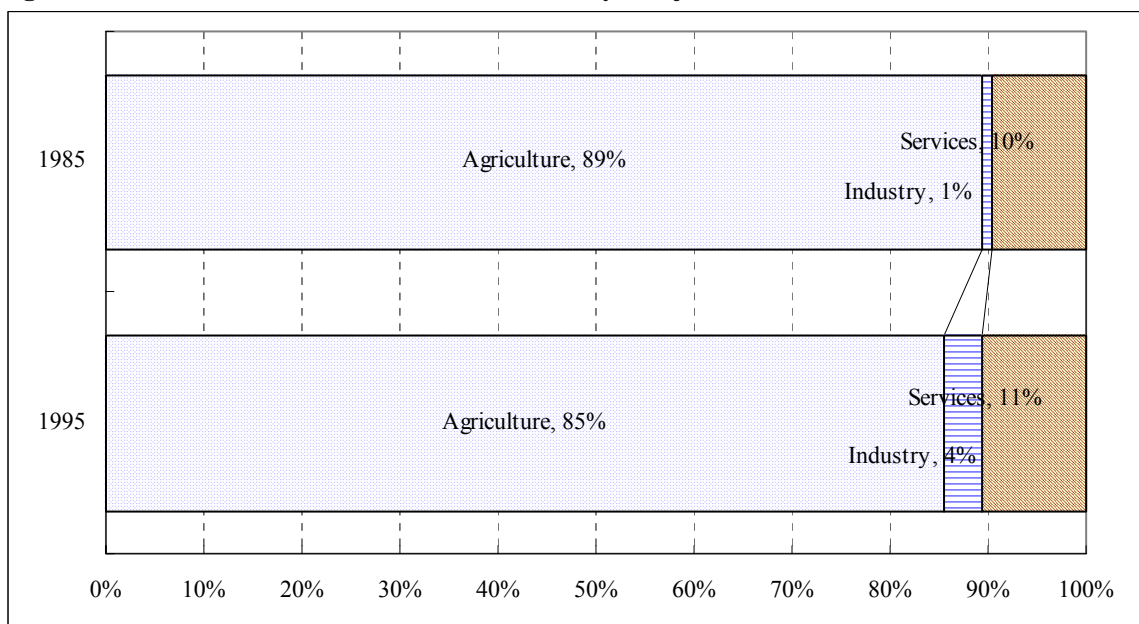
In the Lao PDR, the population of 10 years old and over was 3.16 million in the 1995 census year, accounting for 69% of the total population in the country. Of this total population, 2.22 million people participated into the labour market, accounting for 70%. 98% of the labour force was employed, so the unemployment rate was 2% only in 1995.

In Vientiane Capital City, the population was 524,000 in the 1995 census. Since the population of 10 years old and over was 394,000 in the same year, it accounted for 75% of the total population. Of this population, 60% participated in the labour market as economically active people, as shown in Table 31-1. 93% of the labour force was employed in the labour market, and thus 7% was unemployed.

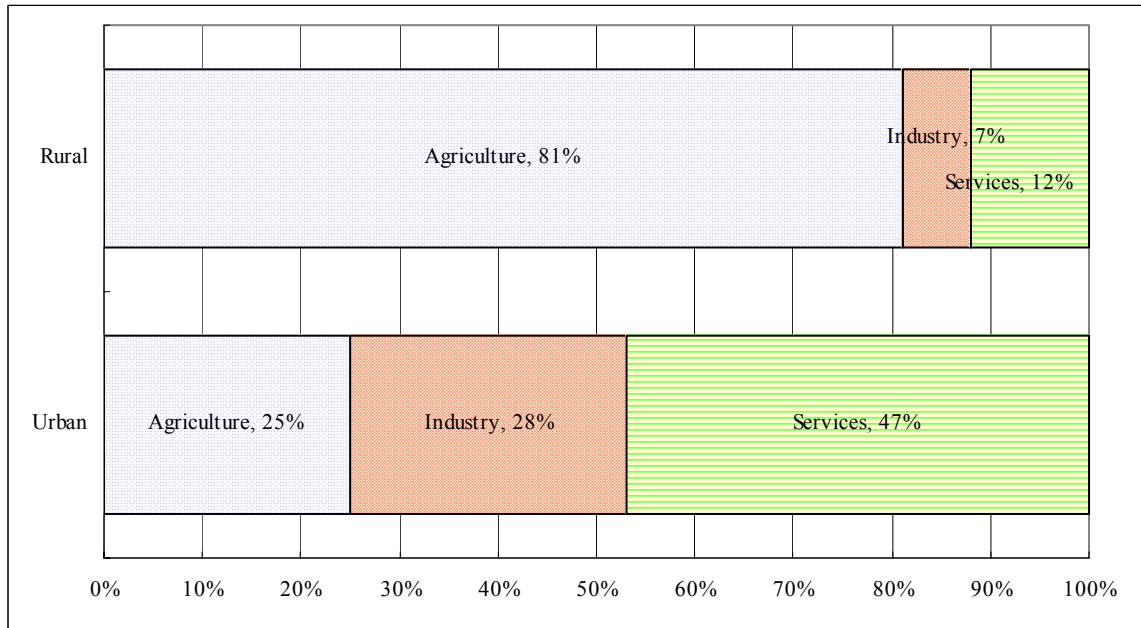
The agriculture sector, so called as the primary sector, absorbs the greatest portion of manpower resources in the country. In the 1995 census, the sector accounted for 1.85 million or 85% of the total employed workers (2.17 million) in the country. Since the sector absorbed 89% in the 1985 census, it recorded a slight decrease by 4% between the two censuses, as shown in the figure below.

On the other hand, the services sector accounted for 300,000 or 11% of the total employed workers in the 1995 census. Since the sector absorbed 10% in the 1985 census, it recorded a 1% increase between the two censuses. The industry sector absorbed 83,000 or 4% of the total employed workers in the 1995 census. Since the composition of the industry sector was 1% only in the 1985 census, the sector has grown at considerably high rate but its share was still small as compared with the other sectors.

**Figure 32-1 Distribution of Labour Force by Major Economic Sector in Lao PDR**



In Vientiane Capital City, the labour force distribution in urban areas was different from the national average. Total labour force in the urban areas of the capital city was 130,400 in the 1995 census year, accounted for 60% of the total labour force in the capital city. Of this total labour force, 31,600 workers were absorbed in the agriculture sector, accounting for 25%. 61,800 workers or 47% of the total labour force were in the services sector. The industry sector absorbed 37,000 workers or 28%. This structure was illustrated in the figure below.



**Figure 32-2      Distribution of Labour Force by Major Economic Sector in Vientiane Capital City: 1995**

On the other hand, the labour force distribution in rural areas was similar to the national average, although the labour force of the industry and services sectors was slightly larger than the national average. The total labour force in the rural areas was 87,700, accounting for 40% of the total labour force of the capital city. This structure was shown in the figure above.

As of 2003, labour wage in the Lao PDR is said to be the lowest in Asian countries. Ministry of Labour and Social Welfare is revising the minimum wage to 140,000 kip per month in the regulation.

### 3.3      Poverty Condition

The incidence of poverty was presented in Table 33-1, which was quoted from “Poverty in the Lao PDR during the 1990’s, Nanak Kakwani and others, 2002, National Statistical Centre (NSC)”. In the country, 46% of the national population lived in poverty in 1992/93, but by 1997/98 the incidence of poverty was improved to 39% as shown in the table. The annual rate of poverty reduction was calculated at 3.3%. Since GDP grew at 4.6% per annum on average during the same period, the poverty incidence has been

improved at a modest pace.

However, the incidence of poverty in Vientiane Capital City recorded the lowest among 18 provinces. The incidence was 34% in 1992/93 and improved to 14% in 1997/98, as shown in the table. Thus, the annual reduction rate of poverty was calculated at 18.2%. The poverty condition in Vientiane Capital City was considerably improved at a high pace.

**Table 33-1 Incidence of Poverty**

		(Unit: %)		
Area		1992/93	1997/98	Growth Rate
1.	Vientiane Capital City	33.6	13.5	-18.2
2.	Lao PDR	46.0	39.1	-3.3

Source: (1) Table 9 in "Poverty in Lao PDR during the 1990's, Nanak Kakwani and others, 2002, National Statistical Centre, Committee for Planning and Cooperation  
(2) Expenditure and Consumption Survey and Social Indicator Survey 1992-1993, July 1995, National Statistical Centre, Committee for Planning and Cooperation  
(3) The Households of Lao PDR, Social and Economic Indicators, Lao Expenditure and Consumption Survey 1997/98 (LECS2), December 1999, National Statistical Centre, State Planning Committee

Remark: A poverty line is set as a cost of basic needs approach, whereby the food poverty line is anchored to an energy threshold of 2100 calories per person per day, and the non-food poverty lines allow for basic non-food expenses. The poverty lines are set as follows:

		(Unit: Kip/month)	
Area	Urban/Rural	1992/93*1	1997/98
Vientiane Capital City	Urban Areas	12,301	22,613
	Rural Areas	12,301	22,613
Lao PDR	Urban Areas	9,887	20,597
	Rural Areas	9,482	19,718

Note: Values of poverty line in 1992/93 were adjusted to those in 1997/98 by using the appropriate price indices.

Infrastructure services to the poor are generally worse than those to the non-poor as a whole. Poor households are concentrated in areas where infrastructures are more underdeveloped. In fact, about only 39% of the poor has access to piped water or protected wells in the country, but 57% of the non-poor has access to the safe water sources in 1997/98. In the same manner, only 17% of the poor is linked to electricity networks, but about 40% of the non-poor can access to the networks.

The degree of inequality is measured with a Gini index in general. The Gini index is said as a uni-dimensional measure of inequality, i.e., the lower index the more equal. Inequality of the Lao PDR is said to be low, as compared with other Asian countries. According to 1993 information, the Gini index of the Lao PDR was 36% against Indonesia of 37%, Thailand of 41%, Malaysia of 44% and Philippines of 46%. According to the analysis of household survey in 1992/93 and 1997/98 by NSC, however, the Gini index increased from 33% in 1992/93 to 37% in 1997/98. Accordingly, inequality in the Lao PDR had worsened gradually.

### 3.4 Ethnic Groups and Religion

As of the 1995 census, NSC confirmed 48 ethnic groups in the country. The census report shows the top three ethnic groups as almost 53% Lao, 11% Ihmu and 10% Phutai, as shown in Table 34-1. Around 7% belonged to the Hmong ethnic group. Following them, the ethnic groups accounting for more than 1% of the total population were as follows: Leu of 2.6%, Katang of 2.1%, Makong of 2.0%, Kor of 1.4% and Xuay of 1.0%.

**Table 34-1 Ethnic Group in Lao PDR**

(Unit: 1000, %)

Ethnic Group		Male	Female	Total	Percentage Distribution of Total
1.	Lao	1,188.1	1,215.7	2,403.9	52.5
2.	Phuntai	232.5	240.0	472.5	10.3
3.	Khmu	247.4	253.5	501.0	11.0
4.	Hmong	158.1	157.4	315.5	6.9
5.	Leu	58.7	60.5	119.2	2.6
6.	Katang	46.9	48.6	95.4	2.1
7.	Makong	45.1	47.2	92.3	2.0
8.	Kor	33.1	33.0	66.1	1.4
9.	Xuay	22.2	23.3	45.5	1.0
10.	Others	216.4	223.1	439.4	9.6
11.	Not Stated	12.5	11.6	24.1	0.5
Total		2,261.0	2,313.9	4,574.8	100.0

Source: Table 1.7 in "Results from the Population Census 1995, April 1997, NSC, State Planning Committee"

NSC reported the distribution of religious groups in the country in the 1995 census, as shown in Table 34-2. The predominant religions were Buddhism accounting for 65% of the total population and Animism, 33%. Following them, Christianity accounted for 1.3% only. Other religions occupied less than 1%, as shown in the table.

**Table 34-2 Religious Group in Lao PDR**

(Unit: 1000, %)

Ethnic Group		Male	Female	Total	Percentage Distribution of Total
1.	Buddhist	1,480.1	1,513.4	2,993.5	65.4
2.	Animist	748.5	766.7	1,515.2	33.1
3.	Christian	29.3	30.7	60.1	1.3
4.	Muslim	0.6	0.6	1.1	0.0
5.	Others	2.4	2.3	4.7	0.1
6.	Not Stated	0.1	0.1	0.3	0.0
Total		2,261.0	2,313.9	4,574.8	100.0

Source: Table 1.6 in "Results from the Population Census 1995, April 1997, NSC, State Planning Committee"

### 3.5 Public Health and Medical Conditions

In the Lao PDR, around 315,000 patients suffering from water-borne diseases were cared by hospitals in 2001. The number of patients was segregated to 257,300 outpatient to 3.03 million population of

selected provinces and 57,700 inpatients to 2.90 million population of selected provinces. Then, their disease incidence rates were 8.5% and 2.0%, respectively. Table 35-1 shows records of patients by water-borne diseases for three years between 1999 and 2001. Average days of hospital treatment for inpatients for three years were as follows: 2.9 days for diarrhoea, 5.8 days for typhoid fever, 4.3 days for dysentery, 5.3 days for cholera, and 3.0 days for conjunctivitis.

In Vientiane Capital City, there are ten hospitals, comprising one central hospital at Setthathiral and nine district hospitals located in the respective district in the capital city. According to Department of Health in Vientiane Capital City, there were 2,826 patients suffering from major water-borne diseases such as diarrhoea, typhoid fever and dysentery in 2002. The number of patients was composed of 2,165 of outpatient and 661 of inpatient. Table 35-2 shows records of patients by water-borne diseases for the latest five years between 1998 and 2002. The average data of these diseases for the five years are summarised in the table below.

**Table 35-3      Summary of Patients by Water-borne Diseases: 1998-2002**

	Out-patient	In-patient	Morbidity Rate (Persons/100,000)	Average Days of Hospital Treatment (days)
Diarrhoea	1,506	406	342	3
Typhoid Fever	6	120	21	6
Dysentery	178	74	30	3



**Table 35-1 Records of Patients by Waterborne Diseases in Lao PDR: 1999-2001**

	Disease	Died (Persons)	Outpatient (Persons)	Inpatient		Died (Persons)
				Number of Annual Inpatients (Persons)	Average Days of Hospital Treatment (Days)	
1.	In 2001					
	Total Population (1000)*1		3,030	2,895		
	(1) Diarrhoea	18	12,110	5,168	2.4	18
	(2) Typhoid Fever	3	476	483	4.2	3
	(3) Dysentery	-	2,345	-	-	-
	(4) Cholera	-	-	-	-	-
	(5) Trachoma	-	291	-	-	-
	(6) Conjunctivitis	0	1,856	13	6.0	0
	Total of Provinces*1	624	257,320	57,754	3.8	624
	Disease Incidence Rate		8.5%	2.0%		
2.	In 2000					
	Total Population (1000)*2		3,064	2,466		
	(1) Diarrhoea	34	8,261	4,059	3.1	34
	(2) Typhoid Fever	4	345	953	5.7	4
	(3) Dysentery	0	4,279	260	4.5	0
	(4) Cholera	-	-	146	4.9	0
	(5) Trachoma	0	779	1	2.0	0
	(6) Conjunctivitis	0	2,458	8	6.5	0
	Total of Provinces*2		307,096	109,059	4.3	1,335
	Disease Incidence Rate		10.0%	4.4%		
3.	In 1999					
	Total Population (1000)*3		4,011	4,182		
	(1) Diarrhoea	50	16,141	9,094	3.1	50
	(2) Typhoid Fever	1	441	643	7.5	1
	(3) Dysentery	4	2,693	774	4.1	4
	(4) Cholera	0	-	60	5.7	0
	(5) Trachoma	0	842	77	4.0	0
	(6) Conjunctivitis	0	3,653	67	3.7	0
	Total of Provinces*3	1,979	395,752	172,497	5.8	1,979
	Disease Incidence Rate		9.9%	4.1%		

Source: Summary of Patients in Outpatients, Inpatients and Died 2001, 2000 and 1999, Ministry of Health

Note: \*1 The number of patients was estimated for ten provinces (Phongsaly, Luangnamtha, Bokeo, Luangpabang, Huaphanh, Khammuane, Savannakhet, Champasack, Attapeu, Xaysomboon SR) in outpatient, and nine provinces (eight provinces excluding Luangnamtha) in inpatients and died.

\*2 The number of patients was estimated for eight provinces (Vientiane Capital City, Luangnamtha, Luangpabang, Huaphanh, Xlengkhuang, Savannakhet, Champasack, Sekong) in outpatient, and Seven provinces (eight provinces excluding Vientiane Capital City) in inpatients and died.

\*3 The number of patients was estimated for 13 provinces (Vientiane Capital City, Bokeo, Luangpabang, Huaphanh, Vientiane Province, Borlkhamsay, Khammuane, Savannakhet, Saravane, Sekong, Champasack, Xaysomboon SR) in outpatient, and 14 provinces (eight provinces including Phongsaly) in inpatients and died.

**Table 35-2 Records of Patients by Water-borne Diseases in Vientiane Capital City: 1998-2002**

Disease	Out-patient (Persons)	In-patient		Died (Persons)	Morbidity Rate (Persons/100,000)	Mortality Rate (%)
		Number of Annual Inpatients (Persons)	Average Days of Hospital Treatment (Days)			
1. In 2002						
(1) Diarrhoea	2,111	551	3	0	431	0.00
(2) Typhoid Fever	-	110	6	0	18	0.00
(3) Dysentery	54	-	-	-	9	0.00
2. In 2001						
(1) Diarrhoea	1,277	48	3	0	303	0.00
(2) Typhoid Fever	-	-	-	-	-	-
(3) Dysentery	-	-	-	-	-	-
3. In 2000						
(1) Diarrhoea	-	-	-	-	-	-
(2) Typhoid Fever	-	-	-	-	-	-
(3) Dysentery	-	-	-	-	-	-
4. In 1999						
(1) Diarrhoea	1,327	603	3	1	323	0.05
(2) Typhoid Fever	6	169	7	0	29	0.00
(3) Dysentery	-	53	3	1	9	1.88
5. In 1998						
(1) Diarrhoea	1,309	420	3	7	309	0.40
(2) Typhoid Fever	6	82	6	0	16	0.00
(3) Dysentery	302	94	3	1	71	25.00
Average						
(1) Diarrhoea	1,506	406	3.0	2	342	0.11
(2) Typhoid Fever	6	120	6.3	0	21	0.00
(3) Dysentery	178	74	3.0	1	30	8.96

Source: Department of Public Health, Vientiane Capital City  
Data from 9 district hospitals and 1 central hospital at Setthathiral Hospital

## 4. MACRO ECONOMIC FEATURES

### 4.1 National Accounts

Gross domestic product (GDP) in the Lao PDR was 15.7 trillion kip (equivalent to approximately US\$1.8 billion) in 2001 at current prices, as shown in Table 41-1. It was broken down into gross value added (GVA) of main economic sectors as follows: 7.97 trillion kip in the agriculture sector, 2.77 trillion kip in the industry sector, and 3.88 trillion kip in the services sector. These sectors were composed of 51%, 24% and 25% respectively, as shown in Table 41-2. A trend of GDP for the last 12 years was tabulated in Table 41-1.

In 2001, GDP at 1990 constant prices was counted as 1.19 trillion kip, as shown in Table 41-4. Since GDP in 1990 was 0.62 trillion kip at 1990 constant prices, its real growth rate was calculated at 6.5% per annum on average for the 12 years, as shown in Table 41-5. Among the major economic sectors, the industry sector recorded the highest growth rate of 10.2% per annum for the same period. On the other hand, the agriculture sector has grown at 5.2% per annum, lower than the national average rate of 6.5%. For the recent 12 years, GDP growth rate dropped down to 4.0% due to Asian financial crisis in 1998, but the government regained its economic stability after 1999 as shown in Table 41-4.

Per capita GDP was 2,910 kip at current prices, equivalent to approximately US\$ 330 in 2001, as shown in Table 41-3. That has grown at 4.0% per annum on average since 1990, as shown in Table 41-6. The Lao PDR is still ranked together with Cambodia and Myanmar in the LLDC level because of less than US\$400 of GDP per capita. That is considerably backward in per capita GDP of ASEAN ten countries, such as, Thailand of US\$ 2,500, Philippines of US\$ 1,100, Indonesia of US\$ 1,000 and Malaysia of US\$ 4,500.

Gross regional domestic product (GRDP) in the respective provinces is not available. In the report of “State of the Environment, Lao PDR 2001, August 2001, UNEP and NORAD”, GRDP index for the respective provinces was presented together with other socio-economic indicators, which was quoted originally from “The Dynamics of Regional Disparities in Laos, Asian Survey, July 1998, BOURDET, I.”. Its summary is shown in Table 41-7 below.

**Table 41-7 Socio-economic Indicators of Lao PDR and Vientiane Capital City**

Item	Unit	Lao PDR	Vientiane Capital City	Remark
GDP per Capita	Mean=100	100	142	1992/93
Access to Safe Water of All Households	%	15.1	48.0	1995
Use of Electricity of All Households	%	25.4	84.0	1995

Note: \*1 The number of children who die during the first year of life per 1,000 births

**Table 41-1 Gross Domestic Product at Current Prices: 1990 - 2001**

(Unit: Billion Kip)												
Sector	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*1
Agriculture	371.8	414.5	492.9	538.0	622.0	767.6	891.1	1,138.6	2,226.9	5,507.5	7,127.4	7,974.6
Crops	225.0	221.9	275.6	260.5	313.3	365.5	425.1	578.6	1,168.4	3,031.2	4,232.6	4,750.2
Livestock & Fishery	127.4	165.3	198.0	219.2	244.0	302.8	351.6	430.0	835.9	1,955.6	2,468.2	2,727.1
Forestry	19.5	27.3	19.3	58.3	64.7	99.3	114.4	130.0	222.6	520.7	426.6	497.3
Industry	88.2	119.8	141.5	165.9	196.0	265.3	351.7	454.0	940.4	2,320.7	3,105.6	3,673.2
Mining & Quarrying	0.9	0.9	1.2	1.7	2.3	2.9	5.3	8.1	17.6	53.6	67.0	73.1
Manufacturing	60.5	88.9	106.9	122.3	139.7	196.6	262.4	342.5	712.4	1,744.1	2,305.8	2,772.6
Construction	17.9	20.1	23.7	29.3	36.7	46.8	59.5	74.5	121.5	276.1	309.3	377.0
Electricity, Gas & Water	8.9	9.8	9.8	12.6	17.3	18.9	24.6	28.8	88.9	246.9	423.3	450.4
Services	147.4	177.7	199.7	233.4	271.2	362.2	442.0	564.3	1,011.5	2,425.4	3,332.6	3,883.4
Transport, Communication & Post	31.7	36.4	42.8	46.9	52.2	73.8	91.8	120.9	244.3	590.8	794.0	929.7
Wholesale & Retail Trade	42.0	52.4	61.6	77.5	89.3	116.8	146.7	194.2	404.6	991.7	1,284.0	1,502.0
Banking	6.9	7.0	8.6	10.4	12.0	20.3	22.4	29.1	7.2	57.5	105.2	134.6
Dwellings	24.4	31.7	29.2	33.5	38.8	48.0	57.6	70.5	137.1	321.3	406.2	448.9
Public Administration	35.6	36.7	37.3	44.0	56.0	68.0	78.5	94.8	122.9	219.4	392.7	496.7
Non-profit Institution	5.5	10.0	12.5	11.7	8.3	11.9	13.3	13.6	11.2	11.0	12.2	11.0
Hotel & Restaurant	0.9	2.6	6.5	7.9	13.0	21.0	28.8	37.8	77.4	215.1	309.0	329.3
Other Services	0.4	0.8	1.3	1.4	1.6	2.3	2.9	3.5	6.8	18.6	29.3	31.1
Import Duties	5.4	10.0	10.2	16.0	18.6	35.2	41.0	43.8	61.5	75.0	105.7	138.7
<b>GDP at Current Prices</b>	<b>612.7</b>	<b>722.0</b>	<b>844.3</b>	<b>953.3</b>	<b>1,107.8</b>	<b>1,430.3</b>	<b>1,725.7</b>	<b>2,200.7</b>	<b>4,240.2</b>	<b>10,328.6</b>	<b>13,671.3</b>	<b>15,670.0</b>

Source: (1) Basic Statistics of the Lao PDR 1975-2000, State Planning Committee National Statistical Centre  
 (2) 1975-1995, Basic Statistics about the Socio-economic Development in the Lao P.D.R., State Planning Committee National Statistical Centre  
 (3) 1997, Basic Statistics about the Socio-economic Development in the Lao P.D.R., State Planning Committee National Statistical Centre  
 (4) Statistical Yearbook 2001, May 2002, State Planning Committee National Statistical Centre

Note: \*1 Provisional estimates

**Table 41-2 Share of Gross Value Added to GDP: 1990 - 2001**

	(Unit: %)											
Sector	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Agriculture	60.7	57.4	58.4	56.4	56.1	53.7	51.6	51.7	52.5	53.3	52.1	<b>50.9</b>
Crops	36.7	30.7	32.6	27.3	28.3	25.6	24.6	26.3	27.6	29.3	31.0	30.3
Livestock & Fishery	20.8	22.9	23.4	23.0	22.0	21.2	20.4	19.5	19.7	18.9	18.1	17.4
Forestry	3.2	3.8	2.3	6.1	5.8	6.9	6.6	5.9	5.2	5.0	3.1	3.2
Industry	14.4	16.6	16.8	17.4	17.7	18.5	20.4	20.6	22.2	22.5	22.7	<b>23.4</b>
Mining & Quarrying	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.5
Manufacturing	9.9	12.3	12.7	12.8	12.6	13.7	15.2	15.6	16.8	16.9	16.9	17.7
Construction	2.9	2.8	2.8	3.1	3.3	3.3	3.4	3.4	2.9	2.7	2.3	2.4
Electricity, Gas & Water	1.5	1.4	1.2	1.3	1.6	1.3	1.4	1.3	2.1	2.4	3.1	2.9
Services	24.1	24.6	23.7	24.5	24.5	25.3	25.6	25.6	23.9	23.5	24.4	<b>24.8</b>
Transport, Communication & Post	5.2	5.0	5.1	4.9	4.7	5.2	5.3	5.5	5.8	5.7	5.8	5.9
Wholesale & Retail Trade	6.8	7.3	7.3	8.1	8.1	8.2	8.5	8.8	9.5	9.6	9.4	9.6
Banking	1.1	1.0	1.0	1.1	1.1	1.4	1.3	1.3	0.2	0.6	0.8	0.9
Dwellings	4.0	4.4	3.5	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.0	2.9
Public Administration	5.8	5.1	4.4	4.6	5.1	4.8	4.5	4.3	2.9	2.1	2.9	3.2
Non-profit Institution	0.9	1.4	1.5	1.2	0.8	0.8	0.8	0.6	0.3	0.1	0.1	0.1
Hotel & Restaurant	0.2	0.4	0.8	0.8	1.2	1.5	1.7	1.7	1.8	2.1	2.3	2.1
Other Services	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Import Duties	0.9	1.4	1.2	1.7	1.7	2.5	2.4	2.0	1.5	0.7	0.8	0.9
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table 41-3 GDP per Capita: 1990 – 2001**

Item	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Population (Mid-year, 1000)	4,140	4,248	4,360	4,474	4,591	4,603	4,718	4,846	4,967	5,091	5,232	5,377
In Local Monetary Unit (1000 Kip at Current Prices)	148	170	194	213	241	311	366	454	854	2,029	2,613	2,914
Exchange Rate (Kip/US\$)*1	713	703	716	717	718	819	926	1,260	3,296	7,108	7,846	8,871
In US Dollars Equivalent (US\$)	208	242	270	297	336	379	395	360	259	285	333	<b>329</b>

Note: \*1 Annual average rate (refer to Table 23-23)

**Table 41-4 Gross Domestic Product at 1990 Constant Prices: 1990 – 2001**

(Unit: Billion Kip)												
Sector	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*1
Agriculture	371.8	365.3	395.5	406.2	440.0	453.7	466.2	498.7	514.1	556.2	583.6	605.6
Crops	225.0	195.6	221.2	196.7	221.6	216.0	222.4	253.4	269.7	306.1	346.6	360.7
Livestock & Fishery	127.4	145.7	158.9	165.5	172.6	179.0	183.9	188.3	193.0	197.5	202.1	207.1
Forestry	19.5	24.0	15.5	44.0	45.8	58.7	59.9	56.9	51.4	52.6	34.9	37.8
Industry	88.2	105.6	113.6	125.3	138.6	156.8	184.0	198.8	217.1	234.4	254.3	279.0
Mining & Quarrying	0.9	0.8	0.9	1.3	1.7	1.7	2.8	3.6	4.1	5.4	5.5	5.6
Manufacturing	60.5	78.4	85.8	92.4	98.8	116.2	137.3	150.0	164.5	176.1	188.8	210.6
Construction	17.9	17.7	19.1	22.1	25.9	27.7	31.1	32.6	28.1	27.9	25.3	28.6
Electricity, Gas & Water	8.9	8.7	7.8	9.5	12.3	11.2	12.9	12.6	20.5	24.9	34.7	34.2
Services	147.4	157.0	163.0	175.6	185.4	204.3	221.6	238.3	251.5	268.5	281.7	297.8
Transport, Communication & Post	31.7	32.1	34.3	35.4	36.9	43.6	48.0	52.9	56.4	59.7	65.0	70.6
Wholesale & Retail Trade	42.0	46.2	49.4	58.6	63.2	69.0	76.8	85.1	93.4	100.2	105.1	114.1
Banking	6.9	6.2	6.9	7.8	8.5	12.0	11.7	12.8	13.0	13.4	8.6	10.2
Dwellings	24.4	28.0	23.4	25.3	27.5	28.4	30.1	30.9	31.7	32.5	33.3	34.1
Public Administration	35.6	31.9	31.0	31.0	28.9	27.6	27.7	28.0	29.2	31.2	33.4	34.0
Non-profit Institution	5.5	9.7	11.7	10.5	10.1	9.9	10.7	10.5	8.4	8.0	8.6	7.5
Hotel & Restaurant	0.9	2.3	5.2	6.0	9.2	12.4	15.1	16.5	17.9	21.7	25.3	25.0
Other Services	0.4	0.7	1.1	1.1	1.1	1.3	1.5	1.5	1.6	1.9	2.4	2.4
Import Duties	5.4	9.2	9.6	14.7	16.7	20.8	21.4	19.2	10.5	6.4	7.7	9.0
<b>GDP at 1990 Constant Prices</b>	<b>612.7</b>	<b>637.2</b>	<b>681.8</b>	<b>721.8</b>	<b>780.7</b>	<b>835.7</b>	<b>893.3</b>	<b>955.0</b>	<b>993.2</b>	<b>1,065.4</b>	<b>1,127.3</b>	<b>1,191.4</b>

Source: (1) Basic Statistics of the Lao PDR 1975-2000, State Planning Committee National Statistical Centre  
 (2) 1975-1995, Basic Statistics about the Socio-economic Development in the Lao P.D.R., State Planning Committee National Statistical Centre  
 (3) 1997, Basic Statistics about the Socio-economic Development in the Lao P.D.R., State Planning Committee National Statistical Centre  
 (4) Statistical Yearbook 2001, May 2002, State Planning Committee National Statistical Centre

Note: \*1 Provisional estimates

**Table 41-5 Real Growth Rate of Gross Value Added: 1991 – 2001**

	(Unit: %)											
Sector	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/01	1991/2001
Agriculture	-1.7	8.3	2.7	8.3	3.1	2.8	7.0	3.1	8.2	4.9	3.8	<b>5.2</b>
Crops	-13.0	13.1	-11.0	12.7	-2.5	2.9	14.0	6.4	13.5	13.2	4.1	6.3
Livestock & Fishery	14.4	9.0	4.2	4.3	3.7	2.8	2.4	2.5	2.3	2.3	2.5	3.6
Forestry	23.2	-35.4	183.7	4.0	28.2	2.0	-4.9	-9.8	2.3	-33.6	8.1	4.6
Industry	19.8	7.5	10.3	10.7	13.1	17.3	8.1	9.2	8.0	8.5	9.7	<b>10.2</b>
Mining & Quarrying	-7.9	13.0	36.5	30.4	3.7	61.2	28.6	13.8	33.5	1.3	1.2	21.0
Manufacturing	29.7	9.4	7.7	7.0	17.7	18.1	9.3	9.6	7.1	7.2	11.5	10.4
Construction	-1.0	7.4	16.1	17.2	6.8	12.3	5.0	-14.1	-0.6	-9.2	13.0	4.9
Electricity, Gas & Water	-2.4	-9.8	21.4	29.0	-8.8	15.0	-1.9	62.7	21.6	39.0	-1.3	14.7
Services	6.5	3.9	7.7	5.5	10.2	8.5	7.5	5.5	6.7	4.9	5.7	<b>6.6</b>
Transport, Communication & Post	1.4	6.9	3.1	4.3	18.2	10.1	10.3	6.5	5.8	9.0	8.6	8.2
Wholesale & Retail Trade	10.0	7.0	18.5	7.9	9.3	11.2	10.8	9.8	7.2	5.0	8.5	9.5
Banking	-10.6	11.4	13.2	8.2	42.0	-2.7	9.0	2.0	3.0	-35.7	18.7	5.1
Dwellings	14.6	-16.2	8.0	8.6	3.4	6.2	2.5	2.5	2.5	2.5	2.5	2.0
Public Administration	-10.5	-2.7	-0.2	-6.6	-4.5	0.4	1.1	4.2	6.7	7.1	1.6	0.6
Non-profit Institution	76.8	20.8	-9.8	-3.8	-2.4	7.9	-1.2	-20.3	-4.8	7.5	-12.5	-2.5
Hotel & Restaurant	151.7	125.3	14.8	53.6	35.0	21.3	9.6	8.0	21.6	16.5	-1.2	26.8
Other Services	80.7	51.9	3.5	3.0	19.4	11.8	3.2	2.0	19.6	27.5	-1.5	13.1
Import Duties	71.3	4.9	52.8	13.2	25.0	2.9	-10.5	-45.2	-38.8	20.5	15.8	-0.2
GDP	4.0	7.0	5.9	8.1	7.0	6.9	6.9	4.0	7.3	5.8	5.7	<b>6.5</b>

**Table 41-6 Real Growth Rate of GDP per Capita: 1991 – 2001**

Item	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Population (Mid-year, 1000)	4,140	4,248	4,360	4,474	4,591	4,603	4,718	4,846	4,967	5,091	5,232	5,377
GDP per Capita (1000 Kip at 1990 Constant Prices)	148	150	156	161	170	182	189	197	200	209	215	222
Real Growth Rate (% per annum)	1.3	4.3	3.2	5.4	6.8	4.3	4.1	1.5	4.7	3.0	2.8	<b>4.0</b>

According to the table above, the GRDP per capita of Vientiane Capital City was estimated as 142% of the national average. Since the basic data were based on 1992/93 information, i.e., back around 10 years, the present regional disparity of GRDP per capita might widen more than that (142%) in the table above.

## **4.2 Economic Sector Profile**

The Lao PDR's economy has heavily dependent on the natural resource base. After introducing the economic reform in 1986, however, the government started to develop a market-oriented economy. Thus, GVA of the agriculture sector accounted for around 70% of GDP in 1985, but in 2001 its share dropped down to 51%. In terms of labour, it absorbed 89% of the total labour force in 1985, but 85% in the 1995 census. On the other hand, GVA of the industry sector accounted for 11% only in 1985, but in 2001 its share went up to 23%.

### **4.2.1 Agriculture Sector**

The agriculture sector generally composes of three sub-sectors, that is, crops, livestock and fishery, and forestry, in the Lao PDR. In 2001, GVA of the sector was 7.97 trillion kip at current prices as shown in Table 41-1. The respective sub-sectors recorded that their GVAs were 4.75 trillion kip of crop production, 2.73 trillion kip of livestock and fishery, and 0.50 trillion kip of forestry. The percentage distribution in the agriculture sector was calculated as 60% of crop production, 34% of livestock and fishery, and 6% of forestry.

In 2001, around 990,000ha of land was under cultivation. Of the total cultivated area, 747,000 ha or 76% was devoted to rice production, as shown in Table 42-1. In 2001, rice production was 2.3 million tons in the country. In Vientiane Capital City, on the other hand, rice was produced 0.28 million tons or 12% of the national production in 70,000 ha of harvested fields. Following rice, Vientiane Capital City produced 91,000 tons of vegetables and beans, 4,500 tons of tobacco and 45,000 tons of sugarcane, accounting for 15%, 15% and 22% of the national production, respectively. In terms of other crops, however, its crop production was quite limited except sugar cane, as shown in the table.

Livestock production also contributed to the national economy, as discussed above. Its value added was 2.73 trillion kip including fishery in 2001. In Vientiane Capital City, livestock production is limited in the national total production, as shown in Table 42-2.



**Table 42-1 Crop Production in Lao PDR and Vientiane Capital City: 1999 – 2001**

Crop	Harvested Area (1000 ha)			Production (1000 tons)			Yield (tons/ha)		
	1999	2000	2001	1999	2000	2001	1999	2000	2001
<b>Lao PDR</b>									
1. Cereals	772.0	787.9	811.0	2,270.7	2,436.2	2,548.5	2.9	3.1	3.1
(1) Rice	718.2	719.5	746.8	2,094.0	2,201.7	2,334.5	2.9	3.1	3.1
1) Season Rice	477.5	475.6	486.8	1,502.0	1,552.8	1,619.7	3.1	3.3	3.3
2) Irrigated Rice	87.0	91.8	102.0	354.0	390.1	436.2	4.1	4.2	4.3
3) Upland Rice	153.7	152.1	158.0	238.0	258.8	278.6	1.5	1.7	1.8
(2) Maize	40.7	49.0	47.9	96.1	117.0	113.2	2.4	2.4	2.4
(3) Starchy Roots	13.1	19.4	16.3	80.6	117.5	100.8	6.2	6.1	6.2
2. Vegetables & Beans	41.1	104.7	109.7	236.0	636.0	630.6	5.7	6.1	5.7
3. Manufacturing Products	78.2	70.3	65.6	239.7	378.4	290.8	3.1	5.4	4.4
(1) Mungbeans	1.7	1.3	2.4	1.5	1.1	2.8	0.9	0.8	1.2
(2) Soybeans	6.8	6.4	3.3	5.9	5.4	3.0	0.9	0.8	0.9
(3) Peanuts	13.1	12.8	12.1	13.1	13.2	16.8	1.0	1.0	1.4
(4) Tobacco	4.3	6.7	5.1	23.4	33.4	30.1	5.4	5.0	5.9
(5) Cotton	4.4	4.7	3.5	4.3	4.6	3.4	1.0	1.0	1.0
(6) Sugarcane	4.7	8.4	6.6	173.6	297.0	208.8	36.9	35.4	31.6
(7) Coffee	42.3	29.4	32.2	17.5	23.5	25.8	0.4	0.8	0.8
(8) Tea	0.9	0.6	0.4	0.4	0.2	0.1	0.4	0.3	0.3
<b>Vientiane Capital City</b>									
1. Cereals	66.1	72.8	71.9	236.3	270.1	292.7	3.6	3.7	4.1
(1) Rice	64.4	70.8	69.8	229.9	263.1	284.7	3.6	3.7	4.1
1) Season Rice	47.7	50.6	47.8	158.0	172.2	183.1	3.3	3.4	3.8
2) Irrigated Rice	16.7	19.5	22.0	71.9	89.8	101.6	4.3	4.6	4.6
3) Upland Rice	-	0.6	-	-	1.1	-	-	1.7	-
(2) Maize	1.3	1.8	1.7	3.8	5.2	5.0	2.8	2.8	3.0
(3) Starchy Roots	0.3	0.2	0.4	2.6	1.9	3.0	8.2	8.2	8.1
2. Vegetables & Beans	4.7	12.4	10.9	37.9	103.2	91.4	8.1	8.4	8.4
3. Manufacturing Products	2.3	2.3	2.2	45.6	39.3	50.3	19.6	17.4	23.1
(1) Mungbeans	0.0	0.1	0.2	0.0	0.1	0.2	0.8	0.8	0.8
(2) Soybeans	0.1	0.2	0.0	0.1	0.2	0.0	0.9	0.9	0.8
(3) Peanuts	0.3	0.0	0.1	0.3	0.0	0.1	1.0	0.9	1.0
(4) Tobacco	1.0	1.0	0.7	6.5	-	4.5	6.5	-	6.8
(5) Cotton	-	0.0	0.0	-	0.0	0.0	-	1.0	0.9
(6) Sugarcane	1.0	1.0	1.1	38.8	39.1	45.4	40.0	39.9	40.0

Source: (1) 2000 Basic statistics of the Lao P.D.R., July 2001, National Statistical Centre, State Planning Committee  
(2) Statistical Yearbook 2001, May 2002, National Statistical Centre, State Planning Committee

**Table 42-2 Livestock Production in Lao PDR and Vientiane Capital City: 1999 – 2001**

Livestock	(Unit: 1000 heads)					
	Lao PDR			Vientiane Capital City		
	1999	2000	2001	1999	2000	2001
1. Buffalo	992	1,028	1,051	32	32	32
2. Cattle	944	1,100	1,217	48	54	56
3. Swine	1,036	1,425	1,426	15	102	46
4. Goats & Sheep	94	121	124	2	3	5
5. Poultry	11,215	13,094	14,063	1,181	2,126	1,674

Source: (1) 2000 Basic Statistics of the Lao PDR, July 2001, National Statistical Centre, State Planning Committee  
(2) Statistical Yearbook 2001, May 2002, National Statistical Centre, State Planning Committee

#### 4.2.2 Industry Sector

The industry sector accounted for around 23% of GDP in 2001. The sector consists of manufacturing, mining & quarrying, construction and electricity, gas & water sub-sectors. In 2001, manufacturing sub-sector accounted for more than 75% of industry's value added. Thus, the manufacturing sub-sector is regarded as a leading sub-sector in the industry sector.

In 2001, there were 24,309 manufacturing establishments in the country. They were composed of 112 establishments of large scale, 542 of middle scale and 23,651 of small scale, as shown in Table 42-3. Incidentally, establishment scale is defined as follows: (a) large scale, employing more than 100 workers, (b) middle scale, employing between 10 to 99 workers, and (c) small scale, employing less than 9 workers. In Vientiane Capital City, there were 1,969 manufacturing establishments in 2001, accounting for 8% of the national total. In terms of large scale, 62 establishments or 53% of the national total existed in Vientiane Capital City. In the same manner, 157 establishments of middle scale or 29% and 1,750 of small scale or 7% were in Vientiane Capital City.

**Table 42-3 Number of Manufacturing Establishments by Size in Lao PDR and Vientiane Capital City: 1999 – 2001**

Scale of Establishment	Lao PDR.			Vientiane Capital City		
	1999	2000	2001	1999	2000	2001
1. Large Scale	108	95	116	52	58	62
2. Middle Scale	532	512	542	137	133	157
3. Small Scale	21,232	20,962	23,651	1,129	1,525	1,750
Total	21,872	21,569	24,309	1,318	1,716	1,969

Source: (1) 2000 Basic Statistics of the Lao PDR., July 2001, National Statistical Centre, State Planning Committee

(2) Statistical Yearbook 2001, May 2002, National Statistical Centre, State Planning Committee

Note: Scale of establishment was defined as follows.

- (1) Small scale: the number of employees is less than 9 persons.
- (2) Middle scale: the number of employees is between 10 to 99 persons.
- (3) Large scale: the number of employees is more than 100 persons.

In 1999, United Nation Industrial Development Organisation (UNIDO) conducted “Survey of Industrial Establishments, 1999” covering all provinces in the Lao PDR. Table 42-4 shows performance of industrial establishments by industrial type. Among manufacturing establishments, the types that a ratio of water cost to gross output was comparatively large were: (a) paper and paper products accounting for 0.44%, (b) manufacture of textiles, 0.19%, (c) manufacture of food and beverages, 0.17%, (d) chemical and chemical products, 0.16% and (e) machinery and equipment, 0.13%. However, the water cost includes the procurement cost of water supplied by Nam Papa (water supply company), but does not include the cost of groundwater which the factory procured through its own wells. Table 42-5 shows average performance by industrial type. Among sample establishments, the types that employed more than 100 workers (defined as large industry) were: (a) manufacture of wearing apparel, (b) basic metals and (c) manufacture of tobacco products, as shown in the table.

### 4.3 External Trade and Balance of Payment

Lao’s external trade balance has recorded widening in the deficit. The trade balance for the recent five years is summarised in the table below. The foreign trade is tabulated in detail by major commodities in Table 43-1.

(Unit: US\$ million)					
Item	1998	1999	2000	2001	2002
Export (FOB)	337	301	330	320	312
Import (CIF)	553	554	535	510	522
Balance	-216	-253	-205	-190	-210

According to Table 43-1, the major traditional commodity exports like wood products seem to contribute to the national trading performance for long time. For the recent years, the leading positions were held by garments and electricity. The top three exports in 2002 were recorded as follows: (1) garments, accounting for US\$105 million or 34% of the total export, (2) electricity, US\$104 million or 33%, and (3) wood products, US\$64 billion or 21%. The total of these three articles accounted for US\$273 million or 87% of the total exports of US\$313 million in 2002.

The country’s top three imports comprised the following articles, which were shown in detail in Table 43-1: (1) consumption goods, which accounted for US\$256 million or 49% of the total import; (2) investment goods, US\$181 million or 35%; (3) materials for garments industry, US\$68 million or 13%. Investment goods were furthermore composed of (a) construction/electrical equipment, US\$66 million or 36% of the total investment goods, (b) machinery and equipment, US\$47 million or 26%, (c) vehicles, US\$35 million or 19% and (d) fuel, US\$33 million or 18%. The total of these three major import items accounted for US\$504 million or 87% of the total exports of US\$522 million in 2002.

**Table 42-4 Performance of Industrial Establishments by Industrial Type: 1999 (1/2)**

Industrial Type	Number of Establishments	Number of Persons Engaged	Number of Employees	Value in Million Kip					
				Compensation of Employees	Gross Fixed Capital Formation	Change in Stock	Gross Output	Intermediate Consumption	Total Value Added
Mining and Quarrying	14	715	696	4,124	2,683	777	33,471	18,511	14,960
10 Mining of Coal	2	223	218	1,251	2,408	814	20,310	12,132	8,178
14 Other Mining & Quarrying	12	492	478	2,873	275	-37	13,161	6,379	6,782
<b>Manufacturing</b>	<b>410</b>	<b>32,677</b>	<b>31,951</b>	<b>93,994</b>	<b>75,391</b>	<b>92,640</b>	<b>1,243,517</b>	<b>775,244</b>	<b>468,273</b>
15 Manufacture of Food & Beverages	74	2,276	2,062	6,262	32,013	12,228	233,439	75,579	157,860
16 Manufacture of Tobacco Products	8	853	850	2,687	4,552	1,425	74,670	18,640	56,030
17 Manufacture of Textiles	5	375	367	1,116	313	242	4,836	2,078	2,758
18 Manufacture of Wearing Apparel	44	15,227	15,121	42,371	14,310	29,501	411,566	311,454	100,112
20 Wood & Wood Products	79	6,819	6,728	19,277	6,569	15,085	189,024	171,837	17,187
21 Paper & Paper Products	5	311	304	684	2,059	1,259	5,438	5,139	299
22 Publishing & Printing	8	386	385	993	978	695	11,705	7,047	4,658
24 Chemical & Chemical Products	23	732	682	3,703	2,010	1,935	31,755	19,016	12,739
25 Rubber & Plastic Products	11	536	514	1,300	1,900	6,310	24,849	17,582	7,267
26 Non-metallic Mineral Products	97	2,473	2,358	5,156	5,382	5,770	58,355	22,266	36,089
27 Basic Metals	4	583	574	2,693	811	1,157	23,875	11,499	12,376
28 Fabricated Metal Products	9	257	242	1,113	1,110	8,202	43,515	28,840	14,675
29 Machinery & Equipment	7	218	207	952	118	467	9,342	6,987	2,355
31 Electrical Machinery & Apparatus	2	104	103	209	0	1,184	6,108	5,412	696
34 Manufacture of Motor Vehicles	9	864	837	3,226	2,029	3,154	69,990	47,240	22,750
35 Other Transport Equipment	4	181	167	1,123	109	2,744	32,226	19,689	12,537
Other Manufacturing	21	482	450	1,129	1,128	1,282	12,824	4,939	7,885
<b>Electricity and Water Supply</b>	<b>3</b>	<b>3,683</b>	<b>3,683</b>	<b>11,745</b>	<b>13,945</b>	<b>54,330</b>	<b>920,678</b>	<b>569,324</b>	<b>351,354</b>
40 Production & Distribution of Electricity	2	3,097	3,097	10,944	3,786	53,050	909,907	560,596	349,311
41 Collection & Distribution of Water	1	586	586	801	10,159	1,280	10,771	8,728	2,043
<b>Industrial Total</b>	<b>427</b>	<b>37,075</b>	<b>36,330</b>	<b>109,863</b>	<b>92,019</b>	<b>147,747</b>	<b>2,197,666</b>	<b>1,363,079</b>	<b>834,587</b>

Source: Survey of Industrial Establishments 1999, July 2000, UNIDO & MIH

**Table 42-4 Performance of Industrial Establishments by Industrial Type: 1999 (2/2)**

Industrial Type	Products Purchased (Million Kip)				Change in Stock of Materials & Fuel	Payment for Services	Intermediate Consumption
	Materials & Supplies	Fuel	Electricity	Water			
Mining and Quarrying	3,655	1,190	62	0	182	13,786	18,511
10 Mining of Coal	2,574	147	6	0	10	9,415	12,132
14 Other Mining & Quarrying	1,081	1,043	56	0	172	4,371	6,379
<b>Manufacturing</b>	<b>684,374</b>	<b>25,447</b>	<b>10,563</b>	<b>1,062</b>	<b>64,473</b>	<b>118,271</b>	<b>775,244</b>
15 Manufacture of Food & Beverages	69,923	5,432	1,197	401	11,197	9,823	75,579
16 Manufacture of Tobacco Products	20,732	158	198	22	3,320	850	18,640
17 Manufacture of Textiles	1,343	43	89	9	141	735	2,078
18 Manufacture of Wearing Apparel	282,003	3,112	2,468	352	17,938	41,457	311,454
20 Wood & Wood Products	129,469	8,441	2,344	96	13,282	44,769	171,837
21 Paper & Paper Products	4,238	323	296	24	392	650	5,139
22 Publishing & Printing	5,982	99	67	6	316	1,209	7,047
24 Chemical & Chemical Products	16,352	278	261	50	4,059	6,134	19,016
25 Rubber & Plastic Products	17,843	139	490	20	2,122	1,212	17,582
26 Non-metallic Mineral Products	15,151	3,272	903	24	1,875	4,791	22,266
27 Basic Metals	8,251	2,325	1,364	1	781	339	11,499
28 Fabricated Metal Products	30,591	909	213	3	3,521	645	28,840
29 Machinery & Equipment	6,568	176	337	12	581	475	6,987
31 Electrical Machinery & Apparatus	4,408	17	57	5	-509	416	5,412
34 Manufacture of Motor Vehicles	48,071	439	169	26	2,368	903	47,240
35 Other Transport Equipment	18,304	127	30	4	1,801	3,025	19,689
Other Manufacturing	5,145	157	80	7	1,288	838	4,939
<b>Electricity and Water Supply</b>	<b>259,830</b>	<b>5,832</b>	<b>2,136</b>	<b>0</b>	<b>2,902</b>	<b>304,428</b>	<b>569,324</b>
40 Production & Distribution of Electricity	254,427	5,330	828	0	1,622	301,633	560,596
41 Collection & Distribution of Water	5,403	502	1,308	0	1,280	2,795	8,728
<b>Industrial Total</b>	<b>947,859</b>	<b>32,469</b>	<b>12,761</b>	<b>1,062</b>	<b>67,557</b>	<b>436,485</b>	<b>1,363,079</b>

Source: Survey of Industrial Establishments 1999, July 2000, UNIDO & MIH

**Table 42-5 Average Performance of Industrial Establishments by Industrial Type: 1999 (1/2)**

Industrial Type	Total Number of Establish- ments	Average Value per Establishment by Industrial Type (Million Kip)								
		Number of Persons Engaged	Number of Employees	Value (Million Kip)					Intermediate Consump- tion	Total Value Added
				Compensation of Employees	Gross Fixed Capital Formation	Change in Stock	Gross Output			
Mining and Quarrying	14	51	50	295	192	56	2,391	1,322	1,069	
10 Mining of Coal	2	112	109	626	1,204	407	10,155	6,066	4,089	
14 Other Mining & Quarrying	12	41	40	239	23	-3	1,097	532	565	
Manufacturing	410	80	78	229	184	226	3,033	1,891	1,142	
15 Manufacture of Food & Beverages	74	31	28	85	433	165	3,155	1,021	2,133	
16 Manufacture of Tobacco Products	8	107	106	336	569	178	9,334	2,330	7,004	
17 Manufacture of Textiles	5	75	73	223	63	48	967	416	552	
18 Manufacture of Wearing Apparel	44	346	344	963	325	670	9,354	7,079	2,275	
20 Wood & Wood Products	79	86	85	244	83	191	2,393	2,175	218	
21 Paper & Paper Products	5	62	61	137	412	252	1,088	1,028	60	
22 Publishing & Printing	8	48	48	124	122	87	1,463	881	582	
24 Chemical & Chemical Products	23	32	30	161	87	84	1,381	827	554	
25 Rubber & Plastic Products	11	49	47	118	173	574	2,259	1,598	661	
26 Non-metallic Mineral Products	97	25	24	53	55	59	602	230	372	
27 Basic Metals	4	146	144	673	203	289	5,969	2,875	3,094	
28 Fabricated Metal Products	9	29	27	124	123	911	4,835	3,204	1,631	
29 Machinery & Equipment	7	31	30	136	17	67	1,335	998	336	
31 Electrical Machinery & Apparatus	2	52	52	105	0	592	3,054	2,706	348	
34 Manufacture of Motor Vehicles	9	96	93	358	225	350	7,777	5,249	2,528	
35 Other Transport Equipment	4	45	42	281	27	686	8,057	4,922	3,134	
Other Manufacturing	21	23	21	54	54	61	611	235	375	
Electricity and Water Supply	3	1,228	1,228	3,915	4,648	18,110	306,893	189,775	117,118	
40 Production & Distribution of Electricity	2	1,549	1,549	5,472	1,893	26,525	454,954	280,298	174,656	
41 Collection & Distribution of Water	1	586	586	801	10,159	1,280	10,771	8,728	2,043	
<b>Industrial Total</b>	<b>427</b>	<b>87</b>	<b>85</b>	<b>257</b>	<b>216</b>	<b>346</b>	<b>5,147</b>	<b>3,192</b>	<b>1,955</b>	

**Table 42-5 Average Performance of Industrial Establishments by Industrial Type: 1999 (2/2)**

Industrial Type	Average Value per Establishment by Industrial Type (Million Kip)						
	Products Purchased (Million Kip)				Change in Stock of Materials & Fuel	Payment for Services	Intermediate Consumption
	Materials & Supplies	Fuel	Electricity	Water			
Mining and Quarrying	261	85	4.4	0.0	13	985	1,322
10 Mining of Coal	1,287	74	3.0	0.0	5	4,708	6,066
14 Other Mining & Quarrying	90	87	4.7	0.0	14	364	532
Manufacturing	1,669	62	25.8	2.6	157	288	1,891
15 Manufacture of Food & Beverages	945	73	16.2	5.4	151	133	1,021
16 Manufacture of Tobacco Products	2,592	20	24.8	2.8	415	106	2,330
17 Manufacture of Textiles	269	9	17.8	1.8	28	147	416
18 Manufacture of Wearing Apparel	6,409	71	56.1	8.0	408	942	7,079
20 Wood & Wood Products	1,639	107	29.7	1.2	168	567	2,175
21 Paper & Paper Products	848	65	59.2	4.8	78	130	1,028
22 Publishing & Printing	748	12	8.4	0.8	40	151	881
24 Chemical & Chemical Products	711	12	11.3	2.2	176	267	827
25 Rubber & Plastic Products	1,622	13	44.5	1.8	193	110	1,598
26 Non-metallic Mineral Products	156	34	9.3	0.2	19	49	230
27 Basic Metals	2,063	581	341.0	0.3	195	85	2,875
28 Fabricated Metal Products	3,399	101	23.7	0.3	391	72	3,204
29 Machinery & Equipment	938	25	48.1	1.7	83	68	998
31 Electrical Machinery & Apparatus	2,204	9	28.5	2.5	-255	208	2,706
34 Manufacture of Motor Vehicles	5,341	49	18.8	2.9	263	100	5,249
35 Other Transport Equipment	4,576	32	7.5	1.0	450	756	4,922
Other Manufacturing	245	7	3.8	0.3	61	40	235
Electricity and Water Supply	86,610	1,944	712.0	0.0	967	101,476	189,775
40 Production & Distribution of Electricity	127,214	2,665	414.0	0.0	811	150,817	280,298
41 Collection & Distribution of Water	5,403	502	1,308.0	0.0	1,280	2,795	8,728
<b>Industrial Total</b>	<b>2,220</b>	<b>76</b>	<b>29.9</b>	<b>2.5</b>	<b>158</b>	<b>1,022</b>	<b>3,192</b>

**Table 43-1 Foreign Trade: 1999 - 2002**

	(Unit: US\$ million)										
Item	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Export (FOB)</b>											
Customs Data	115.6	216.9	256.2	265.1	275.5	249.9	269.9	210.1	217.1	212.0	207.9
Wood Products	42.7	65.9	96.1	88.4	124.8	89.7	115.4	54.9	72.8	78.6	64.3
Logs	-	-	-	-	-	16.7	10.5	20.0	26.0	-	-
Timber	-	-	-	-	-	67.4	87.4	26.9	37.6	-	-
Others	-	-	-	-	-	5.6	17.5	8.0	9.2	-	-
Coffee	2.4	4.1	3.0	21.2	25.0	19.2	48.0	15.2	12.1	14.9	17.1
Agricultural/Forest Products	7.3	9.1	12.0	13.7	18.0	18.1	8.4	8.3	15.4	8.6	9.3
Other Products	29.4	38.0	36.0	47.6	31.1	15.3	10.1	27.9	9.6	11.2	12.1
Motorcycles	0.0	36.1	46.3	17.7	12.5	17.1	17.8	38.3	15.6	0.0	0.0
Car Re-exports	6.5	14.4	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Garments	27.3	49.3	58.3	76.6	64.1	90.5	70.2	65.5	91.6	98.7	105.1
Electricity	17.0	19.5	24.9	24.0	29.8	20.8	66.5	90.5	112.2	106.4	103.6
Gold Re-exports	0.0	4.1	18.9	21.8	15.1	41.5	0.0	0.0	0.0	0.0	0.0
Fuel Purchases by Foreign Carriers	0.0	0.0	0.3	0.3	0.3	0.5	0.4	0.8	1.0	1.1	1.0
Total Exports	132.6	240.5	300.4	311.2	320.7	312.7	336.8	301.4	330.3	319.5	312.5
<b>Import (CIF)</b>											
Customs Data	255.7	416.6	514.9	556.7	668.5	593.1	544.6	541.5	525.8	496.0	504.3
Investment Goods	69.7	114.2	147.8	192.5	277.9	226.8	226.7	184.0	161.8	160.6	181.1
Machinery & Equipment	13.8	22.9	32.2	43.6	71.0	52.0	44.4	21.0	16.2	30.5	47.2
Vehicles	16.7	27.6	24.8	35.9	71.7	53.8	39.4	35.8	23.3	36.0	35.1
Fuel	9.3	15.1	23.1	34.2	33.8	38.2	61.8	36.7	79.1	38.0	32.9
Construction/Electrical Equipment	30.0	48.6	67.7	78.9	101.4	82.8	81.1	90.5	43.2	56.1	65.9
Consumption Goods	140.3	224.4	276.6	283.8	308.3	267.7	234.1	252.7	288.0	269.9	255.6
Materials for Garments Industry	22.3	36.1	51.6	66.5	70.3	73.7	66.8	66.5	60.4	65.5	67.6
Motorcycles Parts for Assembly	16.7	27.2	34.4	13.5	11.7	24.9	17.0	38.3	15.6	0.0	0.0
Cars for Re-export	6.6	14.7	4.5	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Gold & Silver	8.0	13.0	46.8	29.4	18.6	50.4	0.7	2.1	1.5	5.4	8.1
Electricity	1.6	2.4	2.3	2.9	2.8	3.2	5.8	8.6	5.8	6.5	7.2
Fuel Purchased Abroad by Lao Carriers						1.3	1.7	2.0	2.3	2.4	2.6
Total Imports	265.2	431.9	564.0	589.0	689.9	648.0	552.8	554.2	535.4	510.3	522.2
<b>Balance</b>	<b>-132.6</b>	<b>-191.4</b>	<b>-263.6</b>	<b>-277.8</b>	<b>-369.2</b>	<b>-335.3</b>	<b>-216.0</b>	<b>-252.8</b>	<b>-205.1</b>	<b>-190.8</b>	<b>-209.7</b>

Source Bank of the Lao P.D.R.

Present Conditions and Issues of Economic Development in Lao PDR, October 1998, OECF



In terms of balance of payment, Lao PDR has traditionally run a deficit on its current account balance. As mentioned above, it has consecutively recorded the deficit in trade balance. In 1998, the current account recorded the deficit of US\$33 million. In 1999, the worsening in the merchandise trade balance pushed up the current account deficit to US\$76 million. In 2000, however, the improvement of the trade gap was resulted in the deficit of US\$9 million. Nevertheless, this worsening trend has continued to 2002, and the current account reached at the deficit of US\$39 million in 2002.

The current deficit is said to be partly offset by tourism, i.e., transportation and travel. The balance of payment for the recent five years is shown in Table 43-2. The deficit was mainly financed by borrowing from overseas, from official and private sources. This activity may accelerate the worsening current deficit in the future. Anyhow, Lao PDR has procured financial sources heavily in international markets. As a result, financial-account balance was US\$125 million in 1998, and even in 2002 recorded US\$78 million. Accordingly, an overall balance recorded surplus in 1998, and reached US\$58 million in 2002.

#### **4.4 Government Finance**

The total budgetary expenditure of the national government has nominally increased from 0.42 trillion kip in 1996/97 to 4.25 trillion kip in 2002/03. In the total expenditure, the capital expenditure for investment has generally relied on the foreign grant. On the other hand, the total revenue has added up from 0.29 trillion kip in 1996/97 to 2.98 trillion kip in 2002/03. The revenues account for nearly 70% of the total expenditures in 2002/03. Thus, the national finance has reported a net loss for long time. The deficit was 0.13 trillion kip in 1996/97 and increased to 1.27 trillion kip in 2002/03. These deficits were covered mostly by foreign support. The ratio of the expenditure to GDP has kept almost the same level of 20% since 1996 except 1999 as shown in the table below. The recent public finance was broken down in Table 44-1.

	(Unit: Trillion Kip)					
Item	1996	1997	1998	1999	2000	2001
GDP	1.73	2.20	4.24	10.33	13.67	15.67
Expenditure	0.36	0.42	0.85	1.72	2.75	3.14
Percentage	20.8	19.1	20.0	16.7	20.1	20.0

Note: In this table, the fiscal year 1996/97 is suggested as 1997. The fiscal year starts from October 1996 and ends in September 1997.

**Table 43-2 Balance of Payments: 1998 – 2002**

	(Unit: US\$ Million)				
Item	1998	1999	2000	2001	2002
<b>I. Current Account</b>	-33.7	-75.7	-8.7	-56.1	-38.8
<b>1. Goods, Services and Income (net)</b>	-156.7	-175.1	-124.9	-89.8	-101.4
Trade Balance	-216.0	-252.8	-205.0	-190.8	-209.9
Export (FOB)	336.8	301.5	330.3	319.5	312.4
Import (CIF)	-552.8	-554.3	-535.3	-510.3	-522.3
Services (net)	78.4	99.0	132.5	134.5	146.0
Receipts	129.7	145.5	175.6	166.1	175.9
Payments	-51.3	-46.5	-43.1	-31.6	-29.9
Income (net)	-19.1	-21.3	-52.4	-33.5	-37.5
Receipts	6.9	10.6	7.3	5.8	4.7
Payments	-26.0	-31.9	-59.7	-39.3	-42.2
<b>2. Transfers (net)</b>	123.0	99.4	116.2	33.7	62.6
Private Transfers (net)	49.3	29.6	0.6	10.7	19.5
Other Transfers	73.7	69.8	115.6	23.0	43.1
Of which: Technical Assistance	16.7	14.0	23.1	4.6	8.6
<b>II. Capital &amp; Financial Account</b>	124.5	69.9	115.3	130.0	77.9
<b>1. Capital Account</b>	-	-	-	-	-
<b>2. Financial Account</b>	124.5	69.9	115.3	130.0	77.9
(1) Direct Investment	45.3	51.7	33.9	23.9	4.6
1) Lao Investment Abroad	-	-	-	-	-
2) Foreign Investment in Lao PDR	45.3	51.7	33.9	23.9	4.6
(a) Equity Capital	45.3	51.7	33.9	23.9	4.6
a) Hydropower	18.1	6.3	2.6	0.0	-20.9
b) Others	27.2	45.4	31.3	23.9	25.5
(2) Portfolio Investment	0.5	0.0	0.0	0.0	0.0
1) Liabilities	0.5	0.0	0.0	0.0	0.0
(a) Equity Securities	0.5	0.0	0.0	0.0	0.0
(b) Debt Securities	0.0	0.0	0.0	0.0	0.0
(3) Other Investment	78.7	18.2	81.4	106.1	73.3
1) Assets	-17.3	-43.2	18.8	25.2	-9.8
(a) General Government	-	-	-	-	-
(b) Monetary Authorities	-	-	-	-	-
(c) Banks	-17.3	-43.2	18.8	25.2	-9.8
(d) Other Sectors	-	-	-	-	-
2) Liabilities	96.0	61.4	62.6	80.9	83.1
(a) General Government	85.6	73.9	67.2	79.0	80.4
a) Loans Received	98.1	93.8	87.0	103.6	107.2
b) Amortization	-12.5	-19.9	-19.8	-24.6	-26.8
(b) Monetary Authorities	8.1	-8.8	-10.8	-5.7	6.8
a) Use of Fund Credit	8.1	-8.8	-10.8	-5.7	6.8
(c) Banks	2.3	-3.7	6.2	7.6	-4.1
<b>III. Errors &amp; Omissions *1</b>	-88.7	-0.8	-72.1	-81.4	18.5
<b>IV. Overall Balance</b>	2.1	-6.6	34.5	-7.5	57.6

Source : Bank of the Lao P.D.R.

Note: \*1 Including short-term private capital and unrecorded imports.

**Table 44-1 Fiscal Operation of Government: 1992/93 – 1999/2000**

	(Unit: Kip. Billion)										
Item	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03
<b>Revenue</b>	<b>144.5</b>	<b>210.5</b>	<b>238.4</b>	<b>269.9</b>	<b>288.2</b>	<b>566.7</b>	<b>1,461.6</b>	<b>2,166.6</b>	<b>2,476.0</b>	<b>2,648.7</b>	<b>2,981.7</b>
1. Tax Revenue	85.9	114.5	134.9	175.9	189.6	290.3	745.5	1,366.9	1,628.8	1,824.3	2,114.3
(1) Profit Tax	8.6	11.5	17.3	20.7	23.4	33.4	80.4	186.5	205.2	253.2	337.5
(2) Income Tax	4.8	7.2	10.7	13.5	11.5	19.5	69.6	117.1	145.4	136.4	169.4
(3) Agricultural/Land Tax	1.2	2.2	1.8	2.1	2.5	3.0	4.8	7.4	16.7	19.6	23.5
(4) Business Licenses	0.1	0.1	0.2	0.2	0.2	0.3	0.3	1.3	0.4	0.8	1.2
(5) Minimum Tax	-	-	-	-	-	-	-	-	7.4	10.5	29.7
(6) Turnover Tax	14.3	19.9	27.6	33.9	40.0	62.8	159.8	290.0	318.0	374.1	440.9
(7) Excise Tax	4.4	5.1	5.5	15.5	17.9	50.2	157.3	226.2	371.3	324.3	375.9
(8) Import Duties	22.0	25.7	33.8	40.6	47.0	51.4	98.5	134.6	178.9	241.3	303.5
(9) Export Duties	3.1	8.1	4.9	6.0	6.3	10.4	24.4	41.2	56.7	53.3	61.9
(10) Registration	-	-	1.1	1.5	1.8	2.1	4.9	7.2	11.1	13.8	15.0
(11) Natural Resource Tax	-	-	0.8	0.7	1.1	2.0	5.3	14.1	23.6	14.9	16.4
(12) Timber Royalty	23.6	31.5	26.7	34.6	31.7	36.6	89.5	272.5	181.5	253.2	160.0
(13) Hydropower Royalty	-	-	-	-	-	4.5	17.4	22.2	51.2	57.0	54.3
(14) Others	3.8	3.2	4.5	6.6	6.2	14.1	33.3	46.6	61.4	71.9	125.1
2. Non-tax Revenue	27.3	29.1	30.8	36.4	38.7	76.7	183.7	324.4	371.5	395.2	447.4
3. Grants	31.3	66.9	72.7	57.6	59.9	199.7	532.4	475.3	475.7	429.2	420.0
<b>Expenditure &amp; Net Lending</b>	<b>170.5</b>	<b>266.7</b>	<b>293.9</b>	<b>364.4</b>	<b>419.2</b>	<b>846.6</b>	<b>1,719.0</b>	<b>2,754.6</b>	<b>3,140.8</b>	<b>3,279.2</b>	<b>4,249.5</b>
1. Current Expenditure	104.9	127.1	142.7	166.0	199.2	267.6	449.3	1,050.2	1,229.4	1,393.5	1,667.0
2. Capital Expenditure	65.6	139.6	151.2	198.4	220.0	579.0	1,269.7	1,704.4	1,911.4	1,885.7	2,582.5
<b>Current Cash Balance</b>	<b>8.3</b>	<b>16.5</b>	<b>23.0</b>	<b>46.3</b>	<b>29.1</b>	<b>99.4</b>	<b>479.9</b>	<b>641.1</b>	<b>770.9</b>	<b>826.0</b>	<b>894.7</b>
<b>Overall Cash Balance</b>	<b>-26.0</b>	<b>-56.2</b>	<b>-55.5</b>	<b>-94.5</b>	<b>-131.0</b>	<b>-279.9</b>	<b>-257.4</b>	<b>-588.0</b>	<b>-664.8</b>	<b>-630.5</b>	<b>-1,267.8</b>
Excluding Grants	-57.3	-123.1	-128.2	-152.1	-190.9	-479.6	-789.8	-1,063.3	-1,140.5	-1,059.7	-1,687.8
<b>Financing of Budget Deficit</b>	<b>41.6</b>	<b>56.3</b>	<b>55.6</b>	<b>89.5</b>	<b>114.1</b>	<b>279.9</b>	<b>257.4</b>	<b>588.0</b>	<b>664.8</b>	<b>584.1</b>	<b>1,267.8</b>
Foreign Financing (Net)	27.1	50.6	60.0	109.1	113.5	223.2	393.3	735.6	477.6	549.7	1,227.0
Domestic Financing	14.5	5.7	-4.4	-19.6	0.6	56.7	-135.9	-147.6	187.2	34.4	40.8
Market Borrowings	-0.1	-1.3	-6.4	-23.6	-47.2	56.7	-135.9	-147.6	187.2	34.4	40.8
Bank	-1.3	-5.3	-14.2	-15.2	-31.6	53.1	-143.1	-157.6	180.4	13.0	35.0
Non-Bank	1.2	4.0	7.8	-8.4	-15.6	3.6	7.2	10.0	6.8	21.4	5.8
Sales of Assets	14.6	7.0	2.0	4.0	47.8	-	-	-	-	-	-

Source: Department of Fiscal Policy, Ministry of Finance  
Present Conditions and Issues of Economic Development in Lao PDR, October 1998, OECF  
Present Conditions in Southeast Asia 2001, IDE

Note: A fiscal year starts at the beginning of October and ends at the end of September.

## 4.5 Taxation System

Major national taxes are listed in the national revenue in Table 44-1. Among many national taxes, the following three taxes are levied to water supply companies: turnover tax, income tax, and profit tax or minimum tax. Turnover tax will be transferred to value added tax (VAT) in 2006.

Turnover tax is set at 5% of water sale's amount. For NPVC, turnover tax is collected as a part of water sales. NPVC keeps the tax amounts as turnover tax withholding, and pay later to a tax office. Income tax is levied on salary of employees as well as company officials. A worker getting a salary of less than 200,000 kip/month enjoys tax relief. Tax rates are between 5% and 40%. NPVC keeps the tax to salaried as income tax withholding and pay in the following month to the tax office.

A profit tax rate is 35% of net profit, at present. On the other hand, a minimum tax rate is set as 1% of total sales. A tax payer has to pay the larger tax amount of the two taxes. For example, in a case of total sales was 20 billion kip and a net profit was 800 million kip, the profit tax is calculated at 280 million kip and the minimum tax is calculated 200 million kip. In this case, then, the taxpayer has to pay 280 million kip to the national tax office.

## 4.6 Foreign Assistance and External Debt

### 4.6.1 Foreign Assistance

Gross receipts of official development assistance (ODA) from OECD countries and multilateral agencies aggregated to US\$1.52 billion for the recent five years and averaged US\$0.30 billion per year between 1996 and 2000. The receipts fluctuate year by year, as shown in Table 46-1.

An annual receipt of ODA accounted for approximately 16.5% of GDP in 2000. The percentage of this rate was around 20% until 1999, but it abruptly decrease more than 16.5% in 2000. The receipt accounted for 100% of an annual expenditure of the central government on average in the same period. For the recent five years, its average rate was around 110%. It ranged from maximum 90% in 2000 and minimum 120% in 1999 as shown in the table below.

Item	(Unit: US\$ million)				
	1996	1997	1998	1999	2000
Receipt of ODA	333	329	283	296	281
GDP	1,868	1,741	1,284	1,445	1,700
Expenditure of Central Government	-	326	256	239	312
<hr style="border-top: 1px dashed black;"/>					
Share of ODA (%)					
To GDP	17.8	18.7	22.0	20.5	16.5
To Expenditure of Central Government	-	100.9	110.5	123.8	90.0

**Table 46-1 Official Development Assistance: 1996 – 2000**

Item	(Unit: US\$ Million)					
	1996	1997	1998	1999	2000	Total
Bilateral	147.9	165.7	166.1	211.0	195.1	885.8
Japan	57.4	78.6	85.6	132.5	114.9	469.0
Germany	22.9	16.6	18.4	21.7	13.3	92.9
Sweden	17.7	15.5	12.0	11.6	14.6	71.4
France	16.4	14.8	11.7	10.7	12.8	66.4
Australia	12.4	14.3	10.4	8.6	11.8	57.5
Norway	4.2	5.4	7.2	6.6	8.5	31.9
USA	3.0	2.0	7.7	6.0	2.7	21.4
Netherlands	3.2	4.2	2.5	0.5	2.0	12.4
Belgium	2.7	2.8	3.1	1.6	1.8	12.0
Switzerland	3.1	4.8	0.6	1.1	1.6	11.2
Finland	1.4	1.3	1.3	2.1	1.9	8.0
Others	3.5	5.4	5.6	8.0	9.2	31.7
Multilateral	184.6	163.5	116.5	84.5	86.1	635.2
ADB	83.6	85.6	63.5	43.8	47.3	323.8
IDA	59.0	40.9	23.7	18.5	16.7	158.8
EC	12.8	14.7	13.8	10.9	7.8	60.0
UNDP	8.6	7.8	4.5	4.4	2.8	28.1
UNICEF	3.8	1.9	1.7	2.9	2.2	12.5
IMF	5.5	3.3	0.0	-8.1	-7.7	-7.0
Others	11.3	9.3	9.3	12.1	17.0	59.0
Total	332.5	329.2	282.6	295.5	281.2	1,521.0

Source: Geographical Distribution of Financial Flows to Aid Recipients, Disbursements Commitments Country Indicators 1996-2000, OECD Development Assistance Committee

Note: \*1 Official development assistance is defined as grants and loans, with at least a 25% grant element, administered with the aim of promoting economic or social development. Figures indicate amounts.

#### 4.6.2 External Debt and Outstanding

In 2000, the total external debt was US\$2.50 billion as shown in Table 46-2, accounting for 147% of GDP. Since the outstanding of long-term debt was US\$2.53 billion or 175% of GDP in 1999, its conditions were improved in 2000. The total debt-service in 2000 was US\$42 million, comprising US\$32 million of principal repayment and US\$9 billion of interest payment. The table below shows the trend of total debt service between 1996 and 2000.

Item	(Unit: US\$ million)					
	1996	1997	1998	1999	2000	
Debt Outstanding of Long-Term Debt	2,264	2,320	2,436	2,527	2,498	
Total Debt Service	29	28	31	37	42	
Principal Repayment	22	20	23	28	32	
Interest Payment	7	7	8	9	9	
Exports of Goods and Services	436	435	494	479	516	
Debt Service Ratio (DSR)*1	6.7	6.4	6.3	7.7	8.1	

Note: \*1 A ratio of total debt service over exports of goods and services

The debt-service ratio (DSR), a kind of country risk assessment factors, has been at almost the same condition, i.e., from 6.3% in 1998 to 8.1% in 2000. Thus, the DSR has kept a sound position in terms of external debt problem so far, because those were always lower than the level of 20%, critical level of DSR.

**Table 46-2 External Debt: 1995 – 2000**

Item	(Unit: US\$ Million)					
	1995	1996	1997	1998	1999	2000
Total Debt Stocks	2,165	2,264	2,320	2,436	2,527	2,498
1. Long Term Debt	2,091	2,186	2,247	2,373	2,471	2,449
2. Use of IMF Credit	64	67	66	62	53	42
3. Short Term Debt	10	11	7	1	3	7
Debt Outstanding of Long Term Debt	2,092	2,186	2,247	2,373	2,471	2,450
1. Public and Publicly Guaranteed	2,092	2,186	2,247	2,373	2,471	2,450
a. Official Creditors	2,092	2,186	2,247	2,373	2,471	2,450
- Multilateral	621	741	816	953	1,064	1,058
- Bilateral	1,471	1,445	1,431	1,420	1,407	1,392
b. Private Creditors	0	0	0	0	0	0
- Bonds	0	0	0	0	0	0
- Commercial Banks	0	0	0	0	0	0
- Others	0	0	0	0	0	0
2. Private Non-guaranteed	0	0	0	0	0	0
Total Debt Service	26	29	28	31	37	42
1. Principal Repayment	20	22	20	23	28	32
a. Long Term Debt	18	19	15	16	20	24
b. IMF Repurchases	2	3	5	6	8	8
2. Interest Payments	7	7	7	8	9	9
a. Long Term Debt	6	6	7	8	9	9
b. IMF Charges	0	0	0	0	0	0
c. Short Term Debt	1	1	0	0	0	0
Ratios (%)						
1. Total Debt Stocks/GNP	123.2	121.3	136.2	195.2	178.0	149.6
2. Debt Service Ratio *1	6.3	6.7	6.4	6.3	7.7	8.1

Source: Global Development Finance, Country Tables 2002, March 2002, World Bank

Note: Long term debt is defined as having original maturity of more than one year.

\*1 Debt service as a percentage of earnings from exports of goods and service

#### 4.7 Price Indices and Exchange Rates

Table 47-1 shows consumer price index (CPI) in the Vientiane Capital City from the year 1988 to 2003. After 1995, CPI increased from 79.6 (base: December 1995=100) in January 1995 to 1,251.1 in January 2003, up by about 1,570% in the past eight years. In 1998 and 1999 after Asian financial crisis, inflation in the capital city experienced serious inflation of 95% and 140% respectively, as shown in the table. After then, the inflation has calmed down to 10% level.

**Table 47-1 Consumer Price Index and Inflation in Vientiane Capital City: 1988 – 2003**

														(Unit: Dec. 1995=100)	
Year	Item	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average	Inflation
1988	CPI (Consumer Price Index)	23.8	23.4	24.4	24.2	25.6	25.9	26.0	25.8	26.3	27.8	28.2	27.3	25.7	-
1989	CPI	27.9	29.4	30.2	33.9	38.0	42.5	44.1	48.2	49.4	49.8	50.1	49.7	41.1	59.7
1990	CPI	49.8	51.9	51.9	53.8	55.4	56.7	58.3	58.1	58.3	59.1	58.5	58.5	55.9	35.9
1991	CPI	57.3	57.3	59.1	61.1	64.2	65.4	66.3	65.8	66.1	66.4	65.6	64.5	63.3	13.2
1992	CPI	64.5	64.6	65.3	66.3	68.7	70.0	73.5	74.5	74.3	73.4	70.3	68.4	69.5	9.8
1993	CPI	68.6	68.8	69.2	71.3	72.2	73.7	76.7	78.4	79.1	78.3	75.2	74.5	73.8	6.3
1994	CPI	73.8	73.8	75.7	77.0	77.5	78.8	80.6	82.3	83.8	82.4	80.6	79.6	78.8	6.7
1995	CPI	79.6	80.1	83.7	88.4	93.9	93.7	96.4	102.6	106.5	104.6	102.2	100.0	94.3	19.6
	Foods	79.5	80.8	84.4	90.2	98.8	96.3	100.8	109.0	114.7	109.0	104.1	100.0	97.3	
	Non-food	79.4	75.6	83.0	86.6	88.7	91.1	91.8	95.9	97.9	100.0	100.2	100.0	90.9	
	Construction Materials	71.3	71.3	74.2	77.5	81.6	83.6	84.5	92.4	99.6	100.0	100.2	100.0	86.4	
1996	CPI	101.4	103.7	106.0	107.6	108.3	108.7	109.9	110.6	111.4	111.3	109.5	109.4	108.2	14.7
	Foods	99.9	103.3	105.6	107.2	107.7	108.1	110.1	111.5	111.8	111.3	107.8	107.4	107.6	
	Non-food	103.1	104.2	106.4	107.9	109.1	109.4	109.6	109.7	111.0	111.3	111.5	111.6	108.7	
	Construction Materials	101.3	102.7	105.0	105.3	105.3	106.1	106.2	106.2	106.3	106.4	106.5	106.5	105.3	
1997	CPI	109.1	110.5	112.6	115.1	118.1	118.2	126.2	132.7	133.5	134.7	133.7	136.1	123.4	14.1
	Foods	107.6	109.6	112.4	115.8	116.5	118.4	131.5	142.8	141.6	141.1	135.9	131.9	125.4	
	Non-food	110.9	111.5	112.8	114.4	120.0	118.1	120.1	121.2	124.1	127.3	131.1	140.9	121.0	
	Construction Materials	105.9	107.3	109.0	110.9	113.4	114.0	116.0	116.9	117.6	120.3	124.4	134.3	115.8	
1998	CPI	141.0	158.1	166.3	185.6	196.1	254.1	263.7	266.5	288.9	295.4	334.1	349.8	241.6	95.9
	Foods	134.5	156.2	170.1	196.5	204.9	274.6	282.6	282.1	295.8	294.1	339.1	357.4	249.0	
	Non-food	148.4	160.2	161.8	173.1	185.9	230.5	242.0	248.7	281.0	296.8	328.3	341.2	233.2	
	Construction Materials	137.1	152.4	156.3	167.2	185.8	217.6	216.5	225.1	240.1	256.4	282.9	291.1	210.7	
1999	CPI	376.7	439.2	479.7	519.7	540.2	592.8	651.0	680.7	689.6	689.5	645.8	645.6	579.2	139.7
	Foods	381.8	454.6	500.4	545.7	560.1	616.2	670.5	692.2	693.2	693.1	623.9	620.9	587.7	
	Non-food	370.9	421.4	456.0	489.8	517.5	565.9	628.7	667.6	685.5	685.3	670.9	673.9	569.5	
	Construction Materials	325.8	407.3	455.2	490.0	511.1	606.7	693.2	726.7	728.8	723.7	710.5	727.4	592.2	
2000	CPI	654.6	673.4	677.9	694.0	698.5	708.2	714.0	726.3	737.3	741.1	732.8	737.9	708.0	22.2
	Foods	625.9	649.5	653.2	677.4	668.7	674.9	680.5	697.9	702.2	702.9	681.1	684.2	674.9	
	Non-food	686.7	701.5	706.2	713.7	732.5	745.3	752.1	759.5	776.3	783.1	789.8	796.5	745.3	
	Construction Materials	736.1	756.5	785.6	798.0	807.4	827.8	832.1	840.1	870.0	895.4	910.0	923.8	831.9	
2001	CPI	749.5	753.4	757.9	768.9	785.0	784.4	791.5	822.5	834.1	841.2	831.5	822.5	795.2	12.3
	Foods	704.1	704.7	709.7	726.2	753.8	750.0	755.6	801.0	816.5	817.1	789.8	761.8	757.5	
	Non-food	799.9	806.7	810.0	816.1	821.5	823.5	832.3	848.4	856.5	869.3	878.8	888.2	837.6	
	Construction Materials	996.0	1,004.0	1,021.6	1,034.6	1,042.9	1,056.0	1,076.4	1,103.1	1,132.9	1,156.3	1,204.3	1,233.6	1,088.5	
2002	CPI	831.5	839.9	840.6	849.0	847.0	869.0	901.3	941.3	969.7	970.3	958.7	965.8	898.7	13.0
	Foods	777.4	796.0	800.3	810.9	805.3	818.3	866.8	873.6	899.7	887.9	857.5	863.1	838.1	
	Non-food	890.2	888.9	885.5	890.9	893.6	924.6	940.8	1,014.9	1,045.9	1,058.0	1,066.8	1,074.9	964.6	
	Construction Materials	1,251.1	1,270.8	1,279.5	1,290.4	1,306.4	1,617.0	1,697.0	2,555.4	2,593.2	2,647.7	2,698.7	2,743.0	1,912.5	
2003	CPI	974.9	980.0	-	-	-	-	-	-	-	-	-	-	-	-
	Foods	866.2	870.5	-	-	-	-	-	-	-	-	-	-	-	-
	Non-food	1,090.4	1,096.4	-	-	-	-	-	-	-	-	-	-	-	-
	Construction Materials	2,785.9	2,839.0	-	-	-	-	-	-	-	-	-	-	-	-

Source: National Statistical Centre

The foreign exchange rates of kip per US\$ dollar from 1992 to 2002 are tabulated in Table 47-2. Although the rate was around 719 kip per US dollar at the beginning of 1995, it went up to 10,520 kip per US dollar and 88.89 kip per Japanese yen at the end of May 2003.

**Table 47-2 Foreign Exchange Rates: 1995 – 2003**

		(Unit: Kip at End of Period)								
Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	
<b>Kip per US Dollar</b>										
January	<i>719.00</i>	933.70	961.00	2,427.00	4,374.00	7,545.00	8,228.00	9,500.00	10,610.00	
February	<i>719.00</i>	923.50	982.00	2,438.00	4,467.00	7,565.00	8,238.00	9,505.00	10,590.00	
March	<i>719.00</i>	925.00	1,004.00	2,418.00	5,365.00	7,560.00	8,390.00	9,480.00	10,645.00	
April	<i>719.01</i>	918.50	1,021.00	2,527.00	6,715.00	7,580.00	8,520.00	9,190.00	10,650.00	
May	<i>749.01</i>	918.50	1,021.00	2,602.00	7,680.00	7,700.00	8,520.00	9,608.00	10,520.00	
June	<i>784.98</i>	918.60	1,021.00	3,408.00	9,430.00	7,815.00	8,673.00	9,965.00	-	
July	<i>785.02</i>	918.60	1,138.00	3,498.00	9,350.00	8,010.00	9,120.00	10,260.00	-	
August	<i>785.00</i>	918.60	1,310.00	3,682.00	9,350.00	7,980.00	9,155.00	10,480.00	-	
September	<i>925.00</i>	918.90	1,343.00	3,941.00	6,550.00	8,085.00	9,540.00	10,870.00	-	
October	<i>924.00</i>	919.50	1,599.00	4,203.50	7,700.00	9,163.00	9,550.00	10,760.00	-	
November	<i>925.00</i>	938.70	1,756.00	4,200.00	7,700.00	9,263.00	9,520.00	10,770.00	-	
December	<i>923.00</i>	935.00	2,009.00	4,274.00	7,600.00	8,218.00	9,490.00	10,680.00	-	
<b>Average</b>	<b><i>806.42</i></b>	<b>923.93</b>	<b>1,263.75</b>	<b>3,301.54</b>	<b>7,190.08</b>	<b>8,040.33</b>	<b>8,912.00</b>	<b>10,089.00</b>	-	
<b>Kip per Japanese Yen</b>										
January	<i>7.30</i>	<i>8.71</i>	<i>7.88</i>	<i>19.13</i>	<i>37.64</i>	<i>70.61</i>	<i>70.84</i>	<i>71.48</i>	<i>89.20</i>	
February	<i>7.41</i>	<i>8.82</i>	<i>8.13</i>	<i>19.16</i>	<i>37.41</i>	<i>68.66</i>	<i>70.77</i>	<i>70.99</i>	<i>89.94</i>	
March	<i>8.05</i>	<i>8.70</i>	<i>8.09</i>	<i>18.31</i>	<i>44.56</i>	<i>71.42</i>	<i>67.34</i>	<i>71.17</i>	<i>88.60</i>	
April	<i>8.59</i>	<i>8.76</i>	<i>8.05</i>	<i>19.10</i>	<i>56.27</i>	<i>71.14</i>	<i>69.02</i>	<i>71.80</i>	<i>89.05</i>	
May	<i>9.00</i>	<i>8.49</i>	<i>8.77</i>	<i>18.71</i>	<i>63.25</i>	<i>72.20</i>	<i>71.48</i>	<i>77.23</i>	<i>88.89</i>	
June	<i>9.28</i>	<i>8.40</i>	<i>8.92</i>	<i>24.20</i>	<i>77.87</i>	<i>74.15</i>	<i>69.92</i>	<i>83.42</i>	-	
July	<i>8.88</i>	<i>8.51</i>	<i>9.62</i>	<i>24.34</i>	<i>81.16</i>	<i>73.15</i>	<i>73.08</i>	<i>85.61</i>	-	
August	<i>7.92</i>	<i>8.47</i>	<i>10.98</i>	<i>26.03</i>	<i>84.37</i>	<i>75.00</i>	<i>76.97</i>	<i>88.85</i>	-	
September	<i>9.41</i>	<i>8.28</i>	<i>11.10</i>	<i>29.14</i>	<i>61.30</i>	<i>74.97</i>	<i>79.97</i>	<i>89.43</i>	-	
October	<i>9.09</i>	<i>8.08</i>	<i>13.33</i>	<i>36.11</i>	<i>73.44</i>	<i>84.03</i>	<i>78.39</i>	<i>87.87</i>	-	
November	<i>9.11</i>	<i>8.25</i>	<i>13.77</i>	<i>33.97</i>	<i>75.12</i>	<i>83.32</i>	<i>76.81</i>	<i>88.06</i>	-	
December	<i>8.98</i>	<i>8.06</i>	<i>15.46</i>	<i>36.97</i>	<i>74.36</i>	<i>71.52</i>	<i>72.00</i>	<i>89.07</i>	-	
<b>Average</b>	<b><i>8.58</i></b>	<b><i>8.46</i></b>	<b><i>10.34</i></b>	<b><i>25.43</i></b>	<b><i>63.90</i></b>	<b><i>74.18</i></b>	<b><i>73.05</i></b>	<b><i>81.25</i></b>	-	

Source: International Financial Statistics, April 1995 to August 2003, IMF

Note: \*1 Figures in italics are calculated based on data from "International Financial Statistics, IMF".

#### 4.8 Household Economy

Living conditions can be derived sketchily from family income and expenditure. The average household expenditure was reported as 189,300 kip in 1998, according to "The Households of Lao PDR, Social & Economic Indicators, Lao Expenditure and Consumption Survey 1997/98 (LECS2), December 1999, NSC". In urban areas, the average household expenditure was calculated as 295,500 kip per month, accounting for 1.56 times of the national average. The detailed information is enumerated in Table 48-1. A household income was not surveyed in the report because of its difficulties, but its tendency might be almost the same as expenditure distribution.



Engel coefficient, which is a rate of food expenditure to total income, is said to characterize destitute living condition. The lower income family shows the higher coefficient. The coefficient of the national average was calculated at 61%, according to the same report. It was improved from the previous survey in 1992/93, 64%. Thus, the living condition may be more improved than that in 1992/93.

Housing expense accounted for 7.1% of the total family expenditure. The expense includes housing cost and its utility costs. Of the total percentage of 7.1%, utility charge including water, electricity, etc. accounted for 1.3% of the total expenditure. This amounted to 2,460 kip (equivalent US\$ 1.63) per month in 1997/98. In urban areas, housing expense accounted for 10.3% of the total family expenditure. Utility charge accounted for 2.2% of the total expenditure or 6,560 kip (equivalent to US\$4.35) per month in 1997/98.

Medical care expense of the national average was 4,250 kip or 2.2% of the total family expenditure. In urban areas, medical care expense accounted for 1.9% only, although the actual expenditure of 5,580 kip recorded larger than the national average.

Household expenditure in urban population of Vientiane Capital City was calculated at 284,587 kip/month in 1997/98 according to LECS2, as shown in Table 48-2. It accounted for 138% of the national average. An average household in urban areas expended 22,377 kip for housing and 5,631 kip for medical care. Among housing expense, utilities accounted for 9,477 kip. In terms of water expense, a family expended 2,861 kip in urban areas on average, accounting for 13% of housing expense, and 1.0% of the total expenditure in urban areas of Vientiane Capital City.

Among medical care expenses of 5,633 kip in urban areas, expense for medicines accounted for 4,366 kip or 78%, and expense for medical treatment accounted for 813 kip or 14%. These shares were smaller than those in rural areas, as shown in Table 48-2.

**Table 48-1 Household Consumption by Item Group: 1997/98**

Item	LECS 1997/98		LECS	Consumption by Urban/Rural			Consumption by Region: 1997/98		
	Average Monthly Expenditure (Kip/Month)	% Share (%)	1992/93 % Share (%)	Urban (Kip/Month)	Rural with Access to Road (Kip/Month)	Rural without Access to Road (Kip/Month)	North Region (Kip/Month)	Centre Region (Kip/Month)	South Region (Kip/Month)
1. Foods	115,220	60.9	64.3	149,481	117,342	101,040	92,651	134,148	106,490
(1) Food Expenditure	50,999	26.9	26.3	122,444	46,495	28,246	27,636	69,288	45,044
(2) Food Own Produced	64,221	33.9	38.0	27,037	70,847	72,794	65,015	64,860	61,446
2. Clothing, Footwear, Tailoring	5,265	2.8	4.1	9,145	4,883	4,135	4,647	6,266	3,887
3. Housing	13,401	7.1	7.1	30,290	11,722	8,493	10,212	17,752	8,214
(1) Rent of Houses	60	0.0	0.0	11	161	0	29	102	9
(2) Imputed Rent	8,939	4.7	4.7	23,041	7,966	4,513	6,923	11,859	5,260
(3) Fetched Firewood	1,941	1.0	1.3	679	1,875	2,454	2,168	2,010	1,417
(4) Water, Electricity, etc.	2,461	1.3	1.1	6,559	1,720	1,526	1,092	3,781	1,528
4. Household Utensils & Operations	9,674	5.1	4.0	17,502	11,990	5,037	7,099	12,964	6,007
5. Medical Care	4,246	2.2	2.4	5,582	4,566	3,513	3,806	4,616	4,075
6. Transport & Communications	20,007	10.6	6.7	39,662	20,918	12,106	14,174	27,263	12,167
7. Recreation	11,562	6.1	3.8	22,551	11,182	7,823	10,440	13,185	9,516
8. Educaiton	934	0.5	0.8	2,740	746	416	478	1,412	532
9. Personal Care	1,464	0.8	3.1	3,165	1,244	1,008	1,096	1,880	1,065
10. Alcohol & Tobacco	5,449	2.9	3.0	8,986	5,083	4,432	4,087	6,522	5,088
11. Others	2,098	1.1	0.7	6,354	1,391	1,077	750	3,387	1,200
Total	189,320	100.0	100.0	295,458	191,067	149,080	149,440	229,395	158,241

Source: The Households of Lao PDR, Social & Economic Indicators, Lao Expenditure and Consumption Survey 1997/98 (LECS2), December 1999, NSC, State Planning Committee

**Table 48-2 Household Consumption by Item Group in Vientiane Capital City: 1997/98**

Item	Urban (Kip)	Rural (Kip)	Capital City Average (Kip)
1. Foods	169,347	134,536	160,993
(1) Food Expenditure	149,103	82,467	133,111
(2) Food Own Produced	20,244	52,069	27,882
2. Clothing, Footwear, Tailoring	10,230	1,314	8,090
3. Housing	22,377	5,827	18,405
(1) Rent of Houses	0	0	0
(2) Imputed Rent	12,270	136	9,358
(3) Fetched Firewood	629	2,128	989
(4) Water, Electricity, etc.	9,477	3,563	8,058
1) Water	2,861	0	2,174
2) Electricity	3,930	1,109	3,253
3) Kerosene	66	3	51
4) Charcoal	1,306	1,718	1,405
5) Firewood (purchased)	720	485	664
6) Others	595	248	511
4. Household Utensils and Operations	10,958	5,405	9,625
5. Medical Care	5,631	6,656	5,877
(1) Medicines	4,366	5,263	4,581
(2) Expenses for Medical Care	813	1,173	900
(3) Medical Goods	121	35	101
(4) Others	330	185	295
6. Transport & Communications	21,977	11,251	19,402
7. Recreation	12,765	9,130	11,893
8. Education	5,473	3,278	4,946
9. Personal Care	3,885	1,803	3,385
10. Alcohol & Tobacco	15,825	8,699	14,115
11. Others	6,120	1,378	4,982
<b>Total</b>	<b>284,587</b>	<b>189,277</b>	<b>261,713</b>

Source: The Households of Lao PDR, Social & Economic Indicators, Lao Expenditure and Consumption Survey 1997/98 (LECS2), December 1999, NSC, State Planning Committee

## **5. PROJECTION OF SOCIO-ECONOMIC STRUCTURES**

### **5.1 National Development Plans**

The Lao government laid down a long-term national development plan. It includes the socio-economic development plan which has its planning period of 20 years from 2001 to 2020 and the socio-economic development strategy which has its planning period of 10 years from 2001 to 2010. In addition, the medium-term development plan 2001-2005 was published to accelerate its economic development at a higher pace than before.

#### **(1) Basic Strategy for National Socio-economic Development 2001-2020**

It proposes the national long-term development vision for 20 years. It insists on the following development policy: (a) sustainable development, keeping the balance among economy, socio-culture and environment; (b) well-balanced socio-economic development, consisting of regional balance between urban and rural areas, effective distribution of national and human resources and equitable distribution of wealth; and (c) activation of administration and attainment of national defence and safety based on the national development.

It declares the following national goals by the target year 2020.

- (a) National population: 8.30 million with annual growth rate of 2.2%
- (b) GDP per capita: US\$ 1,200 to US\$1,500 with an annual growth rate of 7% on average, based on the total investment by 25% ~ 30% of GDP from both public and private sectors
- (c) Literacy rate: 90% of population more than 15 years old
- (d) Life expectancy: 70 years
- (e) Development of basic infrastructures
- (f) Increase of GVA shares of industry and services sectors
- (g) Improvement of living conditions in physical and mental circumstance based on job creation

#### **(2) Socio-economic Development Strategy 2001-2010**

For the first ten years of the long-term development plan above, the government declares the following development goals. Its development strategies for the planning period suggest increasing agricultural production, alleviation of poverty problems and establishment of key industries.

- (a) National population: 6.70 million with annual growth rate of 2.4%
- (b) GDP per capita: US\$ 700 to US\$750 with an annual growth rate of not less than 7%
- (c) Literacy rate: 84% of population more than 15 years old

- (d) Life expectancy: 67 years
- (e) Reduction of viral diseases like malaria and diarrhoea

(3) Five-Year National Development Plan 2001-2005

In this plan, the government proposes the following development goals attained during the planning period.

- (a) National population: 5.90 million
- (b) GDP per capita: US\$ 450 to US\$500
- (c) Annual growth rate of GDP: not less than 7.0% per annum on average, composed of average growth rate of 4% ~ 5% of agriculture sector, 10% ~ 11% of industry sector and 8% ~ 9% of services sector
- (d) Structure of national economy in the target year: 47% of agriculture sector's GVA to GDP, 26% of industry sector and 27% of services sector
- (e) Price and foreign exchange: less than 10% of annual inflation rate on average and stabilisation of foreign exchange rates
- (f) Reconstruction of public finance: to reduce the annual budget deficit by 5% of GDP
- (g) Improvement of external trade balance: 6% of GDP in deficit of merchandize trade balance
- (h) Public investment: 12% ~ 14% of GDP, with internal accumulation shares about 12% of GDP
- (i) Poverty alleviation: to effort up to reach to a half of the current poor

In order to attain the goals above, sectoral plans are proposed in the plan. One of the most important development targets of MCTPC is to realise paved roads connecting a central part of Vientiane to the respective provinces and access roads connecting the respective villages even in the rainy season. In addition, improvement of water supply systems in Vientiane Capital City and in major district and to some small districts in provinces is one of the most important development goals.

## **5.2 Regional Development Plans**

Vientiane Urban Development Master Plan (VUDMP) was formulated in 1991 with UNDP/UNCHS support and revised in 2000. The revised VUDMP by Urban Research Institute, MCTPC was approved in 2002 by Prime Minister and implementation of improvement of roads and drainage system started already financed by ADB. Implementing agency of the projects is Vientiane Urban Development and Administration Authority (VUDAA) of the Vientiane Capital City Government.

This VUDMP covers central part of the Vientiane Capital City and the area covered by the VUDMP is called as “Capital Municipality Zones”. The Capital Municipality Zones are comprised of 7 districts as follows:

- Chanthabouli District
- Sisattanak District
- Part of Sikhottabong District
- Part of Saysettha District
- Part of Naxaithong District
- Part of Xaythany District
- Part of Hadxaifong District

Remaining two remote districts, Sangthong and Mayparkngum Districts are not included in the VUDMP.

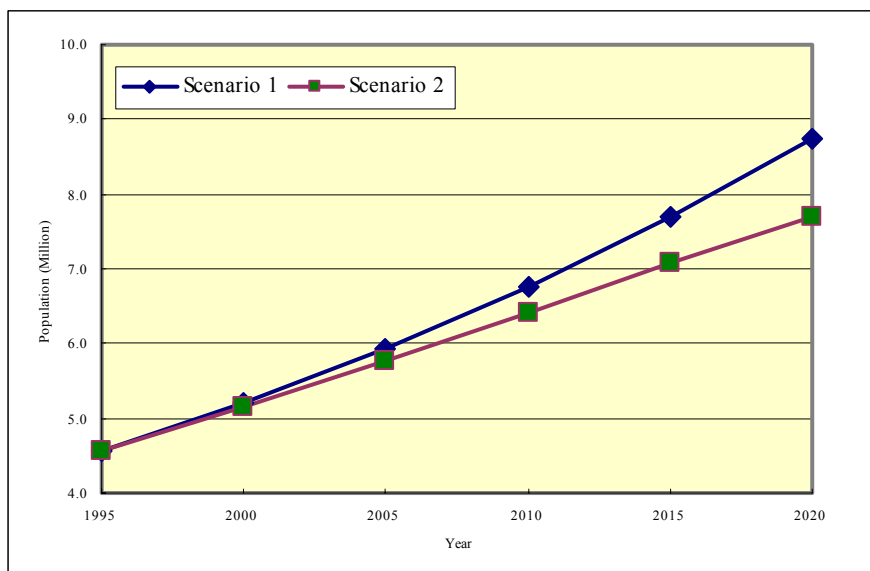
Although the VUDMP covers only central part of the capital city, “Special Development Zones”, “Satellite Towns Zones” and “Long-Term Expansion Urban Zones” which are outside of the planning zone are also discussed in the VUDMP Report. These zones are defined in the VUDMP as follows:

- (a) Capital municipality zone: central urban areas of Vientiane
- (b) Special development zone: mainly residential areas, including public space like public garden, agricultural areas, industrial areas, transport facilities, cultural facilities, defence facilities, etc.
- (c) Satellite district zone: potential areas for future development, designated as second development priority, within the sphere of 20km ~ 60km from the central zone and having a population of more than 10,000. It is mainly agricultural areas at present, but includes industrial development potential areas.
- (d) Long-term development zone: undeveloped area at present, located in hilly lands without any hazard of flood menace, but unsuitable for agricultural production. It is expected as development areas having tourism potential.

This VUDMP defines policy of urban developments and land use pattern of future development to achieve well coordinated development. Although the development policy and land use are defined, specific target year or source of funds for implementation are not described in the Report.

### 5.3 National Population Projection

NSC has made a long-term population projection for a period from 1995 to 2020 by five years interval with two scenarios of (1) Standard Projection, (2) Low Projection for the whole nation based on the said “Results from the Population Census 1995”. The



NSC presents these population projections in the publication above. The basic data for projection such as fertility rate and mortality rate were based on the 1995 census information. The population is projected under the two scenarios. Table 53-1 shows the population projections for the respective scenarios. The projections are illustrated in the figure above.

The 1995 census of population was conducted after an interval of 10 years. According to the results, the total census population was counted at 4.57 million and an average growth rate for the country was calculated at 2.47% per annum between the two censuses. On the other hand, the 2020’s populations projected under the scenarios above were estimated as follows: 8.74 million under the standard scenario and 7.69 million under the low scenario. As far as it is seen in these projections, the population under the standard scenario seems to be the most presumable scenario.

**Table 53-1 Population Projection in Lao PDR: 2000-2020**

Item	(Unit: 1000)					
	1995 Census	2000	2005	2010	2015	2020
I. Scenario 1						
Male	2,261	2,575	2,942	3,367	3,845	4,375
Female	2,314	2,618	2,973	3,386	3,849	4,363
Total	4,575	5,193	5,916	6,752	7,694	8,738
II. Scenario 2						
Male	2,261	2,548	2,858	3,186	3,515	3,826
Female	2,314	2,598	2,905	3,229	3,554	3,861
Total	4,575	5,146	5,763	6,415	7,069	7,687

Source: Results from the Population Census 1995, April 1997, NSC, State Planning Committee

Note:

Scenario 1 assumes that the mortality and fertility levels of the 1995 census will prevail until 2020. Scenario 2 assumes that the mortality and fertility are improved as follows.

Item	Scenario 1		Scenario 2			
	1995- 2000	2000- 2005	2005- 2010	2010- 2015	2015- 2020	
Gross Reproduction Rate (GRI)	2.6	2.4	2.2	2.0	1.7	1.5
Net Reproduction Rate (NRR)	2.0	1.9	1.8	1.6	1.5	1.5
Total Fertility Rate (TFR)	5.5	5.0	4.5	4.0	3.5	3.0
Life Expectancy (LE)						
Male	50	51	54	56	59	61
Female	52	55	57	60	62	65
Infant Mortality Rate (IMR)						
Boys	-	101	76	79	57	49
Girls	-	85	76	66	57	49
Both Sexes	104	94	83	73	63	54

## 5.4 GDP Projection

The long-term projection of GDP is indispensable for formulating the future framework of the socio-economic structure in the project sites. Official economic projection in “Five-year National Development Plan 2001-2005” and “Long-term Development Plan 2001-2020” were described in Section 5.1. The Five-year Plan has a more specific projection like sectoral scenarios, but the “Long-term Plan” shows overall targets in the year 2020. In this study, then, the future projection was based on the “Five-year Plan” projection scenario. The criteria for projection are assumed as follows.

- (1) Major sectors grow at the following annual rates until 2005 as proposed in the “Five-year Plan”: 4.5% of agriculture sector, 10.5% of industry sector, 8.5% of services sector and 7.0% for import duties. As a result, GDP is expected to grow at 7.0% per annum on average during



the planning period.

- (2) After 2005, the respective sectors grow at the same rates as set in the “Five-year Plan” until the target year 2020.

GDP projected under the above assumptions are shown in Table 54-1. By 2020, the GDP projection is summarised in the table below. The GDP values were estimated at 2001 constant prices.

Item	2001	2005	2010	2020
GDP (Trillion Kip)	15.7	20.6	29.2	61.7
GDP per Capita (Million Kip)	2.9	3.5	4.3	7.1
GDP per Capita (US\$)	329	396	498	797

As shown in the table above, GDP per capita was estimated at 7.1 million kip (equivalent to around US\$800) for the national average. Since GDP per capita in 2001 was 2.9 million kip (around US\$330), that in 2020 was around 2.5 times more than that in 2001. Overall growth rates between 2001 and 2020 were calculated at 7.5% per annum for GDP and 4.8% per annum for GDP per capital. In Vientiane Capital City, GRDP and GRDP per capita are expected to grow in proportion to GDP growth. Although the data of GRDP are not available at present, GRDP of Vientiane would grow faster than the national average as seen in the past trend.

**Table 54-1      Projection of Gross Domestic Product at 2001 Constant Prices**

Item	2001	2005	2010	2015	2020
I. National Account					
1. GDP (Billion Kip)	15,670	20,550	29,221	42,158	61,690
(1) Agriculture	7,975	9,510	11,851	14,769	18,404
(2) Industry	3,673	5,476	9,022	14,863	24,486
(3) Services	3,883	5,382	8,093	12,168	18,297
(4) Import Duties	139	182	255	358	502
2. GDP per Capita					
(1) In Kip (1000)	2,914	3,474	4,327	5,480	7,060
(2) In US\$ *1	329	392	488	618	796
3. Population (1000)	5,377	5,916	6,752	7,694	8,738
II. Growth Rate					
1. GDP	5.7	7.0	7.3	7.6	7.9
(1) Agriculture	3.8	4.5	4.5	4.5	4.5
(2) Industry	9.7	10.5	10.5	10.5	10.5
(3) Services	5.7	8.5	8.5	8.5	8.5
(4) Import Duties	15.8	7.0	7.0	7.0	7.0
2. GDP per Capita	2.8	4.5	4.5	4.8	5.2

Source: National Development Plan 2001-2020 and 2001-2005, CPC

Note: \*1 Foreign Exchange Rate in 2001 was 8,871 kip/US\$.

**ANNEX 4-2**

**PRESENT MANAGEMENT CONDITIONS**

**OF NAM PAPA VIENTIANE CAPITAL CITY**

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## **1 MANAGEMENT OF VIENTIANE WATER SUPPLY COMPANY**

Water Supply Company of the Vientiane Capital City (Nam Papa Vientiane Capital City: NPVC) was reorganised from Lao Water Supply Company (Nam Papa Lao: NPL) under the provision of the Resolution (No.37/PM) in September 30, 1999. NPL used to cover all over the country in water supply services. After the reorganisation, the NPVC became one of the Nam Papa State-owned Enterprises (NPSEs), covering Vientiane Capital City only. In terms of training for water engineers, the NPVC succeeded its function for the all NPSEs as an implementing agency in the country.

The top management of the NPVC is conducted by three deputy general managers under the general manager. Its organisation consists of four branch offices, four water treatment plants, five administrative and engineering divisions, training centre, and manufacturing bottled potable water. As of 2002, the number of workers in the NPVC was enumerated at 322 for these sections.

The main water supply system of the NPVC covers the central area of Vientiane Capital City with two water treatment plants. Besides, the NPVC conducts two small water supply systems in the Tangon area in northern part of the capital city and the Thadua area in south-eastern part. In addition to the water supply services, the NPVC carries also manufactures bottled potable water. Although these all water supply services are managed by the NPVC, the latter three businesses are managed with independent accounting systems. The total amount of these three businesses accounted for less than 3% of the main water supply business. In this chapter, then, the management of the NPVC is discussed as the main water supply system operator.

## **2 FINANCIAL SITUATION**

### **2.1 Financial Conditions**

The profit and loss (PL) table of the NPVC for the last five years between 1998 and 2002 are shown in Table 21-1. Sales revenue comprises water sales, new connection fees, income from project undertaken, rental fees of heavy equipment and rental fees of water meters. In 2002, sales revenues of the NPVC accounted for 19.8 trillion kip. Of these sales revenues, 78% accrues from water sales, as shown in the table. Other major revenue sources were connection fees, project income and rental fees of meters, accounting for 10%, 5% and 6%, respectively. Beside this sales revenue, the NPVC earns revenue of 163 million kip from non-operating activities.

In 2002, the total expenditure was 21.6 trillion kip. Expenditure is divided into two main categories. The first category is the purchasing materials and equipment for potable water production. That accounted for 11.2 trillion kip or 52% of the total expenditure. The other category is for service and administration expenses supporting water supply services. This accounted for 10.4 trillion kip or 48% of the total. At the end of the fiscal year, the total expenditure was reduced through closing adjustment, which was calculated at 2.4 trillion kip. Accordingly, the net expenditure for the year 2002 resulted in 19.2 trillion kip.

In 2002, net profit after tax was calculated at 778 million kip, as shown in Table 21-1. The NPVC experienced financial net profit after an interval of three years. This financial trend is illustrated in Figure 21-1. According to the financial report, the NPVC received financial aid of 3.8 trillion kip from the government in 2002. As a result, the deficit accumulated for the consecutive three years was settled by means of this assistance.

Table 21-2 shows the balance sheet (BS) of the NPVC for the recent five years. In 2002, the total assets were estimated at 39.0 trillion kip. Fixed assets accounted for 22.6 trillion kip or 58% of the total assets. Current assets including (a) available assets of cash and bank deposit and (b) other current assets such as inventory stock, account receivable, products in progress, etc. accounted for 16.3 trillion kip or 42% of the total. Of the total current assets, available assets accounted for 4.2 trillion kip or 11% of the total assets. Other current assets were 12.1 trillion kip or 31%. Account receivable was 3.6 trillion kip or 9% of the total assets. This amount is equivalent to nearly three months' water sales.

The capital stock of the NPVC was also 39.0 trillion kip in 2002, comprising 10.3 trillion of shareholder's equity or 26% of the total, 23.3 trillion kip of long-term liabilities or 60%, and 5.4 trillion kip of short-term liabilities or 14%. Of the total equity, the government holds 8.3 trillion kip or 80%. Other enterprises hold only 20% of the total equity. The long-term liabilities rely on bank loans as

shown in Table 21-2. 75% of the long-term liabilities come from banks.

**Table 21-1 Profit and Loss Table: 1998 to 2002 (1/2)**

(Unit: Kip Million)					
Item	1998	1999	2000	2001	2002
<b>I. Income</b>					
1. Sales Revenues	<b>5,942</b>	<b>9,637</b>	<b>11,985</b>	<b>15,787</b>	<b>19,814</b>
(1) Water Sales	4,430	5,487	6,410	10,299	15,527
(2) Connection	674	1,208	1,889	2,070	2,027
(3) Inside Repairs	0	0	0	0	0
(4) Undertake Project	401	2,289	2,657	2,140	996
(5) Material Sales	240	337	378	161	105
(6) Vehicle Rental	25	64	56	70	62
(7) Meter Rental	172	252	594	1,047	1,098
2. Other Revenues	<b>345</b>	<b>781</b>	<b>287</b>	<b>215</b>	<b>163</b>
(1) Various Products of Current Management	35	17	13	13	12
(2) Profits on Exchange	76	475	73	85	56
(3) Other Financial Income	13	41	109	68	56
(4) Sales of Fixed Assets	7	0	12	0	2
(5) Penalties Imposed	12	22	42	49	37
(6) Gift Receivable	0	0	0	0	0
(7) Previous Years' Profit	87	0	0	0	0
(8) Other Exceptional Profits	0	0	37	0	0
(9) Resumption of Major Repair Charges	115	226	0	0	0
3. Total	<b>6,287</b>	<b>10,419</b>	<b>12,272</b>	<b>16,002</b>	<b>19,978</b>
<b>II. Expenditure</b>					
1. Purchase of Materials and Equipment	<b>3,955</b>	<b>7,212</b>	<b>8,317</b>	<b>10,996</b>	<b>11,157</b>
(1) Raw Materials Principal (Foreign)	344	1,419	916	1,387	2,017
(2) Raw Materials Auxiliary (Foreign)	319	612	753	825	1,242
(3) Pipe (Foreign)	48	1,065	2,032	2,668	1,252
(4) Spare Parts (Foreign)	24	166	0	421	108
(5) Raw Materials Principal (Local)	15	6	0	2	13
(6) Pipe (Local)	2,177	1,532	843	711	1,193
(7) Fuel for Stock (Local)	202	502	652	778	652
(8) Spare Parts (Local)	30	93	66	81	77
(9) Construction Materials (Local)	58	198	210	260	269
(10) Tools (Local)	47	76	43	68	53
(11) Office Supplies (Local)	122	234	377	442	268
(12) Fuel	0	0	0	0	0
(13) Electricity	571	1,308	2,423	3,354	4,013
(14) Materials	0	0	0	0	0
2. Service Expenses and Administration	<b>3,625</b>	<b>5,342</b>	<b>6,857</b>	<b>8,077</b>	<b>10,431</b>
(1) Location of Vehicle	87	151	197	389	756
(2) Repairs & Maintenance Charges	115	226	0	0	0
(3) Insurance Charges	4	5	14	27	131
(4) External Remittances	38	70	89	59	68
(5) Water Meter Service	0	0	10	21	37
(6) Transport Charges on Purchases	7	17	24	19	32
(7) Travel	25	37	46	87	104
(8) Sports Charges	0	0	59	24	27
(9) Expenditure for Training	21	24	37	19	38
(10) Mission, Meeting, Receptions	11	36	33	34	63
(11) General Sub-contractor	73	549	1,145	1,076	1,312
(12) Newspaper, Advertising, PTT	32	59	77	117	199
(13) General Management Charges	30	63	92	178	275
(14) Import Taxes	33	173	358	260	239
(15) Registration Rights and Stamps	6	17	19	40	91

(To be continued)



**Table 21-1 Profit and Loss Table: 1998 to 2002 (2/2)**

(Continuation)	(Unit: Kip Million)				
Item	1998	1999	2000	2001	2002
(16) Other Taxes	0	0	0	0	0
(17) Salary and Labours	499	651	1,051	1,465	2,227
(18) Premiums and Bonus	49	58	83	170	124
(19) Other Allowances	35	62	73	126	116
(20) Advantages by Nature	0	0	0	0	0
(21) Office Guard Expenses	37	17	163	290	245
(22) Charges of Social Security	6	17	15	49	53
(23) Other Social Charges	32	92	99	154	355
(24) Indirect Charges (Mechanical Departme:	0	0	0	0	0
(25) Loan Interest Charges	1,141	1,024	1,070	1,001	959
(26) Losses on Foreign Exchanges	19	379	141	315	196
(27) Charges on Previous Years	0	0	0	0	0
(28) Other Financial Charges	2	5	13	12	21
(29) Accounting Value of Elements of Fixed	6	3	0	0	0
(30) Penalties	0	0	0	0	0
(31) Gift Expenses	1	1	1	2	3
(32) Losses on Bad Debts	0	0	197	0	14
(33) Exceptional Charges	0	1	4	4	24
(34) Deprecation of Fixed Assets in Use	1,065	1,253	1,399	1,578	1,972
(35) Endowment to Provisions for Risk & Ch	253	350	347	403	752
(36) Other Exceptional Charges	0	0	0	0	0
(37) Imposts on Profits	0	0	0	158	0
<b>3. Total</b>	<b>7,580</b>	<b>12,554</b>	<b>15,173</b>	<b>19,073</b>	<b>21,588</b>
<b>3. Reduction Expenses</b>					
1. Stock Adjustment	-49	1,374	-319	975	198
(1) Raw Materials Principal	192	111	-302	-423	380
(2) Raw Materials Auxiliary	-288	-1,056	-1,408	-1,489	-1,781
(3) Pipes	-270	546	-83	470	-455
(4) Fuel Gasoline	-14	55	-18	413	-1
(5) Spare Parts	-6	169	-166	368	-139
(6) Construction Materials	-2	-7	21	21	6
(7) Tools	33	-13	-10	-29	-4
(8) Office Supplies	14	-17	32	196	8
(9) Materials of Branch Offices	292	1,586	1,615	1,447	2,183
2. Other Adjustment	1,499	-354	841	877	2,190
(1) Production of Auto-consumed	0	0	0	0	0
(2) Production Immobilized	9	10	83	56	262
(3) Production (Undertake Project)	689	-689	512	517	1,420
(4) Charges of Acquisition of Fixed Assets	801	325	246	303	509
<b>3. Total</b>	<b>1,451</b>	<b>1,020</b>	<b>521</b>	<b>1,851</b>	<b>2,388</b>
<b>4. Net Expenses for the Year (2. - 3.)</b>	<b>6,129</b>	<b>11,534</b>	<b>14,652</b>	<b>17,222</b>	<b>19,200</b>
<b>5. Profit or Loss for the Year (1. - 4.)</b>	<b>158</b>	<b>-1,115</b>	<b>-2,380</b>	<b>-1,220</b>	<b>778</b>

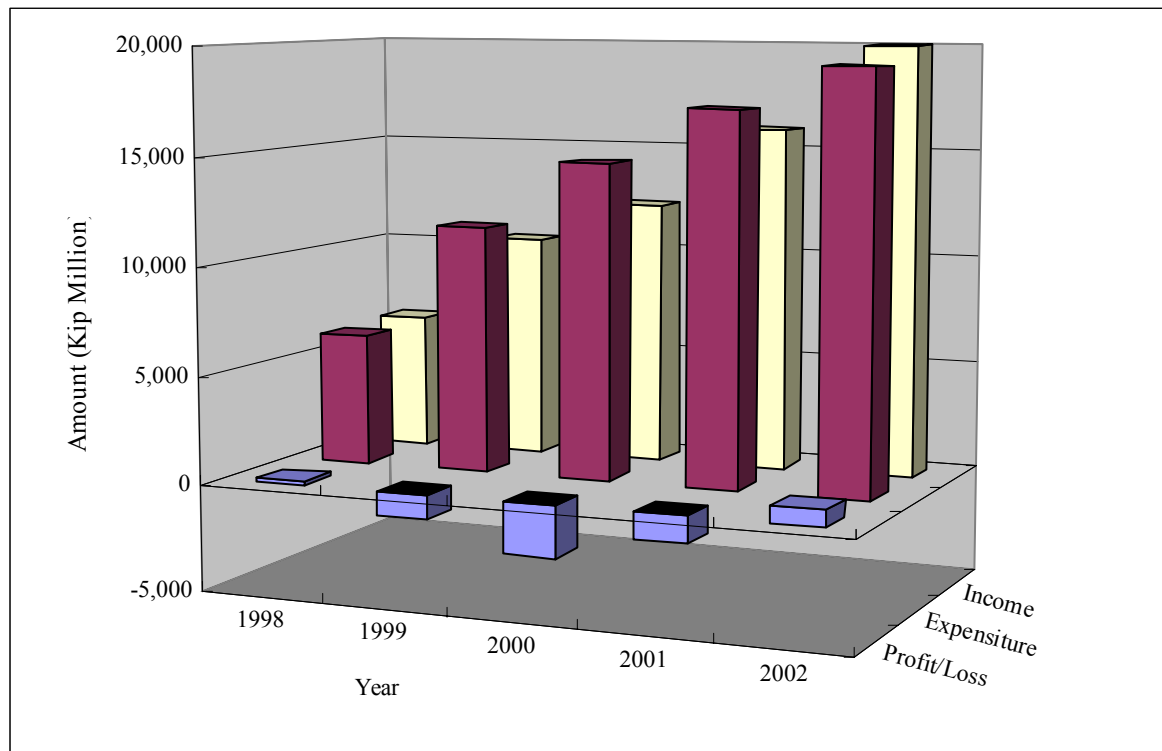
Source: Nam Papa Vientiane Capital City

**Table 21-2 Balance Sheet: 1998 to 2001**

(Unit: Kip Million)					
Item	1998	1999	2000	2001	2002
<b>I. Assets</b>					
1. Fixed Assets	<b>15,470</b>	<b>24,058</b>	<b>23,441</b>	<b>22,288</b>	<b>22,569</b>
(1) Gross Value of Fixed Assets	19,054	29,091	29,909	30,333	32,778
(2) Less: Accumulated Depreciation	3,584	5,033	6,468	8,046	10,209
2. Current Assets	<b>6,119</b>	<b>8,369</b>	<b>8,061</b>	<b>9,540</b>	<b>12,063</b>
(1) Stock of Supplies	1,960	3,240	2,840	3,584	4,177
(2) Products in Progress	689	0	512	1,029	2,448
(3) Accounts Receivable	1,664	3,085	2,930	2,854	3,595
(4) Prepaid Expenses	139	2	187	49	15
(5) Others Receivable	1,667	2,042	1,593	2,024	1,827
3. Not Current Assets	<b>19</b>	<b>46</b>	<b>102</b>	<b>74</b>	<b>136</b>
(1) Others Receivable	19	46	102	74	136
4. Available Assets	<b>557</b>	<b>1,329</b>	<b>1,715</b>	<b>1,959</b>	<b>4,206</b>
(1) Cash	84	152	144	207	304
(2) Bank Deposits	377	985	1,447	1,626	3,835
(3) Outstanding Cheques	96	192	124	126	67
5. Total	<b>22,165</b>	<b>33,802</b>	<b>33,320</b>	<b>33,861</b>	<b>38,973</b>
<b>II. Liabilities and Stockholders' Equity</b>					
1. Equity	<b>8,952</b>	<b>8,440</b>	<b>6,631</b>	<b>5,294</b>	<b>10,305</b>
(1) Enterprise Capital	1,209	1,807	1,452	1,452	1,479
(2) Government Owned Capital	7,641	7,645	7,664	7,666	8,320
(3) Profit or Loss for the Previous Years	0	103	-105	-2,605	0
(4) Profit or Loss for the Year	103	-1,115	-2,380	-1,220	506
2. Long-term Liabilities	<b>12,354</b>	<b>22,715</b>	<b>23,193</b>	<b>23,512</b>	<b>23,305</b>
(1) Borrowings	1,754	783	783	971	806
(2) Others Reserve	474	0	0	0	0
(3) Major Repairs Reserve	476	622	552	188	495
(4) Bank Loan	6,906	17,677	17,488	17,114	17,443
(5) Interest Payable	2,744	3,634	4,371	5,240	4,561
3. Operating Liabilities	<b>858</b>	<b>2,647</b>	<b>3,496</b>	<b>5,055</b>	<b>5,363</b>
(1) Overseas Suppliers	184	1,300	1,351	2,447	1,434
(2) Local Suppliers	261	934	1,519	1,979	2,799
(3) Other Creditors	76	225	240	274	930
(4) Advanced Receipt	313	166	325	228	226
(5) Profit Tax	25	22	61	127	-27
4. Total	<b>22,165</b>	<b>33,802</b>	<b>33,320</b>	<b>33,861</b>	<b>38,973</b>

Source: Nam Papa Vientiane Capital City

Figure 21-1 Trend of Management Performance



## 2.2 Analysis of Financial Statement

Table 22-1 shows changes of financial position in the balance sheet between 2000 and 2002. Current assets increase steadily for the three years as shown in the table. In particular, works in progress, bank deposit and cash positions recorded remarkably an increase for three years. In addition to them, stock of raw materials and account receivable also increased at a high pace. Fixed assets increased at a moderate pace, but they were cancelled by depreciation. Thus, real increase of fixed assets were not realised for these years. As a result, the total assets increase at an average rate of 8% per annum. Since the inflation rate was more than 12% for these years, the real assets value is said to decrease for these years.

In terms of capital stock, current liabilities in 2002 remarkably increased by 166% more than that in 2000. In particular, overseas short-term debt increased 212% more than in 2000. Besides, shareholder's equity increased from 6.6 trillion kip in 2000 to 10.3 trillion kip in 2002. This was because of not increment of capital stock but cancellation of negative retained earnings, and because of current net loss owing to the government's subsidy. As a result, the equity increased by 155% for these years. Fixed assets kept almost of the same financial position during the same period.

**Table 22-1 Analysis of Balance Sheet: 2000-2002**

[Balance Sheet]

(Unit: Kip Million)

Item	No.	2000		Index	2001		Rise or Fall	2002		Rise or Fall													
		Amount	Share		Amount	Share		Amount	Share														
		Kip Mil.	%		Kip Mil.	%		Kip Mil.	%														
Assets	Current Assets	Cash	1	144					207										304				
		Bank Deposits	2	1,447	5	100	1,626	6	114	3,835	11	245	↗										
		Other Deposits	3	124			126			67													
		Account Receivable	4	2,930			2,854			14				108	3,595	14	120	↗					
		Other Receivable	5	1,593			2,024			1,827													
		Raw Materials and Supplies	6	2,840			3,584			4,177													
		WIP (Work in Progress)	7	512	11	100	1,029	14	132	2,448	17	188	↗										
		Prepaid Expenses	8	187			49			15													
		Supplies	9	0			0			0													
		Other Current Assets	10	0	0		0	0		0	0												
	Total (1+2+ ... +9+10)	11	9,776	29	100	11,499	34	118	↗	16,268	42	166	↗										
	Property, Plant, Equipment and Intangible Assets	Land, Buildings	12	29,909			30,333			32,778													
		Equipment	13	0	70	100	0	66	95	0	58	96	↘										
		CWIP (Construction Work in Progress)	14	0			0			0													
		Less: Accumulated Depreciation	15	-6,468			-8,046			-10,209													
		Not-current Assets	16	102	0		74	0		136	0												
		Goodwill	17	0	0		0	0		0	0												
		Total (12+13+ ... +16+17)	18	23,544	71	100	22,362	66	95	↘	22,705	58	96	↘									
	Deferred Assets	19	0	0		0	0		0	0													
	Total (11+18+19)	20	33,320	100	100	33,861	100	102	↗	38,973	100	117	↗										
Liabilities and Stockholders' Equity	Current Liabilities	Account Payable	21	0	0		0	0		0	0												
		Overseas Short-term Debt	22	1,351	9	100	2,447	14	151	1,434	13	166	↗										
		Short-term Debt	23	1,759			2,253			3,730													
		Income Taxes Payable	24	61	0		127	0	209	-27	0	-											
		Dividends Payable	25	0	0		0	0		0	0												
		Advance Receipt	26	325	1		228	1	70	226	1	70	↘										
		Other Current Liabilities	27	0	0		0	0		0	0												
		Total (21+22+ ... +27)	28	3,496	10	100	5,055	15	145	5,363	14	153											
	Fixed Liabilities	Long-term Liabilities	29	17,488	55	100	17,114	53	99	17,443	47	100	→										
		Borrowings	30	783			971			806													
		Interest Payable	31	4,371	13	100	5,240	15	120	4,561	12	104	↗										
		Major Repairs Reserve	32	552	2		188	1	34	495	1	90	↘										
		Other Fixed Liabilities	33	0	0		0	0		0	0												
	Total (29+30+...+33)	34	23,193	70	100	23,512	69	101	↗	23,305	60	100	→										
	Stockholders' Equity	Common Stock, Preferred Stock	35	9,116	27	100	9,118	27	100	9,799	25	107	↗										
		Additional Paid-in Capital	36	0	0		0	0		0	0												
		Capital Reserve	37	0	0		0	0		0	0												
		Retained Earnings	38	-105	0		-2,605	-8		0	0												
		Current Net Profit	39	-2,380	-7		-1,220	-4		506	1												
	Total (35+36+ ... +39)	40	6,631	20	100	5,294	16	80	↘	10,305	26	155	↗										
Total (28+34+40)	41	33,320	100	100	33,861	100	102	↗	38,973	100	117	↗											
Among items of 10, 12, 13, 14, 16, and 17, Assets Unrelated to Business Activities																							
Total of Non-operating Assets	42	0			0				0														
Operating Assets (capital) (20-42)	43	33,320			33,861				38,973														

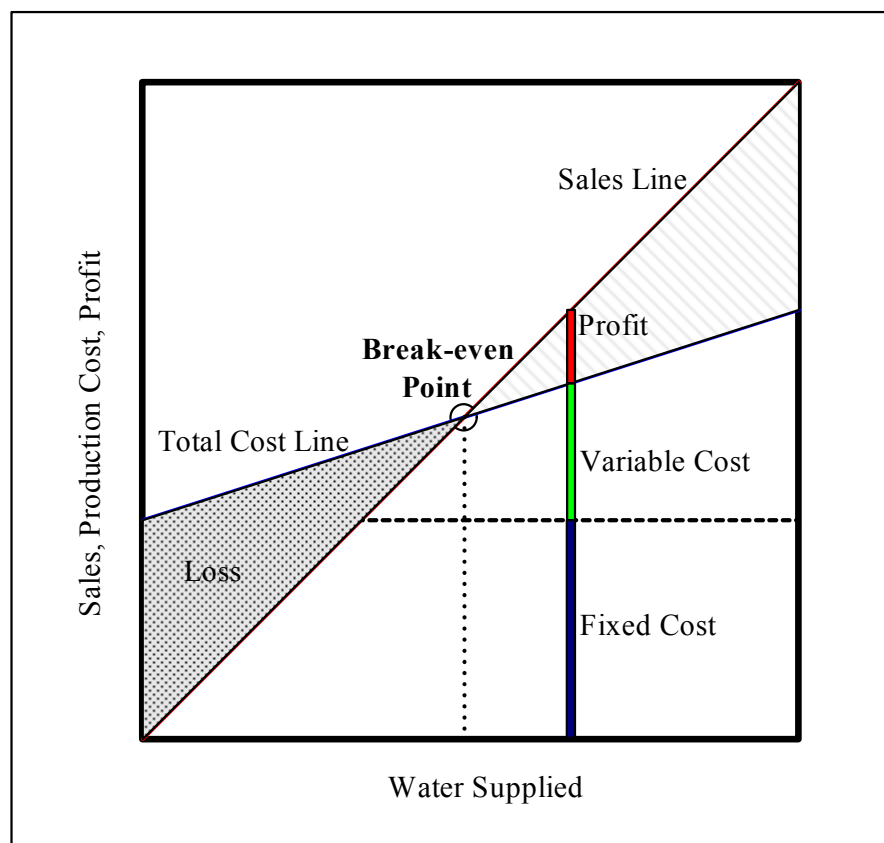
Outstanding Amount of Note Discounted \_\_\_\_\_

Table 22-2 shows changes of income and expenditure in 2002. As shown in the table, water sales in 2002 increase remarkably by 242% more than that in 2000. Although other revenues decreased for these years, the net revenue increased by 165% more than that in 2000. This was because of increment of average unit price of water from 269 kip/m<sup>3</sup> in 2000 to 547 kip/m<sup>3</sup> in 2002, in spite of the fact that the water supplied in 2000 increased at a modest increase of 118% more than that in 2000. For the same period, production cost increased 143%, which was much smaller than the increment of the net revenue (165%). Thus, the gross profit increased by 218% for these three years, as shown in the table.

Yet, the operating profit was deficit in 2000 and 2001. In 2002, it recorded a small profit as shown in the table. During the period, the increment of these expenses in 2002 was 122%, which was smaller than the increment of the gross profit (218%). Then, it is said that the expenses of services and administration were already too much against the gross profit for these years. However, the expenses can not be segregated into services expenses and administration expenses, furthermore into sub-items of expenses, because the expense items are unchangeably set up in accounting system of the NPVC. It would be impossible to identify what expense items are influential for high costs in the expenditure of services and administration.

The NPVC provides a monthly financial report as shown in Table 22-3. It might be effective to identify financial problems in management of water supply production. Furthermore, it would be useful to revise the accounting system to identify financial issues based on financial diagnosis. However, it would take time to manage revision of the present accounting system.

CVP analysis is one of the management tools, which is used for short-term profit planning. CVP stands for cost, volume (of sales) and profit. Break-even analysis is one of the CVP analyses. Table 22-4 shows break-even points based on the financial statements of the NPVC. The break-



even points were calculated at around 19,000 million kip, referring the figures of 19,500 million kip in 2000, 18,900 million kip in 2001 and 18,800 million kip in 2002. Once the break-even point was estimated, the sales amount to get target profit could be estimated through the following formula.

$$S = \frac{(F + P)}{M}$$

Where,         $S$  : Sales amount to attain target profit  
                   $F$  : Fixed Expenditure  
                   $P$  : Target Profit  
                   $M$  : Marginal Revenue Ratio

For example, if  $F$  and  $M$  were applied with the figures in 2002, i.e.,  $F=10,780$  million kip,  $M=0.575$ , and  $P$  was assumed at around 1,000 million kip, around 5% of sales amount in 2002, the sales amount should be 20,500 million kip. This is one of the management plans to develop sound financial condition.

**Table 22-2 Analysis of Income and Expenditure: 2000-2002**

[Profit and Loss Statement] (Unit: Kip Million)

Item	No.	2000			2001				2002					
		Amount	Share %	Index	Amount	Share %	Index	Rise or Fall	Amount	Share %	Index	Rise or Fall		
Sales Revenue	Sales	Water Sales	43	6,410	53	100	10,299	65	161		15,527	78	242	
		Other Operating Sales	44	5,575	47	100	5,488	35	98		4,287	22	77	
		Sales Discount	45	0			0				0			
	Net Revenue (43+44) -45	46	11,985	100	100	15,787	100	132	↗	19,814	100	165	↗	
	Production Cost	Opening Inventory	47	0			0				0			
		Cost of Purchase	48	0			0				0			
		Production Costs	49	11,093			14,070				17,464			
		Ending Inventory	50	0			0				0			
		Net Production Cost (47+48+49)-50	51	11,093	93	100	14,070	89	127	↗	17,464	88	157	↗
	Excise Tax, etc.	52	0			0				0				
Gross Profit 46-(51+52)	53	892	7	100	1,717	11	192	↗	2,350	12	263	↗		
Operating Profit	Service Expenses	Salary for Servicing	54											
		Travel Expenses	55											
		Telecommunication	56											
		Repairing & Maintenance	57											
		Depreciation Expenses	58											
		Supply Expenses	59											
		Advertisement Expenses	60											
		Entertainment Expenses	61											
		Other Expenses	62											
	Total (54+55+ ... 62)	63												
	Administration	Salary for Management	64											
		Salary for Administration	65											
		Fringe Benefits	66											
		Interest & Discount Expenses	67											
		Depreciation Expenses	68											
		Taxes & Duties	69											
		Other Expenses	71											
Total (64+65+ ... +71)		72												
Total (63+72)	73	2,428	20	100	2,024	13	83	↗	804	4	33	↗		
Total (53-73)	74	-1,536	-13	100	-307	-2	-		1,546	8	-			
Non-operating Earnings & Expenses	Non-operating Earnings	75	178			147				108				
	Interest Receives	76	109			68				56				
	Non-operating Expenses	77	1,070			1,001				959				
Recurring Profit (74+75+76) -77	78	-2,319	-19	100	-1,093	-7	-		751	4	-			
Special Profit & Loss	Special Profits	79												
	Special Losses	80												
Net Profit before Tax	81	-2,319	-19	100	-1,093	-7	-		751	4	-			
Appropriation for Tax	82	61			127				-27					
Net Profit after Tax	83	-2,380	-20	100	-1,220	-8	-		778	4	-			

**Table 22-3 Summary of Monthly Performance in July 2002**

No.	Item	Unit	Annual Plan	Accumulated Performance	Attained Rate (%)	Performance in July			Total Performance
						Monthly Plan	Performance	Attainment (%)	
(1)	(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)	(9)=(8)/(7)	(10)
<b>I. Production</b>									
1.	Water Production	10 <sup>6</sup> m <sup>3</sup>	35.9	19.8	55	3.7	3.6	97	23
2.	Water Supplied	10 <sup>6</sup> m <sup>3</sup>	26.2	13.8	53	2.4	2.4	98	16
3.	Water Lost	10 <sup>6</sup> m <sup>3</sup>	9.7	6.0	62	1.3	1.2	94	7
4.	Percent of Water Lost	%	27	30	112	35	34	97	64
5.	New Installation		1,000	852	85	93	180	194	1,032
6.	Repair Outside		3,500	1,646	47	292	259	89	1,905
7.	Alum		1,400	206	15	117	124	106	330
8.	Meter		42,761	42,613		42,706	42,793	100	85,406
<b>II. Income</b>									
		Kip Million	<b>19,939</b>	<b>9,436</b>	<b>47</b>	<b>1,621</b>	<b>2,252</b>	<b>139</b>	<b>11,688</b>
1.	Water Sales	Kip Million	14,311	7,614	53	1,261	1,229	97	8,843
2.	Connection	Kip Million	990	985	100	163	156	96	1,141
3.	Meter Renting	Kip Million	1,102	541	49	91	92	101	632
4.	Rent Vehicle	Kip Million	68	31	46	2	2	110	33
5.		Kip Million	100	42	42	12	23	196	65
6.	Others	Kip Million	120	35	29	7	11	167	46
7.	Total	Kip Million	3,248	188	6	87	740	853	927
<b>III. Expenditure</b>									
		Kip Million	<b>20,965</b>	<b>8,688</b>	<b>41</b>	<b>1,780</b>	<b>2,233</b>	<b>125</b>	<b>10,921</b>
1.	Main Production Expenditure	Kip Million	<b>15,883</b>	<b>7,235</b>	<b>46</b>	<b>1,388</b>	<b>1,322</b>	<b>95</b>	<b>8,556</b>
(1)	Depreciation	Kip Million	1,500	754	50	126	128	101	881
(2)	Large Repair	Kip Million	450	280	62	53	52	97	332
(3)	Normal Repair	Kip Million	750	540	72	109	114	105	655
(4)		Kip Million	2,007	676	34	216	73	34	749
(5)	Chlorine	Kip Million	990	407	41	74	66	90	474
(6)	Power	Kip Million	4,779	2,192	46	379	371	98	2,563
(7)	Lime	Kip Million	1	0	0	0	0	0	0
(8)	Polimer	Kip Million	62	9	14	9	10	118	19
(9)	Oil Products	Kip Million	1	0	0	0	0	0	0
(10)	Salary	Kip Million	1,947	734	38	113	164	145	898
(11)	Domestic Interest	Kip Million	135	68	50	11	11	100	79
(12)	Foreign Interest	Kip Million	824	412	50	69	69	100	481
(13)	Other Fee	Kip Million	34	60	176	7	20	311	80
(14)	Training	Kip Million	36	14	40	12	0	0	14
(15)	Water Analysis	Kip Million	3	0	0	0	0	0	0
(16)	Fuel	Kip Million	633	237	37	25	41	164	278
(17)		Kip Million	288	138	48	30	20	67	159
(18)		Kip Million	38	45	119	19	7	35	52
(19)	Guard	Kip Million	300	110	37	15	16	110	126
(20)		Kip Million	92	67	73	21	5	25	72
(21)		Kip Million	274	94	34	39	30	78	124
(22)	Donation	Kip Million	43	28	65	2	2	65	29
(23)	Social Welfare	Kip Million	312	175	56	38	36	96	211
(24)	Vehicle Insurance	Kip Million	12	11	89	0	0	0	11
(25)		Kip Million	144	92	64	4	13	325	106
(26)	Pension Annual	Kip Million	99	49	50	8	8	100	58
(27)	Exchange Meter	Kip Million	33	0	0	0	55	0	55
(28)	Insurance	Kip Million	96	42	44	9	9	104	51
2.	Reserve Expenditure	Kip Million	<b>908</b>	<b>949</b>	<b>105</b>	<b>227</b>	<b>143</b>	<b>63</b>	<b>1,092</b>
(1)	Depreciation	Kip Million	129	56	43	10	10	100	66
(2)	Large Repair	Kip Million	9	8	91	1	1	100	9
(3)	Fuel	Kip Million	39	80	208	9	-13	-139	67
(4)	Pipe & Equipment	Kip Million	527	558	106	153	103	68	662
(5)	Materials	Kip Million	1	5	347	2	0	24	5
(6)		Kip Million	0	20	5609	5	5	99	24
(7)	Wage Salary	Kip Million	148	158	107	27	27	100	185
(8)		Kip Million	12	13	115	2	2	81	15
(9)	Pension Annual	Kip Million	17	8	50	1	1	100	10
(10)		Kip Million	26	42	162	17	6	37	49
3.	Other Expenses	Kip Million	<b>4,174</b>	<b>504</b>	<b>12</b>	<b>165</b>	<b>769</b>	<b>466</b>	<b>1,272</b>
(1)	Depreciation	Kip Million	261	173	66	32	33	105	207
(2)		Kip Million	3,819	290	8	129	728	565	1,018
(3)	Gage Outside	Kip Million	49	22	45	2	2	129	24
(4)	Management	Kip Million	44	19	42	2	5	191	23
<b>IV. Profit &amp; Loss</b>									
		Kip Million	<b>-1,026</b>	<b>748</b>	<b>-73</b>	<b>-159</b>	<b>19</b>	<b>-12</b>	<b>767</b>
1.	State's Profit	Kip Million							
2.	Government Profit	Kip Million							
<b>V. Budget</b>									
		Kip Million	<b>1,668</b>	<b>585</b>	<b>35</b>	<b>126</b>	<b>120</b>	<b>95</b>	<b>705</b>
1.	Depreciation	Kip Million							
2.	Government Profit	Kip Million	199	100	50	18	0	0	100
3.	Tax Business	Kip Million	1,223	442	36	101	108	107	550
4.	Tax Salary	Kip Million	246	43	17	8	12	156	55

Source: Nam Papa Vientiane Capital City



**Table 22-4 Break-Even Point and Management Safety**

Term Eye		2000	2001		2002	
		(Kip Million)	(Kip Million)	Ratio to Preceding Term	(Kip Million)	Ratio to Preceding Term
Fixed Expenses	Compensation	1,217	1,769	1.45	2,618	1.48
	Depreciation	1,399	1,578	1.13	1,972	1.25
	Welfare Expenses	114	203	1.77	408	2.01
	Other Expenses	4,212	5,213	1.24	5,782	1.11
	Sub-total	6,942	8,762	1.26	10,780	1.23
Variable Expenses	Direct Material Cost	5,023	5,479	1.09	5,050	0.92
	Indirect Material Cost	34	41	1.20	69	1.69
	Subcontract Cost	1,145	1,076	0.94	1,312	1.22
	Taxes and Charges	502	737	1.47	459	0.62
	Other Expenses	1,006	1,126	1.12	1,530	1.36
	Sub-total	7,710	8,459	1.10	8,420	1.00
Sales Amount		11,985	15,787	1.32	19,814	1.26
Marginal Revenue Ratio *1		0.357	0.464	-	0.575	-
Break Even Point *2		19,462	18,878	0.97	18,746	0.99
Ratio of Break Even Point *3		1.62	1.20	-	0.95	-
Management Safety Ratio *4		0.62	0.84	-	1.06	-

Note: \*1 (Sales Amount - Variable Expenses)/Sales Amount

\*2 Fixed Expenses/Marginal Revenue Ratio

\*3 Break Even Point/Sales Amount

\*4 Reciprocal of Break Even Point Ratio (= 1/Ratio of Break Even Point)

### **3 MANAGEMENT CHARACTERISTICS**

#### **3.1 Analysis of Profitability**

In 2002, a ratio of net profit to total capital was 1.93%, as shown in Table 31-1. In 2000 and 2001, the net profit was negative, so no ratio could be calculated as index in the table. The ratio of 1.93% was not small as compared with Japanese average ratio of 0.67% in water supply business. In the same manner, other ratios in the management fields look better than the ratios in the Japanese cases. This is because the total capital is small as compared with those in the Japanese cases. This tendency is also realized from that the turnover of shareholders' equity is higher than that in the Japanese cases.

Yet, as understood from the ratio of net expense to net sales amount in Line No.6, the ratio is considerably larger than that in the Japanese cases. In 2000 and 2001, on the other hand, some ratios were not indicated due to deficit in those years. Thus, the ratios in these years suggest an unstable condition for profitability. This condition could be caused by insufficient water sales. In addition, the fluctuation of the cost components such as production cost, services expenses and administration costs may cause this unstable condition.

#### **3.2 Analysis of Safety**

The current ratio provides a measure of solvency in financial situation. The ratio of the NPVC was nearly 300, which was sufficiently high enough for solvency. That was almost equal to the Japanese average ratio. Thus, the NPVC is in good condition for solvency, from the viewpoint of short-term safety. If a financial market is active well, surplus fund could be utilized efficiently in the financial market.

The ratios of fixed assets were checked through (a) fixed asset ratio and (b) ratio of fixed assets to long-term capital. The former ratio is desirable to be less than 100%. The real ratio of the NPVC was more than 200% in the latest three years, which was also more than the Japanese cases of 183%. However, even if the former ratio were in worse condition but if the latter ratio were less than 100%, the safety might be fair within the permissible range of safety. The ratio of the NPVC was less than 80% in the respective years. Thus, the composition of capital and liability is biased to long-term liabilities more than capital. Overall, the NPVC seems to be in fair condition for fixed assets, as well.

The ratio of depreciation to fixed assets is usually 3% in every case of Japanese water supply systems. However, the ratio of the NPVC was almost 2 to 3 times larger than the Japanese standard. This may be that Lao PDR applies a different depreciation system for durable assets.

**Table 31-1 Management Analysis: 2000-2002 (1/2)**

	No.	Item	Unit	Formula	Fiscal Year: 2000		Fiscal Year: 2001		Fiscal Year: 2002		Management Index*1				
					Actual Figures	Value	Actual Figures	Value	Actual Figures	Value	Water	Electricity	Gas	Manufacturing	
Management	1.	Ratio of Net Profit to Total Capital	%	$\frac{\text{Net Profit after Tax}}{\text{Total Capital}} \times 100$	-2,319	-	-1,093	-	751	1.93	0.67	4.30	5.80	2.86	
					33,320		33,861		38,973						
	2.	Ratio of Operating Profit to Total Capital	%	$\frac{\text{Operating Profit}}{\text{Total Capital}} \times 100$	-1,536	-	-307	-	1,546	4.0	-	9.38	8.99	4.51	
					33,320		33,861		38,973						
	3.	Turnover of Total Capital		$\frac{\text{Net Sales Amount}}{\text{Total Capital}} \times 100$	11,985	0.36	15,787	0.47	19,814	0.51	0.13	-	-	-	
					33,320		33,861		38,973						
Finance	4.	Turnover of Stockholders' Equity		$\frac{\text{Net Sales Amount}}{\text{Stockholders' Equity}}$	11,985	1.81	15,787	2.98	19,814	1.92	0.26	0.51	0.69	1.04	
					6,631		5,294		10,305						
	5.	Ratio of Operating Profit to Sales Amount	%	$\frac{\text{Operating Profit}}{\text{Net Sales Amount}} \times 100$	-1,536	-	-307	-	1,546	7.8		8.66	8.42	2.74	
					11,985		15,787		19,814						
	6.	Ratio of Net Expense to Net Sales Amount	%	$\frac{\text{Net Expenses}}{\text{Net Sales Amount}} \times 100$	14,652	122.3	17,222	109.1	19,200	96.9	95.2	91.3	91.6	97.3	
					11,985		15,787		19,814						
Finance	7.	Fixed Assets Ratio	%	$\frac{\text{Fixed Assets}}{\text{Stockholders' Equity}} \times 100$	23,441	353.5	22,288	421.0	22,569	219.0	182.6	-	-	-	
					6,631		5,294		10,305						
	8.	Ratio of Fixed Assets to Long-Term Capital	%	$\frac{\text{Fixed Assets}}{\text{Stockholders' Equity} + \text{Long-Term Borrowing}} \times 100$	23,441	78.6	22,288	77.4	22,569	67.1	94.5	-	-	-	
					29,824		28,806		33,610						
	9.	Current Ratio	%	$\frac{\text{Current Assets}}{\text{Current Liability}} \times 100$	9,776	279.7	11,499	227.5	16,268	303.3	302.3	39.6	65.6	114.7	
					3,496		5,055		5,363						
	10.	Turnover of Account Receivable		$\frac{\text{Net Sales Amount}}{\text{Note Receivable} + \text{Accounts Receivable}}$	11,985	2.65	15,787	3.24	19,814	3.65	7.9	-	-	-	
				4,523		4,879		5,422							
Finance	11.	Turnover of Fixed Assets		$\frac{\text{Fixed Assets}}{\text{Net Sales Amount}}$	23,441	1.96	22,288	1.41	22,569	1.14	0.14	-	-	-	
					11,985		15,787		19,814						
	12.	Ratio of Depreciation to Fixed Assets	%	$\frac{\text{Depreciation}}{\text{Fixed Assets}} \times 100$	1,436	6.12	1,578	7.08	2,163	9.59	3.4	-	-	-	
				23,441		22,288		22,569							
Finance	13.	Ratio of Interest to Net Expenses	%	$\frac{\text{Interest Payment}}{\text{Net Expenses}} \times 100$	1,070	7.3	1,001	5.8	959	5.0	4.8	-	-	-	
					14,652		17,222		19,200						

(To be continued)

Note: \* Indices were quoted from Japanese management indices. Indices of water were based on data in 2001, by others were in 1977.

**Table 31-1 Management Analysis: 2000-2002 (2/2)**

(Continuation)

	No.	Item	Unit	Formula	Fiscal Year: 2000		Fiscal Year: 2001		Fiscal Year: 2002		Management Index*1			
					Actual Figures	Value	Actual Figures	Value	Actual Figures	Value	Water	Electr-icity	Gas	Manu-factur-ing
Production	14.	Annual Production per Employee	Kip Mil	$\frac{\text{Net Sales Amount}}{\text{Number of Employees}}$	11,985	32.8	15,787	46.0	19,814	58.6	52.1*2	-	-	-
			Person		365		343		338					
	15.	Value Added Ratio	%	$\frac{\text{Annual Value Added}}{\text{Net Sales Amount}} \times 100$	6,746	56.3	8,737	55.3	11,776	59.4	76.2*3	-	-	-
					11,985		15,787		19,814					
	16.	Turnover of Raw Materials		$\frac{\text{Net Sales Amount}}{\text{Raw Materials}}$	11,985	4.22	15,787	4.41	19,814	4.74	-	-	-	-
					2,840		3,584		4,177					
17.	Ratio of Production Cost to Net Sales Amount	%	$\frac{\text{Production Costs}}{\text{Net Sales Amount}} \times 100$	11,093	92.6	14,070	89.1	17,464	88.1	-	-	-	-	
				11,985		15,787		19,814						
18.	Load Factor	%	$\frac{\text{Average Daily Water Supplied}}{\text{Maximum Daily Water Supplied}} \times 100$		-		-			85.1	-	-	-	
19.	Utilisation Ratio of Fixed Assets	m3	$\frac{\text{Annual Water Supplied}}{\text{Fixed Assets}}$	24,992,460	1,062	27,928,026	1,249	29,522,253	1,300	9.37*4	-	-	-	
		Kip Mil		23,544		22,362		22,705						
Marketing	20.	Ratio of Gross Profit to Sales Amount	%	$\frac{\text{Gross Profit}}{\text{Net Sales Amount}} \times 100$	892	7.4	1,717	10.9	2,350	11.9	-	-	-	-
					11,985		15,787		19,814					
	21.	Ratio of Operating Profit to Sales Amount	%	$\frac{\text{Operating Profit}}{\text{Net Sales Amount}} \times 100$	-1,536	-	-307	-	1,546	7.8	-	-	-	-
					11,985		15,787		19,814					
	22.	Ratio of Recurring Profit to Sales Amount	%	$\frac{\text{Recurring Profit}}{\text{Sales Amount}} \times 100$	-2,319	-	-1,093	-	751	3.8	-	-	-	-
					11,985		15,787		19,814					
23.	Ratio of Service Expenses and Administration	%	$\frac{\text{Service Expenses \& Administration}}{\text{Net Sales Amount}} \times 100$	2,428	20.3	2,024	12.8	804	4.1	-	-	-	-	
				11,985		15,787		19,814						
24.	Ratio of Service Expenses	%	$\frac{\text{Service Expenses}}{\text{Net Sales Amount}} \times 100$		-		-			-	-	-	-	
25.	Ratio of Advertisement and Public Relation	%	$\frac{\text{Advertisement \& Public Relation}}{\text{Net Sales Amount}} \times 100$	77	0.6	117	0.7	199	1.0	-	-	-	-	
				11,985		15,787		19,814						
Labour	26.	Monthly Compensation per Employee	Kip 1000	$\frac{\text{Annual Compensation}}{\text{Number of Employees}} \times 12$	100,683	276	146,697	428	205,529	608	-	-	-	-
			Person		365		343		338					
	27.	Ratio of Compensation to Net Sales Amount	%	$\frac{\text{Compensation}}{\text{Net Sales Amount}} \times 100$	1,208	10.1	1,760	11.2	2,466	12.4	19.3	-	-	-
					11,985		15,787		19,814					
28.	Number of Employees per Water Supplied	Person 10 <sup>4</sup> m <sup>3</sup> /day	$\frac{\text{Number of Employees}}{\text{Annual Water Supplied}}$	365	53	343	45	338	42	12	-	-	-	

Note: \*2 Unit: Yen Million

\*3 The ratio was quoted from that of Phylippines' water supply in 1994

\*4 Unit: m3 per 10,000 Yen

In terms of turnover of account receivable, it indicates speed of bill collection. Thus, the larger index means the better efficiency for capital utilisation. The NPVC recorded a quite worse index like 2.7 to 3.7. These figures were considerably low as compared with the Japanese case of 7.9. This means that the NPVC spend more two times to collect bill than the Japanese water supply enterprises.

A period of bill collection is calculated applying the following formula:

$$\textit{Period of Bill Collection} = 365 \textit{ days} / \textit{Turnover of Account Receivable}$$

Applying this formula, the index 3.65 of the turnover of account receivable in 2002, means that it takes 100 days to collect bills on average. Thus, the ratio should be improved as soon as possible for financially safety purpose.

The efficiency of fixed assets' utilization is examined through the indices of "turnover of fixed assets" and "ratio of depreciation fixed assets". Turnover of fixed assets shows efficiency of fixed assets utilisation. The smaller index indicates that the fixed assets are utilised more effectively. The ratio of depreciation to fixed assts shows a size of depreciation against a book value of fixed assets. An inverse number of the ratio, then, shows an average economic life of fixed assets. For instance, 9.59% in 2002 indicates around 10 years of residual life. This index means that the present fixed assets value was small as compared with the depreciation. That was because new investment and replacement works are delayed or stagnant from the original schedule.

The ratio of interest to net expenses indicates static safety of financial procurement. The smaller index shows the better soundness of management. It is said that the ratio is desirably less than 5% for sound management. Thus, the NPVC would rather look for better financial sources to decrease interest burden.

### **3.3 Analysis of Productivity**

The value added ratio of the NPVC was ranged between 55% and 59% in these years. On the other hand, the value added ratio in the Philippines' case was reported as 76% in 1994. Thus, the NPVC's ratios are smaller as water supply business. In order to improve this ratio, the management has to improve its productivity by means of restraining production costs of water. In addition, the management has to cut down expenses of services and administration.

For instance, purchasing and inventory system is conducted through an annual purchasing plan proposed at the beginning of the fiscal year. The annual performance and plan is shown in Table 33-1, as an example. The raw materials which must be imported from foreign countries are purchased directly through the import channel of the NPVC. In the process of importing these materials, the NPVC has to get several

permissions from government agencies in advance. It takes time to promote these procedures. The NPVC can not procure from local markets because of immature local market in the Lao PDR. After the importation of these materials, the NPVC would better improve inventory control system for reduction of turnover of raw materials.

As shown in the number of employee per water volume supplied in Line No.28, the number of staff for water supply services seems to be quite large as compared with the Japanese average. It ranged between 43 persons and 51 persons per 10,000 m<sup>3</sup> per day, which was more than 4 to 5 times of the Japanese average. Thus, these systems should be improved taking the future management conditions into consideration.

### **3.4 Analysis of Financial Soundness**

The soundness of financial system is assessed through the indices of profitability, safety and productivity. The sound financial conditions are not only for these indices to attain in good results but also to be in good balance among these indices. Since the indices were analysed taking account of the Japanese ones, the evaluation results may not always be pertinent to Lao's conditions. The management principle is something common in the business world. These indices should be utilized properly to manage soundly the water supply business.

**Table 33-1 Annual Performance and Plan: 2002 and 2003**

Item	Unit	Records of Plan and Performance 2002			Annual Plan 2003	
		Annual Plan	Performance	Variation (%)	Plan	Variation (%)
<b>I. Production</b>						
1. Water Produced	Million m3	39.5	41.5	105	41.8	101
2. Water Supplied	Million m3	27.6	28.7	104	29.7	103
3. Water Wasted	Million m3	11.9	12.7	107	12.1	95
4. Percentage of Water Wasted	%	30%	31%	102	29%	94
5. Installation of Water Meter for New Users	Units	1,000	1,700	170	1,386	82
6. External Reparation	Units	1,854	3,314	179	3,662	111
7. Production of Alum	Tons	1,194	1,730	145	1,400	81
8. Total Number of Water Meters	Units	43,613	44,313	102	45,699	103
<b>II. Revenue</b>	Kip Million	<b>19,556.5</b>	<b>19,977.9</b>	102	<b>19,894.9</b>	100
1. Water Sales	Kip Million	15,227.7	15,527.3	102	16,328.4	105
2. Installation of Water Meters	Kip Million	1,173.3	1,989.7	170	1,250.5	63
3. Maintenance of Water Meters	Kip Million	1,081.8	1,134.9	105	1,075.5	95
4. Vehicle Rental	Kip Million	62.6	61.8	99	62.6	101
5. Shares	Kip Million	83.9	105.3	126	100.0	95
6. Other Revenues	Kip Million	70.6	163.4	231	131.0	80
7. Project Sub-contract	Kip Million	1,856.6	995.5	54	946.8	95
<b>III. Expenditure</b>	Kip Million	<b>19,846.0</b>	<b>19,200.1</b>	97	<b>21,077.1</b>	110
1. Water Production	Kip Million	16,009.2	15,631.8	98	18,319.1	117
(1) Basic Depreciation	Kip Million	1,500.0	1,574.8	105	1,634.6	104
(2) Major Depreciation	Kip Million	560.7	596.2	106	817.3	137
(3) Regular Depreciation	Kip Million	1,080.9	1,166.2	108	1,189.0	102
(4) Alum	Kip Million	2,007.4	1,862.4	93	2,456.3	132
(5) Water Germicide	Kip Million	990.4	849.0	86	1,015.7	120
(6) Electricity	Kip Million	4,439.0	3,990.8	90	4,514.5	113
(7) Lime	Kip Million	0.5	0.0	0	0.5	-
(8) Polymer	Kip Million	61.8	63.2	102	66.4	105
(9) Engine Oil	Kip Million	1.0	0.0	0	3.0	-
(10) Wages	Kip Million	1,946.8	1,878.0	96	2,668.5	142
(11) Interest of Domestic Loans	Kip Million	135.0	135.0	100	114.7	85
(12) Interest of Foreign Loans	Kip Million	823.8	823.8	100	778.6	95
(13) Fees	Kip Million	107.2	111.6	104	106.1	95
(14) Training Expenses	Kip Million	36.2	37.6	104	39.8	106
(15) Water Research	Kip Million	2.7	0.0	0	2.7	-
(16) Fuel	Kip Million	521.8	457.1	88	695.7	152
(17) Office Supplies & Materials	Kip Million	288.3	227.3	79	269.1	118
(18) Accommodations for Formal Meetings	Kip Million	91.0	63.4	70	69.3	109
(19) Securities/Guards and Overtime	Kip Million	252.8	245.5	97	259.6	106
(20) Travelling Expenses	Kip Million	134.2	103.5	77	147.6	143
(21) Management & Services	Kip Million	188.2	308.5	164	248.8	81
(22) Social Contribution	Kip Million	55.6	53.3	96	65.2	122
(23) Social Welfare & Subsidy for Family	Kip Million	349.4	452.1	129	411.8	91
(24) Vehicle Insurance	Kip Million	21.6	12.2	57	23.8	194
(25) Advertisement, Telephone & Newspaper	Kip Million	184.6	198.7	108	209.3	105
(26) Annual Bonus & Remuneration	Kip Million	98.9	106.7	108	118.7	111
(27) Profit from Foreign Exchange Rates	Kip Million	33.2	196.2	590	237.7	121
(28) Social Insurance	Kip Million	96.3	118.7	123	154.7	130
2. Installation of Water Meters	Kip Million	1,130.6	1,832.1	162	1,136.8	62
(1) Basic Depreciation	Kip Million	66.6	138.0	207	77.3	56
(2) Major Depreciation	Kip Million	9.9	14.8	151	9.8	66
(3) Fuel	Kip Million	95.6	106.4	111	70.8	66
(4) Water Main & Accessories	Kip Million	665.1	1,112.0	167	668.1	60
(5) Machinery Spare Parts	Kip Million	5.4	17.7	327	4.4	25
(6) Other Materials	Kip Million	23.3	37.1	159	22.6	61
(7) Wages	Kip Million	188.4	302.0	160	214.4	71
(8) Subsidy for Family Welfare	Kip Million	15.9	18.9	119	12.2	64
(9) Bonus	Kip Million	10.1	17.0	168	11.1	66
(10) Temporary Labour Wages	Kip Million	50.3	68.2	136	46.2	68
3. Costs of Other Services	Kip Million	2,706.2	1,736.2	64	1,621.2	93
(1) Basic Depreciation	Kip Million	922.3	400.8	43	351.9	88
(2) Materials	Kip Million	1,545.0	1,219.6	79	1,112.5	91
(3) Temporary Labour Wages	Kip Million	110.2	38.8	35	100.1	258
(4) Management	Kip Million	128.7	77.0	60	56.7	74
<b>IV. Profit and Loss</b>	Kip Million	<b>-289.4</b>	<b>777.8</b>	-	<b>-1,182.2</b>	-
1. Enterprise's Profit (65%)	Kip Million		505.5			
2. Profit to Hand Over to the Government (35%)	Kip Million		272.2			
<b>V. Customs Duties and Taxes</b>	Kip Million	<b>1,581.5</b>	<b>1,485.5</b>	94	<b>1,435.6</b>	97
1. Basic Depreciation	Kip Million					
2. Profit to Hand Over to the Government	Kip Million	195.6	199.4	102	198.9	100
3. Customs Duties	Kip Million	1,140.2	1,166.0	102	1,119.3	96
4. Income Tax	Kip Million	245.7	120.1	49	117.4	98

Source: Nam Papa Vientiane Capital City

## 4 WATER PRODUCTION COSTS

### 4.1 Water Production Cost

Water production costs of the NPVC are enumerated in Table 41-1 in the next page. Unit production costs during four years from 1998 to 2001 in the table were larger than the average unit prices. The average unit prices after tax were much smaller than the corresponding unit production costs. This was the reason why the NPVC recorded the final net deficit for three years from 1999 to 2001. In December 2001, the new tariff system was permitted by the government and applied to water consumers. It turned the NPVC profitable in 2002, but the net profit was comparatively small. The new unit production cost in 2002 was 529 kip/m<sup>3</sup>, as shown in the table. In the same year, the average unit price was calculated 547 kip/m<sup>3</sup>. The unit price after tax was 521 kip/m<sup>3</sup>, so still resulted in smaller than the unit production cost.

### 4.2 Water Meter Installation Cost

Table 42-2 shows installation price and cost for new water consumers. As compared with water price and production cost, the installation business seems to keep the soundness in financial balance. The ratio of unit cost to unit price after tax was within the range of 0.8 and 0.9.

**Table 42-1 Price of Water Meter Installation: 1999-2002**

Item	Unit	1999	2000	2001	2002
<b>Average Price of Installation for New Connection</b>					
1. Revenue from Installation	Kip Million	1,370	2,092	2,291	2,164
2. Units of Water Meter	Unit	2,543	1,900	2,044	1,827
3. <b>Average Unit Price</b>	Kip 1000/Unit	<b>539</b>	<b>1,101</b>	<b>1,121</b>	<b>1,185</b>
4. Average Unit Price (excluding tax)	Kip 1000/Unit	513	1,048	1,067	1,128
<b>Installation Costs of New Connection</b>					
<b>I. Installation Cost</b>					
1. Water Main Accessories	Kip Million	498	876	1,127	1,112
2. Machinery Spare Parts	Kip Million	13	6	2	6
3. Building Materials	Kip Million	8	3	12	11
4. Fuel	Kip Million	40	67	107	106
5. Office Supplies and Materials	Kip Million	36	38	2	37
6. Basic Depreciation	Kip Million	266	307	299	138
7. Depreciation of Major Reparation	Kip Million	48	20	21	15
8. Wages	Kip Million	68	127	245	302
9. Susidy for Family and Welfare	Kip Million	7	13	27	19
10. Bonus for Staff	Kip Million	0	0	0	17
11. External Remuneration	Kip Million	70	89	59	68
<b>II. Total of Installation Cost</b>	Kip Million	<b>1,053</b>	<b>1,547</b>	<b>1,901</b>	<b>1,832</b>
<b>III. Unit Installation Cost</b>	Kip 1000/Unit	<b>414</b>	<b>814</b>	<b>930</b>	<b>1,003</b>

Source: Nam Papa Vientiane Capital City



**Table 41-1 Unit Price and Production Cost of Water: 1998-2002**

Item	Unit	1998	1999	2000	2001	2002
<b>Average Price of Water Served</b>						
1. Annual Sales	Kip Million	4,563	5,941	6,730	10,832	16,144
2. Total Water Volume Supplied	Million m3	21	22	25	28	30
3. <b>Average Unit Price</b>	Kip/m3	<b>219</b>	<b>271</b>	<b>269</b>	<b>388</b>	<b>547</b>
4. Average Unit Price (excluding tax)	Kip/m3	208	258	256	369	521
<b>Production Costs of Water Served</b>						
<b>I. Direct Costs of Water</b>	Kip Million	2,971	5,333	7,223	9,074	11,981
1. Basic Depreciation	Kip Million	790	832	938	1,077	1,575
2. Depreciation of Major Reparation	Kip Million	203	282	282	324	596
3. Regular Reparation	Kip Million	490	803	885	699	1,166
4. Alum	Kip Million	215	999	1,286	1,684	1,862
5. Lime	Kip Million	0	0	0	0	0
6. Chemical Research	Kip Million	1	0	0	0	0
7. Polymer	Kip Million	3	5	8	39	63
8. Water Germicide	Kip Million	259	574	650	731	849
9. Water Research	Kip Million	1	0	0	0	0
10. Engine Oil	Kip Million	0	0	0	0	0
11. Electricity	Kip Million	571	1,273	2,304	3,345	3,991
12. Wages	Kip Million	437	565	869	1,175	1,878
<b>II. Managerial Expenditure</b>	Kip Million	1,685	2,214	2,706	3,520	3,651
1. <i>Direct Administration</i>	Kip Million	355	711	1,088	1,367	1,405
(1) Fuel	Kip Million	172	338	425	518	457
(2) Office Supplies and Materials	Kip Million	79	190	270	236	227
(3) Accommodations for Formal Meetings	Kip Million	11	36	33	34	63
(4) Securities/Guards	Kip Million	37	47	163	290	245
(5) Other Managerial Costs	Kip Million	55	100	197	290	309
(6) Travelling Expenses	Kip Million	-	-	-	-	104
2. <i>Indirect Administration</i>	Kip Million	1,331	1,503	1,618	2,153	2,246
(1) Fees	Kip Million	8	22	32	52	112
(2) Travelling Expenses	Kip Million	21	24	37	19	38
(3) Advertisement in Newspapers	Kip Million	32	59	77	117	199
(4) Social Contribution	Kip Million	6	17	15	49	53
(5) Interest of Domestic Loan	Kip Million	191	144	190	132	135
(6) Interest of Foreign Loans	Kip Million	950	880	880	869	824
(7) Welfare for Staff & Subsidy for Family	Kip Million	60	132	149	261	452
(8) Vehicle Insurance	Kip Million	4	5	14	11	12
(9) Social Insurance	Kip Million	-	-	-	-	119
(10) Bonus for Staff	Kip Million	42	58	83	170	107
(11) Differential of Exchange Rate	Kip Million	19	162	141	315	196
(12) Tax	Kip Million	-	-	-	158	-
<b>III. Total Production Cost</b>	Kip Million	4,656	7,547	9,929	12,594	15,632
<b>IV. Unit Production Cost</b>	Kip/m3	<b>223</b>	<b>344</b>	<b>397</b>	<b>451</b>	<b>529</b>

Source: Nam Papa Vientiane Capital City

## 5 TARIFF SYSTEM

### 5.1 Current Tariff System

In principle, the NPVC collects water charges on the basis of meter-rate system. The present water tariff is set as shown in Table 51-1. The tariff is classified into four categories: (a) domestic users and officials, (b) enterprise and private business, (c) business users who consume water as raw material, hotel, guest house, restaurant, and swimming pool, and (d) embassy, international organisation, and foreigner. The unit rates are set by the categories above and by water volume consumed.

The tariff was set up into four categories mentioned above through modification of the average prices of 550 kip/m<sup>3</sup>, equivalent to around US\$0.051/m<sup>3</sup>. The tariff rates are so low that the water charges can not cover the full costs of water production, as discussed in the previous section, although the tariff for foreigners in Category 4 is high enough to cover the production cost.

**Table 51-1 Water Tariff: 2002**

Article 01: Modify the Water Tariff in Vientiane Capital City at the average price of 550 kip/m<sup>3</sup> in four Categories of consumers

Category	Range of Water Consumption	Water Rate	
Category 1	Water Tariff for the officials, soldiers, people without business and non-governmental organization:		
	Less than	5 m <sup>3</sup> /month	219 Kip/m <sup>3</sup>
	from	5 - 20 m <sup>3</sup> /month	263 Kip/m <sup>3</sup>
	from	20-50 m <sup>3</sup> /month	329 Kip/m <sup>3</sup>
	More than	50 m <sup>3</sup> /month	383 Kip/m <sup>3</sup>
Category 2	Water Tariff for enterprise, private business and merchandiser:		
	Less than	5 m <sup>3</sup> /month	549 Kip/m <sup>3</sup>
	from	5 - 20 m <sup>3</sup> /month	602 Kip/m <sup>3</sup>
	from	20-50 m <sup>3</sup> /month	636 Kip/m <sup>3</sup>
	More than	50 m <sup>3</sup> /month	670 Kip/m <sup>3</sup>
Category 3	Water Tariff for businesses used water as the raw materials for production, hotels, guest house, restaurant and swimming pool:		
	Less than	50 m <sup>3</sup> /month	855 Kip/m <sup>3</sup>
	from	50-100 m <sup>3</sup> /month	1,216 Kip/m <sup>3</sup>
	More than	100 m <sup>3</sup> /month	1,360 Kip/m <sup>3</sup>
Category 4	Water Tariff for embassy, international organisation, foreigners and expatriates:		
	Less than	10 m <sup>3</sup> /month	0.75 US\$/m <sup>3</sup>
	More than	10 m <sup>3</sup> /month	0.93 US\$/m <sup>3</sup>

The present tariff made the NPVC a small net profit in 2002. However, the profit was too small to solve the accumulated deficit for the previous three years. The NPVC is planning to revise the water tariff. In order to revise the tariff, the NPVC has to get permissions from WASA, DHUP, DCTPC, Governor of Vientiane Capital City and Lao President in the final stage. The procedure for revision of the tariff requires a long time.

Water meters reading is conducted by meter readers once a month for the respective consumers. The bills of water volume metered are prepared with a computer system and distributed by meter readers to the respective consumers. The consumers can pay the water charge directly to the water reader or pay at a cashier's window of the NPVC branch offices. Some of consumers, however, seem not to pay their water charge without delay. This causes that the NPVC's account receivable was considerably large as discussed in the previous sections. Considerable percentage of account receivable is said to be attributed to arrearages of public agencies of the government.

In addition, a water consumer installs a water meter to connect to the water distribution piping network of the NPVC. After signing a contract with the NPVC, the consumer installs connection pipes including the water meter at his own expense. In 2002, an average cost of new connection instalment was around US\$105 per unit. Its actual cost depends on the site conditions of a new consumer, which consists of material cost including, installation cost, and optional costs like valves, fire hydrant and drain installation. As a result, a larger diameter connection needs higher installation cost. Furthermore, he has to pay for water meter rental charge every month in accordance with a diameter of water meter. The rental rate is tabulated in Table 51-2.

**Table 51-2 Water Meter Rental Rate: 2002**

	Connection Diameter	Category 1 - 4 (Kip/Month)	Category 5 (US\$/Month)
1.	13 mmø	1,550	1.20
2.	20 mmø	2,050	1.80
3.	25 mmø	3,350	2.40
4.	40 mmø	8,600	3.00
5.	50 mmø	12,400	3.75
6.	80 mmø	17,450	8.40
7.	100 mmø	25,000	12.00
8.	150 mmø	40,000	18.00
9.	200 mmø	45,000	27.00

## 5.2 Trend of Water Tariff Revision

The water tariff of the NPVC has revised six times since 1994, as shown in Table 52-1 below. In January

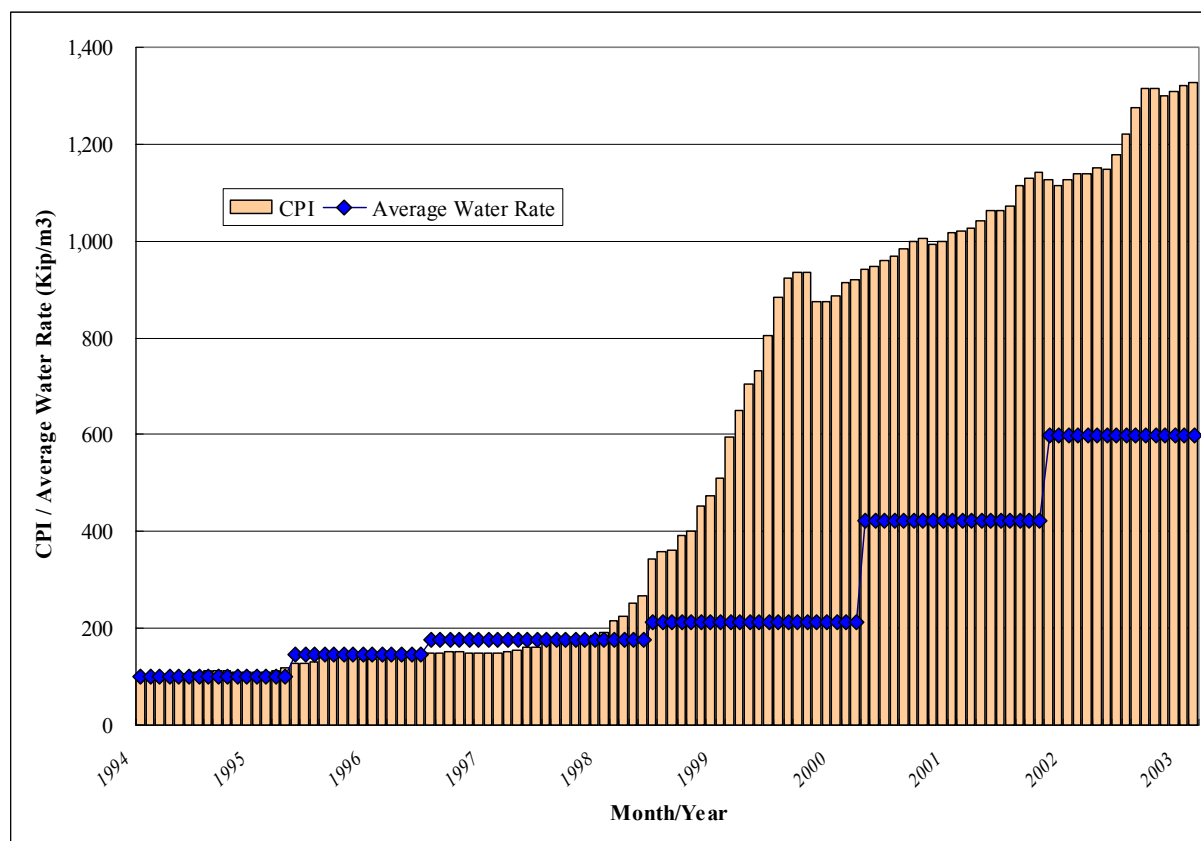
1994, an average water rate was revised at 74 kip/m<sup>3</sup>. As of 2003, the average water rate was 550 kip/m<sup>3</sup> or around 7.4 times more than that in 1994.

**Table 52-1 Transition of Water Tariff Revision: 1994-2003**

Effective Period: From	Through	Average Unit Rate
January 1994	April 1995	92 kip/m <sup>3</sup>
May 1995	June 1996	135 kip/m <sup>3</sup>
July 1996	May 1998	162 kip/m <sup>3</sup>
June 1998	May 2001	195 kip/m <sup>3</sup>
April 2001	October 2002	387 kip/m <sup>3</sup>
November 2002	Present	550 kip/m <sup>3</sup>

On the other hand, a consumer price index (CPI) in January 1994 was 72 (base: 1995=100) and rose up to 980 in February 2003, as shown in Table 47-1 in Socio-economic Study in Annex 4-1. Then, an inflation rate during the period was around 13.3 times. The inflation rate of 13.3 times was higher than the revision of the average water rate of 7.4 times. The water rate is undesirably behind the inflation speed, as shown in Figure 52-1. The water consumers have felt happy about water comparatively declining in price. They have enjoyed their lives with the low-priced water.

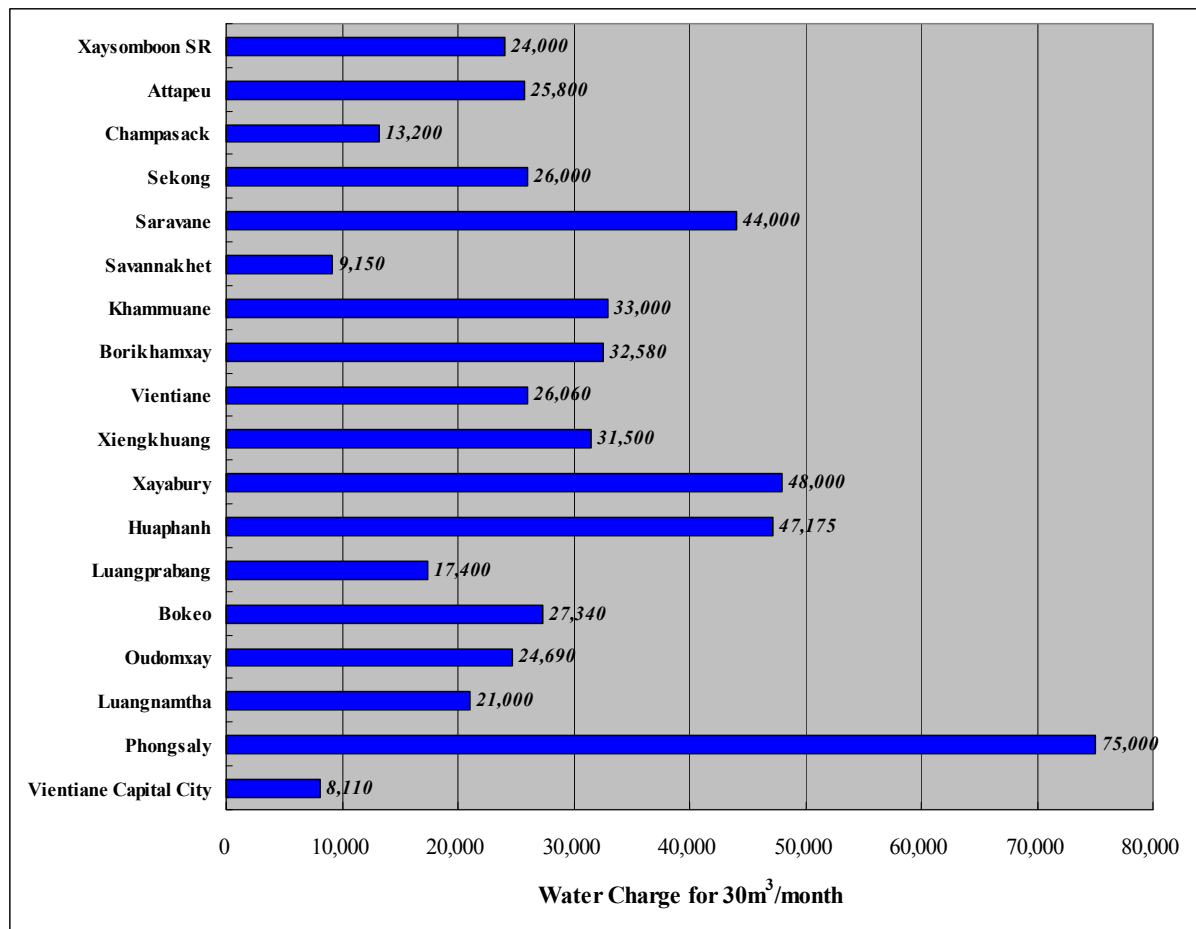
**Figure 52-1 Relation between Average Water Rate and Consumer Price Index**



### 5.3 Comparison of NPVC Tariff with Other Waterworks

Furthermore, the water rate for domestic water consumer is known to be cheaper than those of other provinces. Figure 53-1 shows water charges for an average household consuming 30 m<sup>3</sup>/month in the respective provinces. Table 53-1 shows the detail calculation of water charges which were illustrated in the figure. The monthly charge in Vientiane Capital City was calculated at 8,110 kip/month only, which is the lowest among 18 provinces, as shown in the table. An average water charge of 18 provinces was calculated at 29,700 kip/month. That of Vientiane Capital City accounted for only 27% of the national average.

**Figure 53-1 Water Charge of Household's Monthly Consumption of 30m<sup>3</sup> as of May 2003**



**Table 53-1 Water Charge of Household's Monthly Consumption of 30m<sup>3</sup> as of May 2003**

No.	Province	Standing Charge		Commodity Charge					Water Charge for 30m <sup>3</sup> /month Kip/month	
		Kip/month/wml* <sup>1</sup>	Lump Sum m <sup>3</sup>	1st Block		2nd Block		3rd Block		
				m <sup>3</sup> /month	Kip/m <sup>3</sup>	m <sup>3</sup> /month	Kip/m <sup>3</sup>	m <sup>3</sup> /month		Kip/m <sup>3</sup>
01	Vientiane Municipality	-	-	0 - 10	219	11 - 20	263	21 - 50	329	8,110
02	Phongsaly	-	-	-	2,500	-	-	-	-	75,000
03	Luangnamtha	-	-	-	700	-	-	-	-	21,000
04	Oudomxay	-	-	-	823	-	-	-	-	24,690
05	Bokeo	8,040	10	11 - 30	965	31 - 50	985	More than 50	1,005	27,340
06	Luangprabang	5,600	10	11 - 30	590	31 - 50	620	More than 50	650	17,400
07	Huaphanh	10,000	5	More than 5	1,487	-	-	-	-	47,175
08	Xayabury	-	-	-	1,600	-	-	-	-	48,000
09	Xiengkhuang	-	-	-	1,050	-	-	-	-	31,500
10	Vientiane	-	-	0 - 5	770	6 - 15	838	16 - 30	922	26,060
11	Borikhamxay	-	-	-	1,086	-	-	-	-	32,580
12	Khammuane	-	-	-	1,100	-	-	-	-	33,000
13	Savannakhet	-	-	0 - 10	215	11 - 20	325	21 - 30	375	9,150
14	Saravane	6,500	5	More than 5	1,500	-	-	-	-	44,000
15	Sekong	-	-	0 - 20	800	21 - 30	1,000	31 - 50	1,200	26,000
16	Champasack	-	-	0 - 10	300	11 - 20	470	21 - 30	550	13,200
17	Attapeu	-	-	-	860	-	-	-	-	25,800
18	Xaysomboon SR	-	-	-	800	-	-	-	-	24,000

Source: Water tariffs of the respective provinces which are effective as of May 2003.

Note: \*1 Kip/m/wml means "kip per month with one water meter"

