

JAPAN INTERNATIONAL COOPERATION AGENCY
MINISTRY OF INDUSTRY AND HANDICRAFTS OF
THE GOVERNMENT OF LAO P.D.R.

FEASIBILITY STUDY
ON
THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT
IN
THE LAO PEOPLE'S DEMOCRATIC REPUBLIC



FINAL REPORT : VOLUME 6
SUPPORTING REPORT (IV)
SUB-CONTRACTOR'S FIELD
INVESTIGATION REPORT



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FIELD REPORT

FEBRUARY 2000

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FINAL REPORT

COMPOSITION OF REPORTS

Volume 1	Main Report
Volume 2	Executive Summary Report
Volume 3	Supporting Report (I) : First Environmental Impact Assessment Report
Volume 4	Supporting Report (II) : Preliminary Environmental Management Plan
Volume 5	Supporting Report (III) : Preliminary Resettlement Plan
Volume 6	Supporting Report (IV) : Sub-Contractor's Field Investigation Report
Volume 7	Supporting Report (V) : Records during Field Investigations

Front Cover Photos		
Downstream Scenery of the Nam Ngiep River	Site Workshop under the Lao & Japanese National Flags	Vegetable Gardens along lower banks of the Nam Ngiep River
Hmong's National Costume at Site Workshop	Ceremony "Bassii" at General Workshop	Site Workshop at Thaviang Sub-district

**VOLUME 6 : SUPPORTING REPORT(IV)
SUB-CONTRACTOR'S FIELD INVESTIGATION REPORT**

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CHAPTER - 1

SOCIO-ECONOMIC SURVEY



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**FINAL REPORT ON ENVIRONMENTAL ASSESSMENT SURVEY
FOR
NAM NGIEP-I HYDROELECTRIC POWER PROJECT**

1. SOCIO-ECONOMIC SURVEY

1.1 INTRODUCTION

The socioeconomic survey is one of the components of the Environmental Assessment Survey. The Final Report presents the results of the survey at village and households covering the Upper Reservoir, the Lower Reservoir and the Downstream area.

As specified in the Terms of Reference, the main objective is to conduct a socioeconomic survey as a basis for assessing social impacts upstream and downstream of the proposed dam site. For the upstream effects, this socioeconomic survey will provide a basis for proposing viable design changes to minimize resettlement. It will provide initial data for a preliminary draft Resettlement Plan that sets out mitigation strategies to assist those affected by land acquisition and any other resettlement effects in recovering and surpassing their pre-project standard of living.

1.2 APPROACH AND METHODOLOGY.

The planning, the selection of sample size as well as the design of questionnaires for village-level and household survey have been undertaken in close supervision of the JICA Team's Social Development/Resettlement Expert.

1.2.1 Preparation of Survey Questionnaires

The questionnaires were prepared under the supervision and guidance of the JICA Team's Social Development/Resettlement Expert and based on questionnaires already used in Laos. A series of meetings were organized to finalize the questionnaires. There are two types of questionnaires, (1) Village Level and (2) Household Level.

The first one, a Village Level Questionnaire was filled with the assistance of Village Heads and/or their assistants. The objective is to understand the general social, economic, and land use situation of the village, as well as the community assets such as schools, dispensaries, bridges, communal forests and pasture lands.

The second questionnaire is the Household Level Questionnaire. The household heads filled it out, unless they are not available, in which case another adult member of the household was interviewed. This questionnaire covers aspects related to household ethnic identification, demography and family structure; health and education; income, expenditures; land and natural resource usage; household-level production systems and

assets such as land and built-up properties; knowledge and opinions about the project and possible resettlement.

1.2.2 Field Orientation Meetings

Field Orientation Meetings were done on three levels, Zonal, District, and Village levels: (1) the first Field Orientation Meeting was held with administration personnel of the Xaysomboon Special Zone (XSZ); (2) the second meeting was held with Thaviang Sub-District authorities of Thathom District; and (3) the third meeting was with Village Heads and with the villagers themselves during the course of the survey.

1.2.3 Data Collection

Data collection was done in the Upper and Lower Reservoir. Data collection in the Upper Reservoir was conducted in December 28, 1998 to January 16, 1999 whereas in the Lower reservoir the work was carried out 20 - 28 January 1999. The Upper Reservoir comprises some thirteen (13) villages whereas the Lower Reservoir has only four (4) villages. The survey of the downstream area was conducted from March 5 to March 18, 1999. Prior to the launching of the survey, the final questionnaire was translated into Lao and used for in-house training. In order to ensure a smooth implementation of the survey, following actions were undertaken:

1. Informal meeting with the representatives of local authorities who attended the Inception Workshop in Vientiane on November 26, 1998.
2. The Hydropower Project Office provided a counterpart to accompany the surveyor. The Hydropower Office's counterpart (HPO) provides assistance in informing the local authorities about the objectives of the survey.
3. At the outset of the survey in each village, the survey team briefed the local authority and elderly people on the objectives of the survey.

1.2.4 Survey Sample

A Stratified Random Sample, covers twenty one percent (21%) of the total households in the Reservoir Area and was combined with stratification based on the ethnic makeup of the community. The number of households surveyed is one hundred and seventy nine (179) of a total eight-hundred and fifty three (853) households.

1.3 GENERAL PROFILE OF THE RESERVOIR AREA

1.3.1 Xaysomboon Special Zone (XSZ).

The entire Nam Ngiep 1 reservoir will be within the XSZ. The Survey Team visited the XSZ Headquarters in December 1998 and again in January 1999 for a Zone Level Field Orientation Meeting.

Formerly part of Vientiane and Xiengkhuang Provinces, the XSZ was set up on July 23, 1994 to give the area special preference for community development. This was felt necessary because the area, with a population of about fifty seven thousand three hundred (57,300), is inhabited mostly by the Lao Sung. Its geography of some 7,105 km² is very rough and mountainous, and it has the lowest population density in the Lao PDR, about eight (8) persons per square kilometer compared to about twenty (20) persons for the Lao PDR.¹ The development budget, which comes directly from the central budget, in 1998 was around five (5) billion Kip, whereas income, derived mostly from taxes, generated from the XSZ itself was only around four hundred and fifty (450) million Kip.²

The XSZ has five (5) districts, given below. There is a discrepancy between the total population figure in this table, obtained at the XSZ Headquarters (52,456), and the census figure published by the National Statistical Center (57,300).³

TABLE 1: Xaysomboon Special Zone (XSZ): Number of Villages and Population 1998

District	From Former Province	No. Villages	%	Population	%
Hom*	Vientiane	11	9	6,012	12
Lang Xan	Vientiane	38	30	17,480	33
Poun	Vientiane	25	19	8,830	17
Thatom**	Xieng Khuang	29	22	7,934	15
Xaisomboon	Vientiane	26	20	12,200	23
Total:		129	100	52,456 ⁴	100

*Nam Ngiep 1 _ is in this District.

**Nam Ngiep 1 _ is in this District.

The XSZ, which has one hundred and twenty nine (129) villages and eight thousand two hundred and sixty four (8,264) households, stands very low in most social indicators. The XSZ has a total fertility of 6.8 compared with 5.4 for the Lao PDR; a birth rate of 46.0 compared to nationally 40.0; a death rate of 16.0 compared to national 15.0; a 3.0 rate of

¹ Lao PDR. 1998. Basic Statistics about the Socio-Economic Development in the Lao PDR. Vientiane: State Planning Committee, National Statistical Center. Table 12, p. 18.

² Personal communication with Mr. Sombdy Keodalaven, General Director Cabinet Office, Xaisomboon Special Zone.

³ Personal communication, Ibid. Lao PDR. 1998. Basic Statistics. Ibid.

⁴ Total population as given by the Zonal Headquarters, differs from the National Statistical Centre's Basic Statistics, Ibid. Which also has two figures – 57,300 and also 54,068 (Tables 13 and 14).

natural increase of compared to 2.5 for the nation; and an infant mortality rate of 138.0, compared to 104.0 for the Lao PDR as a whole. In all these categories, the XSZ has the second least favorable ranking in each category among the other eighteen (18) Provinces that constitute the Lao PDR, with the exception of infant mortality, for which it has the highest mortality ranking among all the Provinces.⁵ The XSZ also has the lowest distribution of population in urban areas, with some 8.5% in urban areas, compared with seventeen percent (17%) for the Lao PDR as a whole.⁶

1.3.2 Upper and Lower Reservoir Area

The Upper Reservoir consists of thirteen (13) mostly Lao Loum and Lao Theung villages in the Thaviang Sub-District of Thathom District, XSZ. All of the villages in Thaviang Sub-District have Lao Loum households, seven also with Lao Theung and only two have Lao Sung. Ban Phonyeng (*Ban* is Lao for village = 'B. '), the market and administrative center for Thaviang Sub-District, is the second largest village in the area, after B. Naxong. B. Dong has a market center with twenty to twenty-five (20-25) shops where a market bazaar attended by surrounding villages is held mornings three times a week.

The Lower Reservoir contains four (4) Lao Sung villages, belonging to Hom District of the XSZ. Development activities have apparently been going on in B. Namyouk and B. Sopyouk and B. Soppouh for quite a number of years as part of the Muang Hom Integrated Agricultural Development project funded by UNDP in the late 1980's currently located in the XSZ and the Phalavek Alternative Development Project funded by United Nations Drug Control Programme (UNDCP). These projects consisted of road construction, agricultural development, hospital improvement, school construction, boat services and technical assistance to these sectors. There were achievements in all these sectors, but the management capacity of the local authorities was not strengthened sufficiently to allow for the sustainability of the project activities.

Table 2 : Number of Households Surveyed in the Reservoir Area

Village Name	Number of Households by Ethnic groups			Households (Total)	Households Surveyed (Nber.)	Households Surveyed (%)
	Lao Lum	Lao Theung	Lao Sung			
<i>Upper Reservoir</i>						
Phone Hom	0	67	0	67	13	19.40
Xieng Khong	34	5	0	39	8	20.51
Na Kang	10	15	0	25	5	20.00

⁵ Lao PDR. 1998. *Basic Statistics*. Ibid. Table 15 & 16, pp. 21-22.

⁶ Ibid. Table 14, p. 20.

Nam Long	13	4	0	17	5	29.41
Naxay	1	21	0	22	5	22.73
Na Hong	15	60	0	75	15	20.00
Viengthong	45	1	0	46	10	21.74
Phonyeng	32	0	31	63	12	19.05
Naxong	68	13	0	81	16	19.75
Dong	82	0	0	82	16	19.51
Hatsamkhone	27	0	0	27	6	22.22
Phiangta	47	2	0	49	10	20.41
Pou	52	0	14	66	12	18.18
Upper Reservoir	426	188	45	659	133	20.18
Subtotal :						
<u>Lower Reservoir</u>						
Houay Pamom	0	0	18	18	4	22.22
Nam Youk	0	0	86	86	20	23.26
Sopphouh	0	0	23	23	6	26.09
Sop Youk	1		66	67	16	23.88
Lower Reservoir	1	0	193	194	46	23.71
Subtotal :						
TOTAL	427	188	238	853	179	20.98

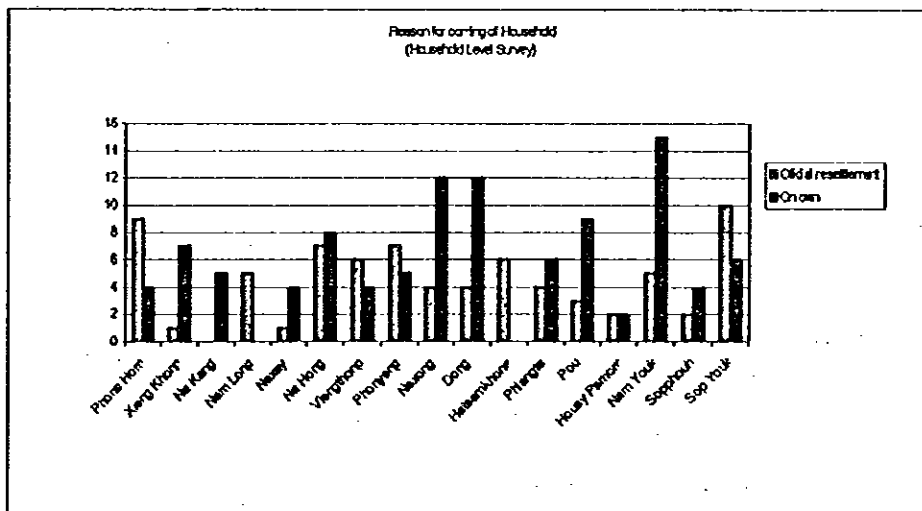


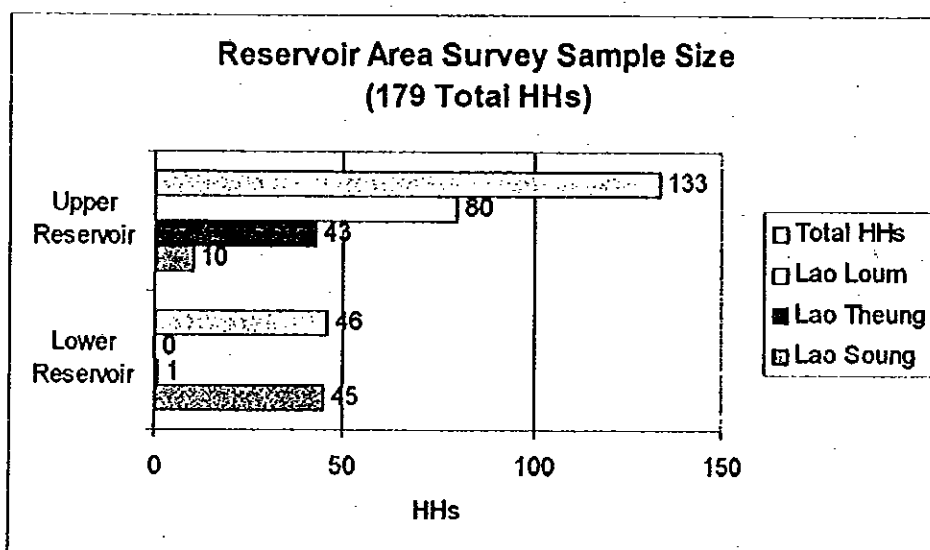
Figure 1 shows Ethnic groups in the reservoir

**TABLE 3: Surveyed Households Classified by Ethnic Groups
(Total HH: 179)**

Villages names	Number households by Ethnic groups						Total	
	Lao Loum		Lao Theung		Lao Soung		HH	%
	HH	%	HH	%	HH	%		
<i>Upper Reservoir</i>								
Phone Hom	0	0	13	100	0	0	13	100
Xieng Khong	8	100	0	0	0	0	8	100
Na Kang	1	20	4	80	0	0	5	100
Nam Long	4	80	1	20	0	0	5	100
Naxay	0	0	5	100	0	0	5	100
Na Hong	4	27	11	73	0	0	15	100
Viengthong	9	90	1	10	0	0	10	100
Phonyeng	5	45	1	9	5	45	11	100
Naxong	14	87	2	13	0	0	16	100
Dong	14	87	2	13	0	0	16	100
Hatsamkhone	4	67	2	33	0	0	6	100
Phiangta	9	82	1	9	1	9	11	100
Pou	8	67	0	0	4	33	12	100
Upper Reservoir Subtotal :	80		43		10		133	
<i>Lower Reservoir</i>								
Houay Pamom	0	0	0	0	4	100	4	100
Nam Youk	0	0	0	0	20	100	20	100
Sopphouh	0	0	0	0	3	100	3	100
Sop Youk	0	0	1	5	18	95	19	100
Lower Reservoir Subtotal :	0		1		45		46	
TOTAL	80		44		55		179	

Figure 2 shows number of households surveyed

For the Village Profile, secondary data was collected by interviewing the Village Chief or



his assistant. As for Household Profile, primary data was collected by interviewing the head/representative of the household. Therefore, data concerning households given in this report is an average per household based on a total of one hundred and seventy nine (179) households.

General information of the surveyed villages is given in the following table:

TABLE 4: Location of Villages in the Reservoir Area

Village name	Households	Population	Elev.(m)
<i>Upper Reservoir</i>			
Phonehom	67	375	368.32
Xiangkhong	39	247	361.72
Nakang	25	132	354.98
Namlong	17	107	352.92
Naxay	22	125	345.40
Nahong	75	446	341.88
Viengthong	46	273	339.40
Phonyeng	63	349	335.65
Naxong	81	522	330.44
Dong	82	509	327.24
Hatsankhone	27	174	326.15
Phiangta	49	322	322.65
Pou	66	416	318.92
Upper Reservoir Subtotal:	659	3,997	
<i>Lower Reservoir</i>			
Houaypamon	18	127	274.59
Sopphouh	23	132	261.22
Namyouk	86	540	271.12
Sopyouk	67	408	245.48
Lower Reservoir Subtotal:	194	1,207	
TOTAL	853	5,204	

Figure 3 shows percentage of households in the reservoir area

1.4 RESULTS OF THE UPPER AND LOWER RESERVOIR SURVEY

1.4.1 Population of the Reservoir Area

As shown the above Table, there are seventeen (17) villages in the reservoir area: Thirteen (13) villages are located in Upper Reservoir, whereas four (4) villages in the lower Reservoir. Ten (10) villages out of seventeen (17) villages are located on the Left Bank of the Nam Ngiep River, while only seven (7) villages are on the Nam Ngiep's Right Bank. There are a total of eight hundred and fifty three (853) households and the population is five thousand two hundred and four (5,204) habitants in the Reservoir Area. The average number of persons per family is 6.1, compared with 6.5 for the XSZ and 5.9 for the Lao PDR.⁷ The male population is less than female and consists of forty nine percent (49%) of the whole population, compared with roughly fifty percent (50%) for the XSZ and forty nine percent (49%) for the Lao PDR.⁸ The average size of a village is about fifty (50) households, compared with around sixty (60) households per village for the XSZ and seventy (70) for the Lao PDR.⁹

1.4.2 Village History

There are six (6) villages namely B. Xiangkhong, B. Nahong, B. Naxong, B. Dong, B. Pou and B. Namyouk which are considered to be the oldest settlement villages in the Reservoir Area. The oldest village in the area is Xiangkhong village, which is about one hundred (100) years old. There are also newly established villages namely B. Viengthong, B. Naxay, B. Phonehom, B. Phonyeng, B. Phiangta, B. Hatsamkhone, B. Namlong, B. Nakang, B. Houaypamon, B. Sophanh and B. Sopyouk. The most recently established village is B. Nakang village which moved out of B. Phonehom due to limited resources (e.g. lack of available arable land, water supply).

Specific information of B. Naphanh sub-village has been collected at B. Pou, since B. Naphanh sub-village has been recently established and is administratively dependent to B. Pou. Most of the villages in the Reservoir Area moved from Xiengkhouang Province, in particular, Pek, Khoun and Nonghet Districts. The reasons for moving out from the villages are to create new villages in the Reservoir Area in order to have better access and opportunities to new farming land. Another reason is linked to population pressure. After marriages, young couples move out of their parental home which is natural as the family members increased and more farming land have to be developed and at the same time, young couples wanted to become more independent.

⁷ *Ibid.* Tables 14 & 16, pp. 20, 22.

⁸ *Ibid.* Table 12, p. 18.

⁹ *Ibid.* Table 16, p. 22. The Zonal and National figures include urban establishments and not only villages.

Nakang, B. Houaypamon, B. Sophanh and B. Sopyouk. The most recently established village is B. Nakang village which moved out of B. Phonehom due to limited resources (e.g: lack of available arable land, water supply).

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The following table indicates the time of settlement of the surveyed households:

TABLE 5: Year of Settlement of Households (Total HH surveyed: 179)

Village Name	Classified by age										Total	
	1-5 years		6-10 years		11-15 years		16-20 years		Over 20 years		HH	%
	HH	%	HH	%	HH	%	HH	%	HH	%		
<i>Upper Reservoir</i>												
Phone Hom	10	77	1	8	1	8	0	0	1	8	13	100
Xieng Khong	1	13	0	0	2	25	3	37	2	25	8	100
Na Kang	4	80	0	0	1	20	0	0	0	0	5	100
Nam Long	4	80	0	0	0	0	0	0	1	20	5	100
Naxay	4	80	0	0	1	20	0	0	0	0	5	100
Na Hong	7	47	1	7	2	13	4	27	1	7	15	100
Viengthong	9	90	1	10	0	0	0	0	0	0	10	100
Phonyeng	10	83	1	8	1	8	0	0	0	0	12	100
Naxong	7	44	2	13	1	6	1	6	5	31	16	100
Dong	6	38	0	0	3	19	4	25	3	19	16	100
Hatsamkhone	6	100	0	0	0	0	0	0	0	0	6	100
Phiangta	6	60	1	10	0	0	1	10	2	20	10	100
Pou	4	33	0	0	1	8	2	17	5	42	12	100

Upper Reservoir Subtotal:	78	7	13	15	20	133
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Lower Reservoir

Houay Pamom	4	100	0	0	0	0	0	0	0	4	100	
Nam Youk	5	25	2	10	4	20	8	40	1	5	20	100
Sopphouh	3	50	1	17	0	0	1	17	1	17	6	100
Sop Youk	5	31	1	6	3	19	2	13	5	31	16	100
Lower Reservoir Subtotal:	17		4		7		11		7		46	
TOTAL	95		11		20		26		27		179	

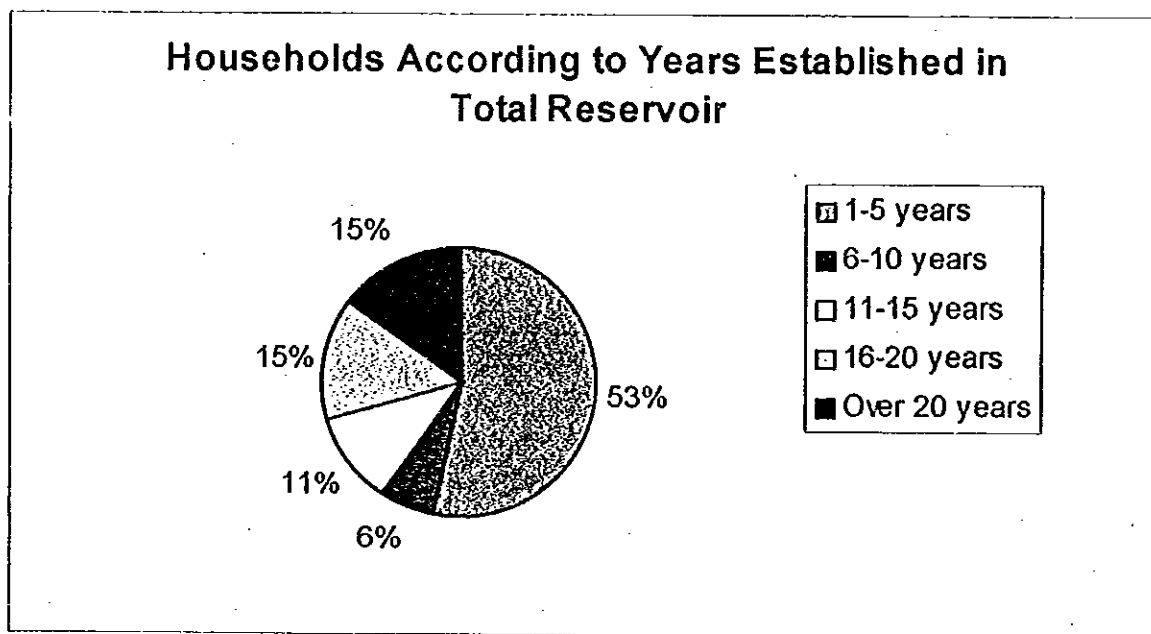


Figure 4 shows number of households according to years of establishment (Total: 179 HH)

The reasons of the settlement could be classified as follows:

TABLE 6: Reason for Coming of Households (Total:179HII)

Village names	Official resettlement		On own		Total	
	Number	%	Number	%	Number	%
<i>Upper Reservoir</i>						
Phone Hom	9	69	4	31	13	100
Xieng Khong	1	13	7	87	8	100
Na Kang	0	0	5	100	5	100
Nam Long	5	100	0	0	5	100
Naxay	1	20	4	80	5	100
Na Hong	7	47	8	53	15	100
Viengthong	6	60	4	40	10	100
Phonyeng	7	58	5	42	12	100
Naxong	4	25	12	75	16	100
Dong	4	25	12	75	16	100
Hatsamkhone	6	100	0	0	6	100
Phiangta	4	40	6	60	10	100
Pou	3	25	9	75	12	100
Upper Reservoir Subtotal :	57		76		133	
<i>Lower Reservoir</i>						
Houay Pamom	2	50	2	50	4	100
Nam Youk	5	25	15	75	20	100
Sopphouh	2	33	4	67	6	100
Sop Youk	10	63	6	38	16	100
Lower Reservoir Subtotal :	19		27		46	
TOTAL	76		103		179	

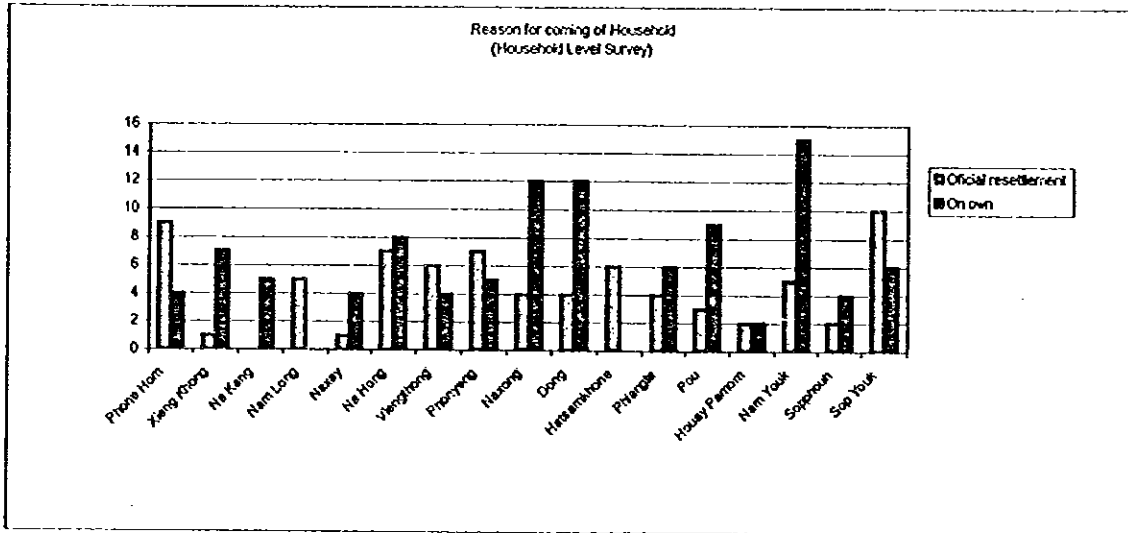


Figure 5 shows reason for coming of households (Total: 179HH)

Laos is a multiethnic nation with more than forty ethnic groups, classified into three general families: *Lao Loum* (lowland Lao), 66 percent of the national population, *Lao Theung* (midland Lao) 24 percent; and *Lao Sung* (upland Lao) 10 percent of the national population in 1993.¹⁰

Lao Loum traditionally live on the plain and valley along rivers and practice paddy rice cultivation. This lowland ethnic group is not nomadic by nature. Where and once they settle they would develop cultivable land into paddy as much as possible and build their houses with hard wood. Only the new and young families would first have bamboo houses with roofing made from grass. Their houses are always on stilts. This group is fifty percent (50%) of the total population in the Reservoir Area, compared to sixty six percent (66%) nationally. This group had settled solidly in large groups in most of the villages surveyed in the Upper Reservoir and is the majority ethnic group in the Upper Reservoir as well as in the whole country.

¹⁰ Andrea Matles Savada, ed. 1994. *Laos: A Country Study*. Washington, DC: Federal Research Division, Library of Congress.

TABLE 7: LAO LOUM HOUSEHOLDS IN THE RESERVOIR AREA (Total HH in the reservoir area: 853)

Village Name	Lao Loum	%	Total HH
<i>Upper Reservoir</i>			
Phone Hom	0	0	67
Xieng Khong	34	87	39
Ne Kang	10	40	25
Nam Long	13	76	17
Naxay	1	5	22
Na Hong	15	20	75
Viengthong	45	98	46
Phonyeng	32	51	63
Naxong	68	84	81
Dong	82	100	82
Hatsamkhone	27	100	27
Phiangta	47	96	49
Pou	52	79	66
Upper Reservoir Subtotal :	426	65	659
<i>Lower Reservoir</i>			
Houay Pamom	0	0	18
Nam Youk	0	0	86
Sopphouh	0	0	23
Sop Youk	1	2	67
Lower Reservoir Subtotal :	1	1	194
TOTAL	427	50	853

Lao Theung traditionally live at the mid-way level of hill and mountainsides. Normally they practice slash and burn cultivation. By the nature of shifting cultivation, they are semi-nomadic, in that they must move to new locations when their slash and burn fields are exhausted. Usually they build temporary bamboo shelters, and some villages build their houses from bamboo and wood with stilts similar to the Lao Loum style. However, when they are given the opportunity to farm on a permanent basis, whether paddy cultivation or horticulture, they quickly adapt themselves to the new environment. This group comprises twenty two percent (22%) of the total Reservoir Area households, compared to twenty four percent (24%) nationally, and is classified as one of the minority ethnic groups in the area, although they are becoming more and more assimilated into the Lao Loum culture.

TABLE 8: LAO THEUNG HOUSEHOLDS IN THE RESERVOIR AREA (Total HH in the reservoir area: 853)

Village name	Lao Theung HH	%	Total HH
<i>Upper Reservoir</i>			
Phone Hom	67	100	67
Xieng Khong	5	13	39
Na Kang	15	60	25
Nam Long	4	24	17
Naxay	21	95	22
Na Hong	60	80	75
Viengthong	1	2	46
Phonyeng	0	0	63
Naxong	13	16	81
Dong	0	0	82
Hatsamkhone	0	0	27
Phiangta	2	4	49
Pou	0	0	66
Upper Reservoir Subtotal :	188	29	659
<i>Lower Reservoir</i>			
Houay Pannon	0	0	18
Nam Youk	0	0	86
Sopphouh	0	0	23
Sop Youk	0	0	67
Lower Reservoir Subtotal :	0	0	194
TOTAL	188	22	853

The Lao Sung ethnic group, mainly the Hmong from upper highland areas, normally lives on the upper side or tops of mountains. This group also practices shifting cultivation and is semi-nomadic. Their houses are usually made from bamboo and are built on the ground, with low and not so steep roofs. The Lao Sung in the Reservoir Area came from the high lands of Xiengkhouang Province where the altitude varies from 1,000 to 1,500 meters above sea level and have become lowland paddy farmers in a very short time through opportunities provided by outside aid. This group is about twenty eight percent (28%) of the total Reservoir Area households, compared to ten percent (10%) nationally. It is classified as one of the minority ethnic groups too but, unlike the Lao Theung, the Lao Sung (Hmong) is strong in its own society and hardly mixes with other ethnic groups.

TABLE 9: LAO SUNG HOUSEHOLDS IN THE RESERVOIR AREA (Total households in the reservoir area:853)

Village Name	Lao Sung	%	Total HH
<i>Upper Reservoir</i>			
Phone Hom	0	0	67
Xieng Khong	0	0	39
Na Kang	0	0	25
Nam Long	0	0	17
Naxay	0	0	22
Na Hong	0	0	75
Viengthong	0	0	46
Phonyeng	31	49	63
Naxong	0	0	81
Dong	0	0	82
Hatsamkhone	0	0	27
Phiangta	0	0	49
Pou	14	21	66
Upper Reservoir Subtotal :	45	7	659
<i>Lower Reservoir</i>			
Houay Pamom	18	100	18
Nam Youk	86	100	86
Sopphouh	23	100	23
Sop Youk	66	98	67
Lower Reservoir Subtotal :	193	99	194
TOTAL	238	28	853

The Project Area consists of three ethnic groups namely Lao Loum, Lao Theung and Lao Sung. The number of households in each ethnic group is as follow:

- Lao Loum: 427 households;
- Lao Sung: 238 households;
- Lao Theung: 188 households;

According to data collected during the survey, from the 17 villages, the few non-mixed villages are:

- Lao Loum villages: B. Dong and B. Hatsamkhone;

- Lao Theung villages: B. Phonehom;
- Lao Sung villages: B. Houaypamon, B. Sopphouanh, B. Namyouk.

All the remaining villages are mixed but the mixture will rather be between Lao Loum and Lao Theung ethnic group.

TABLE 10: MIXTURE OF ETHNIC GROUPS

Village name	LL	LT	LS	LL+LT	LL+LS	LT+LS	LL+LT+LS
<i>Upper Reservoir</i>							
Phone Hom		*					
Xieng Khong				*			
Na Kang				*			
Nam Long				*			
Naxay				*			
Na Hong				*			
Viengthong				*			
Phonyeng					*		
Naxong				*			
Dong	*						
Hatsamkhone	*						
Phiangta				*			
Pou					*		
Upper Reservoir Subtotal :	2	1		8	2	0	0
<i>Lower Reservoir</i>							
Houay Pamom			*				
Nam Youk			*				
Sopphouh					*		
Sop Youk					*		
Lower Reservoir Subtotal :	0	0	2	0	2	0	0
TOTAL	2	1	2	8	4	0	0

1.4.3 Family Size and Sex Distribution

The family size ranged from 1 to 16 persons. The average family sizes were found to be 6.1 persons per household: Average persons/family 6.1

Percent of male 49 %
Percent of female 51 %

TABLE 11: Population in the reservoir area in 1998 classified by gender (Total population :5,204)

Village name	Population				Total	
	Male		Female		Number	%
	Number	%	Number	%		
<i>Upper Reservoir</i>						
Phonhom	188	50	187	50	375	100
Xiengkhong	121	49	126	51	247	100
Nakang	62	47	70	53	132	100
Nam long	56	52	51	48	107	100
Naxay	63	50	62	50	125	100
Nahong	202	46	244	54	446	100
Viengthong	136	50	137	50	273	100
Phonyeng	180	52	169	48	349	100
Naxong	256	49	266	51	522	100
Dong	250	49	259	51	509	100
Hat Samkhone	91	52	83	48	174	100
Piangta	168	52	154	48	322	100
Pou	205	49	211	51	416	100
Upper Reservoir Subtotal:	1978		2019		3997	
<i>Lower Reservoir</i>						
Houaypamon	55	43	72	57	127	100
Namyouak	268	50	272	50	540	100
Sophouanh	65	49	67	51	132	100
Sopyouak	196	48	212	52	408	100
Lower Reservoir Subtotal:	584		623		1207	
TOTAL	2562		2642		5204	

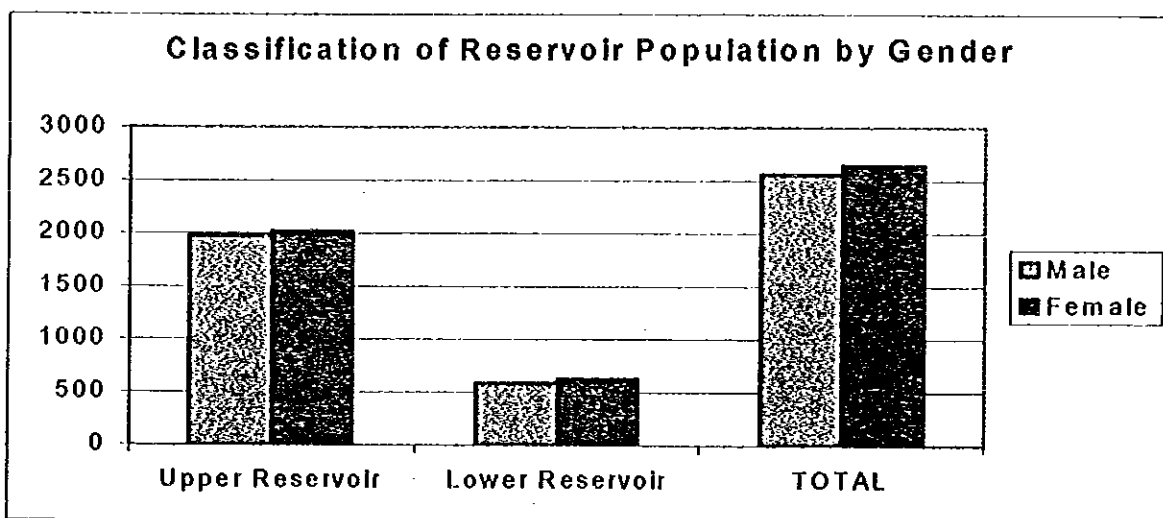


Figure 6 shows population by gender (Total population: 5,204)

1.4.4 Type of Family

Families in the reservoir area are found of being two types: (1) small, nuclear families and (2) large, extended families. A nuclear family consists of husband, wife, and their unmarried children, while an extended family comprises the husband, wife, children, and children-in-law and other relatives, such as grand parents and grand children. In most of the cases, the husband heads the family. However, due to divorce, separation or widowhood, women head some families.

TABLE 12: HOUSEHOLDS HEADED BY WOMAN
(Total households surveyed: 179 HH)

Village Name	Headed by Woman HH	Households Total HH	%
<i>Upper Reservoir</i>			
Phone Hom	0	67	0.00
Xieng Khong	2	39	5.13
Na Kang	1	25	4.00
Nam Long	0	17	0.00
Naxay	1	22	4.55
Na Hong	3	75	4.00
Viengthong	3	46	6.52
Phonyeng	4	63	6.35
Naxong	2	81	2.47

Naxong	2	81	2.47
Dong	3	82	3.66
Hatsamkhone	1	27	3.70
Phiangta	2	49	4.08
Pou	1	66	1.52
Upper Reservoir Subtotal :	18	659	2.73
<i>Lower Reservoir</i>			
Houay Pamom	0	18	0.00
Nam Youk	4	23	17.39
Sopphouh	6	67	8.96
Sop Youk	0	86	0.00
Lower Reservoir Subtotal :	10	194	5.15
TOTAL	28	853	3.28

1.4.5 The Age Structure

The age group up to five (5) years (pre-school children) consists of nineteen percent (19%) of the total population in the surveyed area, with the highest number of this age group in Dong village, amounting 115 persons. It can also be observed that this percentage is the highest as compared to the other categories. The category of elder people, people, those over sixty-five (65) years represents only about four percent (4%) of the total population, the lowest percent of all categories.

A parameter of interest is the dependency ratio, which is defined as the ratio of dependents to active labor. The active labor is categorized between the ages of fifteen to forty five (15 to 45). The remaining categories will be classified as dependents. It can be observed that the active population is equal to thirty nine percent (39%) of the surveyed households. The overall dependency ratio is 1.56% that is quite high for rural areas. On the other hand the most striking feature is the high percentage of population under fifteen (15) years, amounting some forty five percent (45%). This means that there is almost the same number of children than adults in the community unless education and health facilities are improved in the next future youth problems could be not availed.

The following table summarizes the age structure of the population in the reservoir area:

Figure 7 shows population classified according to age (Total population: 5,204; Total households: 853)

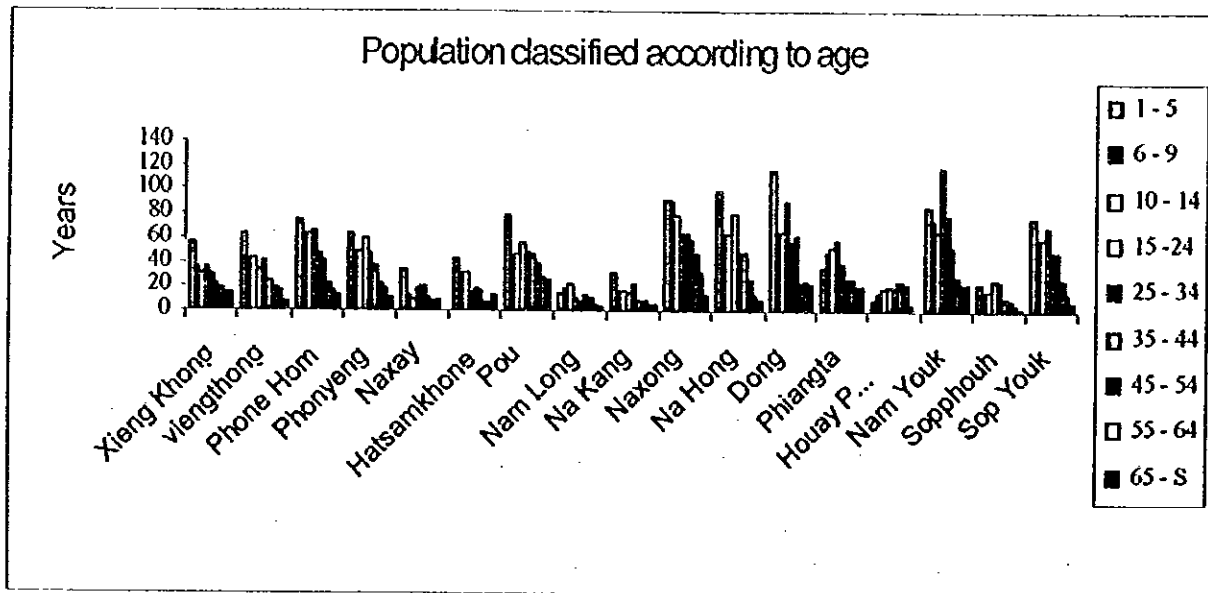


TABLE 13: Population Classified According to Age (Total population: 5,204; Total households: 179)

Village name	Number of persons from 1 day-5 years	% of persons from 1 day-5 years	Number of persons from 6-9 years	% of persons from 6-9 years	Number of persons from 10-14 years	% of persons from 10-14 years	Number of persons from 15-24 years	% of persons from 15-24 years	Number of persons from 25-34 years	% of persons from 25-34 years	Number of persons from 35-44 years	% of persons from 35-44 years	Number of persons from 45-54 years	% of persons from 45-54 years	Number of persons from 55-64 years	% of persons from 55-64 years	Over 65 years	Total Number of persons	%	
<u>Upper Reservoir</u>																				
Phone Hom	56	23	35	14	29	12	36	15	29	12	22	9	19	8	6	2	15	6	247	100
Xieng Khong	63	23	24	9	43	16	33	12	42	15	25	9	18	7	17	6	8	3	273	100
Na Kang	74	20	31	8	63	17	66	18	46	12	42	11	22	6	17	5	14	4	375	100
Nam Long	64	18	39	11	49	14	59	17	47	13	38	11	23	7	19	5	11	3	349	100
Naxay	33	26	14	11	9	7	19	15	21	17	12	10	7	6	10	8	0	0	125	100
Na Hong	43	25	25	14	31	18	16	9	19	11	16	9	7	4	3	2	14	8	174	100
Viengthong	79	19	45	11	47	11	56	13	49	12	46	11	40	10	28	7	26	6	416	100
Phonyeng	15	14	18	17	22	21	11	10	7	7	13	12	12	11	6	6	3	3	107	100
Naxong	32	24	14	11	16	12	15	11	23	17	10	8	10	8	6	5	6	5	132	100
Dong	91	17	89	17	78	15	52	10	63	12	57	11	47	9	31	6	14	3	522	100
Hatsamkhone	99	22	54	12	63	14	81	18	49	11	49	11	27	6	14	3	10	2	446	100
Phiangia	115	23	54	11	65	13	89	17	56	11	61	12	23	5	24	5	22	4	509	100
Pou	35	11	48	15	52	16	58	18	39	12	25	8	26	8	19	6	20	6	322	100
Upper Reservoir Subtotal:	799		490		567		591		490		416		281		200		163		3997	
<u>Lower Reservoir</u>																				
Houay Pamom	10	8	15	12	18	14	20	16	12	9	25	20	22	17	5	4	0	0	127	100
Nam Youk	86	16	74	14	65	12	117	22	78	14	52	10	28	5	17	3	23	4	540	100
Sopphouh	22	17	14	11	17	13	26	20	25	19	12	9	9	7	5	4	2	2	132	100
Sep Youk	77	19	57	14	59	14	69	17	48	12	49	12	26	6	15	4	8	2	408	100
Lower Reservoir Subtotal:	195		160		159		232		163		138		85		42		33		1207	
TOTAL	994		650		726		823		653		554		366		242		196		5204	

1.4.6 Education Level and Facilities

In all seventeen (17) villages surveyed, there is only B. Naxay without a primary school. The children of B. Naxay go to school in B. Dong, which is a distance of four (4) km or about one hour walking distance. B. Dong village is relatively better off than B. Naxay, since it has been established many years before. Although the walls of the school are still made of bamboo, the roof is from iron sheet and the size is the biggest in the Reservoir Area. The total surface of the school covers 588m²

B. Sopyouk and B. Namyouk are two (2) villages which have better primary school education facilities in the Reservoir Area. These primary schools of three hundred and thirty six square meter (336m²), and each can accommodate approximately one hundred (100) students. They have concrete walls and floor and iron sheet roofing. These schools have been assisted by the UNDCP Phalavek Alternative Development Project. Two (2) primary schools in the Lower Reservoir are the only ones in the Reservoir Area that meet the standards of the Ministry of Education. The ratio of teachers to students is 1:25, which indicates that one teacher has under his responsibility about twenty five (25) students.

TABLE 14: Secondary School in the Project Area

School Level	Location	Size (m ²)	Number of classes	Nber. of studen t	Nber. Of Teach er	Age of school (Year)	Condi tion	App. Cost (Mill. Kip)	Type of roof	Type of Wall	Type of Floor	Pole.Column
Secondary school (Tha vieng)	Ban Dong	384	6	96	6	3	Good	200	Cemen t made file	Brick	Cement	Concrete

Out of two thousand six hundred and sixty two (2,662) literate population, there is only one (1) student with an university degree, thirty five (35) graduated from high school. Two hundred and thirty seven (237) have a secondary education level, nine hundred and twelve (912) have a primary education level and one thousand four hundred and seventy seven (1,477) having some informal education. There are ninety six (96) students in the Thaviang Secondary School, with only six (6) teachers. There are only two (2) high schools, one located at the XSZ headquarter and the other one in Hom District. To attend secondary and high school, students must walk up to ten (10) km. Construction of new dormitories for the Thaviang High School would need to be considered to enable students to get a better education.

**TABLE 15: Number of Persons at Different Level of Education
(Total HH surveyed: 179)**

Education Level	Number of Persons
Illiterate	512
Literate	436
Primary	213
Secondary	47
High School	13
TOTAL	1,221

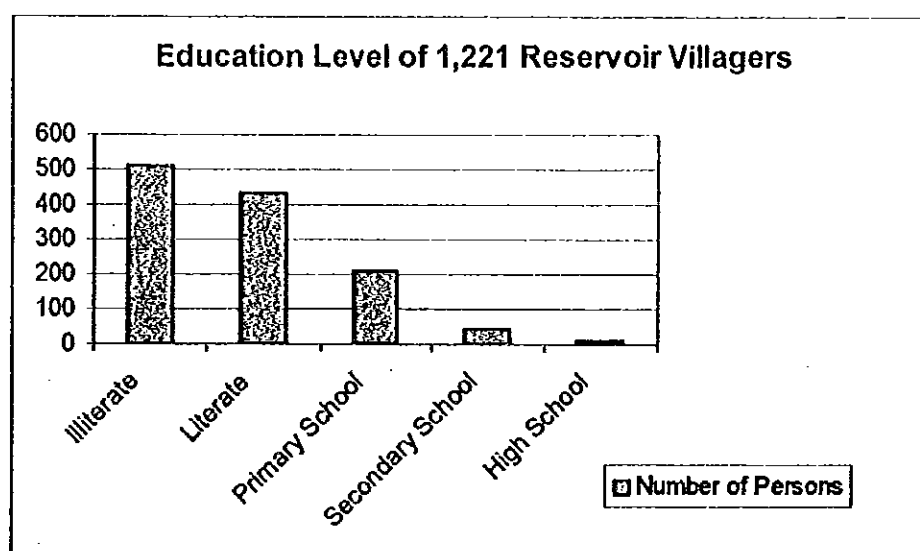


Figure 8 shows education level of population (Total HH surveyed: 179)

1.4.7 Occupation

Villagers in the Project Area can be divided into two (2) major occupational groups. The first group is farmers involved mainly in paddy and upland rice production. The second group is non-agricultural, such as staff officers, traders, and other service providers. The survey indicates that from the seventeen (17) villages surveyed, about eighty eight percent (88%) are farmers, whereas about twelve percent (12%) are non-agricultural workers.

The results of the survey at household level indicates that some four hundred and forty six (446) persons out of eight hundred and eighty five (885) persons have as main occupation the low land farming, and only seventy five (75) persons are upland farmers.

TABLE 16: Main occupation (Total HH 179; 1,221 persons)

Village Name	Main occupation														Total	
	Lowland Rice Farmer		Upland Rice Farmer		Trader		Teacher		Health Practitioner		Pupil / Student		Other		Pers.	%
	Pers.	%	Pers.	%	Pers.	%	Pers.	%	Pers.	%	Pers.	%	Pers.	%		
<i>Upper Reservoir</i>																
Phone Hom	33	52	6	10	0	0	1	2	0	0	21	33	2	3	63	100
Xieng Khong	30	63	0	0	0	0	0	0	0	0	18	38	0	0	48	100
Na Kang	10	67	2	13	0	0	0	0	0	0	3	20	0	0	15	100
Nam Long	0	0	11	41	0	0	0	0	0	0	13	48	3	11	27	100
Naxay	8	38	4	19	0	0	1	5	0	0	7	33	1	5	21	100
Na Hong	38	55	3	4	0	0	2	3	0	0	26	38	0	0	69	100
Viengthong	22	44	7	14	0	0	0	0	1	2	19	38	1	2	50	100
Phonyeng	18	40	2	4	3	7	1	2	0	0	20	41	1	2	45	100
Naxong	31	42	2	3	0	0	4	5	1	1	34	46	2	3	74	100
Dong	57	66	0	0	0	0	0	0	0	0	30	34	0	0	87	100
Hatsakhone	15	50	2	7	1	3	1	3	0	0	10	33	1	3	30	100
Phiangta	35	65	0	0	0	0	1	2	0	0	18	33	0	0	54	100
Pou	29	48	9	15	0	0	1	2	0	0	20	33	1	2	60	100
Upper Reservoir Subtotal:	326		48		4		12		2		239		12		643	
<i>Lower Reservoir</i>																
Hcuay Pamom	7	26	9	33	0	0	1	4	0	0	10	37	0	0	27	100
Nam Youk	66	57	8	7	0	0	3	3	1	1	33	29	4	3	115	100
Sopphouh	7	39	3	17	0	0	1	6	0	0	7	39	0	0	18	100
Sop Youk	40	49	7	9	0	0	2	2	0	0	33	40	0	0	82	100
Lower Reservoir Subtotal:	120		27		0		7		1		83		4		242	
TOTAL	446		75		4		19		3		322		16		885	

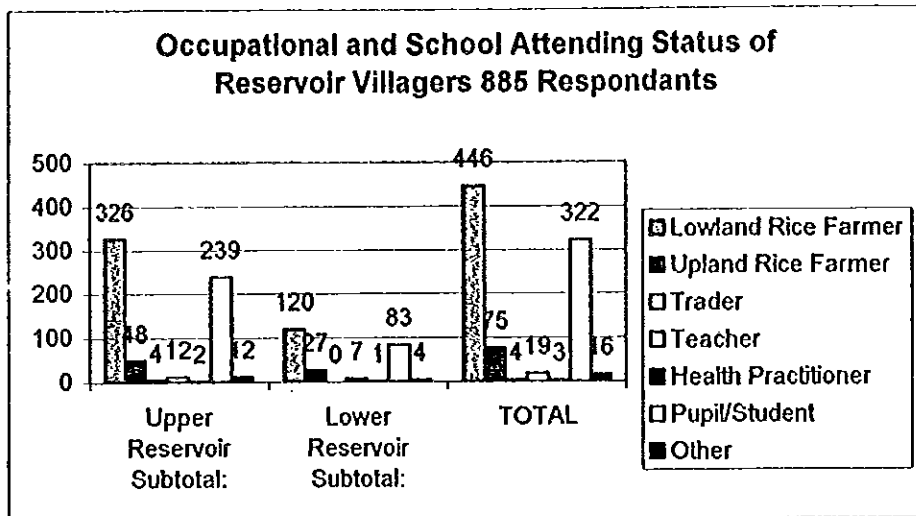


Figure 9 shows main occupation of population in the reservoir area (Total HH ; 179)

1.4.8 Health Situation

The result of the survey indicates that there is only one (1) hospital in B. Phonyeng or so called the "Thaviang Hospital" with one (1) doctor and six (6) staff. Thaviang hospital is one hundred and twenty eight squares meters (128 m²) and has three (3) rooms and ten (10) beds. The hospital is in good condition and made of concrete. B. Viengthong and B. Phiangta have dispensaries of about the same size and condition, each one about forty-eight square meter (48 m²), with four (4) rooms. In each of the dispensary there is two (2) Doctor assistants and six (6) staff. Health facilities in the Reservoir Area are inadequate, as they cannot provide assistance to most of the villagers. However, there are about twenty (20) traditional practitioners who can also provide basic aids.

The health situation recorded reveals that malaria seems to affect working age people and that the number of death caused by malaria is the highest. B. Phonehom has been affected the most and has forty-six (46), or forty one percent (41%) of the recorded one hundred and twelve (112) dying from malaria. Out of the eighteen (18) villages surveys, only five (5) villages are not affected by the disease. The data also revealed that a limited number of persons benefit from medical care and that the epidemy was more frequent during year 1992 to 1997.

Diarrhea is also present in the area. Some eighteen (18) persons have died from diarrhea and the number of twenty-two (22) patients are under medical care. The number of persons under medical care is relatively better compared to malaria (5 persons to 22 persons respectively). Persons with respiratory infection under medical care are reported to be only three (3) in B. Dong.

The results of household level survey shown in the following table 16 indicate that the most frequent diseases are: (1) Diarrhea; (2) Malaria; (3) Fever; (4) cough; and (5) Dysentery.

TABLE 17: Diseases (Total HH surveyed: 179)

Village Name	Diarrhea		Malaria		Dysentery		Cough		Flu		Fever		Tuberculosis		Cholera		Total	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
<i>Upper Reservoir</i>																		
Phone Hom	2	11	7	37	6	32	1	5	0	0	1	5	0	0	2	11	19	100
Xieng Khong	2	18	5	45	1	9	1	9	0	0	2	18	0	0	0	11	100	
Na Kang	1	33	1	33	0	0	0	0	1	33	0	0	0	0	0	3	100	
Nam Long	0	0	2	33	0	0	2	33	0	0	2	33	0	0	0	6	100	
Naxay	1	14	1	14	1	14	2	29	0	0	1	14	0	0	1	14	7	100
Na Hong	4	21	8	42	0	0	4	21	0	0	3	16	0	0	0	19	100	
Viengthong	2	20	3	30	2	20	0	0	2	20	0	0	1	10	0	10	100	
Phonyeng	4	44	4	44	0	0	0	0	0	0	1	11	0	0	0	9	100	
Naxong	5	25	7	35	0	0	4	20	1	5	3	15	0	0	0	20	100	
Dong	3	19	4	25	3	19	1	6	0	0	5	31	0	0	0	16	100	
Hatsanikhone	0	0	1	33	0	0	0	0	0	0	0	0	0	0	2	67	3	100
Phiangta	3	30	2	20	0	0	2	20	0	0	3	30	0	0	0	10	100	
Pou	4	31	5	38	1	8	1	8	1	8	1	8	0	0	0	13	100	
Upper Reservoir Subtotal :	31		50		14		18		5		22		1		5		146	
<i>Lower Reservoir</i>																		
Houay Pamom	3	43	2	29	0	0	1	14	0	0	1	14	0	0	0	7	100	
Nam Youk	11	46	6	25	3	13	1	4	0	0	3	13	0	0	0	24	100	
Sopphouh	2	50	2	50	0	0	0	0	0	0	0	0	0	0	0	4	100	
Sop Youk	12	44	10	37	0	0	1	4	0	0	4	15	0	0	0	27	100	
Lower Reservoir Subtotal :	28		20		3		3		0		8		0		0		62	
TOTAL	59		70		17		21		5		30		1		5		208	

(note: Some households mentioned more than one case)

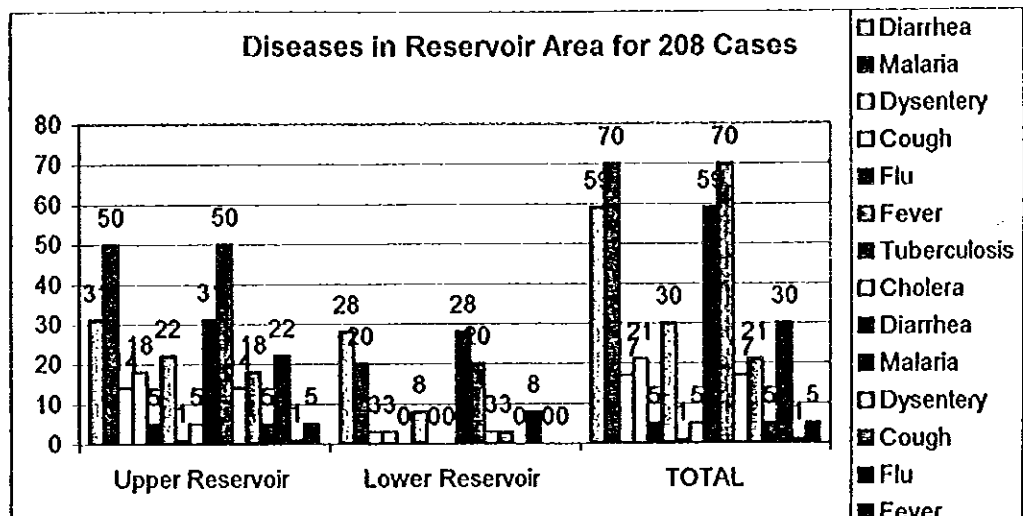


Figure 10 shows diseases in the reservoir area (Total households surveyed: 179)

1.4.9 Water Sources

In the Reservoir Area, there are four (4) different sources of water: (1) from the Nam Ngiep River, (2) from its tributaries, (3) from wells, and (4) from springs. Water from the Nam Ngiep River and its tributaries is used for domestic and agricultural purposes, whereas water from wells is used primarily for drinking. There are a total of five (5) wells in the area. However, these are only found in B. Nahom and B. Phiangta. Spring water is used in B. Phonehom and B. Phonyeng and is connected to pipe system to serve twenty-eight (28) households mainly in B. Phonehom.

Although villages are located not far from the Nam Ngiep River and its tributaries, water availability is insufficient, especially in the dry season. More than ten (10) villages do not have an adequate system of water distribution. It was observed that some families do not boil their drinking water, leading to gastrointestinal disease, mostly diarrhea.

TABLE 18: Water Supply System

Village Names	Number of dug well	Name of river	HH connected to water supply system
<i>Upper Reservoir</i>			
Phone Hom	0	Spring	23
Xieng Khong	0	Nam Ngiep	
Na Kang	0	Small river	
Nam Long	0	Small river	
Naxay	0	Small river	
Na Hong	3		
Viengthong	0	Small river	
Phonyeng	0	Spring	5
Naxong	0	Small river	
Dong	0	Nam Ngiep	15
Hatsamkhone	0	Spring	
Phangta	2	NamNgiep	
Pou	0	NamNgiep	
Upper Reservoir Subtotal	5		43
:			
<i>Lower Reservoir</i>			
Houay Pamom	0	NamNgiep	
Nam Youk	0	Small river	
Sopphouh	0	Spring	
Sop Youk	0	Nam Youk	
Lower Reservoir Subtotal			
:			
TOTAL	5		43

1.4.10 Communication Facilities

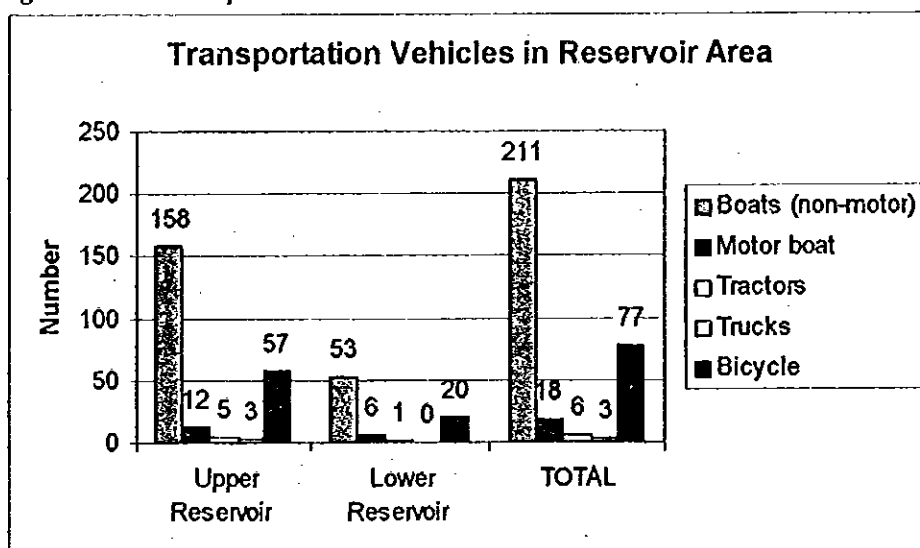
Thaviang District Administrative Office is connected by a sixty (60) km road to the XSZ Headquarters and also by approximately 150 km of road under construction to Xiengkhouang Province headquarters, Phonsavan city. These roads at present are in bad condition. From Thaviang District Administrative Office to Muang Hom District, the distance is about 30 km. In the wet season, access is very difficult. Even with a four by four (4x4) vehicle, it is almost impossible to get through the road. The road from Hom District Headquarters to B. Namyouk and B. Sopyouk is relatively good and vehicles can travel all year long. But a four by four (4x4) vehicle is required.

One could say that common transport facilities are not existing. There is no bus going to the Reservoir Area. There are a total of two hundred and twenty nine (229) boats, including eighteen (18) mounted with an engine.

TABLE 19: Productive Transport / Motor assets in the Village

Village Name	Boats (without motor)	Motor boat	Tractors	Trucks	Pickups	Cars	Tuk Tuk	Bicycle
<i>Upper Reservoir</i>								
Phone Hom	0	0	0	0	0	0	0	0
Xieng Khong	40	0	0	0	0	0	0	0
Na Kang	0	0	0	0	0	0	0	0
Nam Long	0	0	0	0	0	0	0	0
Naxay	16	0	0	0	0	0	0	0
Na Hong	1	0	0	0	0	0	0	10
Vienghong	8	0	0	0	0	0	0	0
Phonyng	30	0	0	0	0	0	0	0
Naxong	30	0	0	2	0	0	0	15
Dong	8	3	4	1	0	0	0	17
Hatsamkhone	13	3	0	0	0	0	0	0
Phiangta	0	0	0	0	0	0	0	15
Pou	12	6	1	0	0	0	0	0
Upper Reservoir Subtotal :	158	12	5	3	0	0	0	57
<i>Lower Reservoir</i>								
Houay Pamom	8	5	0	0	0	0	0	2
Nam Youk	0	0	0	0	0	0	0	0
Sopphouh	5	1	0	0	0	0	0	0
Sop Youk	40	0	1	0	0	0	0	18
Lower Reservoir Subtotal :	53	6	1	0	0	0	0	20
TOTAL	211	18	6	3	0	0	0	77

Figure 11 shows transportation in reservoir area



1.4.11 Living Conditions

The living condition is rated by housing condition and household assets. The houses in the Reservoir Area are bamboo or wooden. The majority of these houses are one-story houses on stilts, which is the typical Lao Loum and Lao Theung house. Some villagers, normally the better off, will put a wall around those stilts to make a ground story. The Lao Sung generally does not have houses on stilts, but build their homes with only a ground-level story.

Especially in B. Namyouk and B. Sopyouk houses had tile roofs. A few had corrugated iron roofs. But most of the houses in villages surveyed had either bamboo or grass roofs.

TABLE 20: Houses classified by type of roofing in the reservoir area (Total III:853)

Village name	Tile	Corrugated sheet	Wooden	Bamboo/Thatch	Total
<i>Upper Reservoir</i>					
Phone Hom	0	1	2	64	67
Xieng Khong	2	4	33	0	39
Na Kang	0	0	0	25	25
Nam Long	0	0	0	17	17
Naxay	0	2	2	18	22
Na Hong	0	5	3	67	75
Viengthong	0	1	0	45	46
Phonyeng	0	2	0	61	63
Naxong	0	5	7	69	81
Dong	0	18	11	53	82
Hatsamkhone	0	0	0	27	27
Phiangta	0	4	0	45	49
Pou	0	10	19	37	66
Upper Reservoir Subtotal:	2	52	77	528	659
<i>Lower Reservoir</i>					
Houay Pamom	0	0	0	18	18
Nam Youk	4	4	3	74	85
Sopphouh	0	0	0	23	23
Sop Youk	4	5	11	48	68
Lower Reservoir Subtotal:	8	9	14	163	194
TOTAL	10	61	91	691	853

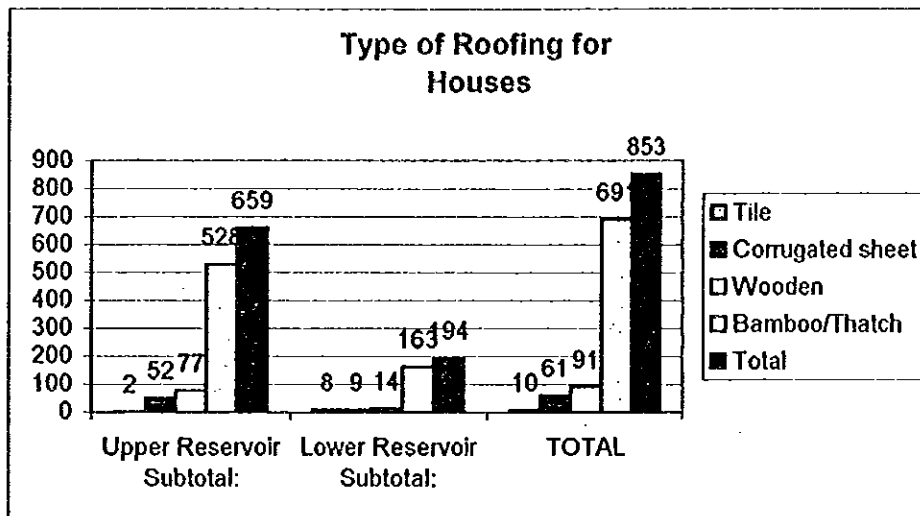


Figure 12 shows type of house roofing in the reservoir area

1.4.12 Assets in Village and Households.

It has been found that apart from boats, which are in relatively large numbers, some two hundred and twenty nine (229) boats, out of which eighteen (18) are motor boats, there are eight (8) small tractors, four (4) in B. Dong. This can be understood, as B. Dong is relatively better off than other villages and has more area of irrigated paddy land. B. Dong also has one (1) truck and four (4) motor boats. There are some forty-nine (49) private generators with a capacity of two to three hundred (200-300) watt, particularly in the lowland areas. Only B. Phonyeng village has a public generator.

TABLE 21: Electricity Supply

Village Name	Village having Electricity supply	By Private generators (*)	By Public generators (**)
<i>Upper Reservoir</i>			
Phone Hom	Yes	2	0
Xieng Khong	Yes	3	0
Na Kang	No	0	0
Nam Long	No	0	0
Naxay	No	0	0
Na Hong	Yes	3	0
Viengthong	Yes	3	0
Phonyeng	Yes	10	1
Naxong	Yes	12	0
Dong	Yes	10	0
Hatsamkhone	No	0	0
Phiangta	Yes	6	0
Pou	No	0	0

Upper Reservoir		49	1
Subtotal:			
<i>Lower Reservoir</i>			
Houay Pamom	No	0	0
Nam Youk	No	0	0
Sopphouh	No	0	0
Sop Youk	No	0	0
Lower Reservoir		0	0
Subtotal:			
TOTAL		49	1

(*) = Average capacity of private generators (400 watt)
(**) = Average capacity of public generator (10 kilowatt)

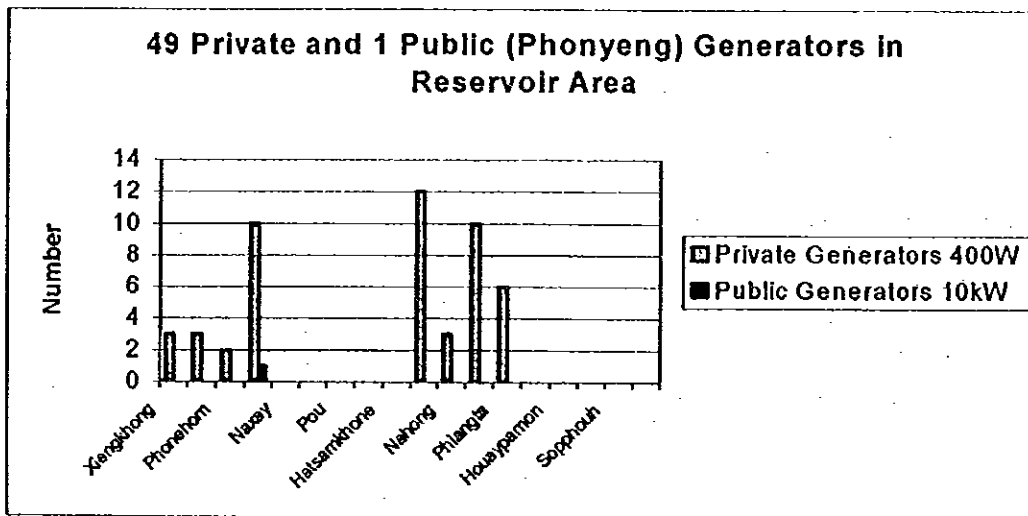


Figure 13 shows Generators in the reservoir area

1.4.13 Village Authority Committee

Every village has four (4) different social organizations, (1) a Village Authority Committee, (2) Women’s Union, (3) Youth Union, and (4) an Elder Committee. In fact, the three unions are supplementary to the Village Authority Committee within their respective social groups. The Village Authority Committee varies from two to four (2-4) persons. When there are four (4) persons, one is the Village Chief, two are Deputy Village Chiefs, and the fourth is a Secretary. When there are only two (2) persons, one is the Village Chief and the other is the Secretary. The villagers themselves, depending on the social conditions and situation of each village decide this. The main task of the Village Authority Committee is to guide and organize development activities in an efficient way. This Committee is well respected by the community.

Lao Women's Union and Youth Organizations

All seventeen (17) villages have a Lao Women's Union. The head of the Village Women's Union is well informed on the mandate of the organization, which is to promote economic and welfare activities. The Union solves social problems and conflicts between households and household members.

The Union also collects data and statistical information to improve the condition and environment of women and children and for other communal work. It has been found that women in Reservoir Area have never had any vocational training such as in home economics or handicrafts.

Every village also has a Village Youth Organization. B. Pou and B Namyouk have more than twenty (20) members each. The Youth Organization is involved in the economic and security activities of the village.

Committee of Elderly People

This Committee is an organization that consists of respectful and honorary elders in the village. Their responsibilities are to:

- Promote security within the village boundaries;
- Create a peaceful atmosphere;
- Promote good education and health facilities;
- Encourage solidarity among the villagers;
- Participate in all traditional activities of the community including religious festivals;
- Arbitrate and solve conflicts between households and household members .

1.4.14 Land Use

Low land rice is grown throughout Reservoir Area. The total low land rice area covers seven hundreds and nine (709) ha, out of which one hundred fifty (150) ha is irrigated during the wet season. About forty-eight (48) ha are irrigated during the dry season, and some five hundred and fifty nine (559) are not irrigated.

TABLE 22: Land Use (Ha) in 1998

Village Names	Low land rice Area						Forest area					Rese fo ceme
	With Irrigation in wet season	Without Irrigation in wet season	Irrigation in dry season	Upland Rice Area	Garden	Pasture	Village managemen t forest	Private forest	Conservatio n area	Others area	Village area	
<i>Upper</i>												
<i>Reservoir</i>												
Phone Hom	2.2	27.6	2.2	15.	8	0	32	14	0	0	1.5	2
Nieng Khong	16.7	10	6.1	8.5	4.5	0	10.8	20	0	0	0.8	0
Na Kang	5	7	5	22	6	0	10	10	0	0	0.5	0
Nam Long	0	5	0	16	2	0	14	20	0	0	0.4	0
Naxay	0	23.3	0	9.65	3.4	0	15	10	0	0	0.5	0
Na Hong	31.9	50	18.3	19.3	5	0	0	0	1.8	0	4	1
Viengthong	0	25	0	18	0	0	50	20	0	0	1.8	0
Phonyeng	0	10.9	0	0	3.5	0	8	7	0	0	1.5	0
Naxong	18	20.4	7	7	0.8	0	15	3	0	0	5	1
Dong	45	40	5	4	20	0	0	0	0.9	0	2.5	0
Hatsankhone	0	14.1	0	6	4	0	15	15	1	0	0.8	1
Phiangta	11.6	27.3	0	6.9	5	0	0	0	0.8	0	3	1
Pou	0	44	0	13.5	8	0	25	10	0	0	1	1
Upper Reservoir Subtotal :	130.4	304.6	43.6	146.75	70.2	0	194.8	129.00	4.5	0	23.3	9
<i>Lower</i>												
<i>Reservoir</i>												
Houay Pamom	0	18	0	17	5	7	0	30	0	0	0.8	0
Nam Youk	20	100	0	14.7	6.1	0	12.8	10	0	0	2.8	0
Sopphouh	0	16.1	0	8.7	1.14	10.1	48.4	10.2	0	0	2.5	0
Sop Youk	0	120	4	125	20	150		26	10	0	8	1
Lower Reservoir Subtotal :	20	254.1	4	165.4	32.24	167.1	61.2	76.2	10	0	14.1	2
TOTAL	150.4	558.7	47.6	312.15	102.4	167.1	256	205.2	14.5	0	37.4	12

Irrigation schemes are still limited in Reservoir Area. Only eight (8) villages out of the eighteen (18) have irrigation. Upland rice covers a total of some three hundred and twelve (312) ha, equivalent to about thirty percent (30%) of the total rice area in the Reservoir. Rice produced in the Reservoir Area is mainly glutinous rice.

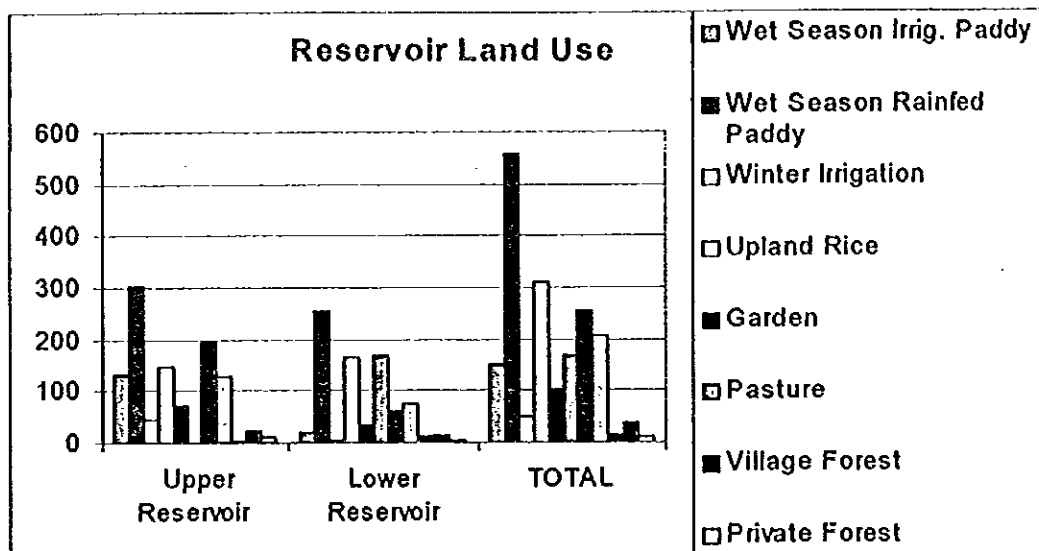


Figure 15 shows land use in the reservoir area

Forest areas under village management cover up to sixty percent (60%) of all forest area. Conservation forests are only two percent (2%) of the total forest area. Village management forest seems to be expanding well with a strong participation of villagers and local authorities. All the respondents own the land they cultivate and there are very few cases of land rental.

1.4.15 Agriculture

The Reservoir Area is mainly devoted to wet season paddy rice and upland rice cultivation although villagers do plant cassava, chilly, peanut, maize and sugar cane but not in large number. Forest products are cardamom, rattan and bamboo shoots. The collection of Non Timber Forest Product (NTFPs) and in particular cardamom are activities most practiced by villagers of the highland.

Villagers in the Reservoir Area face rice shortage, lack of arable land, inadequate health and socio-economic facilities and others difficulties. One of the main reasons for insufficient rice production is lack of rice fields and low yields due to lack of inputs. The four (4) most severe problems in the agriculture sector, according to village respondents, are:

1. Soil fertility
2. Land availability
3. Lack of knowledge
4. Bad weather condition

Some one-hundred and seven (107) households reported a surplus of rice every year, and twenty nine (29) households a surplus in some years. Forty two (42) households reported that rice production is too low and they have a rice deficit varying from one to seven (1-7) months.

TABLE 23: Rice Surplus (Total IHH surveyed: 179)

Village names	Surplus Every year		Exceptional		Total	
	IHH	%	IHH	%	IHH	%
<i>Upper Reservoir</i>						
Phone Hom	1	50	1	50	2	100
Xieng Khong	7	88	1	12	8	100
Na Kang	1	100	0	0	1	100
Nam Long	2	100	0	0	2	100
Naxay	2	100	0	0	2	100
Na Hong	13	100	0	0	13	100
Viengthong	3	60	2	40	5	100
Phonyeng	6	80	2	20	8	100
Naxong	12	79	3	21	15	100
Dong	11	69	5	31	16	100
Hatsamkhone	4	100	0	0	4	100
Phiangta	7	79	2	21	9	100
Pou	10	90	1	10	11	100
Upper Reservoir Subtotal :	79		17		96	
<i>Lower Reservoir</i>						
Houay Pamom	1	33	2	67	3	100
Nam Youk	11	73	4	27	15	100
Sopplouh	2	50	1	50	3	100
Sop Youk	11	73	4	23	15	100
Lower Reservoir Subtotal :	25		11		36	
TOTAL	104		28		132	

TABLE 24: Rice Deficit (Total HH surveyed: 179)

Village names	Deficit														Total	
	1 Month		2 Months		3 Months		4 Months		5 Months		6 Months		7 Months		HH	%
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
<i>Upper Reservoir</i>																
Phone Hom	1	9	4	36	2	18	1	9	0	0	3	27	0	0	11	100
Xieng Khong	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Na Kang	0	0	0	0	1	25	1	25	0	0	1	25	1	25	4	100
Nam Long	1	33	1	33	1	33	0	0	0	0	0	0	0	0	3	100
Naxay	0	0	0	0	3	100	0	0	0	0	0	0	0	0	3	100
Na Hong	0	0	1	50	1	50	0	0	0	0	0	0	0	0	2	100
Viengthong	1	20	2	40	0	0	0	0	1	20	0	0	1	20	5	100

Phonyeng	0	0	4	100	0	0	0	0	0	0	0	0	0	0	4	100
Naxong	0	0	0	0	1	100	0	0	0	0	0	0	0	0	1	100
Dong	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hatsamkhone	1	50	1	50	0	0	0	0	0	0	0	0	0	0	2	100
Phiangta	1	100	0	0	0	0	0	0	0	0	0	0	0	0	1	100
Pou	0	0	1	100	0	0	0	0	0	0	0	0	0	0	1	100
Upper Reservoir Subtotal :	5		14		9		2		1		4		2		37	
<u>Lower Reservoir</u>																
Houay Pamom	1	100	0	0	0	0	0	0	0	0	0	0	0	0	1	100
Nam Youk	0	0	4	80	1	20	0	0	0	0	0	0	0	0	5	100
Soppouh	0	0	0	0	2	67	1	33	0	0	0	0	0	0	3	100
Sop Youk	0	0	0	0	1	100	0	0	0	0	0	0	0	0	1	100
Lower Reservoir Subtotal :	1		4		4		1		0		0		0		10	
TOTAL	6		18		13		3		1		4		2		47	

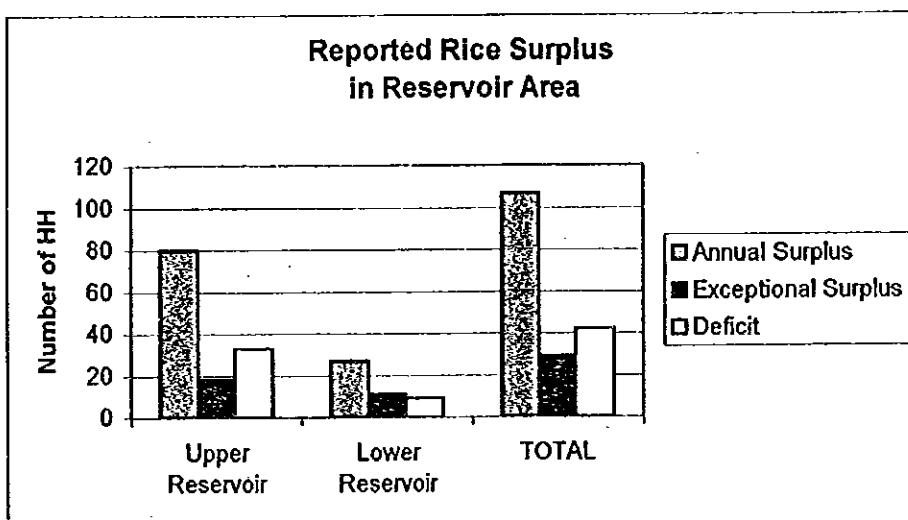


Figure 16 shows rice surplus and deficit (Total HH surveyed: 179)

1.4.16 Livestock

Livestock in the Reservoir Area includes:

- 1) Large Animals: buffaloes, cattle and horses;
- 2) Small Animals: pigs and goats; and
- 3) Poultry.

Almost all the seventeen (17) villages surveyed raise large animals, except B. Namlong, where there is no buffalo and B. Phiangta and B. Nakang that have no cattle. Buffaloes are

in relatively large number, some one thousand two hundred and eighty two (1,282) heads as compared to eight hundred and seventeen (817) head of cattle. There are no horses in the surveyed area. Pigs are in large number, some two thousand forty seven (2,047) heads, but they are unevenly distributed among the villages.

Buffalo is mainly used for plowing, whereas cattle are used for pulling carts and for transporting agricultural products or other goods. Small animals and poultry are raised mainly for consumption and for sale. There are two major problems regarding livestock in the Reservoir Area, namely (1) disease; (2) lack of foddors (whether as feed stuff and grazing land). Among large animals the two most common diseases are (1) *septicemia hemorrhage* and (2) foot and mouth disease. According to villagers interviewed, *septicemia hemorrhage* occurs in mid-April as for foot and mouth disease will occur during June and July.

TABLE 25: Livestock in the Reservoir Area

Village Names	Livestock (Head)					
	Buffalo	Cattle	Pigs	Goats	Horses	Poultry
<u>Upper Reservoir</u>						
Phone Hom	42	50	47	0	0	334
Xieng Khong	124	59	64	0	0	513
Na Kang	3	0	58	0	0	350
Nam Long	0	52	25	0	0	97
Naxay	40	3	19	0	0	105
Na Hong	127	4	130	0	0	1283
Vtengthong	17	55	54	0	0	400
Phonyeng	26	67	206	0	0	1266
Naxong	194	101	62	0	0	2200
Dong	209	47	150	0	0	3600
Hatsankhone	18	25	104	0	0	280
Phiangta	106	0	96	0	0	5400
Pou	110	100	201	0	0	515
Upper Reservoir	1016	563	1216	0	0	16343
Subtotal :						
<u>Lower Reservoir</u>						
Houay Pamom	20	15	300	0	0	500
Nam Youk	104	103	187	0	0	1068
Sopphouh	17	28	83	0	0	377
Sop Youk	125	108	261	0	0	1668
Lower Reservoir	266	254	831	0	0	3613
Subtotal :						
TOTAL	1282	817	2047	0	0	19956

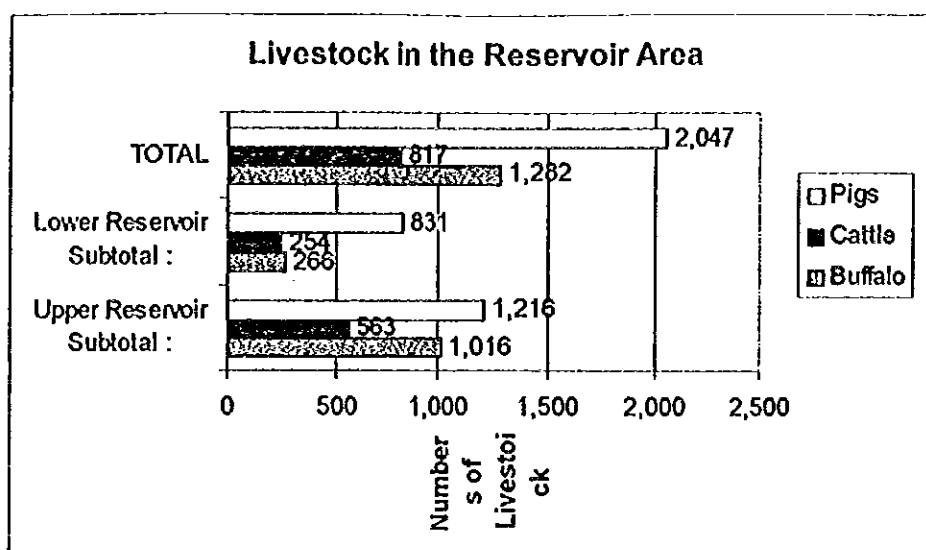


Figure 17 shows livestock in the reservoir area

TABLE 26: Major Agriculture and forestry Produce

Village Names	Agriculture					Forestry produce			
	Rice	Cassava	Chilly	Peanut	Maize	Sugar cane	Carda-mom	Rattan shoot	Bamboo shoot
Upper Reservoir									
Phone Hom	1	1	0	0	0	1	0	1	0
Xieng Khong	1	0	1	1	0	0	1	1	0
Na Kang	1	1	0	0	1	0	0	0	0
Nam Long	1	0	0	0	0	0	0	0	0
Naxay	1	0	0	0	0	0	0	0	0
Na Hong	1	0	0	0	0	1	0	0	0
Viengthong	1	0	1	0	0	0	0	0	0
Phonyeng	1	0	0	0	0	0	0	0	0
Naxong	1	0	1	0	0	1	0	0	0
Dong	1	0	0	0	0	1	0	0	0
Hatsamkhonc	1	0	0	0	0	1	1	1	0
Phiangta	1	0	0	0	0	1	0	0	0
Pou	1	0	0	0	0	1	1	1	0
Upper Reservoir Subtotal :	13	2	3	1	1	7	3	4	0
Lower Reservoir									
Houay Pamom	1	0	0	0	0	0	1	1	0
Nam Youk	1	1	0	0	0	0	1	1	0
Sopphouh	1	1	0	0	0	0	1	0	0
Sop Youk	1	0	0	0	0	0	1	0	0
Lower Reservoir Subtotal :	4	2	0	0	0	0	4	2	0
TOTAL	17	4	3	1	1	7	7	6	0

Note: 1= yes 0= no

1.4.17 Marketing

According to the survey, only B. Phonyeng has a permanent market, with twenty-three (23) shops. The morning bazaar is organized four (4) days a week, during which surrounding villagers bring their small agricultural surplus for sale. At this time, many villages take their produce just to the main road to sell to passengers in the occasional passing vehicle.

TABLE 27: Distance from villages to market

Village Names	Distance to nearest market (Km)
<u>Upper Reservoir</u>	
Phone Hom	4
Xieng Khong	11
Na Kang	16
Nam Long	17
Naxay	4
Na Hong	1
Viengthong	5
Phonyeng	0
Naxong	2
Dong	0
Hatsamkhone	7
Phiangta	4
Pou	8
<u>Lower Reservoir</u>	
Houay Pamom	48
Nam Youk	30
Sopphouh	38
Sop Youk	32

The above table shows that Lao Sung villagers are located far from the market. Therefore B. Houaypamon, B. Sophouanh, B. Sopyouk and B. Namyouk frequent the Hom District market, which is closer than the B. Phonyeng market but not located in the Reservoir Area. This might mean that villages with poorer road conditions are less frequented by outside traders. Outside traders are categorized as those located at the XSZ Administrative Office and at Hom District Headquarters, as well as those traders traveling from other Provinces.

1.4.18 Consumption and Income

Villagers produce a certain amount of agriculture products to satisfy their own food consumption. Forest products are also collected partly for home consumption and for sale.

Agriculture products are also purchased occasionally from the neighbors and neighboring villagers

TABLE 28: The average yearly Expenditure (Total HH surveyed: 179)

Expenditure Source	Average Expenditure (kip)	% All Expenditure
Food	162,426	20
Education	110,732	14
Transport	42,413	5
Farm inputs	30,119	4
Medical expenses	151,940	19
Hire of labor	71,081	9
Fuel	67,549	8
Travel	79,175	10
Ceremonies	92,803	12
TOTAL	808,175	100

TABLE 29: The average yearly income (Total HH surveyed: 179)

Income Source	Average income(kip)	% All Income
Rice	320,554	24
Cereals	26,133	2
Vegetables	6,010	0.5
Fruit	28,779	2
Forestry product	14,380	1
Livestock	553,299	40.5
Fishing	413,000	30
Total Income	1,362,000	100

The market prices of some agricultural products observed during the survey are given below:

Buffalo:	3,500 to 4,500 kip/kg
Beef:	4,000 to 5,000 kip/kg
Chicken:	2,000 to 3,000 kip/kg
Pork:	2,500 to 3,500 kip/kg
Rice:	500 to 600kip/kg

(Note: the exchange rate at the time of the survey was: 1US\$=4,210 Kips)

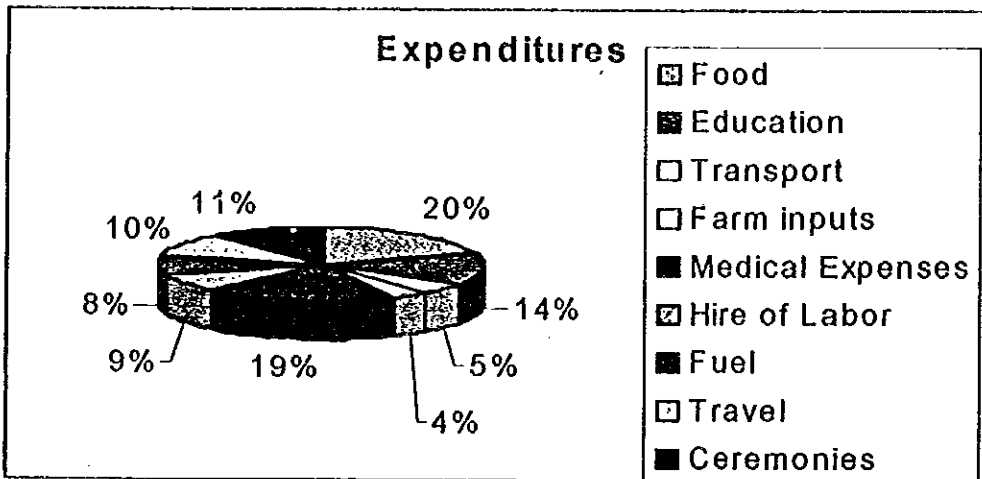


Figure 18 shows the yearly Expenditures (Total HH surveyed: 179)

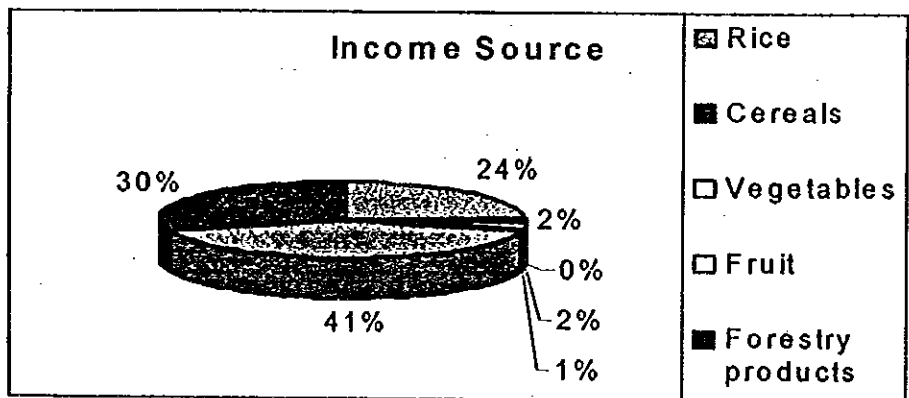


Figure 19 shows income (Total HH surveyed: 179)

1.5 GENERAL PROFILE OF DOWNSTREAM AREA

The socio-economic survey of the downstream area of Nam Ngiep I Hydroelectric Power Project was carried out from March 5 to March 18 1999. The survey was conducted at both the village and household levels.

As regard the village level survey, information was collected through the interview of the head of the village and / or his assistant. Three separate meetings were held with the Chief of the Agriculture and Forestry Office of Bolikhamsay Province, the Chief of Pakxan District and the Chief of Bolikhanh District. The purpose of these meetings is to obtain an overall perspective of the surveyed area and also to inform the local authorities on the purpose and scope of the survey.

The survey at household level was conducted at random based on five (5) percent of the total number of households at each village.

The scope of the socio-economic survey is summarized as follows:

1. Number of villages: 15 with 1,279 households and 6,836 persons
2. Number of surveyed households: 64 with 420 persons.

Among the fifteen (15) villages in the downstream area, five (5) located on the upper part of the downstream area are under the jurisdiction of the Bolikhanh District and the remaining under Pakxan District, Province of Bolikhamsay. Five (5) villages are located along the left bank of Nam Ngiep, one (1) on Nam Sao, a tributary of Nam Ngiep, about 2 kilometers upstream of the confluence and one (1) village on both bank of Nam Ngiep. The remaining are located along the National road No. 4, about 1 to 3 kilometers from the Nam Ngiep river. The details are given below:

1. Villages along Nam Ngiep:
 1. Hatkham, Bolikhanh District;
 2. Somseum,
 3. Nam Pa,
 4. Songkhon,
 5. Komsipchet,
2. Village on Nam Sao
 1. Tahua,
3. Villages along the National Road No. 4:

1. Houay Khon,
2. Nong Deng,
3. Thong Noi,
4. Thong Ngai,
5. Phonsi,
6. Thakokhen,
7. Nam Tek,
8. Nam Ngiep,

4. Village located on both sides of Nam Ngiep:

1. Sen-Oudom,

Most villages have been established for many years such as Ban Hat kham (146 years), Ban Thong Ngai and Ban Songkhon (100 years), Ban Nam Ngiep (97 years), Ban Somseum (82 years) and Ban Thong Noi (70 years). The number of persons per households varies from 4.6 persons in Ban Tahua to 6.6 persons in Ban Thong-Noi as compared the country average of 6.2 persons/household. Out of these 15 villages, three (3) villages have the number of households greater than the in-country average of 70 households per village. As shown in the following Table 1, Ban Houay Koun established 7 years ago has the number of households much greater than old villages mentioned above. This is due the fact that Ban Houay Koun village had been initially established as the Bolikhanh District. The headquarter of the then State Forestry Company No. 3 had also been stationed in Ban Houay Koun. For the time being, there are still a furniture workshop, a sawmill and a Forestry Technical School located in the villages.

The distance from villages to district center varies from 20 Kms for Ban Haykham to 6 Kms for Ban Thong Gnai. As shown in the location map, eight (8) villages are connected directly to the district center by either the National Road No. 13 or the National Road No. 4. The remaining villages are connected to the National Road No. 4 by access roads or tracks.

General data for villages located downstream of the dam site are shown in the following table:

TABLE 30: General Data

Village Name	Establishment (Years)	Number Of Households	Number of Population (1998)	Pers/HH	Distance to District center (Km)
Hat Kham	146	88	533	6.0	20
Tahua	19	55	252	4.6	18
Somscum	82	185	1136	6.1	13
Nam Pa	30	71	427	6.0	18
Houay Koun	7	281	1632	5.8	14
Nong - Deng	2	19	112	5.9	20
Thong - Noi	70	50	329	6.6	7
Thong - Gnai	100	62	340	5.5	6
Song Khon	100	42	239	5.6	8
Phonsi	36	48	276	5.7	7
Thakokkhen	35	58	349	6.0	7
Nam Tek	41	39	203	5.2	7
Nam Ngiep	97	67	331	4.9	7
Sen - Oudom	24	67	314	4.7	7
Komsipchet	8	147	363	2.4	7
TOTAL		1,279	6,836		

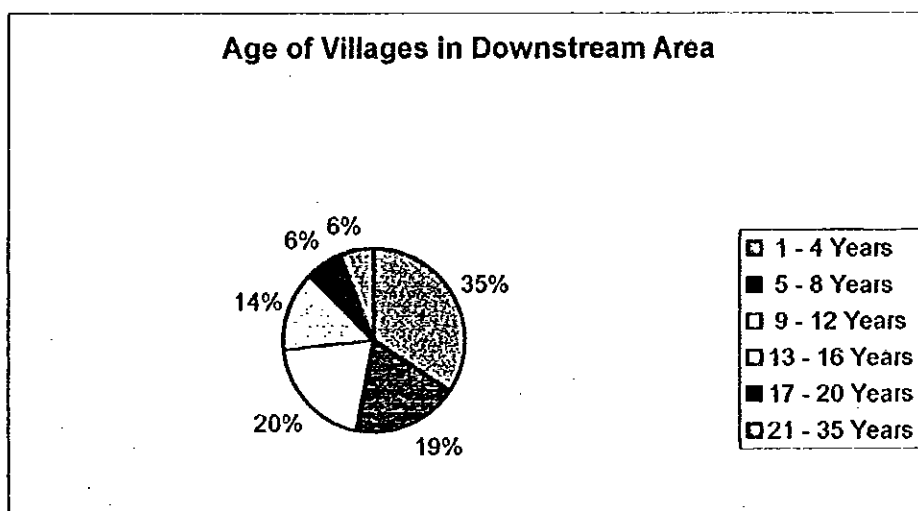


Figure 20 shows age of villages

1.6 Results of Downstream Socio-economic Survey

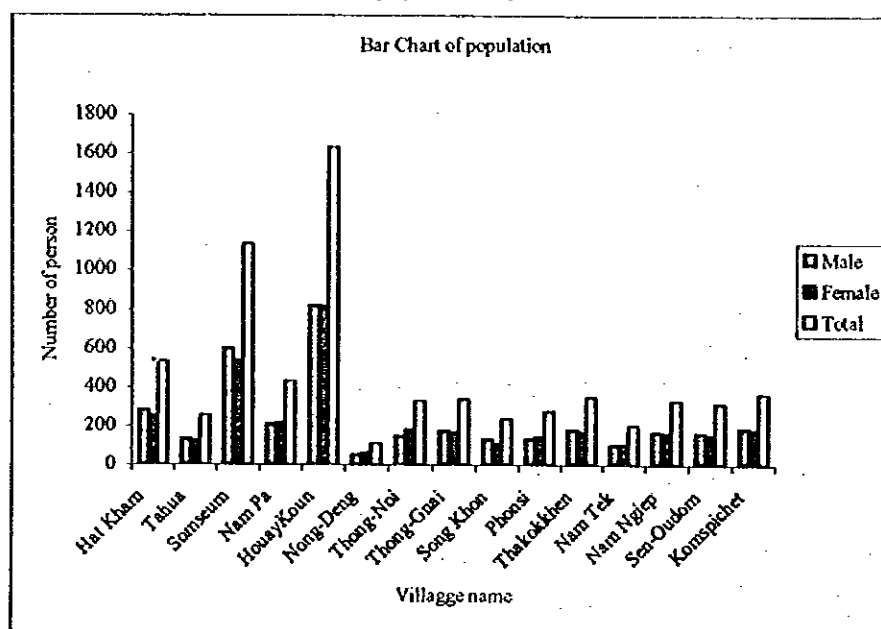
1.6.1 Population

The following table shows the number of population living in the downstream area in 1998 classified by sex.

TABLE 31: Population in 1998

Village name	Male		Female		Total	
	Number	%	Number	%	Number	%
Hat Kham	283	53.10	250	46.90	533	100
Tahua	132	52.38	120	47.62	252	100
Somseum	600	52.82	536	47.18	1136	100
Nam Pa	210	49.18	217	50.82	427	100
Houay Koun	817	50.06	815	49.94	1632	100
Nong-Deng	52	46	60	54	112	100
Thong-Noi	149	45.29	180	54.71	329	100
Thong-Gnai	175	51.47	165	48.53	340	100
Song Khon	132	55.23	107	44.77	239	100
Phonsi	133	48.19	143	51.81	276	100
Thakokkhen	181	51.86	168	48.14	349	100
Nam Tek	101	49.75	102	50.25	203	100
Nam Ngiep	169	51.06	162	48.94	331	100
Sen-Oudom	162	51.59	152	48.41	314	100
Komsipchet	186		177		363	
Total	3,582		3,354		6,836	

Figure 21 shows number of population of downstream



The 15 villages include 1,279 households and a total population of 6,836 people. The average number of persons per household is 5.4. The distribution of women and men is not so different from village to village and shows a higher percentage of female as compared to the average in the country in 1997:

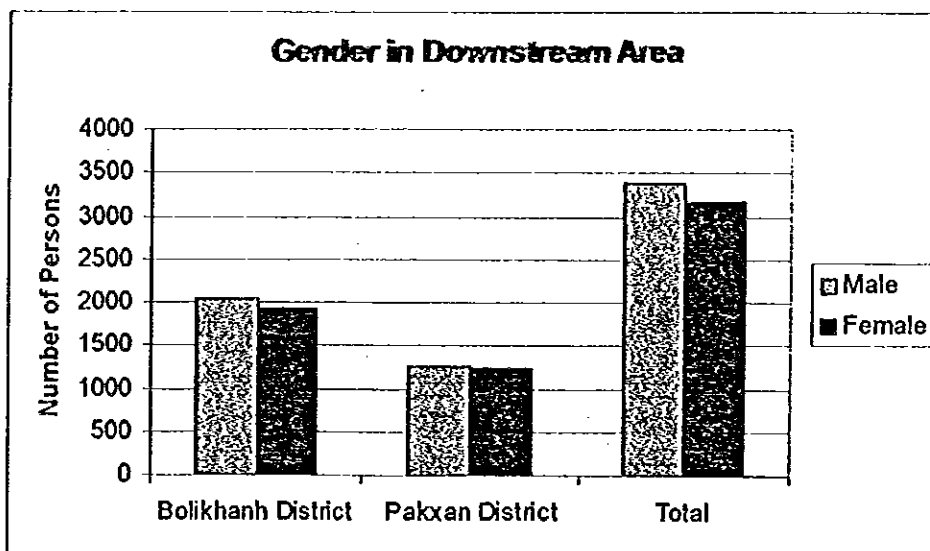


Figure 22 shows gender in downstream area

The population is composed of three main ethnic groups: Lao Loum, Lao Theung and Lao Soung. Lao Loum accounts for about 90% of the total households followed by the Lao Theung and Lao Soung, about 8 % and 2 % respectively. Lao Soung households could be found only in Hatkham village the most upstream village located about five (5) kilometers from the damsite. They represent about 19 % of the total households in the village. Seven (7) villages are populated only by the Lao Loum, namely Ban Somseum, Nong Deng, Thong Noi, Thong Ngai, Nam Tek, Nam Ngiep and Sen-Oudom. While Ban Thakokhen has only the Lao Theung.

TABLE 32: Number of Households by Ethnicity

Village Name	Ethnic Groups					
	Lao Loum	%	Lao Theung	%	Lao Soung	%
Hat Kham	71	81	0	0	17	19
Tahua	45	81	10	19	0	0
Somseum	212	100	0	0	0	0
Nam Pa	58	81	13	19	0	0
Houay Koun	270	96	11	4	0	0
Nong - Deng	19	100	0	0	0	0
Thong - Noi	50	100	0	0	0	0
Thong - Gnai	62	100	0	0	0	0
Song Khom	37	88	5	12	0	0
Phonsi	47	97	1	3	0	0
Thakokkhen	0	0	57	100	0	0
Nam Tek	39	100	0	0	0	0
Nam Ngiep	67	100	0	0	0	0
Sen - Oudom	67	100	0	0	0	0
Komsipchet	146	100				
TOTAL	1191	90	97	8	17	2

Population classified according to age is shown in the following Table 4. Approximately 38% of the population in the downstream area are under the age of 14 years. The active population constituted by persons between 15 years and 54 years old is the major group and amounts to 53%

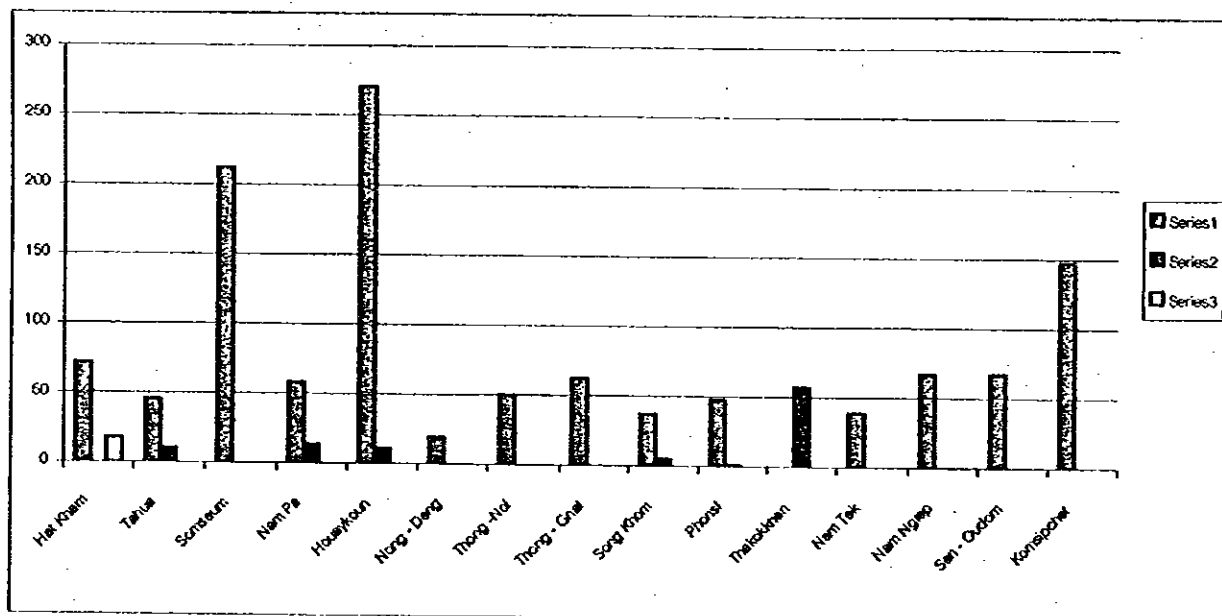


Figure 23 shows population

The comparison between the population in the downstream area and the country-wide population in mid-1997 given in the Table 5 below indicates that:

TABLE 33 : Comparison of Population Classified by Age

Age Group (years)	Downstream area	Country-Wide
0 to 9	21	31
10 to 14	18	13
15 to 54	53	48
55 to 64	5	4
Over 64	3	4

The change in the downstream population from 1995 to 1998 is as follows below:

TABLE 34: Change in Population from 1995 to 1998

Village name	Population In 1998	Population In 1997	Population In 1996	Population In 1995
Hat Kham	533	547	512	501
Tahua	253	234	230	225
Somseum	1,136	1,129	1,122	1,115
Nam Pa	427	414	405	401
Houay Koun	1,632	1,552	1,541	1,536
Nong-Deng	112	98	92	88
Thong-Noi	329	324	320	316
Thong-Gnai	340	331	322	330
Songkhon	343	332	314	307
Phonsi	276	270	265	259
Thakokkhen	349	320	311	304
Nam Tek	203	200	198	194
Nam Ngiep	333	324	313	307
Sen-Oudom	313	301	292	281
Komsipchet	363	NA	NA	NA
Total	6836	6,376	6,237	6,164

Note: NA= Not available data

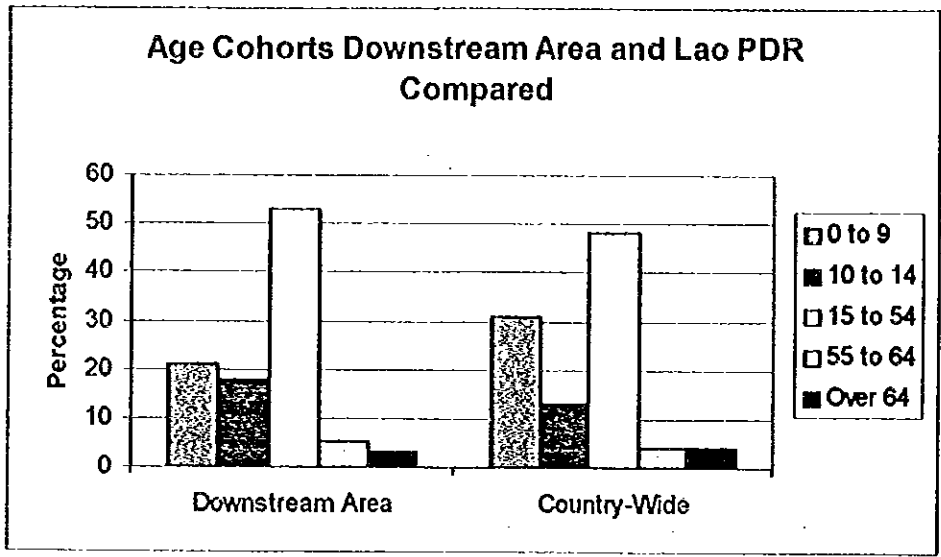


Figure 24 shows age cohorts in downstream districts

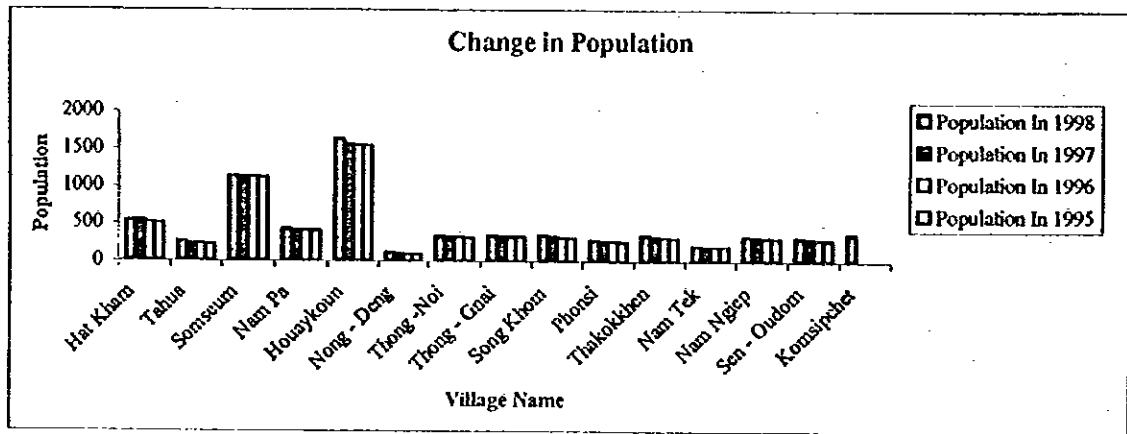


Figure 25 shows Change in Population from 1995 to 1998

During the last four years from 1995 to 1998, the number of villagers has increased at a rate of 2.4% per year as compared to the country wide rate of 2.6%. It can be noticed that during 1995-1998, the change of population in Ban Hat Kham was rather erratic with a high rate of increase during 1995-96.

The immigration into the downstream occurs every year with a sharp increase in 1998. The total number of immigrant households in 1997 was only 13 households (12 Lao Loum households and 1 Lao Soung households), and increased to 49 households in 1998 (43 Lao Loum households, 2 Lao Theung households and 4 Lao Soung households).

About 43% of the immigrant households were settled in Ban Houay Koun. The data on the immigration during 1995-1998 is shown the following Table and Figure 2.

TABLE 35: Recent Immigration from 1995 to 1998

Village	1998			1997			1996			1995		
	LS	LT	LL	LS	LT	LL	LS	LT	LL	LS	LT	LL
Hat Kham	4	0	0	1	0	0	0	0	0	0	0	0
Tahua	0	1	1	0	0	3	0	0	1	0	0	0
Somseum	0	0	3	0	0	4	0	0	2	0	0	1
Nam Pa	0	0	0	0	0	0	0	0	0	0	0	0
Houay Koun	0	0	21	0	0	0	0	0	0	0	0	0
Nong-Deng	0	0	3	0	0	0	0	0	0	0	0	0
Thong-Noi	0	0	0	0	0	0	0	0	0	0	0	0
Thong-Gnai	0	0	2	0	0	0	0	0	0	0	0	0
Soung Khon	0	0	5	0	0	0	0	0	0	0	0	0
Phonsi	0	0	0	0	0	3	0	0	5	0	0	0
Thakokkhen	0	1	0	0	0	0	0	0	0	0	0	0
Nam Tek	0	0	0	0	0	2	0	0	2	0	0	0
Nam Ngiep	0	0	3	0	0	0	0	0	0	0	0	0
Sen-Oudom	0	0	5	0	0	0	0	0	0	0	0	0
Komsipchet*	-	-	-	-	-	-	-	-	-	-	-	-
Total	4	2	43	1	0	12	0	0	10	0	0	1

LS : Lao Soung ; LT : Lao Theung; LL : Lao Loum
 (* : Army village, data not available)

During the same period of 1995-1998, the downstream area had 18 households moved out to other areas. All emigrants are of Lao Loum. The comparison between the immigration and emigration during the period of 1995-1998 indicates an increment of 55 households in four years.

TABLE 36: Emigration During 1985-1998

Village	1998			1997			1996			1995		
	LS	LT	LL	LS	LT	LL	LS	LT	LL	LS	LT	LL
Hat Kham	0	0	1	0	0	0	0	0	1	0	0	0
Tahua	0	0	0	0	0	1	0	0	0	0	0	0
Somseum	0	0	1	0	0	3	0	0	2	0	0	0
Nam Pa	0	0	2	0	0	0	0	0	0	0	0	0
Houay Koun	0	0	1	0	0	1	0	0	0	0	0	0
Nong-Deng	0	0	0	0	0	0	0	0	0	0	0	0
Thong-Noi	0	0	0	0	0	0	0	0	0	0	0	0
Thong-Gnai	0	0	0	0	0	0	0	0	0	0	0	0
Song Khom	0	0	0	0	0	0	0	0	3	0	0	0
Phonsi	0	0	0	0	0	0	0	0	2	0	0	0
Thakokkhen	0	0	0	0	0	0	0	0	0	0	0	0
Nam Tek	0	0	0	0	0	0	0	0	0	0	0	0
Nam Ngiep	0	0	0	0	0	0	0	0	0	0	0	0
Sen-Oudom	0	0	0	0	0	0	0	0	0	0	0	0
Komsipchet*	-	-	-	-	-	-	-	-	-	-	-	-
Total :	0	0	5	0	0	5	0	0	8	0	0	0

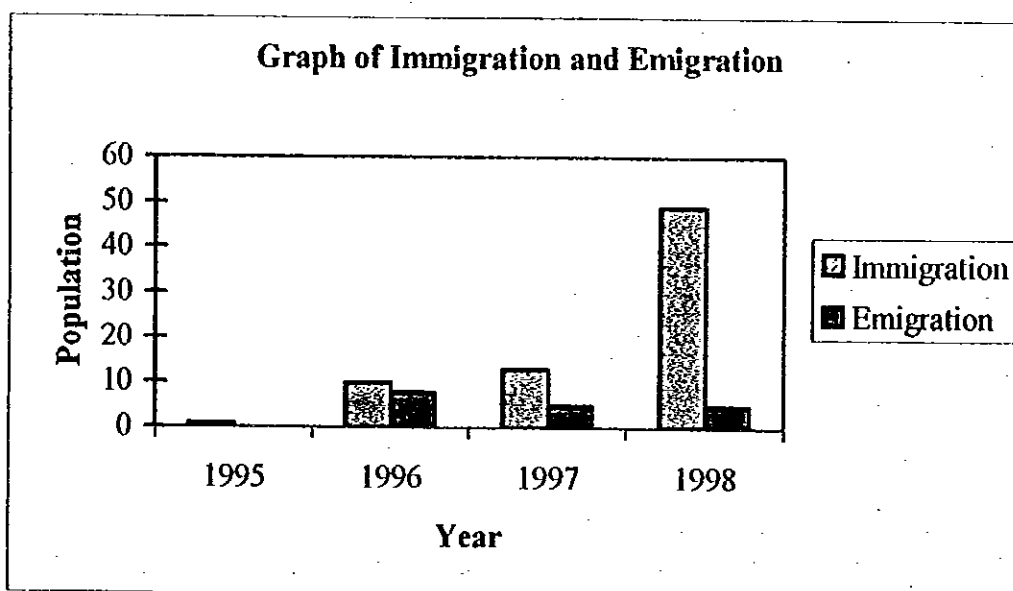


Figure 26 shows the Immigration and emigration during 1995-98

The family tie normally plays a central role in the decision on migration. Moving in or out with relatives is a common practice and follows a pattern observed in other areas as well: a pioneer family settles in a new area and is followed by relatives once they have safely established themselves.

There is, however, little doubt that lack of available land and/or economic consideration are the real underlying factors for migration decision.

The surveyed households classified by ethnic groups are given below:

TABLE 37: Population Classified by Ethnicity (Total HH surveyed ; 64)

Items	Lao Soung	Lao Theung	Lao Loum
Households	1	3	60
Population	7	23	390

1.6.2 Religion

The main religion in the downstream area is Buddhism. There are 967 households of Buddhists, covering about 85 % of the total households living in the downstream area. Christian households are 141, about 12 % and 32 households are Animists, about 3 %. Phonsi and Thakokkhen villages have no Buddhist and Animist households. All villagers are Christian. Some Christian households have settled in Houay Koun and Nam Pa villages. Animist households are only in Hatkham, Som Seum and Houay Koun villages.

All three religions/beliefs are present only Houay Koun village: Buddhists (89 %), Christians (7 %) and Animists (4 %). The total number of temples/churches downstream is 10. Almost each village has a temple or church, except Hatkham, Som Seum, Nam Pa and Nong Deng village.

Data on the religion collected from the survey is shown in the table below.

TABLE 38: Religion Affiliation in the surveyed villages

Village Name	Buddhist (HH)	Christian (HH)	Animism (HH)	Number of Temples/Churches
Hat kham	71	0	17	0
Tahua	55	0	0	1
Somseum	181	0	4	0
Nam Pa	58	13	0	0
Houay koun	250	20	11	1
Nong-Deng	19	0	0	0
Thong-Noi	50	0	0	1
Thong-Gnai	62	0	0	1
Song khon	42	0	0	1
Phonsi	0	48	0	1
Thakokkhen	0	58	0	1
Nam Tek	38	1	0	1
Nam Ngiep	71	1	0	1
Sen-Oudom	67	0	0	1
Komsipchet	101	27	19	
TOTAL :	1065	168	51	10

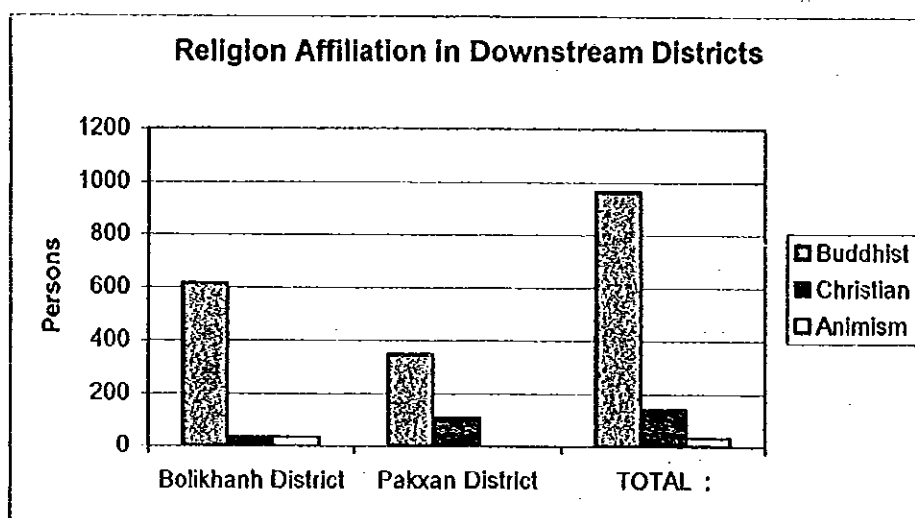


Figure 27 shows Religion affiliation in downstream

1.6.3 Village organization

Most villages have mass organization: Lao Women's Union; the Lao Youth's Organization, Front of National Construction. Some villages have also community forest management groups and irrigation water user groups.

About 281 people are organized members of mass organizations (162 people for the Lao Women's Union and 119 people for the Lao Youth's Organization). These two organizations are the most important mass organizations. Only Houay Koun village has no membership of the Lao Women's Union and the Lao Youth's Union.

TABLE 39: Village Organizations

Village	Membership (pers.)					
	Lao Women's Union	Lao Youth's Union	Lao National Front for Construction	Forest User Groups	Irrigation User	Fishing Cooperation Groups
Hat Kham	15	8	12	2	0	0
Tahua	15	14	4	0	0	0
Somscum	8	15	0	0	0	0
Nam Pa	10	10	5	2	0	0
Houay Koun	0	0	21	0	0	0
Nong-Deng	11	11	1	0	0	0
Thong-Noi	13	1	3	0	0	0
Thong-Gnai	17	13	10	0	10	0
Song Khon	8	9	21	1	0	0
Phonsi	19	14	2	0	0	0
Thakokkhen	12	15	1	1	0	0
Nam Tek	2	2	2	0	0	0
Nam Ngiep	6	0	2	0	2	0
Sen-Oudom	26	7	1	2	2	0
Komsipchet *	-	-	-	-	-	-
Total	162	119	85	8	14	0

(*: Data not available)

1.6.4 Occupation

The main occupation of the downstream people is farming. There are in total 1,123 farmer households of which 646 are lowland rice farmer households and 477 upland rice farmer households. In the villages located along the Nam Ngiep upper reach of the downstream area such as Ban Hatkham, Ban Tahua and Nam Pa, the number of upland rice farmer households is greater than the low land rice farmers. This is due to unsuitable topographic conditions as these villages are located in a rather mountainous area with limited flat land

for paddy field. Only four (4) villages located in the lowest basin, namely Thong Ngai, Song khon, Nam Ngiap and Sen-Oudom have no longer practiced upland rice farming.

Besides the farming, the other main occupations are related to government services, handicrafts and others. There is only one household in Sen Oudom that has chosen the fishing as main occupation. Most people in the downstream area are fishing frequently in the Nam Ngiap mainly for their own consumption.

The survey at household level indicates that the main occupation of about thirty (30) percent of people over fourteen year old of the surveyed households is low land rice farmer and eighteen percent (18%) is upland rice farmer.

TABLE 40: Number of Households Classified by Main Occupation (Survey at village level)

Village Name	Low land rice farm.	Up land rice farm.	Fi- shing	Transport	Car- Pen- ter	Wear- ver	Han- di- Craft	Tra- der	Const ruc- tion	Me- cha- nic	Tea- Cher	Nurse	Mili- tary	Police	Other	Total
									Wor- ker							
<i>Borikhan District</i>																
Hat kham	0	79	0	0	0	0	0	0	0	0	6	3	0	0	0	88
Tahua	29	15	0	4	0	1	0	1	0	0	2	0	3	0	0	55
Somseum	102	49	0	0	1	5	0	8	1	0	14	0	0	0	0	185
Nam Pa	47	18	0	0	0	0	0	0	0	0	4	0	2	0	0	71
Houay koun	180	53	0	0	8	0	0	20	0	0	10	0	5	5	0	281
Sub total	358	214	0	4	9	6	0	29	1	0	36	3	10	5	5	680
<i>Pakxan District</i>																
Nong-Deng	9	5	0	0	0	0	0	0	0	2	1	0	0	0	0	19
Thong-Noi	26	6	0	0	0	0	0	5	0	0	3	1	4	1	4	50
Thong-Gnai	57	0	0	0	0	0	0	0	0	0	4	0	1	0	0	62
Song khon	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Phonsi	20	14	0	0	0	1	2	0	0	3	0	1	7	0	0	48
Thakokkhen	35	12	0	0	0	0	10	0	0	0	0	0	1	0	0	58
Nam Tek	22	10	0	0	1	0	0	1	0	0	0	0	5	0	0	39
Nam Ngiep	49	0	0	0	5	6	0	1	1	0	3	1	1	0	0	67
Sen-Oudom	47	0	1	0	1	0	0	0	0	0	7	1	9	1	0	67
Komsipchet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147	0
Sub total	307	47	1	0	7	7	2	11	7	0	5	4	28	149	6	452
Total	1023	475	1	8	25	7	14	11	65	2	5	10	48	159	16	1812

1.6.5 Housing condition (Household level survey)

About forty five percent (45%) of the houses is in good condition and about twenty percent (20%) in fair condition. The majority of the houses have wooden floor and columns.

TABLE 41: House Condition (Total HH surveyed: 64)

Village name	Good		Condition Fair		Poor		Total	
	HH	%	HH	%	HH	%	HH	%
Hat kham	2	40	1	20	2	40	5	100
Tahua	0	0	2	67	1	33	3	100
Somseum	5	50	4	40	1	10	10	100
Nam Pa	2	50	1	25	1	25	4	100
Houay Koun	6	43	3	21	5	36	14	100
Nong deng	1	50	0	0	1	50	2	100
Thong Noi	1	33	1	33	1	33	3	100
Thong Gnai	3	75	1	25	0	0	4	100
Song Khom	0	0	3	100	0	0	3	100
Phonsi	1	33	1	33	1	33	3	100
Thakokkhen	2	67	1	33	0	0	3	100
Nam Tek	1	50	1	50	0	0	2	100
Nam Ngiep	2	50	1	25	1	25	4	100
Sen Oudom	3	75	1	25	0	0	4	100
Komsipchet*	-	-	-	-	-	-	-	-
TOTAL:	29		21		14		64	

(* : Data not available)

1.6.6 Health

The result of the survey indicates that malaria is the main cause of mortality of the downstream people followed by cholera and dengue fever.

From 1980 to 1997, 18 people in the downstream area have died of malaria, 3 due to cholera and 1 person due to dengue fever. The number of downstream population under medical care from malaria , cholera and from dengue fever are respectively 21, 36 and 10 people. The number of patients under treatment might not reflect the actual situation of diseases in the area. Limited health facilities could be one of the factors influencing the number of patients under medical care.

The following table presents epidemics and diseases suffered by villagers located downstream of the proposed dam site.

TABLE 42 ; Epidemics & Diseases suffered by villages in Downstream Area

Village	Malaria			Cholera			Typhoid	
	Year	Death Toll (pers)	Number under Medical Care	Year	Death Toll (pers)	Number under Medical Care	Year	Number under Medical Care
<i><u>Bolikhanh District</u></i>								
Hat Kham	1994	-	-	1970	-	-	-	-
Tahua	1997	-	7	1980	-	5	-	-
Somseum	1997	3	2	1996	2	5	-	-
Nam Pa	1980	2	-	1980	-	-	-	-
Houay Koun	1997	3	5	1998	-	6	-	-
<i><u>Paksan District</u></i>								
Nong-Deng	1996	4	5	1990	-	2	-	-
Thong-Noi	-	-	-	1997	-	10	-	-
Thong-Gnai	1992	-	-	1983	1	-	-	-
Song Khon	-	-	-	1996	-	-	-	-
Phonsi	1996	4	2	1995	-	5	-	-
Thakokkhen	1997	2	-	1997	-	-	-	-
Nam Tek	-	-	-	1996	-	3	-	-
Nam Ngiep	-	-	-	-	-	-	-	-
Sen-Oudom	-	-	-	1985	-	-	-	-
Konsipchet	-	-	-	-	-	-	-	-
Total		18	21		3	36		

The present health facilities are rather limited. In the 14 villages surveyed in the downstream area, health facilities consist of only 1 hospital and 2 dispensaries.

The hospital of 198 m² is located in Houay Koun village. There are 6 rooms and 20 beds. The hospital has been constructed since 17 years. Its general condition is fair and there are 4 medical staff working in the hospital.

The two dispensaries are located in Som Seum and Sen Oudom village. The size of the dispensaries in Som Seum and Sen Oudom is respectively 32 m² and 40 m². The two dispensaries together have 5 rooms, 5 beds and 5 medical staff. The dispensary in Som Seum village is 20 years old and the one in Sen Oudom village 14 years old. The general condition of the two dispensaries is fair.

1.6.7 Education

The basic education facility in the village is the primary school, while secondary school is only available in Sen Oudom village. The number of classrooms varies from 2 in Nong Deng and Song khone villages to 8 in Somseun village. The secondary school in Sen Oudom established 19 years ago has only three (3) classrooms. Each village has a primary school, except Thong Gnai, Nam Tek and Nam Ngiep village. The children of those three villages attend a primary school at neighboring villages.

The largest primary school is 400 m² and the smallest is 12 m². Their general condition varies considerably depending on the age of the schools. The oldest primary school has been constructed since 29 years and the newest one has been established for one (1) year only. The primary schools in good condition are located in Nong Deng, Thong Noi and Thakokhen village; those of poor condition are in Som Seum, Houay Koun, Song Khom and Sen Oudom villages.

The total number of primary schools in those 14 villages is 11 with 47 classrooms. There are 65 teachers and 1,216 students attending primary school. Most primary schools are made of wood or bamboo. Generally, the roof is made of amboo and corrugated plates. The floors are made of cement or earth.

The size of the secondary school in Sen Oudom village is 216 m². There are 4 classrooms. The secondary school has been constructed since 14 years. The number of students attending the secondary school is 90 and there are 10 teachers.

Education level

The education level of people living in the downstream area is generally very low and only a small number has completed high school and university level. Approximately 28 % of the total number of the downstream people has ever undergone some level of education. The number of illiterate people is therefore quite high.

The village having the most persons that have attended high school is Som Seum village (45 people) and those with the least are Nam Pa, Thong Noi, Thakokkhen and Nam Ngiep villages (1 person each) and for Nong Deng village there is nobody attending high school. People with University degree are only found in Houay Koun village.

The following table presents the education level of the local people.

TABLE 43: Education Level of the Population in Downstream Area (Survey at the village level)

Village Name	University (Persons)	High School (Persons)	Secondary School (Persons)	Primary School (Persons)	Literate (Persons)	Illiterate (Persons)
Hat Kham	-	4	24	150	24	-
Tahua	-	4	10	20	41	6
Somscum	-	45	150	250	-	60
Nam Pa	-	1	10	32	28	-
Houay Koun	5	20	50	400	0	10
Nong-Deng	-	-	6	20	30	8
Thong-Noi	-	1	6	10	50	7
Thong-Gnai	-	10	35	149	18	24
Song Khon	-	4	13	25	19	50
Phonsi	-	3	10	50	50	20
Thakokkhen	-	1	25	49	21	10
Nam Tek	-	3	12	101	-	10
Nam Ngiep	-	1	25	134	17	25
Sen-Oudom	-	-	-	-	-	-
Komsipchet	2	80	48	10	-	-
Total	7	123	230	948	205	164

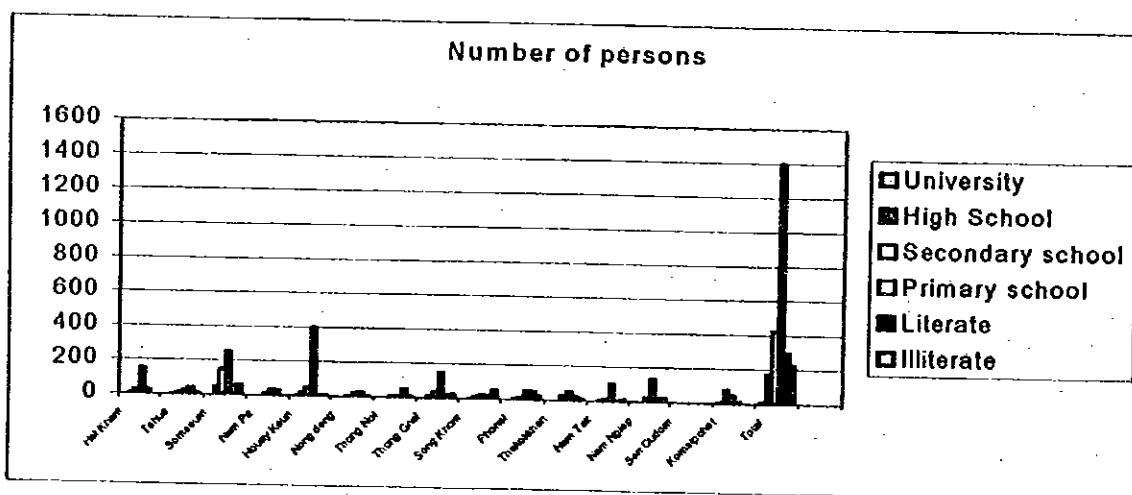


Figure 28 shows Education Level in Downstream Area

1.6.8 Water supply for drinking and domestic use

There is no public water supply facility in the downstream area. Most villages have either the dug wells or drilled wells equipped with hand pump as water source for drinking and domestic use, except the following four villages (Hatkham, Nam Pa, Nong Deng and Song khoun) that have to rely on Nam Ngiep river. The total number of dug and drilled wells

are respectively 89 and 16 wells. Drilled wells could be found only in six villages and their number in each village is still limited as compared to the population of these villages.

TABLE 44: Water Supply

Village Name	Number of dug wells	Number of Hand pump	Drilled wells (Diesel)	Drilled wells (Electric.)	Number of Connections to piped system	Public water supply
Hat Kham	0	0	0	0	0	0
Tahua	3	0	0	0	0	0
Somseum	20	0	0	0	0	0
Nam Pa	0	0	0	0	0	0
Houay Koun	100	5	0	0	0	0
Nong-Deng	0	2	0	0	0	0
Thong-Noi	6	1	0	0	0	0
Thong-Gnai	12	2	0	0	0	0
Song Khom	0	0	0	0	0	0
Phonsi	5	2	0	0	0	0
Thakokkhen	2	0	0	0	0	0
Nam Tek	12	0	0	0	0	0
Nam Ngiep	23	0	0	0	0	0
Sen-Oudom	6	4	0	0	0	0
Komsipchet	5	0	0	0	0	0

TABLE 45: Source of Drinking Water in the Dry Season (Total HH surveyed; 64)

Village Name	Dugwell		Drilled well		River		Spring water		Rain keep in Jar		Connected to water supply system		Total	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Hat Kham	0	100	0	0	0	0	0	0	0	0	0	0	0	100
Tahua	8	53	1	7	4	27	0	0	2	13	0	0	15	100
Somseum	1	17	0	0	4	67	0	0	1	17	0	0	6	100
Nam Pa	6	43	3	21	4	29	0	0	0	0	1	7	14	100
Houay Koun	0	0	2	100	0	0	0	0	0	0	0	0	2	100
Nong deng	2	50	2	50	0	0	0	0	0	0	0	0	4	100
Thong Noi	4	80	1	20	0	0	0	0	0	0	0	0	5	100
Thong Gnai	0	0	0	0	3	100	0	0	0	0	0	0	3	100
Song Khom	1	33	1	33	1	33	0	0	0	0	0	0	3	100
Phonsi	3	75	0	0	1	25	0	0	0	0	0	0	4	100
Thakokkhen	1	100	0	0	0	0	0	0	0	0	0	0	1	100
Nam Tek	4	80	0	0	1	20	0	0	0	0	0	0	5	100
Nam Ngiep	3	75	0	0	1	25	0	0	0	0	0	0	4	100
Sen Oudom														
Komsipchet*														
Total :	36		10		24		0		8		1		79	

(*: data not available)

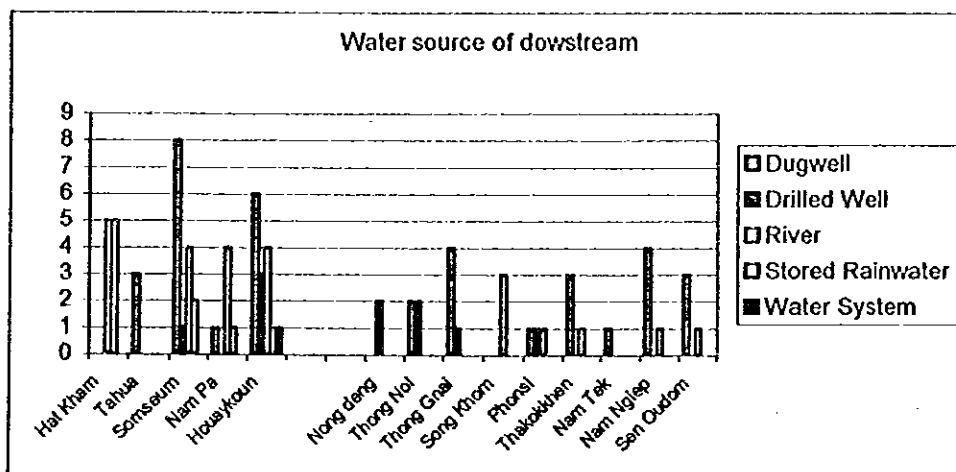


Figure 29 shows sources of water in downstream villages

1.6.9 Transport

There are 727 boats in the 14 villages (466 boats without motor and 261 motor boats) about 52 boats per villages, 61 tractors, 9 cars, 22 Tuk Tuks and 8 motorbikes.

It is evident that boats are an important transport means for those living in the downstream area and are used for fishing and travelling to the farming land and remote areas of the region.

The data collected at village level is given in the following table:

TABLE 46: Transport in Downstream Area

Village Name	Boats(Without Motor)	Motor Boats	Tractors	Trucks	Pickups	Cars	Tuk Tuk	Moto-bike
Hat Kham	10	20	0	0	0	0	0	0
Tahua	15	4	1	0	0	0	0	0
Somseum	58	120	10	0	0	0	5	0
Nam Pa	71	23	2	0	0	0	0	0
Houay Koun	30	6	5	0	0	0	8	2
Nong-Deng	8	1	0	0	0	0	0	1
Thong-Noi	12	2	5	0	0	0	0	5
Thong-Gnai	26	0	15	0	0	0	2	0
Song Khon	47	11	3	0	0	0	0	0
Phonsi	20	10	0	0	0	6	0	0
Thakokkhen	42	15	3	0	0	0	0	0
Nam Tek	40	16	3	0	0	3	1	0
Nam Ngiep	67	23	7	0	0	0	5	0
Sen-Oudom	20	10	7	0	0	0	1	0
Komsipchet*	NA	NA	NA	NA	NA	NA	NA	NA
Total	466	261	61	0	0	9	22	8

(*: Data not available)

About seventy three percent (73%) of the surveyed households has boats or motor boats, even though living along the National Road No. 4 but none of the households in Houay Khoun has a boat (see following table)

TABLE 47: Number of Boats (Total III surveyed: 64)

Village name	Number of Boats				Total	
	Without motor	%	With motor	%	Number	%
Hat Kham	2	40	3	60	5	100
Tahua	0	0	1	100	1	100
Somseum	3	33	6	67	9	100
Nam Pa	2	29	5	71	7	100
Houay Koun	0	0	0	0	0	0
Nong deng	1	100	0	0	1	100
Thong Noi	2	100	0	0	2	100
Thong Gnai	2	67	1	33	3	100
Song Khom	2	50	2	50	4	100
Phonsi	1	50	1	50	2	100
Thakokkhen	0	0	1	100	1	100
Nam Tek	1	50	1	50	2	100
Nam Ngiep	2	40	3	60	5	100
Sen Oudom	3	60	2	40	5	100
Komsipchet	NA		NA		NA	
Total	21		26		47	

(NA: Data not available)

In the wet season, about sixty five percent (65%) to seventy five percent (75%) of the households travel by road to other villages, district and provincial center, fifteen percent (15%) to twenty six percent (26%) by both road and river and about ten percent (10%) by boat only. The households using boats only are those living in the two most upstream villages: Ban Hatkham and Ban Ta Hua. In the dry season, the number of households relying exclusively on boat as means of transport is slightly reduced.

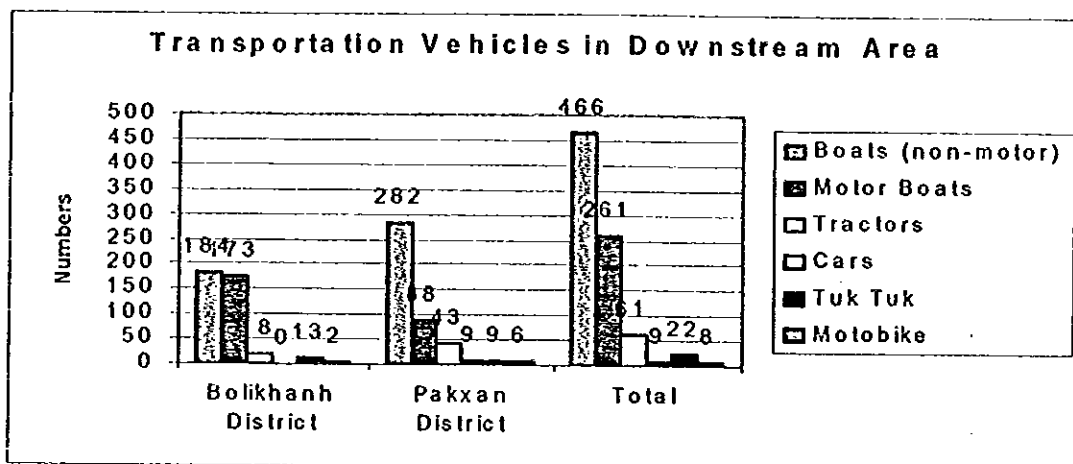


Figure 30 shows Transportation vehicles and boats in downstream area

1.6.10 Land use

The total land area for lowland agricultural production downstream is 730 ha, about 0.11 ha per capita which is slightly higher than the countrywide average of 0.09ha/capita. The average yield of rain fed rice field is about 1.9 tons/ha. The total land area of irrigated agriculture during wet season is 118 ha and during dry season 223 ha. The average yield of irrigated rice production is 3 tons/ha. The main water source for pumping irrigation development is the Nam Ngiep river.

The total production area of upland rice field is 241 ha and its yield is 1.6 tons/ha. The total garden area and grassland are respectively 407.5 ha and 10 ha.

Most of land areas for lowland agricultural production are located in Houay Koun village covering about 30 % of its total lowland area. Sen Oudom village has a garden area more than other villages, covering almost 72 % of the total garden area in the 14 villages. Land for livestock raising only exists in Nam Tek village.

TABLE 48: Land Use by Village in the Downstream area

Village Name	Low Land Rice (Ha)	Irrigation wet season (Ha)	Irrigation Dry season (Ha)	Upland Rice field (Ha)	Garden (Ha)	Grazing Land (Ha)
Hat Kham	7	0	0	49	16	0
Tahua	14	0	0	31	3	0
Somseum	89	0	0	40	20	0
Nam Pa	36	0	0	14	8	0
Houay Koun	222	0	107	66	0	0
Nong-Deng	10	0	0	6	0	0
Thong-Noi	78	0	0	0	10	0
Thong-Gnai	94	81	32	0	6	0
Song Khon	39	0	0	0	29	0
Phonsi	20	0	0	10	0	0
Thakokkhen	51	0	0	25	5	0
Nam Tek	22	0	0	0	7	10
Nam Ngiep	6	37	34	0	10	0
Sen-Oudom	56	0	50	0	294	0
Komsipchet*	-	-	-	-	-	-
Total	743	118	223	241	408	10

(* = Data not available)

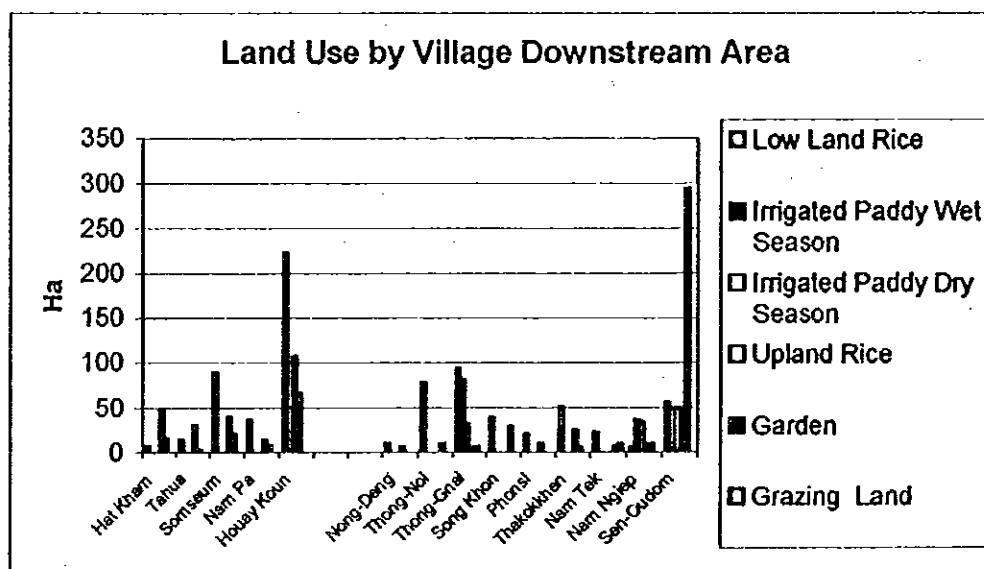


Figure 31 shows Land Use of the Downstream Area

All villages in the downstream area consider rice as the most important crop followed by either maize, cassava or sugarcane. The following Table gives the list of the three most important crops in each village.

TABLE 49: Three Most Important Crops

Village Name	Three most important crops		
	First	Second	Third
Hatkham	Rice	Sugarcane	Maize/Cassava
Tahua	Rice	Banana	Maize
Somseum	Rice	Sugarcane	Maize
Nam Pa	Rice	Maize	Cassava
Houay Koun	Rice	Maize	Cassava
Nong Deng	Rice	Banana	Cassava
Thong Noi	Rice	Sugarcane	Cassava
Thong Ngai	Rice	Banana	Maize
Song khon	Rice	Sugarcane	Banana
Phonsi	Rice	Banana	Maize
Thakokhen	Rice	Sugarcane	Cassava
Nam Tek	Rice	Sugarcane	Banana
Nam Ngiap	Rice	Maize	Vegetable
Sen Oudom	Rice	Vegetable	Banana
Komsipchet	NA	NA	NA

(NA = Not available data)

Data collected at the fourteen (14) villages indicate that flooding occurs more frequently than other natural disasters except the three villages located along the upper reach, namely Hatkham, Tahua and Somseum villages. The details are given in the Table below:

TABLE 50: Natural Disaster of Lowland in the Downstream area

Village name	Drought	Flood	Erosion	Landslide	Pest
Hat Kham	2	4	4	4	3
Tahua	2	4	4	4	1
Somseum	2	2	4	4	2
Nam Pa	4	1	4	4	1
Houay Koun	1	1	4	4	2
Nong-Deng	3	1	4	4	1
Thong-Noi	1	1	4	4	3
Thong-Gnai	3	1	4	4	1
Song Khon	2	1	4	4	3
Phonsi	2	1	2	4	3
Thakokkhen	3	1	4	4	1
Nam Tek	3	1	3	4	2
Nam Ngiep	3	1	4	4	3
Sen-Oudom	3	1	4	4	3
Komsipchet	NA	NA	NA	NA	NA

Note :

Code 1 : Frequent
 Code 2 : Sometimes
 Code 3 : Rare
 Code 4 : Never

NA= Data not available

As shown in the following table, the survey on the land tenure indicates that all households either own or use freely the agricultural upland and only three (3) households have to rent rice field.

TABLE 51: Lowland Rice field Tenure (Total HH surveyed: 64)

Village Names	Owned		Rented		Use Freely		Total	
	HH	%	HH	%	HH	%	HH	%
Hat Kham	0	0	0	0	1	100	1	100
Tahua	1	50	0	0	1	50	2	100
Somseum	6	86	0	0	1	14	7	100
Nam Pa	6	100	0	0	0	0	6	100
Houay Koun	4	100	0	0	0	0	4	100
Nong deng	1	100	0	0	0	0	1	100
Thong Noi	3	100	0	0	0	0	3	100
Thong Gnai	3	75	1	25	0	0	4	100
Song Khom	3	60	1	20	1	20	5	100
Phonsi	2	100	0	0	0	0	2	100
Thakokkhen	2	67	0	0	1	33	3	100
Nam Tek	1	100	0	0	0	0	1	100
Nam Ngicp	3	75	1	25	0	0	4	100
Sen Oudom	4	100	0	0	0	0	4	100
Komsipchet*	-	-	-	-	-	-	-	-
Total :	39		3		5		47	

Komsipchet* = Army village no information for land tenure

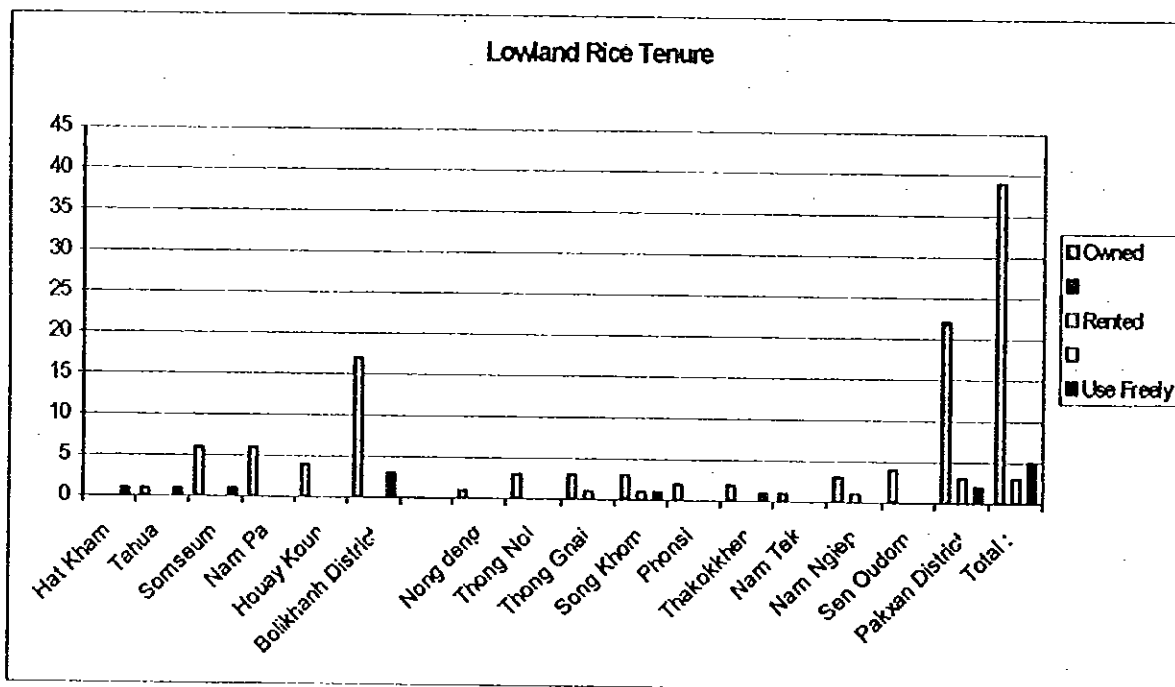


Figure 32 shows Lowland rice tenure (Total HH surveyed: 64)

TABLE 52: Cash Crop Land Tenure (Total HH surveyed: 64)

Village Names	Owned		Rented		Use Freely		Total	
	HH	%	HH	%	HH	%	HH	%
Hat Kham	0	0	0	0	1	100	1	100
Tahua	0	0	0	0	0	0	0	0
Somseum	4	100	0	0	0	0	4	100
Nam Pa	3	100	0	0	0	0	3	100
Houay Koun	3	100	0	0	0	0	3	100
Nong deng	1	100	0	0	0	0	1	100
Thong Noi	2	100	0	0	0	0	2	100
Thong Gnai	0	0	0	0	1	100	1	100
Song Khom	0	0	0	0	1	100	1	100
Phonsi	1	100	0	0	0	0	1	100
Thakokkhen	0	0	0	0	0	0	0	0
Nam Tek	0	0	0	0	0	0	0	0
Nam Ngiep	0	0	0	0	0	0	0	0
Sen Oudom	0	0	0	0	0	0	0	0
Komsipchet	-	-	-	-	-	-	-	-
Total	14		0		3		17	

TABLE 53: Upland Rice Tenure (Total HH: 64)

Village name	Owned		Rented in		Use freely		Total	
	HH	%	HH	%	HH	%	HH	%
Hat Kham	1	25	0	0	3	75	4	100
Tahua	0	0	0	0	2	100	2	100
Somseum	4	67	0	0	2	33	6	100
Nam Pa	2	100	0	0	0	0	2	100
Houay koun	2	67	0	0	1	33	3	100
Nong deng	1	50	0	0	1	50	2	100
Thong Noi	0	0	0	0	0	0	0	0
Thong Gnai	0	0	0	0	0	0	0	0
Song khom	0	0	0	0	0	0	0	0
Phonsi	0	0	0	0	0	0	0	0
Thakokkhen	2	100	0	0	0	0	2	100
Nam Tek	1	100	0	0	0	0	1	100
Nam Ngiep	0	0	0	0	1	100	1	100
Sen Oudom	0	0	0	0	1	100	1	100
Komsipchet	-	-	-	-	-	-	-	-
TOTAL:	13		0		11		24	

1.6.11 Livestock

Livestock plays a very important role in the rural economy of the area. Poultry are kept by most families, pigs roam around in abundance. Goats are comparatively few. Without buffaloes, the fields cannot be prepared in a situation where tractors are largely absent. Cattle are grazed wherever possible and are the most important asset, which can be turned into ready cash in times of need.

Livestock in these 14 villages consist mainly of buffaloes, cattle, pigs, goats and poultry. In total, the 14 downstream villages have 864 buffaloes and 895 cattle. Som Seum village has more buffaloes than other villages, representing about 18 % of the total number of buffaloes. While Houay Koun village has more cattle than others, 255 heads representing 29 % of the total number of cattle. Som Seum and Nam Ngiap villages have no cattle at all. The total number of pigs is 744: Hatkham village has 267 of pigs or about 35 % of the total number of pigs.

The following table gives an overview of the livestock in the downstream area.

TABLE 54: Livestock in Downstream Villages

Village Name	Buffalo	Cattle	Pigs	Goats	Poultry
Hat Kham	133	123	267		300
Tahua	105	42	70		1,260
Somscum	153	91	59		1,800
Nam Pa	57	75	75		850
Houay Koun	147	255	84		21,321
Nong-Deng	35	40	10		400
Thong-Noi	21	100	20		200
Thong-Gnai	16	72	152		1,734
Song Khon	39	42	-		1,050
Phonsi	14	46	-		400
Thakokkhen	80	15	3		120
Nam Tek	2	8	-		780
Nam Ngiap	13	-	-		1,400
Sen-Oudom	49	77	4	5	896
Komsipchet	-	-	-	-	-
Total	864	986	744	5	32,511

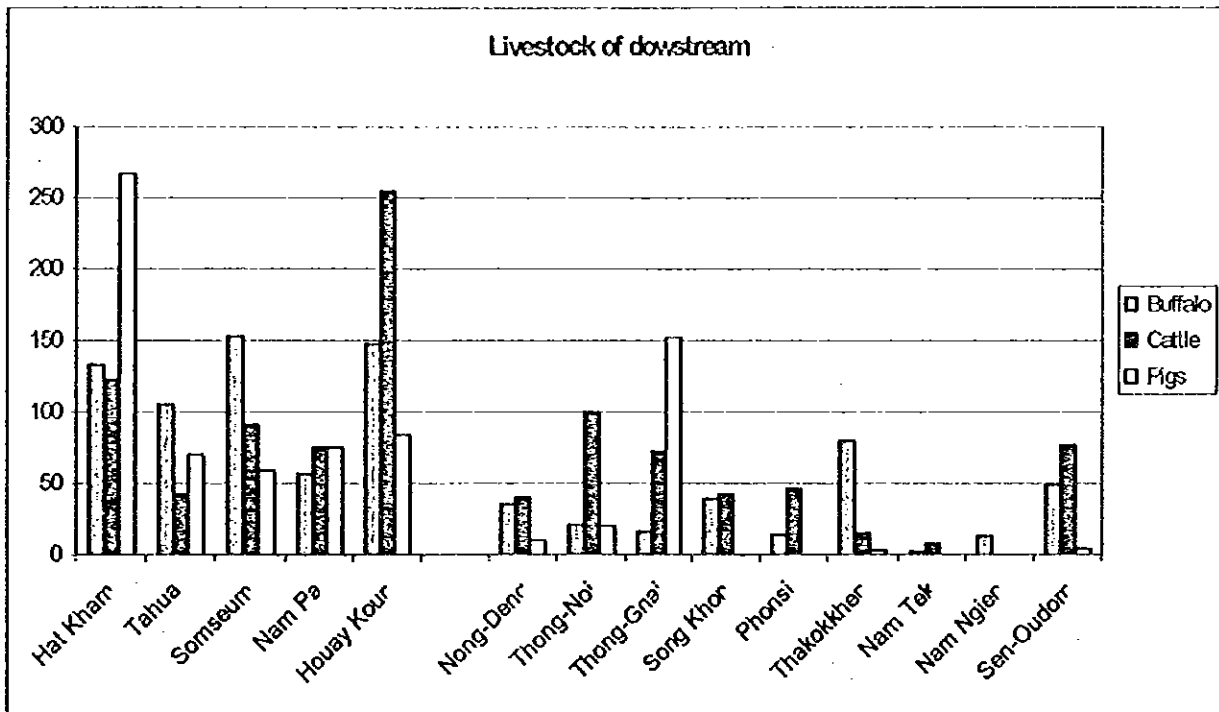


Figure 33 shows Livestock in Downstream Area

1.6.12 Forestry

The total forest area is about 19,706 ha and consists of 8,490 ha of village managed forest, 800 ha of private forest and 11,208 ha of conservation forest. Residential area amounts to 68 ha. Song Khom village has the biggest forest area. The forest covers approximately 14,998 ha (6,498 ha of community managed forest and 8,500 ha of conservation forest), or about 76 % of the total forest area of downstream area. Information on forest areas in Nong Deng and Thakokhen is not available. It can be noted that ten (10) villages have conservation forest and twelve (12) have community managed forest.

TABLE 54: Forestry

Village Name	Village Managed Forest (Ha)	Private (Ha)	Conservation Forest (Ha)	Other Area (Ponds, Swamp, etc.) (Ha)	Residential Area (Ha)	Area reserved for cemetery (Ha)
Hat Kham	16		4		2	1
Tahua	500		200		2	1
Somseum	371		1,099	32	4	2
Nam Pa	371		1,099	32	2	2
Houay Koun	48	8		50	2	1
Nong-Deng	-	-	-	-	-	-
Thong-Noi	50	-	-	-	30	1
Thong-Gnai	250	-	26	2	2	1
Song Khon	6,498	-	8,500	-	1	1
Phonsi	235	-	106	-	16	2
Thakokkhen	-	-	-	-	-	0.2
Nam Tek	98	-	107	-	5	0.5
Nam Ngiep	8	-	6	-	-	0.2
Sen-Oudom Komsipchet	45	-	61	-	2	1
Total	8,489.95	8.00	11,207.70	115.90	67.90	13.90

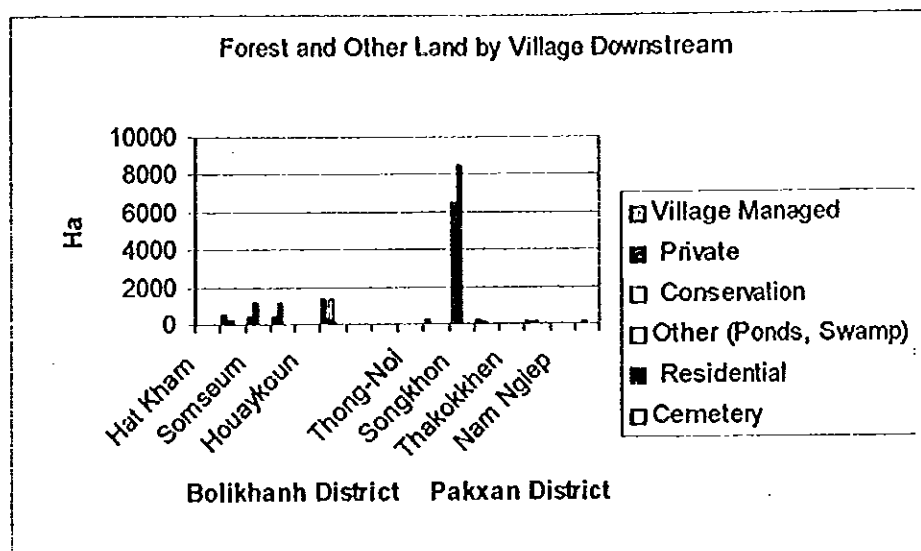


Figure 34 shows forest and other land of downstream

1.6.13 Main Problems

The main problems of the 14 downstream villages are insufficient health service, limited education of children, difficult communication, absence of electricity, lack of lowland and markets and others.

Eight (8) villages consider that lack of electricity as a major problem. Six (6) villages consider that insufficient health service as main problem in the daily life.

TABLE 56: Main Problems in Daily Life in Downstream Villages

Village Name	Health Service Insufficient	Education of Children Limited	Communication Difficult	Electricity not available	Market not available	Social	Other	Lack of low land
Hat kham	*			*				*
Tahua	*			*				
Somseum		*		*	*			
Nam Pa				*	*			
Houay koun	*				*			*
Nong-Deng								*
Thong-Noi				*	*			*
Thong-Gnai					*			

Song khon	*		*		*	
Phonsi					*	*
Thakokkhen					*	
Nam Tek	*	*			*	
Nam Nhiep						
Sen-Oudom						*
Komsipchet						

The survey at household level indicates that 19 households have surplus of rice every year and 10 households occasionally. The details in given in the following table.

TABLE 57: Rice Surplus (Total HH surveyed: 64)

Village Name	Every year		Exceptional		Total HH surveyed	
	HH	%	HH	%		
Hat Kham	2	40	2	40		5
Tahua	2	67	0	0		3
Somseum	1	10	1	10		10
Nam Pa	2	50	1	25		4
Houay Koun	3	21	3	21		14
Nong Deng	0	0	0	0		2
Thong Noi	1	33	0	0		3
Thong Gnai	3	75	0	0		4
Song Khom	0	0	0	0		3
Phonsi	1	33	1	33		3
Thakokkhen	0	0	0	0		3
Nam Tek	0	0	0	0		2
Nam Ngiep	2	50	1	25		4
Sen Oudom	2	50	1	25		4
Komsipchet						
TOTAL :	19		10			64

1.6.14 Income and expenditures

The overview on the average annual income and expenditures of surveyed households are given in thr following figures:

**TABLE 58: Average Monthly Income From Sale of Agricultural Products
(Total HH surveyed: 64)**

Village name	Rice	Other Cereal	Vegetables	Fruit	Livestock	Wild Animals	Bamboo shoots	Forest product	Other
Hat Kham	90,000	0	11,667	18,750	127,167	0	5,000	16,750	0
Tahua	175,000	65,000	0	0	216,667	0	0	0	250,000
Somseum	96,167	93,825	10,000	110,417	51,675	0	0	0	0
Nam Pa	132,250	150,500	2,800	2,500	45,000	0	4,233	4,958	0
Houay Koun	150,417	0	0	2,083	82,083	0	0	0	269,167
Nong deng	76,500	0	6,250	0	141,667	0	0	0	0
Thong Noi	250,000	0	0	0	97,167	0	0	0	83,333
Thong Gnai	249,958	0	1,542	0	583,333	25,000	0	0	250,000
Song Khom	110,000	108,333	4,167	0	41,667	0	4,167	0	291,667
Phonsi	385,417	0	83,333	0	24,583	0	0	0	85,417
Thakokkhen	266,000	41,667	2,667	0	13,575	0	0	0	141,667
Nam Tek	191,667	120,000	0	8,333	7,500	8,333	8,333	0	41,667
Nam Ngiep	174,063	22,083	28,900	27,792	16,167	0	0	0	166,667
Sen Oudom	278,467	15,000	141,667	0	70,833	0	8,333	0	150,000
Komsipchet	-	-	-	-	-	-	-	-	-
Total.	2,625,904	616,408	292,992	169,875	1,519,083	33,333	30,067	21,708	1,729,583

TABLE 59: Average Monthly Income (Total HH surveyed: 64)

Description	Amount (Kip)	%
Rice	163742	33.43
Other Cereal	39368	8.03
Vegetables	17827	3.64
Fruit	21326	4.35
Livestock	103787	21.19
Wild Animals	1822	0.37
Bamboo Shoots	1631	0.33
Forest Product	1618	0.33
Other	138665	28.3

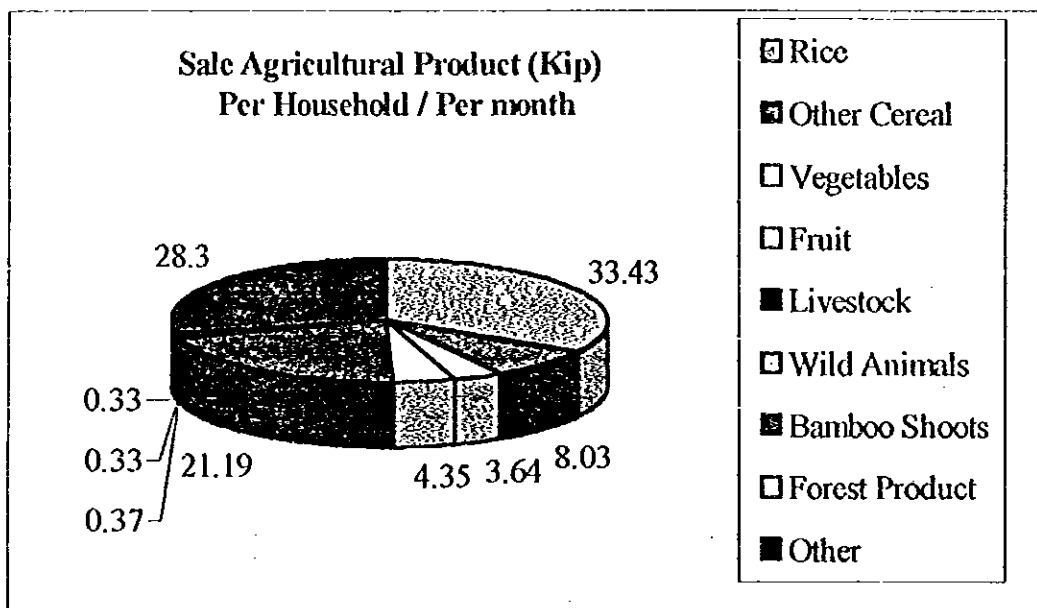


Figure 35 shows sale agricultural products (Total HH surveyed: 64)

In eleven (11) villages, the main source of income of the surveyed households is from the sale of rice that is amounted to 918,000 kip (average in Ban Nong Deng) to 4,625,000 kip (average in Ban Phonsi). For the remaining three (3) villages, the main source of income is from the sale of livestock. In Ban Thong Ngai, the average annual income per household from the sale of livestock amounts to 7,000,000kips. The details are given below:

TABLE 60: Average Monthly Expenditure

Discription	Amount (Kip)	%
Food	121,313	31.76
Education	36,656	9.6
Transport	6,656	1.74
Farm Input	21,938	5.74
Medical expense	22,281	5.83
Hired Laborer	25,406	6.65
Fuel	50,828	13.31
Travel	13,359	3.5
Ceremonies	48,297	13.65
Clothing	29,547	7.74
Other	5,656	1.46

As regard the expenditures in the households, food is ranked first and equal to about 20% of the annual expenditure. The expenditure for transport is ranked last and equal to around

1% of the annual expenditure. This might be due to the fact that villages are not far away from the main roads and also most households have their own boats.

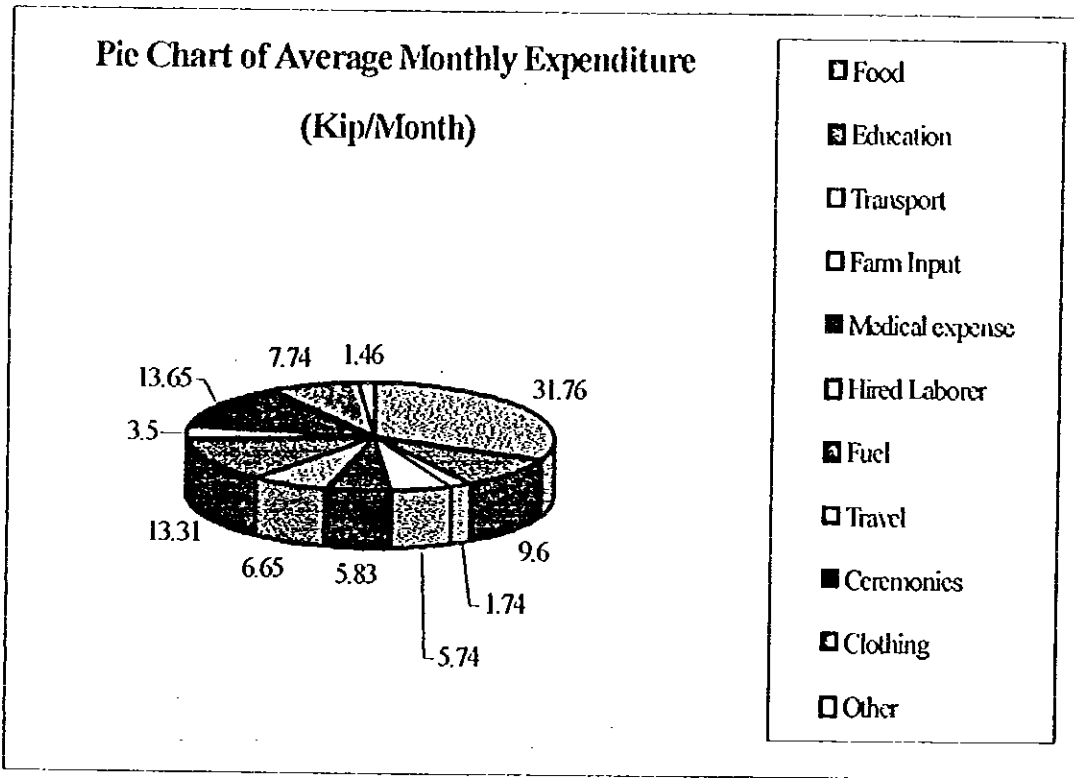


Figure 36 shows Expenditure per Household (Total HH surveyed: 64)

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Downstream area

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Table a1 : Marital Status for both sexes in the reservoir area(Household level survey)

Marital	Age												Total	
	15-24 Years		25-34 Years		35-44 Years		45-54 Years		5-64 Years		>65 Years		Nb	%
	Nb	%	Nb	%	Nb	%	Nb	%	Nb	%	Nb	%		
Married	97	20	142	29	104	22	58	12	46	10	36	7	483	
Single	104	95	6	5	0	0	0	0	0	0	0	0	110	
Divorced	0	0	1	33	1	33	1	33	0	0	0	0	3	
Widow	0	0	1	3	3	9	11	32	9	26	10	29	34	
TOTAL	201	32	150	24	108	17	70	11	55	9	46	7	630	100

Mantal.xls

Table a2 : Male in the reservoir area (Household level survey)

Marital Status	Classified by age												Total	
	15 - 24 Years		25 - 34 Years		35 - 44 Years		5 - 54 Years		55 - 65 Years		> 65 Years		Number	%
	Number	% mber	Number	% mber	Number	% mber	Number	% mber	Number	% mber	Number	% mber		
Married	41	17	59	25	52	22	34	14	24	10	25	11	235	
Single	63	94	3	4	0	0	1	1	0	0	0	0	67	
Divorced	0	0	0	0	1	100	0	0	0	0	0	0	1	
Widow	0	0	0	0	1	17	2	33	1	17	2	33	6	
TOTAL	104	34	62	20	54	17	37	12	25	8	27	9	309	100

Male.xls

Table a3: Female in the reservoir area (Households survey)

Marital	AGE												Total	
	15-24 Years		25-34 Years		35-44 Years		45-54 Years		55-64 Years		> 65 Years		umber	%
Married	56	23	83	33	52	21	24	10	22	9	11	4	248	
Single	40	93	3	7	0	0	0	0	0	0	0	0	43	
Divorced	0	0	1	50	0	0	1	50	0	0	0	0	2	
Widow	0	0	1	4	2	7	9	32	8	29	8	29	28	
TOTAL	96	30	88	27	54	17	34	11	30	9	19	6	321	100

Female.xls

Table a4: Relationship of head households (Household level survey)

Family	AGE												Total						
	1-5 Years		6-9 Years		10-14 Years		15-24 Years		25-34 Years		35-44 Years		45-54 Years		55-64 Years		> 65 Years		umber
Head	0	0	0	0	0	9	5	41	23	53	30	38	21	21	12	17	9	179	100
Spouse	0	0	0	0	0	16	10	62	37	49	30	19	11	17	10	3	2	166	100
Child	206	32	142	22	159	24	121	19	22	3	2	0	0	0	0	0	0	652	100
Sibling	1	3	3	8	7	19	20	54	5	14	0	0	0	0	0	0	0	37	100
Parent	0	0	0	0	0	0	0	0	0	2	4	12	21	16	29	26	46	56	100
Daught	0	0	0	0	1	3	19	56	13	38	1	3	0	0	0	0	0	34	100
Other r	54	62	13	15	5	6	10	11	3	3	0	0	2	2	0	0	0	87	100
Son in	0	0	0	0	0	5	50	4	40	1	10	0	0	0	0	0	0	10	100
TOTA	261	158	172	200	150	108	71	55	46	1221									

relation.xls

Table a5: Education level (Number of persons), (Household level survey)

Age group	Education										Total	
	Illiterate		Literate		primary school		1 second school		secondary school		Pers.	%
	Pers.	%	Pers.	%	Pers.	%	Pers.	%	Pers.	%		
<i>Upper Reservoir</i>												
Phone Hom	29	34	39	46	17	20	0	0	0	0	85	100.00
Xieng Khong	15	24	30	48	16	26	1	2	0	0	62	100.00
Na Kang	12	52	7	30	4	17	0	0	0	0	23	100.00
Nam Long	14	40	17	49	3	9	1	3	0	0	35	100.00
Naxay	12	48	9	36	3	12	1	4	0	0	25	100.00
Na Hong	35	38	30	33	20	22	5	5	2	2	92	100.00
Vienthong	30	42	31	44	10	14	0	0	0	0	71	100.00
Phonyeng	23	38	16	26	15	25	6	10	1	2	61	100.00
Navong	32	32	27	27	33	33	9	9	0	0	101	100.00
Dong	44	39	42	37	25	22	3	3	0	0	114	100.00
Hatsankhone	11	29	12	32	7	18	7	18	1	3	38	100.00
Phiangta	31	40	33	43	10	13	2	3	1	1	77	100.00
Pou	24	32	32	43	15	20	3	4	1	1	75	100.00
Upper Reservoir Su	312		325		178		38		6		859	
<i>Lower Reservoir</i>												
Houay Pannoin	17	50.00	14	41	2	6	1	3	0	0	34	100.00
Nain Youk	95	53.37	50	28	24	13	3	2	6	3	178	100.00
Sopphouh	15	60.00	6	24	2	8	2	8	0	0	25	100.00
Sop Youk	73	58.40	41	33	7	6	3	2	1	1	125	100.00
Lower Reservoir Su	200		111		35		9		7		362	
TOTAL	512		436		213		47		13		1221	

Education

Table a6: Secondary occupation (Household level survey)

Village Name	Secondary occupation										Total	
	d rice farmer		d rice farmer		pland farmer		Trader		Others		Pers.	%
	Pers.	%	Pers.	%	Pers.	%	Pers.	%	Pers.	%		
<i>Upper Reservoir</i>												
Phone Hom	7	39	11	61	0	0	0	0	0	0	18	100
Xieng Khong	0	0	14	100	0	0	0	0	0	0	14	100
Na Kang	1	13	7	88	0	0	0	0	0	0	8	100
Nain Long	7	70	3	30	0	0	0	0	0	0	10	100
Naxay	1	50	1	50	0	0	0	0	0	0	2	100
Na Hong	3	11	22	79	0	0	0	0	3	11	28	100
Vienthong	2	14	12	86	0	0	0	0	0	0	14	100
Phonyeng	2	14	8	57	0	0	4	29	0	0	14	100
Navong	8	36	10	45	0	0	2	9	2	9	22	100
Dong	0	0	30	79	0	0	4	11	4	11	38	100
Hatsankhone	3	50	3	50	0	0	0	0	0	0	6	100
Phiangta	1	3	24	83	4	14	0	0	0	0	29	100
Pou	2	13	13	87	0	0	0	0	0	0	15	100
Upper Reservoir	37		158		4		10		9		218	

Secondary

Table a 7 : Number of households classified by rooms (Household level survey)

Village Name	NUMBER OF ROOM						Total							
	1 Room	2 Rooms	3 Rooms	4 Rooms	5 Rooms	6 Rooms	Number	%						
<i>Upper Reservoir</i>														
Phone Hom	0	0	4	31	6	46	1	8	2	15	0	0	13	100
Xieng Khouag	0	0	0	0	4	50	3	38	1	13	0	0	8	100
Na Kang	0	0	2	40	3	60	0	0	0	0	0	0	5	100
Nam Long	0	0	2	40	3	60	0	0	0	0	0	0	5	100
Naxay	0	0	3	60	1	20	0	0	0	0	1	20	5	100
Na Hong	0	0	5	33	6	40	4	27	0	0	0	0	15	100
Vienthong	0	0	2	20	3	30	4	40	1	10	0	0	10	100
Phonyeng	0	0	3	25	8	67	1	8	0	0	0	0	12	100
Naxay	0	0	2	13	10	63	4	25	0	0	0	0	16	100
Dong	0	0	2	13	8	50	4	25	2	13	0	0	16	100
Hatsamkhone	0	0	0	0	3	50	0	0	2	33	1	17	6	100
Phiangta	0	0	2	20	4	40	3	30	1	10	0	0	10	100
Pou	0	0	1	8	7	58	4	33	0	0	0	0	12	100
Upper Reservoir	0		28		65		28		9		2		133	
<i>Lower Reservoir</i>														
Houay Pamom	0	0	0	0	2	50	2	50	0	0	0	0	4	100
Nam Youk	0	0	4	20	8	40	7	35	1	5	0	0	20	100
Sopphouh	0	0	1	17	3	50	2	33	0	0	0	0	6	100
Sop Youk	0	0	5	31	5	31	4	25	2	13	0	0	16	100
Lower Reservoir	0		10		18		15		3		0		46	
TOTAL	0	38	84	43	12	2	179							

room's

Table a 8 : Size of house (Household level survey)

Village Name	SIZE OF HOUSE								Total							
	1 - 20 m ²	21 - 30 m ²	31 - 40 m ²	41 - 50 m ²	51 - 60 m ²	61 - 70 m ²	70 - 125 m ²	Number	%	Number	%					
<i>Upper Reservoir</i>																
Phone Hom	0	0	3	23	3	23	6	46	0	0	1	8	0	0	13	100
Xieng Khong	0	0	0	0	2	25	1	13	1	13	0	0	4	50	8	100
Na Kang	2	40	1	20	1	20	1	20	0	0	0	0	0	0	5	100
Nam Long	1	20	3	60	0	0	1	20	0	0	0	0	0	0	5	100
Naxay	1	20	0	0	3	60	0	0	1	20	0	0	0	0	5	100
Na Hong	2	13	2	13	3	20	2	13	4	27	1	7	1	7	15	100
viengthong	1	10	0	0	2	20	3	30	3	30	0	0	1	10	10	100
Phonyeng	1	8	2	17	4	33	1	8	3	25	0	0	1	8	12	100
Naxong	0	0	1	6	3	19	4	25	2	13	2	13	4	25	16	100
Dong	0	0	3	19	5	31	0	0	3	19	0	0	5	31	16	100
Hatsamkhone	0	0	1	17	2	33	1	17	0	0	1	17	1	17	6	100
Phiangta	0	0	2	20	2	20	2	20	2	20	0	0	2	20	10	100
Pou	0	0	2	17	0	0	4	33	1	8	1	8	4	33	12	100
Upper Reservoir	8		20		30		26		20		6		23		133	
<i>Lower Reservoir</i>																
Houay Pamom	1	25	1	25	0	0	2	50	0	0	0	0	0	0	4	100
Nam Youk	0	0	0	0	2	10	3	15	1	5	4	20	10	50	20	100
Sopphouh	0	0	3	50	1	17	1	17	0	0	0	0	1	17	6	100
Sop Youk	0	0	4	25	5	31	3	19	0	0	1	6	3	19	16	100
Lower Reservoir	1		8		8		9		1		5		14		46	
TOTAL	9	28	38	35	21	11	37	179								

Size of H's

Table a9 : House characteristics : Type of floor (Household level survey)

Village Name	Type of floor										Total	
	Bamboo		bamboo&Wood		Cement		Earth		Wood		HH	%
	HH	%	HH	%	HH	%	HH	%	HH	%		
<i>Upper Reservoir</i>												
Phone Hom	6	46	1	8	0	0	0	0	6	46	13	100
Xieng Khong	1	13	0	0	0	0	0	0	7	88	8	100
Na Kang	4	80	0	0	0	0	1	20	0	0	5	100
Nam Long	4	80	0	0	0	0	0	0	1	20	5	100
Naxay	2	40	0	0	0	0	0	0	3	60	5	100
Na Hong	5	33	0	0	0	0	0	0	10	67	15	100
Viengthong	2	20	0	0	0	0	2	20	6	60	10	100
Phonyeng	1	8	0	0	0	0	7	58	4	33	12	100
Naxong	5	31	0	0	0	0	0	0	11	69	16	100
Dong	2	13	0	0	0	0	1	6	13	81	16	100
Hatsamkhone	4	67	0	0	0	0	0	0	2	33	6	100
Phiangta	4	40	0	0	0	0	1	10	6	60	10	100
Pou	1	8	0	0	0	0	3	25	8	67	12	100
Upper Reservoir	41		1		0		15		77		133	
<i>Lower Reservoir</i>												
Houay Pamom	0	0	0	0	0	0	4	100	0	0	4	100
Nam Youk	0	0	0	0	2	10	15	75	3	15	20	100
Sopphouh	0	0	0	0	0	0	6	100	0	0	6	100
Sop Youk	0	0	0	0	0	0	12	75	4	25	16	100
Lower Reservoir	0		0		2		37		7		46	
TOTAL	41		1		2		52		84		179	

floor.xls

Table a10 : House characteristics : Type of wall (Household level survey)

Village Name	Type of wall								Total	
	Bamboo		Wood&Bamboo		Wood		Brick		HH	%
	Number	%	Number	%	Number	%	Number	%		
<i>Upper Reservoir</i>										
Phon Hom	11	85	0	0	2	15	0	0	13	100
Xieng Khong	4	50	1	13	3	38	0	0	8	100
Na Kang	5	100	0	0	0	0	0	0	5	100
Nam Long	5	100	0	0	0	0	0	0	5	100
Naxay	4	80	0	0	1	20	0	0	5	100
Na Hong	9	64	2	14	2	14	1	7	14	100
Viengthong	10	100	0	0	0	0	0	0	10	100
Phonyeng	9	75	2	17	1	8	0	0	12	100
Naxong	15	94	1	6	0	0	0	0	16	100
Dong	14	88	1	6	1	6	0	0	16	100
Hatsamkhone	6	100	0	0	0	0	0	0	6	100
Phiangta	10	91	0	0	1	9	0	0	11	100
Pou	10	83	1	8	1	8	0	0	12	100
Upper Reservoir	112		8		12		1		133	
<i>Lower Reservoir</i>										
Houay Pamom	4	100	0	0	0	0	0	0	4	100
Nam Youk	2	10	2	10	16	80	0	0	20	100
Sop Youk	1	17	0	0	5	83	0	0	6	100
Sopphouh	6	38	1	6	9	56	0	0	16	100
Lower Reservoir	13		3		30		0		46	
TOTAL	125		11		42		1		179	

Wall.xls

Table a 11: House characteristics : Type of poles/ columns (Household level survey)

Village names	Type of poles / columns				Total	
	Bamboo HH	%	Wood HH	%	HH	%
Upper Reservoir						
Phone Hom	0	0	13	100	13	100
Xieng Khong	0	0	8	100	8	100
Na Kang	2	40	3	60	5	100
Nam Long	0	0	5	100	5	100
Naxay	0	0	5	100	5	100
Na Hong	0	0	15	100	15	100
Viengthong	0	0	10	100	10	100
Phonyeng	0	0	12	100	12	100
Naxong	0	0	16	100	16	100
Dong	0	0	16	100	16	100
Hatsinkhone	0	0	6	100	6	100
Phiangta	0	0	10	100	10	100
Pou	0	0	12	100	12	100
Upper Reservoir	2		131		133	
Lower Reservoir						
Houay Panom	0	0	4	100	4	100
Nam Youk	0	0	20	100	20	100
Soppouh	0	0	6	100	6	100
Sop Youk	0	0	16	100	16	100
Lower Reservoir	0		46		46	
TOTAL	2		177		179	

poles.xls

Table a 12 : Agricultural land (Household level survey) in hectar

Village na	Lowland paddy rice		Upland rice fields		Cash crop		Home Plot with vegetable		Orchard		Private grazing		Fish Pond	
	Total	Used	Total	Used	Total	Used	Total	Used	Total	Used	Total	Used	Total	Used
Upper Reservoir														
Phone Ho	20.5	9.0	19.3	15.8	3.0	3.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0
Xieng Kho	13.3	12.3	7.2	7.0	0.7	0.7	0.0	0.0	2.9	2.9	0.0	0.0	0.0	0.0
Na Kang	4.3	3.3	2.2	2.2	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nam Long	1.8	1.5	4.7	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Naxay	3.5	3.5	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Na Hong	24.7	0.0	7.5	7.5	0.0	0.0	0.0	0.0	2.1	2.1	0.0	0.0	0.0	0.0
Viengthon	6.6	4.8	5.6	5.6	0.0	0.0	0.0	0.0	0.9	0.9	0.0	0.0	0.0	0.0
Phonyeng	7.3	6.2	4.6	4.6	0.0	0.0	0.1	0.1	1.1	1.1	0.1	0.1	0.0	0.0
Naxong	13.2	11.3	11.3	4.6	1.1	1.1	0.0	0.0	1.5	1.5	0.0	0.0	0.0	0.0
Dong	23.2	22.8	4.7	4.0	0.4	0.4	0.0	0.0	3.1	2.7	0.0	0.0	0.0	0.0
Hatsamkho	7.8	4.5	1.6	1.6	0.5	0.5	0.0	0.0	1.2	1.2	0.0	0.0	0.0	0.0
Phiangta	11.9	11.5	1.4	1.0	2.0	1.5	0.0	0.0	3.3	2.8	0.0	0.0	0.0	0.0
Pou	29.2	17.8	7.1	4.1	2.6	2.6	0.0	0.0	3.3	3.1	0.0	0.0	0.0	0.0
Upper Reservoir														
Subtotal:	167.3	108.6	78.8	64.0	10.8	10.3	0.1	0.1	20.3	19.2	0.1	0.1	0.0	0.0
Lower Reservoir														
Houay Pam	1.2	1.2	5.5	5.5	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nam Youk	22.2	18.8	4.4	4.4	5.2	5.2	0.1	0.1	3.1	3.1	0.0	0.0	0.1	0.1
Soppouh	7.0	5.1	10.6	9.5	1.5	1.5	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0
Sop Youk	16.6	12.0	3.0	3.0	5.5	5.5	0.0	0.0	2.8	2.8	2.5	2.5	0.0	0.0
Lower Reservoir														
Subtotal:	47.0	37.1	23.5	22.4	13.0	13.0	0.1	0.1	6.2	6.2	2.5	2.5	0.1	0.1
TOTAL	214.3	145.7	102.3	86.4	23.8	23.3	0.2	0.2	26.5	25.4	2.6	2.6	0.1	0.1

Agricultural land.xls

Table a13: Cash crops land Tenure (Household level survey)

Village names	Owned		Cash crops tenure		Use freely		Total	
	HH	%	Rented in HH	%	HH	%	HH	%
<i>Upper Reservoir</i>								
Phone Hom	1	50	0	0	1	50	2	100
Xieng Khong	1	50	0	0	1	50	2	100
Na Kang	1	50	0	0	1	50	2	100
Nam Long	0	0	0	0	0	0	0	0
Naxay	0	0	0	0	0	0	0	0
Nahong	0	0	0	0	0	0	0	0
Viengthong	0	0	0	0	0	0	0	0
Phonyeng	0	0	0	0	0	0	0	0
Naxong	2	100	0	0	0	0	2	100
Dong	1	100	0	0	0	0	1	100
Hatsamkhone	2	100	0	0	0	0	2	100
Phiangta	2	100	0	0	0	0	2	100
Pou	3	100	0	0	0	0	3	100
Upper Reservoir Su	13		0		3		16	
<i>Lower Reservoir</i>								
Houay Pamom	1	100	0	0	0	0	1	100
Nam Youk	1	14	0	0	6	86	7	100
Sopphouh	2	100	0	0	0	0	2	100
Sop Youk	4	67	0	0	2	33	6	100
Lower Reservoir Su	8		0		8		16	
TOTAL	21		0		11		32	

Cash crops L I

Table a14 : Low land rice tenure of households (Household level survey)

Village names	Owned		Lowland rice tenure		Use freely		Total	
	HH	%	Rented in HH	%	HH	%	HH	%
<i>Upper Reservoir</i>								
Xieng Khong	8	100	0	0	0	0	8	100
Viengthong	10	100	0	0	0	0	10	100
Phone Hom	12	92	0	0	1	8	13	100
Phonyeng	12	100	0	0	0	0	12	100
Naxay	4	80	1	20	0	0	5	100
Hatsamkhone	6	100	0	0	0	0	6	100
Pou	12	100	0	0	0	0	12	100
Nam Long	4	80	0	0	1	20	5	100
Na Kang	5	100	0	0	0	0	5	100
Naxong	14	88	1	6	1	6	16	100
Na Hong	15	100	0	0	0	0	15	100
Dong	16	100	0	0	0	0	16	100
Phiangta	10	100	0	0	0	0	10	100
Upper Reservoir	128		2		3		133	
<i>Lower Reservoir</i>								
Houay Pamom	4	100	0	0	0	0	4	100
Nam Youk	20	100	0	0	0	0	20	100
Sopphouh	6	100	0	0	0	0	6	100
Sop Youk	15	94	0	0	1	6	16	100
Lower Reservoir	45		0		1		46	
TOTAL	173		2		4		179	

Lowland rice tenure of HH

Table a15 : Tenure of Upland rice field (Household level survey)

Village names	Upland tenure				Total	
	Owned HH	%	Use freely HH	%	HH	%
<i>Upper Reservoir</i>						
Phone Hom	8	73	3	27	11	100
Xieng Khong	5	83	1	17	6	100
Na Kang	3	60	2	40	5	100
Nam Long	0	0	4	100	4	100
Naxay	1	33	2	67	3	100
Na Hong	3	43	4	57	7	100
Viengthong	6	75	2	25	8	100
Phonyeng	5	100	0	0	5	100
Naxong	2	50	2	50	4	100
Dong	1	33	2	67	3	100
Hatsamkhone	2	100	0	0	2	100
Phiangta	3	100	0	0	3	100
Pou	7	78	2	22	9	100
Upper Reservoir	46		24		70	
<i>Lower Reservoir</i>						
Houay Pamom	1	25	3	75	4	100
Nam Youk	3	75	1	25	4	100
Sopphouh	1	100	0	0	1	100
Sop Youk	5	38	8	62	13	100
Lower Reservoir	10		12		22	
TOTAL	56		36		92	

Tenure of Upland x's

Table a16 : Tenure of other crop land (Orchard), (Household level survey)

Village names	Owned		Status of land				Total	
	HH	%	Rented HH	%	Freely HH	%	HH	%
<i>Upper Reservoir</i>								
Phone Hom	5	100	0	0	0	0	5	100
Xieng Khong	6	100	0	0	0	0	6	100
Na Kang	0	0	0	0	0	0	0	0
Nam Long	0	0	0	0	0	0	0	0
Naxay	0	0	0	0	0	0	0	0
Na Hong	5	83.33	0	0	1	16.67	6	100
Viengthong	3	75	0	0	1	25	4	100
Phonyeng	3	100	0	0	0	0	3	100
Naxong	4	80	0	0	1	20	5	100
Dong	9	100	0	0	0	0	9	100
Hatsamkhone	4	100	0	0	0	0	4	100
Phiangta	6	100	0	0	0	0	6	100
Pou	5	100	0	0	0	0	5	100
Upper Reservoir Su	50		0		3		53	
<i>Lower Reservoir</i>								
Houay Pamom	0	0	0	0	0	0	0	0
Nam Youk	8	100	0	0	0	0	8	100
Sopphouh	2	100	0	0	0	0	2	100
Sop Youk	3	100	0	0	0	0	3	100
Lower Reservoir Su	13		0		0		13	
TOTAL	63		0		3		66	

Tenure of other crop

Table a17: Rice field and Distribution of crops in Upland area of households surveyed (III level survey)

Village Name	Rice(Ha)	% r crops(Ha)	%	Total	%	
<i>Upper Reservoir</i>						
Phone Hom	9	94	1	6	10	100
Xieng Khong	10	75	3	25	14	100
Na Kang	3	100	0	0	3	100
Nam Long	2	100	0	0	2	100
Navay	3	92	0	8	4	100
Na Hong	21	91	2	9	23	100
Vieangthong	5	90	1	10	5	100
Phonyeng	8	86	1	14	9	100
Naxong	16	86	3	14	18	100
Dong	23	91	2	9	25	100
Hatsamkhone	5	78	1	22	6	100
Phiangta	12	71	5	29	16	100
Pou	24	78	7	22	30	100
Upper Reservoir	139		26		165	
<i>Lower Reservoir</i>						
Houay Pannom	1	100	0	0	1	100
Nam Youk	20	81	5	19	25	100
Sopphouh	4	71	2	29	6	100
Sop Youk	12	88	2	12	14	100
Lower Reservoir	38		8		46	
TOTAL	177		34		211	

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Table a18: Rice paddy and distribution of Crops in lowland area of households surveyed

Village name	Rice	%	Other crops	%	Total	%
<i>Upper Reservoir</i>						
Xieng Khong	5	100	0	0	5	100
vieangthong	6	100	0	0	6	100
Phone Hom	18	100	0	0	18	100
Phonyeng	3	100	0	0	3	100
Navay	2	100	0	0	2	100
Hatsamkhone	2	100	0	0	2	100
Pou	13	98	0	2	13	100
Nam Long	5	100	0	0	5	100
Na Kang	4	100	0	0	4	100
Naxong	4	77	1	23	5	100
Na Hong	5	100	0	0	5	100
Dong	3	85	1	15	4	100
Phiangta	1	100	0	0	1	100
Upper Reservoir Subtotal :	69		2		71	
<i>Lower Reservoir</i>						
Houay Pannom	6	100	0	0	6	100
Nam Youk	4	72	1	28	5	100
Sopphouh	0	0	0	0	0	0
Sop Youk	13	76	4	24	17	100
Lower Reservoir Subtotal :	22		5		28	
TOTAL	91		7		99	

Table a19 : Perennial crops : In the number of household surveyed (Household level survey)

Village name	MANO ORAN		LEMO JACK F. COCO		TAMA KAPO		BANA PAPAY		SUGA		Total	
	Nbr	%	Nbr	%	Nbr	%	Nbr	%	Nbr	%	Nbr	%
<i>Upper Reservoir</i>												
Phone Hom	3	30	0	0	0	0	3	30	0	0	1	10
Xieng Khong	6	38	0	0	0	0	5	31	2	13	2	13
Na Kang	0	0	0	0	0	0	0	0	0	0	0	0
Nam Leng	0	0	0	0	0	0	0	0	0	0	0	0
Naxay	0	0	0	0	0	0	0	0	0	0	0	0
Na Hong	4	25	3	19	3	19	2	13	2	13	0	0
Viengthong	0	0	0	0	0	0	1	33	0	0	0	0
Phonyeng	1	13	0	0	0	0	1	13	0	0	2	25
Naxong	4	25	0	0	0	0	3	19	7	44	1	6
Dong	3	27	0	0	0	0	2	18	2	18	4	36
Hatsamkhone	1	11	0	0	0	0	1	11	0	0	2	22
Phiangta	4	27	1	7	1	7	4	27	0	0	0	0
Pou	3	30	0	0	0	0	2	20	2	20	1	10
Upper Reservoir Subtotal :	29		4		4		24		19		15	
<i>Lower Reservoir</i>												
Houay Pamom	0	0	0	0	0	0	0	0	1	33	0	0
Nam Youk	9	33	8	30	8	30	0	0	2	7	0	0
Sopphouh	2	29	2	29	2	29	0	0	0	0	0	0
Sop Youk Lower Reservoir	12	52	0	0	3	13	3	13	0	0	3	13
Lower Reservoir Subtotal :	23		10		13		3		3		3	
Total	52		14		17		27		22		18	

Perennial crops

Table a20 : Tools and Equipment (Household level survey)

Village Name	Water pump		Spade		Digging Mach		Rice mill		Foot mill		Hand mill		Total	
	Nbr	%	Nbr	%	Nbr	%	Nbr	%	Nbr	%	Nbr	%	Nbr	%
<i>Upper Reservoir</i>														
Phone Hom	0	0	49	91	0	0	0	0	5	9	0	0	54	100
Xieng Khong	0	0	45	87	0	0	2	4	2	4	3	6	52	100
Na Kang	0	0	11	92	0	0	0	0	1	8	0	0	12	100
Nam Leng	0	0	11	92	0	0	0	0	1	8	0	0	12	100
Naxay	0	0	8	73	2	18	1	9	0	0	0	0	11	100
Na Hong	0	0	61	91	0	0	4	6	2	3	0	0	67	100
Viengthong	0	0	24	75	0	0	3	9	5	16	0	0	32	100
Phonyeng	1	3	34	87	0	0	1	3	2	5	1	3	39	100
Naxong	0	0	70	91	0	0	2	3	5	6	0	0	77	100
Dong	0	0	67	93	0	0	1	1	4	6	0	0	72	100
Hatsamkhone	1	4	21	81	0	0	1	4	3	12	0	0	26	100
Phiangta	0	0	54	92	0	0	0	0	5	8	0	0	59	100
Pou	0	0	55	86	0	0	1	2	6	9	2	3	64	100
Upper Reservoir	2		510		2		16		41		6		577	
<i>Lower Reservoir</i>														
Houay Pamom	0	0	2	100	0	0	0	0	0	0	0	0	2	100
Nam Youk	0	0	110	96	0	0	4	3	1	1	0	0	115	100
Sopphouh	0	0	15	88	0	0	0	0	2	12	0	0	17	100
Sop Youk	0	0	74	94	0	0	2	3	2	3	1	1	79	100
Lower Reservoir	0		201		0		6		5		1		213	
TOTAL	2		711		2		22		46		7		790	

Tool and equipment

Table a21: Tools and Equipment and average unit price (kips), (Household level survey)

Village Name	Plough		Harrow		Wheel Harrow		Boat		Motorised boat	
	Nber.	Kips	Nber.	Kips	Nber.	Kips	Nber.	Kips	Nber.	Kips
<i>Upper Reservoir</i>										
Phon Hom	4	5,000	5	0	0	0	0	0	0	0
Xiang Khong	18	20,800	22	6,500	0	0	7	350,000	0	0
Na Kang	0	0	0	0	0	0	0	0	0	0
Nam Long	0	0	0	500	0	0	0	0	0	0
Naxay	3	5,500	3	0	1	60,000	1	80,000	0	0
Na Hong	25	17,500	15	1,100	0	0	0	0	0	0
Viangthong	4	10,500	4	4,800	0	0	3	250,000	0	0
Phonyeng	5	4,800	5	2,000	0	0	3	330,000	0	0
Navong	27	11,000	26	20,500	2	200,000	9	595,000	0	0
Dong	31	5,700	34	8,400	0	0	4	170,000	2	900,000
Hatsamkhone	4	10,000	4	8,000	0	0	4	330,000	0	0
Phiangta	21	5,300	24	4,500	1	60,000	6	290,000	0	0
Pou	27	13,000	28	5,000	0	0	5	270,000	3	4,750,000
Upper Reservoir Subtotal :	169	109,100	170	61,300	4	320,000	42	2,665,000	5	5,650,000
<i>Lower Reservoir</i>										
Houay Pamon	0	0	0	0	0	0	2	65,000	0	0
Nam Yeuk	19	27,000	18	0	0	0	1	0	0	0
Sopphouh	3	8,000	3	0	0	0	3	130,000	1	3,000,000
Sop Yeuk	13	19,000	17	0	0	1	6	180,000	1	3,500,000
Lower Reservoir Subtotal :	35	54,000	38	0	0	1	12	375,000	2	6,500,000
TOTAL	204	163,100	208	61,300	4	320,001	54	3,040,000	7	12,150,000

Tool & equipment(unit price)

Table a22 : Food available in the home on the day of interview (Number of HII), (Household level survey)

Village name	Rice	Fish	hicken	lbage	geiabl	Chilly	Egg	Salad	Padok	Bird	Pig	Meat
<i>Upper Reservoir</i>												
Phon Hom	13	6	0	0	9	0	0	0	0	0	0	0
Xiang Khong	6	5	0	1	5	2	0	0	1	0	0	0
Na Kang	5	1	0	0	3	0	0	0	0	0	0	1
Nam Long	5	4	0	0	2	1	0	0	0	0	0	0
Naxay	5	4	0	0	2	0	0	0	0	0	0	1
Na Hong	15	3	2	3	0	3	1	0	1	2	0	0
Viang Thong	10	5	0	0	6	1	0	0	0	0	1	0
Phon Yeng	12	2	1	0	7	0	1	0	0	0	0	0
Na Xong	16	8	0	1	4	7	2	0	1	0	0	0
Dong	16	5	1	1	3	4	0	2	1	0	0	0
Hatsamkhone	6	5	0	0	4	0	1	0	0	0	0	0
Phinagta	10	3	0	1	4	3	0	0	0	0	0	0
Pou	12	8	0	0	7	0	1	0	0	0	0	0
Upper Reservoir	131	59	4	7	56	21	6	2	4	2	1	2
<i>Lower Reservoir</i>												
Houaypamon	4	3	0	0	0	0	0	0	0	0	0	0
Nam Yeuk	19	3	3	0	7	1	0	0	0	0	1	0
Sopphouh	6	2	0	0	0	0	0	0	0	0	0	0
Sop Yeuk	16	4	0	0	7	0	0	0	0	0	1	0
Lower Reservoir	45	12	3	0	14	1	0	0	0	0	2	0
TOTAL	176	71	7	7	70	22	6	2	4	2	3	2

Food Available.xls

Table a23: Loan
Have You contracted a loan ?(household survey level)

Village names	Yes		No		Total	
	HH	%	HH	%	HH	%
<i>Upper Reservoir</i>						
Phon Hom	1	8	12	92	13	100
Xieng Khong	4	50	4	50	8	100
Na Kang	4	80	1	20	5	100
Nam Long	1	20	4	80	5	100
Naxay	1	20	4	80	5	100
Na Hong	7	47	8	53	15	100
Viengthong	2	20	8	80	10	100
Phonyeng	4	36	7	64	11	100
Naxong	3	19	13	81	16	100
Dong	8	50	8	50	16	100
Hatsankhone	2	33	4	67	6	100
Phiangta	5	45	6	55	11	100
Pou	2	17	10	83	12	100
Upper Reservoir Su	44		89		133	
<i>Lower Reservoir</i>						
Houay Pamont	0	0	4	100	4	100
Nam Youk	3	15	17	85	20	100
Sopphouh	0	0	3	100	3	100
Sop Youk	3	16	16	84	19	100
Lower Reservoir Su	6		40		46	
TOTAL	50		129		179	

Load.xls

Table a24 : If yes, From where ? (Household level survey)

Village name	Bank	Cooperative	Land lord	Private	Relative	Other
<i>Upper Reservoir</i>						
Phon Hom	0	0	0	0	500,000.00	0
Xieng Khong	1,172,400.00	0	0	0	20,000.00	0
Na Kang	50,000.00	0	0	30,000.00	55,000.00	0
Nam Long	0	0	0	0	20,000.00	0
Naxay	0	0	0	0	15,000.00	0
Na Hong	1,570,000.00	0	0	0	20,000.00	50,000.00
Vieng Thong	0	0	0	0	200,000.00	50,000.00
Phon Yeng	1,072,250.00	100,000.00	0	0	0	0
Na Xong	2,000,000.00	0	0	0	0	25,000.00
Dong	1,620,000.00	0	0	0	20,000.00	0
Hatsamkhone	0	0	0	0	1,000,000.00	50,000.00
Phiangta	3,244,000.00	200,000.00	0	0	200,000.00	160,000.00
Pou	40,000.00	0	0	0	400,000.00	0
Upper Reservoir S	10,768,650.00	300,000.00	0	30,000.00	2,450,000.00	335,000.00
<i>Lower Reservoir</i>						
Houaypamon	1,100,000.00	0	0	0	0	50,000.00
Nam Youk	0	0	0	0	0	0
Sopphouh	0	0	0	0	80,000.00	200,000.00
Sop Youk	244,000.00	0	0	0	4,000,000.00	60,000.00
Lower Reservoir S	1,344,000.00	0	0	0	4,080,000.00	310,000.00
TOTAL	12,112,650.00	300,000.00	0	30,000.00	6,530,000.00	645,000.00

If yes (load) xls

Table a25: ASSETS IN HOUSEHOLDS (Part I), (Household level survey)

Village names	Radi o	Refrige rator	Rice Cooke	Water Heater	Light Bulb	Air Condit	Water Pump	Gener ator	T.V	Video	Satelli te
<i>Upper Reservoir</i>											
Phone Hom	6	0	0	0	2	0	0	1	0	0	0
Xieng Khong	14	0	0	0	6	0	0	3	1	1	0
Na Kang	0	0	0	0	0	0	0	0	0	0	0
Nam Long	2	0	0	0	0	0	0	0	0	0	0
Naxay	1	0	0	0	2	0	0	1	0	0	0
Na Hong	13	0	0	0	0	0	0	1	0	0	0
Viengthong	7	0	0	0	6	0	0	3	0	0	0
Phonyeng	5	0	0	0	4	0	1	1	0	0	0
Naxong	11	0	0	0	13	0	0	4	0	0	0
Dong	12	0	0	0	4	0	0	3	0	0	0
Hatsakhone	6	0	1	0	1	0	0	1	0	0	0
Phiangta	6	0	0	0	2	0	0	1	0	0	0
Pou	11	0	0	0	0	0	0	1	0	0	0
Upper Reservoir	94	0	1	0	40	0	1	20	1	1	0
Average per H	0.7	0.0	0.01	0.0	0.3	0.0	0.01	0.2	0.01	0.01	0.0
<i>Lower Reservoir</i>											
Houay Pamom	1	0	0	0	0	0	0	0	0	0	0
Nam Youk	13	0	0	0	3	0	0	2	0	0	1
Sopphouh	2	0	0	0	0	0	0	0	0	0	0
Sop Youk	5	0	0	0	1	0	0	2	1	1	0
Lower Reservoir	21	0	0	0	4	0	0	4	1	1	1
Average per H	0.5	0	0	0	0.1	0	0	0.09	0.02	0.02	0.02
TOTAL	115	0	1	0	44	0	1	24	2	2	1
Average per H	0.64	0.00	0.01	0.00	0.25	0.00	0.01	0.13	0.01	0.01	0.01

asspart1.xls

Table a26: ASSETS IN HOUSEHOLDS (Part II), (Household level survey)

Village names	Bicycle	Motocycle	Truck	Pickup	Car	Hand Cart
<i>Upper Reservoir</i>						
Phone Hom	2	0	0	0	0	0
Xieng Khong	7	0	0	0	0	1
Na Kang	0	0	0	0	0	0
Nam Long	1	0	0	0	0	0
Naxay	1	0	0	0	0	0
Na Hong	7	0	0	0	0	0
Viengthong	4	0	0	0	0	0
Phonyeng	9	0	0	0	0	0
Naxong	21	0	0	0	0	0
Dong	6	0	0	0	0	0
Hatsakhone	3	0	0	0	0	1
Phiangta	4	0	0	0	0	0
Pou	13	0	0	0	0	0
Upper Reservoir	78	0	0	0	0	2
Average per HH	0.59	0.00	0.00	0.00	0.00	0.02
<i>Lower Reservoir</i>						
Houay Pamom	0	0	0	0	0	0
Nam Youk	16	0	0	0	0	0
Sopphouh	2	0	0	0	0	0
Sop Youk	6	1	0	0	0	0
Lower Reservoir	24	1	0	0	0	0
Average per HH	0.52	0.02	0	0	0	0
Total	102	1	0	0	0	2
Average per HH	0.57	0.01	0.00	0.00	0.00	0.01

Assets (Part II)

Table a27: ASSETS IN HOUSEHOLDS (Part II), (Household level survey)

Village names	Clock	Sewing Machine	Camera	Torch	Lamp	Pressure Lamp	Chair	Sofa	Bed	Mattress
<i>Upper Reservoir</i>										
Phone Hom	0	0	0	18	17	0	2	0	4	0
Xieng Khong	2	0	1	25	20	3	10	0	4	0
Na Kang	0	0	0	7	4	0	0	0	0	0
Nam Long	1	0	0	3	8	0	2	0	0	0
Navay	0	0	0	3	6	0	1	0	0	0
Na Hong	0	0	0	26	23	1	1	2	0	0
Viangthong	0	0	0	14	15	0	3	0	1	0
Phonyeng	6	0	1	26	22	2	23	0	15	0
Navong	4	0	0	29	33	2	12	1	2	0
Dong	3	0	0	26	41	1	9	0	3	0
Hatsakhone	0	0	0	9	12	0	0	4	0	0
Phiangta	0	0	0	24	25	1	0	0	1	0
Pou	3	0	0	32	25	3	9	0	5	3
Upper Reservoir	19	0	2	242	251	13	72	7	35	3
Average HH	0.1	0.0	0.0	1.8	1.9	0.1	0.5	0.1	0.3	0.0
<i>Lower Reservoir</i>										
Houay Pamom	0	0	0	11	4	0	0	0	0	0
Nam Youk	6	0	3	68	54	1	19	0	27	0
Sopphouh	0	0	2	10	6	0	0	0	4	0
Sop Youk	0	0	0	41	36	0	0	0	4	0
Lower Reservoir	6	0	5	130	100	1	19	0	35	0
Average HH	0.1	0.0	0.1	2.8	2.2	0.0	0.4	0.0	0.8	0.0
Total	25	0	7	372	351	14	91	7	70	3
Average HH	0.1	0.0	0.0	2.1	2.0	0.1	0.5	0.0	0.4	0.0

asspart3.xls

Table a28 : Non - Agricultural Occupation (Village level survey)

Village Name	Number of persons per Occupation											
	Non-Agricultural (Pers.)	Teacher (Pers.)	Medical staff (Pers.)	Nurse (Pers.)	Carpenter (Pers.)	Black Smith (Pers.)	Handicraft (Pers.)	Merchant (Pers.)	Driver (Pers.)	Construction (Pers.)	Mechanic (Pers.)	Service Other (Pers.)
<i>Upper Reservoir</i>												
Phone Hom	1	1	0	0	0	0	0	0	0	0	0	0
Xieng Khong	2	2	0	0	0	0	0	0	0	0	0	0
Na Kang	2	2	0	0	0	0	0	0	0	0	0	0
Nam Long	13	1	2	0	0	0	0	0	0	0	0	25
Navay	2	1	1	0	0	0	0	0	0	0	0	0
Na Hong	12	7	0	5	0	2	3	2	3	0	2	0
Viangthong	3	0	1	0	0	0	2	0	0	0	0	0
Phon Yeng	23	3	0	0	0	0	2	23	0	0	0	0
Na Xong	12	10	1	1	3	4	4	2	0	1	1	0
Dong	4	4	0	0	3	1	3	6	1	0	0	0
Hatsamkhone	2	1	1	0	0	0	0	0	0	0	0	0
Phiangta	2	1	1	0	0	0	0	0	0	0	0	0
Pou	2	1	1	0	0	0	0	0	0	0	0	0
Upper Reservoir	80	34	8	6	6	7	14	33	4	1	3	25
<i>Lower Reservoir</i>												
Houay Pamom	2	1	0	1	0	2	0	0	0	0	0	0
Nam Youk	12	5	1	2	0	0	0	0	0	0	0	4
Sopphouh	1	1	0	0	0	0	0	0	0	0	0	0
Sop Youk	6	4	2	0	1	0	3	0	2	0	0	0
Lower Reservoir Subtotal:	21	11	3	3	1	2	3	0	2	0	0	4
TOTAL	101	45	11	9	7	9	17	33	6	1	3	29

Table a 29: General Data (Village level survey)

Village Name	Establishment of the village (Year)	Distance from village to District	Walking (Hrs)	Car (Hrs)	Boat (Hrs)	Road Condition	
						All weather	Not all weather
<u>Upper Reservoir</u>							
Phone Hom	6	34	9	3.5	0	No	Yes
Xieng Khong	100	41	10	4	0	No	Yes
Na Kang	2	46	12	5	0	No	Yes
Nam Long	3	13	4	1.5	0	No	Yes
Naxay	17	34	9	3.5	0	No	Yes
Na Hong	23	31	8	3.5	0	No	Yes
Viengthong	4	35	9	3.5	0	No	Yes
Phouyeng	6	31	8	3.5	0	No	Yes
Naxong	58	32	8	3.5	0	No	Yes
Dong	53	30	8	3.5	0	No	Yes
Hatsankhone	5	23	7.5	3	0	No	Yes
Phiangta	6	26	7.5	3	0	No	Yes
Pou	24	22	7.5	3	0	No	Yes
<u>Lower Reservoir</u>							
Houay Panom	3	49	13	3	1	No	Yes
Nam Youk	20	30	8	2	0	Yes	No
Soppbouh	17	40	10	3	0	No	Yes
Sop Youk	14	33	9	25	0	Yes	No

General data.xls

Table a 30: Natural Disaster to Lowland crop and Major problem (Village level survey)

Village name	Natural disaster						Major problem				
	Drought	Flood	Erosion	Landslid	Pest	Security	munica	Illness	Water supply	Lack of	arket
<u>Upper Reservoir</u>											
Phone Hom	Frequent	Never	Never	Frequent		Yes	Yes	No	No	No	No
Xieng Khong	Sometime	Never	Never	Never	Frequent	Yes	Yes	No	No	No	No
Na Kang	Sometime	Never	Never	Never	Frequent	No	Yes	No	Yes	No	No
Nam Long	Frequent	Never	Never	Never	Sometime	Yes	Yes	No	No	Yes	No
Naxay	Sometime	Never	Never	Never	Frequent	Yes	Yes	No	No	No	No
Na Hong	Rare	Rare	Frequent	Never	Frequent	No	Yes	No	Yes	No	No
viengthong	Sometime	Never	Never	Never	Frequent	No	Yes	No	Yes	No	No
Phouyeng	Sometime	Never	Never	Never	Sometime	Yes	Yes	No	No	Yes	No
Naxong	Rare	Sometime	Frequent	Never	Frequent	Yes	Yes	No	No	No	No
Dong	Rare	Sometime	Rare	Never	Rare	Yes	Yes	No	No	No	No
Hatsankhone	Sometime	Never	Never	Never	Sometime	Yes	Yes	Yes	Yes	No	No
Phiangta	Frequent	Rare	Frequent	Never	Frequent	No	Yes	No	No	Yes	No
Pou	Sometime	Sometime	Never	Never	Sometime	No	Yes	No	No	No	Yes
<u>Lower Reservoir</u>											
Houay Panom	Sometime	Never	Never	Never	Rare	No	Yes	No	No	No	Yes
Nam Youk	Sometime	Never	Never	Never	Rare	No	Yes	No	Yes	No	No
Soppbouh	Sometime	Never	Never	Never	Rare	No	Yes	No	Yes	No	No
Sop Youk	Never	Never	Never	Never	Never	No	Yes	No	Yes	No	No

Table a 31: Number of persons at different education levels (Village level survey)

Village name	Univer sity	%	High School	%	Second ary School	%	Primar y School	%	Literat e (No)	%	Total	%
<i>Upper Reservoir</i>												
Phone Hoin	0	0	0	0	3	5	33	50	30	45	66	100
Xieng Khong	0	0	0	0	6	4	121	86	14	10	141	100
Na Kang	0	0	0	0	3	7	24	55	17	39	44	100
Nam Long	0	0	0	0	0	0	15	38	25	63	40	100
Naxay	1	4	0	0	3	13	8	35	11	48	23	100
Na Hong	0	0	1	0	23	7	80	25	210	67	314	100
Viengtheng	0	0	0	0	4	4	92	93	3	3	99	100
Phonyeng	0	0	6	2	65	23	179	63	35	12	285	100
Naxong	0	0	0	0	7	2	25	6	376	92	408	100
Dong	0	0	2	1	5	1	25	7	302	90	334	100
Hatsankhone	0	0	3	6	9	18	22	43	17	33	51	100
Phiangta	0	0	4	2	2	1	8	4	185	93	199	100
Pou	0	0	1	1	5	3	124	79	27	17	157	100
Upper Reservoir	1		17		135		756		1252		2161	
<i>Lower Reservoir</i>												
Houay Paimoin	0	0	1	7	3	21	2	14	8	57	14	100
Nam Yeuk	0	0	12	5	76	32	126	53	25	10	239	100
Sopphouh	0	0	0	0	1	4	4	16	20	80	25	100
Sop Youk	0	0	5	2	22	10	24	11	172	77	223	100
Lower Reservoir	0		18		102		156		225		501	
TOTAL	1		35		237		912		1477		2662	

Table a 32: Distance from villages to secondary school (Village level survey)

Village name	Distance	
	To secondary School (km)	To high School (km)
<i>Upper Reservoir</i>		
Phone Ho	4	46
Xieng Kho	11	61
Na Kang	16	66
Nam Long	17	67
Naxay	4	54
Na Hong	1	49
viengthon	5	55
Phonyeng	0	50
Naxong	2	52
Dong	0	50
Hatsankh	7	7
Phiangta	4	54
Pou	8	58
<i>Lower Reservoir</i>		
Houay Pa	45	45
Nam Yeuk	30	30
Sopphouh	38	38
Sop Youk	32	32

Table a2x Access to Health facilities (Village level survey)

Village Name	To Hospital (KM)	To Dispensary (KM)	Total
<i>Upper Reservoir</i>			
Phone Hom	4	4	8
Xieng Khong	11	6	17
Na Kang	16	16	32
Nam Long	17	13	30
Navay	5	1	6
Na Hong	1	1	2
Vieng thong	5	0	5
Phon Yeng	0	0	0
Na Xong	2	3	5
Dong	0	0	0
Hatsamkhone	4	3	7
Phiangta	4	0	4
Pou	8	4	12
<i>Lower Reservoir</i>			
Houay Pamom	45	15	60
Nam Youk	30	6	36
Sopphonh	38	10	48
Sop Youk	12	8	20

access.xls

Table a2a : Epidemics & diseases suffered by Village (Village level survey)

Village Name	Malaria			Cholera			Typhoid			Cough, Flu		
	Year of Epidemic (Pers.)	Death toll (Pers.)	Number under Medical care (Pers.)	Year of Epidemic (Pers.)	Death toll (Pers.)	Number under Medical care (Pers.)	Year of Epidemic (Pers.)	Death toll (Pers.)	Number under Medical care (Pers.)	Year of Epidemic (Pers.)	Death toll (Pers.)	Number under Medical care (Pers.)
<i>Upper Reservoir</i>												
Phone Hom	1994	46	2	1997	3	0	0	0	0	0	0	0
Xieng Khong	1985	0	0	1985	0	0	0	0	0	1985	0	0
Na Kang	1997	3	0	1996	2	0	0	0	0	0	0	0
Nam Long	1997	8	1	0	0	0	0	0	0	0	0	0
Phon Yeng	1993	8	0	1993	4	0	0	0	0	0	0	0
Na Hong	1994	15	0	1994	0	0	0	0	0	0	0	0
Vieng thong	1994	10	0	1996	0	0	0	0	0	0	0	0
Navay	1982	1	0	1986	0	0	0	0	0	0	0	0
Na Xong	1994	0	0	1996	3	0	0	0	0	0	0	0
Dong	1992	12	0	1997	0	0	0	0	0	1997	0	0
Hatsamkhone	1993	1	0	1994	0	0	0	0	0	0	0	3
Phiangta	1998	2	1	1998	1	20	0	0	0	0	0	0
Pou	1975	5	1	1990	1	0	0	0	0	0	0	0
Upper Reservoir Subtotal :		111	5		14	20		0	0		0	3
<i>Lower Reservoir</i>												
Houay Pamom	1983	1	0	1980	1	0	0	0	0	0	0	0
Nam Youk	1980	0	0	1985	0	0	0	0	0	0	0	0
Sopphonh	1995	0	0	1995	2	2	0	0	0	0	0	0
Sop Youk	1980	0	0	1985	0	0	0	0	0	0	0	0
Lower Reservoir Subtotal :		1	0		3	2		0	0		0	0
TOTAL		112	5		17	22		0	0		0	3

Epidemics & diseases.xls

Table a 35: Access road (Village level survey)

Village Name	Village located along main road	Village with access road	Distance to main road(km)
<i>Upper Reservoir</i>			
Phone Hom	Yes	No	0
Xieng Khong	Yes	No	0
Na Kang	No	Yes	12
Nam Long	Yes	No	0
Naxay	Yes	No	0
Na Hong	Yes	No	0
Viengthong	Yes	No	0
Phonyeng	Yes	No	0
Naxong	Yes	No	0
Dong	Yes	No	0
Hatsankhone	Yes	No	0
Phiangta	Yes	No	0
Pou	No	Yes	1
<i>Lower Reservoir</i>			
Houay Pannou *	No	No	0
Nam Yeuk	Yes	No	0
Sopphouh	No	Yes	6
Sop Youk	Yes	No	0

* = Travel by boat only

Access road.xls

Table a 36: Shop / Market (Village level survey)

Item	Village name
Village having shops	Phonyeng
Number of Shops	23
Village having market	Phonyeng
Days per week, market is open	4

Table a27: Infrastructures under Construction (Village level survey)

Village Name	Irrigation (Ha)	Hospital (No.)	Administrative (No. of building) (No.)	School (No.)	Bridge (No.)	Others (No.)
<i>Upper Reservoir</i>						
Phone Hom	0	0	0	0	0	0
Xieng Khong	0	0	0	0	0	0
Na Kang	0	0	0	0	0	0
Nam Long	0	0	0	0	0	0
Naxay	0	0	0	0	0	0
Na Hong	0	0	0	1	0	0
Vieng thong	0	0	0	0	0	0
Phon Yeng	30	0	0	1	0	0
Na Xong	33	0	0	0	0	0
Dong	30	0	0	0	0	0
Hatsamkhone	0	0	0	0	0	0
Phiangta	13	0	0	0	0	0
Pou	0	0	0	0	0	0
Upper Reservoir Subtotal :	106	0	0	2	0	0
<i>Lower Reservoir</i>						
Houay Pamom	0	0	0	0	0	0
Nam Youk	0	0	0	0	0	0
Sopphoh	0	0	0	0	0	0
Sop Youk	0	0	1	0	1	0
Lower Reservoir Subtotal :	0	0	1	0	1	0
TOTAL	106	0	1	2	1	0

Infrastructures under Construction.xls

Table a28: Population in the 1998 (Village level survey)

Village name	Household (No.)	Family (No.)	Household headed by women (No.)	Number of Population (Pers.)			Ethnic Groups					
				Male	Female	Total	Song (HH)	Lao r Sub group of LS (No.)	Lao r Sub group of L.Th (HH)	Lao r Sub group of L.L (No.)	Lao r Sub group of L.L (No.)	
<i>Upper Reservoir</i>												
Phone Hom	67	67	7	188	187	375	0	0	67	1	0	0
Xieng Khong	39	42	2	121	126	247	0	0	5	1	34	1
Na Kang	25	26	1	62	70	132	0	0	15	1	10	1
Nam Long	17	22	0	56	51	107	0	0	4	1	13	2
Naxay	22	30	1	63	62	125	0	0	21	1	1	1
Na Hong	75	75	3	202	244	446	0	0	60	1	15	3
Viengthong	46	58	3	136	137	273	0	0	1	1	45	1
Phonyeng	63	66	4	180	169	349	31	2	0	0	32	3
Naxong	81	86	2	256	266	522	0	0	13	1	68	2
Dong	82	82	3	250	259	509	0	0	0	0	82	2
Hatsamkhone	27	27	1	91	83	174	0	0	2	2	27	4
Phiangta	49	49	2	168	151	322	0	0	2	1	47	2
Pou	66	74	1	205	211	416	14	1	0	0	52	3
Upper Reservoir Subtotal :	659	704	30	1978	2019	3997	45	3	190	11	426	25
<i>Lower Reservoir</i>												
Houay Pamom	18	18	0	55	72	127	18	1	0	0	0	0
Nam Youk	86	86	0	268	272	540	86	1	0	0	0	0
Sopphoh	23	26	4	65	67	132	23	1	0	0	0	0
Sop Youk	67	67	6	196	212	408	66	1	0	0	1	1
Lower Reservoir Subtotal :	194	197	10	584	623	1207	193	4	0	0	1	1
TOTAL	853	901	40	2562	2642	5204	238	7	190	11	427	26

Note: Household should be have more than one family

Table a 39 Number of Households moving in the project area during the last five years (Village level survey)

Village name	1998				1997				1996				1995				1994			
	Lao Sung	Lao Theung	Lao Loum	Lao Sung	Lao Theung	Lao Loum	Lao Sung	Lao Theung	Lao Loum	Lao Sung	Lao Theung	Lao Loum	Lao Sung	Lao Theung	Lao Loum	Lao Sung	Lao Theung	Lao Loum		
Upper Reservoir																				
Phone Hom	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	
Xieng Khong	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Na Kang	10	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Nam Long	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	
Navay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
Na Hong	0	0	0	0	18	0	0	1	0	0	3	0	0	0	0	4	0	0	0	
Viengthong	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	
Phonyeng	0	0	0	0	0	0	7	0	0	5	0	0	4	0	0	0	0	0	0	
Naxong	0	0	2	0	0	6	0	13	0	0	7	0	0	0	0	0	0	0	0	
Dong	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Hatsamkhone	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	
Phiangta	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	
Pou	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	
Upper Reservoir S	10	0	4	15	18	25	0	11	21	0	10	13	1	8	6					
Lower Reservoir																				
Houay Pamom	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	
Nam Youk	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
Sopphouh	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sop Youk	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lower Reservoir S	19	0	0	3	0	0	20	0	0	2	0	0	0	0	0	0	0	0	0	
TOTAL	29	0	4	18	18	25	20	11	21	2	10	13	1	8	6					

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Table a 40: Recent emigration (Households) 1997-98, (Village-level survey)

Village Name	Lao Sung		Lao theung		Lao Loum		Total	%
	(Pers.)	%	(Pers.)	%	(Pers.)	%		
Upper Reservoir								
Phone Hom	0	0	1	100	0	0	1	100
Xieng Khong	0	0	0	0	1	100	1	100
Na Kang	0	0	0	0	0	0	0	0
Nam Long	0	0	1	100	0	0	1	100
Navay	0	0	0	0	0	0	0	0
Na Hong	0	0	1	100	0	0	1	100
Vieng thong	0	0	0	0	0	0	0	0
Phon Yeng	0	0	0	0	1	100	1	100
Na Xong	0	0	1	33	2	67	3	100
Dong	0	0	0	0	3	100	3	100
Hatsamkhone	0	0	0	0	0	0	0	0
Phiangta	0	0	0	0	3	100	3	100
Pou	0	0	0	0	0	0	0	0
Upper Reservoir Subtotal :	0		4		10		14	
Lower Reservoir								
Houay Pamom	1	100	0	0	0	0	1	100
Nam Youk	0	0	0	0	0	0	0	0
Sopphouh	1	100	0	0	0	0	1	100
Sop Youk	4	100	0	0	0	0	4	100
Lower Reservoir Subtotal :	6		0		0		6	
TOTAL	6		4		10		20	

Table a 41: Recent emigration (Households) 1997-98, (Village level survey)-

Village Name	Lao Sung (Pers.)	%	Lao theung (Pers.)	%	Lao Loum (Pers.)	%	Total (Pers.)	%
<i>Upper Reservoir</i>								
Phone Hoin	0	0	1	100	0	0	1	100
Xieng Khong	0	0	0	0	1	100	1	100
Na Kang	0	0	0	0	0	0	0	0
Nam Long	0	0	1	100	0	0	1	100
Naxay	0	0	0	0	0	0	0	0
Na Hong	0	0	1	100	0	0	1	100
Vieng Thong	0	0	0	0	0	0	0	0
Phon Yeng	0	0	0	0	1	100	1	100
Na Xong	0	0	1	33	2	67	3	100
Dong	0	0	0	0	3	100	3	100
Hatsankhone	0	0	0	0	0	0	0	0
Phiangta	0	0	0	0	3	100	3	100
Pou	0	0	0	0	0	0	0	0
Upper Reservoir Subtotal :	0		4		10		14	
<i>Lower Reservoir</i>								
Houay Pamom	1	100	0	0	0	0	1	100
Nam Youk	0	0	0	0	0	0	0	0
Sopphouh	1	100	0	0	0	0	1	100
Sop Youk	4	100	0	0	0	0	4	100
Lower Reservoir Subtotal :	6		0		0		6	
TOTAL	6		4		10		20	

Table a42 : Villages having Archeological and Cemetery sites, (Village level survey)

Village Name	Location of Site	With Cemetery
<i>Upper Reservoir</i>		
Phone Hoin	No	Yes
Xieng Khong	No	Yes
Na Kang	No	Yes
Nam Long	No	Yes
Naxay	No	Yes
Na Hong	No	Yes
Viengthong	No	Yes
Phonyeng	No	Yes
Naxong	No	Yes
Dong	No	Yes
Hatsankhone	No	Yes
Phiangta	No	Yes
Pou	No	Yes
<i>Lower Reservoir</i>		
Houay Pamom	No	Yes
Nam Youk	No	Yes
Sopphouh	No	Yes
Sop Youk	No	Yes

Table a 43: Village Organizations, (Village level survey)

Village Name	Lao Women's Union	Lao Youth's Union	Lao National Committee	Other Official Organization			Unofficial Organization			
	Membership (Pers.)	Membership (Pers.)	Membership (Pers.)	Village Military (Pers.)	Village Army (Pers.)	Older Organization (Pers.)	Forest User Group (Pers.)	Land Duty (Pers.)	Irrigation User Group (Pers.)	Water pipe (Pers.)
<i>Upper Reservoir</i>										
Phone Hom	4	5	6	14	2	2	2	0	0	0
Xieng Khong	10	6	4	12	2	2	2	0	0	0
Na Kang	0	2	0	11	1	0	1	0	0	0
Nam Long	4	5	2	0	0	0	0	0	0	0
Naxay	3	2	2	5	2	0	1	0	0	0
Na Hong	2	7	4	15	3	7	1	1	2	0
Vieng thong	5	7	2	12	2	6	2	0	0	0
Phon Yeng	4	7	3	12	2	2	1	0	0	1
Na Xong	38	2	19	3	15	2	5	0	0	0
Dong	3	3	6	0	0	2	1	0	0	0
Hatsamkhone	4	3	3	12	2	0	1	0	1	0
Phiangta	2	4	2	10	4	7	2	0	0	0
Pou	3	21	3	3	3	3	1	0	1	0
Upper Reservoir Subtotal :	82	74	56	109	38	33	20	1	4	1
<i>Lower Reservoir</i>										
Houay Pamoin	6	6	0	2	0	3	1	0	0	0
Nam Youk	11	26	8	25	8	2	1	0	0	0
Sopphonh	5	7	0	5	2	0	5	0	0	0
Sop Youk	9	6	7	16	6	0	2	0	0	0
Lower Reservoir Subtotal :	31	45	15	48	16	5	9	0	0	0
TOTAL	113	119	71	157	54	38	29	1	4	1

Table a 44: Number of household classified by religion, (Village level survey)

Village Name	Buddhist	%	Christian	%	Animist	%	Total	%
	(Pers.)		(Pers.)		(Pers.)		(Pers.)	
<i>Upper Reservoir</i>								
Phone Hom	0	0	0	0	67	100	67	100
Xieng Khong	34	87	0	0	5	13	39	100
Na Kang	0	0	0	0	25	100	25	100
Nam Long	13	76	0	0	4	24	17	100
Naxay	0	0	0	0	22	100	22	100
Na Hong	2	3	0	0	73	97	75	100
Vieng thong	46	100	0	0	0	0	46	100
Phon Yeng	32	51	0	0	31	49	63	100
Na Xong	50	57	0	0	37	43	87	100
Dong	25	30	0	0	57	70	82	100
Hatsamkhone	26	96	0	0	1	4	27	100
Phiangta	12	24	0	0	37	76	49	100
Pou	52	79	0	0	14	21	66	100
Upper Reservoir Subtotal :	292		0		373		665	
<i>Lower Reservoir</i>								
Houay Pamoin	0	0	0	0	18	100	18	100
Nam Youk	0	0	0	0	86	100	86	100
Sopphonh	0	0	0	0	23	100	23	100
Sop Youk	1	1	0	0	66	99	67	100
Lower Reservoir Subtotal :	1		0		193		194	
TOTAL	293		0		566		859	

Table b1 : Education facilities (Primary school) , village survey level

Village Name	Primary School											
	Village Size having (m ²)	Number of Classrooms	Age of Primary School (years)	Approximate Cost of School (Kip)	General Condition	Roof	Walls	Floor	Poles	Number of Students	Number of Teachers	
Hat Kham	Yes 180	5	8	5,000,000	Fair	Corrugated Iron Sheet	wood and wood	Earth and	Wood	113	6	
Tahua	Yes 84	3	3	2,000,000	Fair	Corrugated Iron Sheet	Wood	Earth	Wood	31	2	
Somseum	Yes 360	8	29	3,000,000	Poor	Corrugated Iron Sheet	Bamboo	Cement	Wood	375	14	
Nam Pa	Yes 140	5	5	7,000,000	Fair	Sheet and Palm Thatch	Bamboo	Earth	Wood	103	5	
Houay Koun	Yes 72	3	10	3,000,000	Poor	Bamboo	Bamboo	Earth	Wood	0	0	
Nong-Deng	Yes 12	2	2	350,000	Good	Straw	Bamboo	Earth	Wood	1	13	
Thong-Noi	Yes 288	5	1	1,978,000	Good	Cement made file	Cement Block	Cement	concrete	311	6	
Thong-Gnai	No 0	0	0	-	-	-	-	-	-	0	0	
Song Khon	Yes 24	2	10	400,000	Poor	Corrugated Iron Sheet	wood and wood	Earth	Wood	20	1	
Phonsi	Yes 336	6	2	11,000,000	Fair	Corrugated Iron Sheet	Cement Block	Earth and	concrete	150	7	
Thakokkhen	Yes 400	5	1	25,000,000	Good	Corrugated Iron Sheet	Brick	Cement	concrete	152	6	
Nam Tek	No 0	0	0	-	-	-	-	-	-	0	0	
Nam Ngiep	No 0	0	0	-	-	-	-	-	-	0	0	
Sen-Oudom	Yes 90	3	19	1,000,000	Poor	Corrugated Iron Sheet	Wood	Earth	Wood	60	5	
Komsipchet	Yes											

Note. Army village not available data

Table b2 : Secondary, village survey level

Village name	Village Size having (m ²)	Number of Secondary Classrooms	Age of Secondary School (Years)	Approximate Cost of Secondary School (Kip)	General Condition	Roof	Walls	Floor	Poles	Number of Students	Number of Teachers
Hat Kham	No	-	-	-	-	-	-	-	-	-	-
Tahua	No	-	-	-	-	-	-	-	-	-	-
Somseum	No	-	-	-	-	-	-	-	-	-	-
Nam Pa	No	-	-	-	-	-	-	-	-	-	-
Houay Kou	No	-	-	-	-	-	-	-	-	-	-
Nong-Deng	No	-	-	-	-	-	-	-	-	-	-
Thong-Noi	No	-	-	-	-	-	-	-	-	-	-
Thong-Gna	No	-	-	-	-	-	-	-	-	-	-
Song Khon	No	-	-	-	-	-	-	-	-	-	-
Phonsi	No	-	-	-	-	-	-	-	-	-	-
Thakokkhe	No	-	-	-	-	-	-	-	-	-	-
Nam Tek	No	-	-	-	-	-	-	-	-	-	-
Nam Ngiep	No	-	-	-	-	-	-	-	-	-	-
Sen-Oudom komsipchet	yes 216	4	14	45,000,000	0	Corrugated Iron Sheet	Wood Planks	Cement	Wood	90	10

Note. Army village not available data

Table b3 : Moving From , household survey level

Village Names	Same Province		Other Province		Total	
	HH	%	HH	%	HH	%
Hat Kham	2	100	0	0	2	100
Tahua	2	67	1	33	3	100
Somseum	5	71	2	29	7	100
Nam Pa	2	67	1	33	3	100
Houay Koun	6	46	7	54	13	100
Nong deng	1	50	1	50	2	100
Thong Noi	1	100	0	0	1	100
Thong Gnai	3	75	1	25	4	100
Song Khom	2	100	0	0	2	100
Phonsi	1	33	2	67	3	100
Thakokkhen	1	50	1	50	2	100
Nam Tek	0	0	0	0	0	0
Nam Ngiep	0	0	0	0	0	0
Sen Oudom	3	75	1	25	4	100
Komsipchet						
Total	29		17		46	

Note: Army village not available data

Moving From

Table b4 : Surveyed household classified by ethnic groups

Village Name	Lao Loum		Number Household of Ethnic group				Total	
	HH	%	Lao Theung HH	%	Lao Soung HH	%	HH	%
Hat Kham	4	80	0	0	1	20	5	100
Tahua	2	67	1	33	0	0	3	100
Somseum	10	100	0	0	0	0	10	100
Nam Pa	4	100	0	0	0	0	4	100
Houay Koun	14	100	0	0	0	0	14	100
Nong Deng	2	100	0	0	0	0	2	100
Thong Noi	3	100	0	0	0	0	3	100
Thong Gnai	4	100	0	0	0	0	4	100
Song Khom	3	100	0	0	0	0	3	100
Phonsi	3	100	0	0	0	0	3	100
Thakokkhen	1	33	2	67	0	0	3	100
Nam Tek	2	100	0	0	0	0	2	100
Nam Ngiep	4	100	0	0	0	0	4	100
Sen Oudom	4	100	0	0	0	0	4	100
Komsipchet								
TOTAL :	60		3		1		64	

Note: Army village not available data

Table b5 : Average walking distances (Km)

Village Names	Distance from household to	
	Lowland rice	Upland rice
Hat Kham	0.03	2.37
Tahua	1.25	1.25
Somseum	1.83	3.5
Nam Pa	2	2.5
Houay Koun	1.3	1.33
Nong deng	0	1.5
Thong Noi	1.66	0
Thong Gnai	0.87	0
Song Khom	1.5	0
Phonsi	1.5	0
Thakokkhen	2.34	2.5
Nam Tek	4.05	0.1
Nam Ngiep	6.66	0.5
Sen Oudom	3.62	2
Komsipchet		

Note: Army village not available data

W.distances

Table b6 : Average land Tenure in agriculture per house (ha) , village survey level

Village name	Upland rice fields			Lowland paddy fields			Upland trees			Cash crops			Orchard			Total									
	Total	% Used	% Total	Total	% Used	% Total	Total	% Used	% Total	Total	% Used	% Total	Total	% Used	% Total	Total	% Used	% Total							
Hat kham	1.08	21	0.95	22	0.32	6	0.32	7	0.32	6	0.32	7	2.00	38	2.00	47	1.50	29	0.70	16	5.21	100	4.29	100	
Tahua	0.62	17	0.62	19	0.83	22	0.58	18	0.83	22	0.58	18	0.93	25	0.93	29	0.50	13	0.50	16	3.71	100	3.21	100	
Somseum	0.93	23	0.76	23	1.32	32	0.99	30	1.32	32	0.99	30	0.21	5	0.22	7	0.32	8	0.32	10	4.10	100	3.29	100	
Nam Pa	0.82	21	0.82	24	1.22	32	1.03	30	1.22	32	1.03	30	0.26	7	0.26	8	0.32	8	0.32	9	3.84	100	3.47	100	
Houay Koun	0.97	26	0.97	32	1.07	29	0.72	24	1.07	29	0.72	24	0.00	0	0.00	0	0.60	16	0.60	20	3.71	100	3.01	100	
Nong deng	0.55	46	0.39	38	0.32	27	0.32	31	0.32	27	0.32	31	0.00	0	0.00	0	0.00	0	0.00	0	1.19	100	1.03	100	
Thong Noi	0.00	0	0.00	0	1.96	40	1.80	46	1.96	40	1.80	46	0.00	0	0.00	0	1.00	20	0.30	8	4.93	100	3.89	100	
Thong Gnai	0.00	0	0.00	0	2.00	34	1.78	33	2.00	34	1.78	33	1.50	26	1.50	28	0.32	5	0.32	6	5.82	100	5.37	100	
Song Khom	0.00	0	0.00	0	1.10	35	0.80	38	1.10	35	0.80	38	0.00	0	0.00	0	0.97	31	0.48	23	3.16	100	2.07	100	
Phonsi	0.00	0	0.00	0	5.00	44	3.50	42	5.00	44	3.50	42	0.26	2	0.26	3	1.00	9	1.00	12	11.26	100	8.26	100	
Thakokkhen	0.24	7	0.24	9	1.26	39	1.00	37	1.26	39	1.00	37	0.48	15	0.48	18	0.00	0	0.00	0	3.24	100	2.71	100	
Nam Tek	1.00	20	0.20	24	2.00	40	0.32	38	2.00	40	0.32	38	0.00	0	0.00	0	0.00	0	0.00	0	5.00	100	0.84	100	
Nam Ngiep	1.00	16	0.32	7	2.11	34	1.68	37	2.11	34	1.68	37	0.32	5	0.32	7	0.65	11	0.52	11	6.19	100	4.53	100	
Sen Oudom	0.64	9	0.32	6	2.52	36	1.77	34	2.52	36	1.77	34	0.32	5	0.32	6	1.00	14	1.00	19	6.99	100	5.17	100	
Komsipchet																									
Total	7.84		5.59		23.02		16.60		23.02		16.60		6.29		6.30		8.18		6.06		68.35		51.15		

Note: Army village not available data

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Table b7 : Current Problems (Household level survey)

Village name	Fertility		Lack of La		Lack of lab		Lack of food		Technical		Disaster		Market		Other		Total	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Hat Kham	0	0	3	21	2	14	2	14	1	7	4	29	1	7	1	7	14	100
Tahua	0	0	2	33	0	0	0	0	1	17	2	33	0	0	1	17	6	100
Somseum	2	9	3	13	6	26	2	9	3	13	6	26	1	4	0	0	23	100
Nam Pa	3	18	1	6	3	18	3	18	1	6	5	29	0	0	1	6	17	100
Houay Koun	1	7	3	21	4	29	3	21	1	7	2	14	0	0	0	0	14	100
Nong deng	0	0	1	17	1	14	1	14	2	33	0	0	1	17	0	0	17	100
Thong Noi	2	29	0	0	1	14	1	14	0	0	2	29	1	14	0	0	7	100
Thong Gnai	2	18	1	9	1	9	2	18	1	9	4	36	0	0	0	0	11	100
Song Khom	0	0	1	17	1	17	1	17	0	0	1	17	1	17	1	17	6	100
Phensi	0	0	1	17	1	17	1	17	0	0	2	33	1	17	0	0	6	100
Thakokkhen	0	0	1	17	1	17	1	17	1	17	2	33	0	0	0	0	6	100
Nam Tek	1	33	0	0	0	0	1	33	0	0	1	33	0	0	0	0	3	100
Nam Ngiep	3	19	1	6	3	19	3	19	2	13	4	25	0	0	0	0	16	100
Sen Oudom	1	13	0	0	0	0	2	25	1	13	3	38	1	13	0	0	8	100
Komsipchet																		
Total	15	18	24	24	24	24	12	39	6	5	143							

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Table b8 : Diseases, Village survey level

Village Names	Malaria		Dysentery		Diarrhea		Fever		Flu		Other		Total	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Hat Kham	4	36	2	18	1	9	1	9	3	27	0	0	11	100
Tahua	0	0	1	50	0	0	0	0	1	50	0	0	2	100
Somseum	3	20	2	13	3	20	2	13	5	33	0	0	15	100
Nam Pa	4	31	1	8	2	15	2	15	4	31	0	0	13	100
Houay Koun	6	50	0	0	0	0	2	17	4	33	0	0	12	100
Nong deng	2	100	0	0	0	0	0	0	0	0	0	0	2	100
Thong Noi	0	0	1	25	0	0	1	25	2	50	0	0	4	100
Thong Gnai	1	13	1	13	2	25	1	13	3	38	0	0	8	100
Song Khom	2	40	1	20	0	0	1	20	1	20	0	0	5	100
Phensi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thakokkhen	2	50	0	0	0	0	0	0	2	50	0	0	4	100
Nam Tek	0	0	0	0	0	0	0	0	1	100	0	0	1	100
Nam Ngiep	2	29	0	0	0	0	2	29	3	43	0	0	7	100
Sen Oudom	1	20	0	0	0	0	1	20	3	60	0	0	5	100
Komsipchet														
Total	27	9	8	8	13	13	32	32	0	89				

Note: Army village not available data

Table b9 : Age of Houses (Years) , village survey level

Village Name	1-4 Years		5-8 Years		9-12 Years		13-16 Years		17-20 Years		1-35 Year		Total	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Hai Kham	1	20	1	20	0	0	0	0	2	40	1	20	5	100
Tahua	2	67	1	33	0	0	0	0	0	0	0	0	3	100
Somseum	3	30	5	50	1	10	1	10	0	0	0	0	10	100
Nam Pa	0	0	0	0	4	80	1	20	0	0	0	0	5	100
Houay Koun	5	36	3	21	3	21	3	21	0	0	0	0	14	100
Nong deng	2	100	0	0	0	0	0	0	0	0	0	0	2	100
Thong Noi	0	0	1	33	0	0	1	33	0	0	1	33	3	100
Thong Gnai	0	0	0	0	2	50	0	0	2	50	0	0	4	100
Song Khom	3	100	0	0	0	0	0	0	0	0	0	0	3	100
Phonsi	1	33	0	0	1	33	1	33	0	0	0	0	3	100
Thakokkhen	2	67	1	33	0	0	0	0	0	0	0	0	3	100
Nam Tek	0	0	0	0	1	100	0	0	0	0	0	0	1	100
Nam Ngiep	1	25	0	0	0	0	2	50	0	0	1	25	4	100
Sen Oudom	2	50	0	0	1	25	0	0	0	0	1	25	4	100
Komsipchet														
Total	22		12		13		9		4		4		64	

AgeH.Xls

Table b10 : Size of House , household survey level

Village Name	1-20 m ²		21-31 m ²		31-40 m ²		41-50 m ²		51-60 m ²		61-70 m ²		71-150 m ²		Total	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Hai Kham	0	0	0	0	2	40	1	20	1	20	1	20	0	0	5	100
Tahua	1	33	1	33	0	0	1	33	0	0	0	0	0	0	3	100
Somseum	0	0	0	0	0	0	4	40	2	20	0	0	4	40	10	100
Nam Pa	0	0	1	20	0	0	1	20	1	20	1	20	1	20	5	100
Houay Koun	0	0	2	14	2	14	3	21	3	21	1	7	3	21	14	100
Nong deng	0	0	0	0	1	50	1	50	0	0	0	0	0	0	2	100
Thong Noi	0	0	0	0	0	0	3	100	0	0	0	0	0	0	3	100
Thong Gnai	0	0	0	0	1	25	1	25	0	0	1	25	1	25	4	100
Song Khom	0	0	2	67	1	33	0	0	0	0	0	0	0	0	3	100
Phonsi	0	0	1	33	0	0	0	0	0	0	1	33	1	33	3	100
Thakokkhen	0	0	0	0	0	0	1	33	1	33	0	0	1	33	3	100
Nam Tek	0	0	0	0	0	0	0	0	1	100	0	0	0	0	1	100
Nam Ngiep	0	0	0	0	1	25	0	0	0	0	1	25	2	50	4	100
Sen Oudom	0	0	0	0	0	0	0	0	2	50	0	0	2	50	4	100
Komsipchet																
Total	1		7		8		16		11		6		15		64	

Note: Army village not available data

Size

Table b11 : Number of Households Survey Classified By Rooms

Village Name	1 Room		2 Rooms		3 Rooms		4 Rooms		5 Rooms		6 Rooms		Total	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Hat Kham	0	0	1	20	4	80	0	0	0	0	0	0	5	100
Tahua	0	0	2	67	1	33	0	0	0	0	0	0	3	100
Somseum	0	0	3	30	6	60	0	0	1	10	0	0	10	100
Nam Pa	0	0	2	50	2	50	0	0	0	0	0	0	4	100
Houay Koun	0	0	11	79	3	21	0	0	0	0	0	0	14	100
Nong Deng	0	0	2	100	0	0	0	0	0	0	0	0	2	100
Thong Noi	0	0	1	33	2	67	0	0	0	0	0	0	3	100
Thong Gnai	0	0	2	50	1	25	0	0	0	0	1	25	4	100
Song Khom	0	0	3	100	0	0	0	0	0	0	0	0	3	100
Phonsi	0	0	1	33	1	33	1	33	0	0	0	0	3	100
Thakokkhen	0	0	2	67	1	33	0	0	0	0	0	0	3	100
Nam Tek	0	0	0	0	2	100	0	0	0	0	0	0	2	100
Nam Ngiep	0	0	0	0	4	100	0	0	0	0	0	0	4	100
Sen Oudom	0	0	2	50	2	50	0	0	0	0	0	0	4	100
Komsipchet														
TOTAL:	0		32		29		1		1		1		64	

Note: Army village not available data

Room.xls

Table b12 : House characteristics : Type of Floor , village survey level

Village Name	Bamboo		Earth		Wood		Cement		ood & Ceme		ood & Othe		Total	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Hat Kham	0	0	1	20	4	80	0	0	0	0	0	0	5	100
Tahua	0	0	0	0	3	100	0	0	0	0	0	0	3	100
Soinseum	0	0	0	0	10	100	0	0	0	0	0	0	10	100
Nam Pa	1	25	0	0	3	75	0	0	0	0	0	0	4	100
Houay Koun	0	0	0	0	8	57	5	36	1	7	0	0	14	100
Nong deng	1	50	0	0	1	50	0	0	0	0	0	0	2	100
Thong Noi	0	0	0	0	3	100	0	0	0	0	0	0	3	100
Thong Gnai	0	0	0	0	3	75	0	0	1	25	0	0	4	100
Song Khom	1	33	0	0	2	67	0	0	0	0	0	0	3	100
Phonsi	1	33	0	0	2	67	0	0	0	0	0	0	3	100
Thakokkhen	0	0	0	0	3	100	0	0	0	0	0	0	3	100
Nam Tek	0	0	0	0	2	100	0	0	0	0	0	0	2	100
Nam Ngiep	0	0	0	0	3	75	0	0	0	0	1	25	4	100
Sen Oudom	0	0	0	0	3	75	0	0	1	25	0	0	4	100
Komsipchet														
Total	4		1		50		5		3		1		64	

Note: Army village not available data

floors

Table b13 : House Characteristics : Type of Walls , household survey level

Village Name	Brick		Bamboo		Cement Block		Wood Planks		Brick & Wood		Cement Block &		Total	
	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Hat Kham	0	0	4	80	0	0	1	20	0	0	0	0	5	100
Tahua	0	0	2	67	0	0	1	33	0	0	0	0	3	100
Somseum	0	0	6	60	0	0	4	40	0	0	0	0	10	100
Nain Pa	0	0	2	50	0	0	2	50	0	0	0	0	4	100
Houay Koun	1	7	5	36	1	7	7	50	0	0	0	0	14	100
Nong Deng	0	0	1	50	0	0	1	50	0	0	0	0	2	100
Thong Noi	0	0	1	33	0	0	2	67	0	0	0	0	3	100
Thong Gnai	0	0	2	50	0	0	2	50	0	0	0	0	4	100
Song Khom	0	0	3	100	0	0	0	0	0	0	0	0	3	100
Phonsi	0	0	1	33	0	0	2	67	0	0	0	0	3	100
Thakokkhen	0	0	3	100	0	0	0	0	0	0	0	0	3	100
Nam Tek	0	0	2	100	0	0	0	0	0	0	0	0	2	100
Nam Ngiep	0	0	3	75	0	0	0	0	0	0	1	25	4	100
Sen Oudom	0	0	1	25	0	0	2	50	1	25	0	0	4	100
Keinsipchet														
Total	1		36		1		24		1		1		64	

Note: Army village not available data

WALL.xls

Table b14 : Loan
Have You contracted a loan ? Household survey level

Village name	Yes		No		Total	
	HH	%	HH	%	HH	%
Hat kham	1	20	4	80	5	100
Tahua	0	0	3	100	3	100
Somseum	1	10	9	90	10	100
Nain Pa	0	0	4	100	4	100
Houay Koun	3	21	11	79	14	100
Nong deng	0	0	2	100	2	100
Thong Noi	1	33	2	67	3	100
Thong Gnai	2	50	2	50	4	100
Song Khom	1	33	2	67	3	100
Phonsi	0	0	3	100	3	100
Thakokkhen	1	33	2	67	3	100
Nam Tek	1	50	1	50	2	100
Nam Ngiep	3	75	1	25	4	100
Sen Oudom	3	75	1	25	4	100
Komsipchet						
TOTAL:	17		47		64	

Note: Army village not available data

LOAN.xls

