

## Table of contents

|   |     |
|---|-----|
| Table of contents .....   | i   |
| List of tables .....  | ii  |
| List of figures .....   | iii |
| 1 SURVEY METHODOLOGY .....  | 1   |
| 1.1 Scope and Purpose of the Survey .....   | 1   |
| 1.2 Sample Design and Selection .....   | 2   |
| 1.2.1 First Step: Description of Sample Village .....                                       | 2   |
| 1.2.2 Second Step: Selection of Sample Household .....                                      | 2   |
| 1.3 Methodology and Main Contents of the Survey .....                                       | 4   |
| 1.4 Terms, Concepts and Definition of Words used in the Survey .....                        | 6   |
| 1.5 Reliability of the Data .....   | 8   |
| 2 Household in the LAO PDR .....  | 9   |
| 3 CONSUMPTION AND RICE INTAKE OF HOUSEHOLD .....  | 13  |
| 3.1 Consumption .....   | 13  |
| 3.2 Daily Intake of Rice and Some Certain Food Items .....                                  | 25  |
| 4 POSSIBILITY TO ACCESS AND USE OF SAFE WATER RESOURCES AND SERVICES .....                  | 34  |
| 4.1 Usage of Clean Water Resources and Decease Prevention .....                             | 34  |
| 4.2 Health Services .....   | 35  |
| 4.3 Health Care and Health Behavior .....   | 38  |
| 4.4 Education .....   | 43  |
| 4.5 Knowledge .....   | 45  |
| 4.6 Land and Productive Assets .....  | 50  |
| 4.7 Infrastructure .....  | 50  |
| 5 ECONOMIC ACTIVITY OF HOUSEHOLD .....  | 53  |
| 5.1 Main Activity of Population aged 10 Year or More by Province and Region 2007/2008 ..... | 53  |
| 5.2 Agricultural Production .....   | 56  |
| 5.3 Household Business .....  | 65  |
| 5.4 Productivity .....  | 67  |
| 5.5 Restriction (Barrier) .....   | 69  |
| 5.6 Household Investment and Construction .....   | 70  |
| 5.7 Possession of Goods .....   | 72  |
| 5.8 Sustainable Land Use .....  | 74  |
| 6 TIME USE .....  | 76  |

## List of tables

|  |    |
|--|----|
| Table i : Number Sample for Survey .....   | 2  |
| Table ii: Sample allocation over survey months .....   | 3  |
| Table iii: Number of sample villages in each stratum .....   | 4  |
| Table 2.1: Household size and number of households by provinces and regions in 2007/08 .....   | 9  |
| Table 2.2: Average household size by type of area in 2007/08.....  | 10 |
| Table 2.3: Number of households by province and type of area in 2007/08, 1000 households .....   | 11 |
| Table 2.4: Dependency rates and average number of consumption units, by province and region 2007/2008. ....  | 12 |
| Table 3.1: Household consumption by group of goods and services. Monthly average consumption in thousand Kip. ....   | 14 |
| Table 3.2: Percent of total consumption by groups of goods and services in 1992/93, 1997/98, 2002/03 and 2007/08. ....   | 15 |
| Table 3.3: Percentage share of food consumption by item group in 1992/93, 1997/98, 2002/03 and 2007/08. ....   | 16 |
| Table 3.4: Percentage share of total consumption by areas in 2007/08 for selected items .....  | 16 |
| Table 3.5: Percentage share of total consumption by region in 2007/08.Selected items .....   | 17 |
| Table 3.6: Percentage share of main items to total consumption in urban areas in 2007/08. ....   | 17 |
| Table 3.7: Percentage share of main items to total consumption in rural areas with access to road in 2007/08.....  | 18 |
| Table 3.8: Percentage share of main items to total consumption in rural areas without access to road in 2007/2008.....   | 18 |
| Table 3.9: Household consumption, by provinces and regions. Total monthly household averages and percent own<br>production.....                                  | 19 |
| Table 3.10: Household consumption, by provinces and regions. Percent consumption per main group of goods and services.<br>.....                                  | 20 |
| Table 3.11: Household consumption by group of goods and services. Total and monthly household averages. (Percentages)<br>.....                                   | 21 |
| Table 3.12: Household consumption by group of goods and services in 2007/08. Monthly averages (1000 Kip) and<br>percentages of total consumption, by region..... | 22 |
| Table 3.13: Household consumption by region and group of goods and services in 2007/08. percentages of total.....  | 23 |
| Table 3.14: Household Consumption by region and group of goods and services in 2007/08.....  | 24 |
| Table 3.15: Daily rice intake in grams per person by urban/rural in 1997/98, 2002/03 and 2007/08.....  | 25 |
| Table 3.16: Daily rice intake in grams per person by province and region in 2007/08 .....  | 26 |
| Table 3.17: Weekly intake in grams per person of meat, fish, vegetables and fruits, by region in 2007/08 .....   | 26 |
| Table 3.18: Household consumption by group of goods and services in 2007/08. Monthly averages (1000 Kip) .....   | 27 |
| Table 3.19: Comparison of average consumption of goods and services by province in 2002/03 and 2007/08. (1000 kip) ...   | 28 |
| Table 3.20: Percent of food consumption by type of product and provinces in 2007/2008. ....  | 29 |
| Table 3.21: Percent of total food consumption by province in 2007/2008.....  | 30 |
| Table 3.22: Percent of consumption in urban areas by provinces in 2007/2008. ....  | 31 |
| Table 3.23: Percent of consumption in rural areas with access to road area by provinces in 2007/2008. ....   | 32 |
| Table 3.24: Percent of consumption in rural areas without access to road by provinces in 2007/2008. ....   | 33 |
| Table 4.1: Health environment and prevention by provinces and regions in 2007/08 .....   | 35 |
| Table 4.2: Access to health services by province and region in 2007/08. ....   | 36 |
| Table 4.3: Access to health services in villages .....   | 37 |
| Table 4.4 : Temporary health problems in the past 4 weeks by Provinces and regions in 2007/08 .....  | 38 |
| Table 4.5: Per cent of people with long term illness or disability .....   | 40 |
| Table 4.6: Visits to health care facilities to obtain health care in the past 4 weeks .....  | 41 |
| Table 4.7: Health seeking behavior 2007/08.....  | 42 |
| Table 4.8: Educational services and quality. (2007-08).....  | 44 |
| Table 4.9: Net school enrolment (%) among children 6-15 years old by sex and by province and urban/rural areas. (2007-08)<br>.....                               | 45 |
| Table 4.10: Time for Education by Provinces and regions in 2007/08 .....   | 47 |
| Table 4.11: School attendance, population 6+ years of age. Percentages .....   | 48 |
| Table 4.12: Literacy rate, population 15 +.....  | 48 |
| Table 4.13: Highest level of education completed by sex and region, population 6+ .....  | 49 |
| Table 4.14. Highest level of education completed by region and sex. Population aged 6 +. 2002/03.....  | 49 |
| Table 4.15: Percent of households with access to land, and productive assets by provinces and regions in 2007/08.....  | 50 |
| Table 4.16: Selected indicators by provinces and regions , % of villages or KM .....   | 52 |
| Table 4.17: Percent villages having electricity in 2007/08 and 2002/03 .....   | 52 |
| Table 5.1: Main economic activities for population 10+, by Provinces and regions 2007/08.....  | 54 |
| Table 5.2: Total hours worked in different sectors as percent of total hours.....  | 55 |
| Table 5.3: Agricultural production, by province and region in 2002/03. Annual income and costs, 1000 Kip/household .....   | 57 |

|   |    |
|---|----|
| Table 5.4: Income generating activities (persons 10+ years of age) .....  | 57 |
| Table 5.5: Proportion of total production sold at the market (%).....   | 58 |
| Table 5.6 Agricultural operated land in last agricultural season, 1000 hectares .....   | 59 |
| Table 5.7 Harvested hectares of rice and production of paddy rice in last agricultural season .....   | 60 |
| Table 5.8: Total Number of livestock by type and by province in 1000 heads .....  | 61 |
| Table 5.9: Average number of livestock per household by type and by province.....   | 62 |
| Table 5.10: Total number of poultry raised during last 4 weeks, 1000 heads .....  | 63 |
| Table 5.11: Average number of poultry per household raised during last 4 weeks.....   | 64 |
| Table 5.12: Per cent of households operating a business .....   | 66 |
| Table 5.13: Household business, by region , 1000 Kip/business household per month .....   | 66 |
| Table 5.14: Household businesses, in charge of operation .....  | 67 |
| Table 5.15: Household businesses by number of employees and number of household members usually working in the business.....                              | 67 |
| Table 5.16: Productivity (revenue per hours of work) by sector and by provinces and regions.. Revenue and hours in millions per month. (Persons 10+)..... | 68 |
| Table 5.17: Most important restrictions for not earning more money, by provinces and regions in 2007/08. Percent of villages having the restriction ..... | 70 |
| Table 5.18 : Average investment/construction per household by type and by province, 1000 Kip.....   | 71 |
| Table 5.19: Total Investment in residential buildings, agriculture buildings and business buildings in 2007/08: Million Kip .....                         | 72 |
| Table 5.20: Possession of durable goods 2007/08 and 2002/03. Percent of households. ....  | 73 |
| Table 5.21: Possession of durable goods, per cent of households by provinces and regions 2007/08. ....  | 74 |
| Table 5.22: Agricultural practices, by provinces and regions 2007/08, % of villages .....   | 75 |
| Table 6.1: Time use for economic activities, by provinces and regions in 2007/08, hours per day. ....   | 76 |
| Table 6.2: Time use by sex, hours per day.....  | 77 |
| Table 6.3: Time use on main activities by sex, hours per day.....   | 78 |
| Table 6.4:Time use by type of area, hours per day .....   | 79 |
| Table 6.5:Time use on main activities by type of area, hours per day .....  | 80 |

## List of figures

|  |    |
|--|----|
| Figure 1: Household size .....   | 10 |
| Figure 2: Percentage of food consumption and own produced food.....  | 13 |
| Figure 3: Percent of people with long term illness or disability .....                                     | 39 |
| Figure 4: Visits to health care facilities in the past 4 weeks, per 1000 inhabitants .....                 | 41 |
| Figure 5: % of population age 15+ that can read and write without difficulty or with some difficulty ..... | 48 |
| Figure 6: % working hours, urban .....   | 53 |
| Figure 7: Percent of hours worked In rural with road.....  | 56 |
| Figure 8: Percent of hours worked In rural without road.....   | 56 |
| Figure 9 : Households agriculture production .....   | 58 |
| Figure 10: Agriculture production for market .....   | 59 |
| Figure 11: production for consumption .....  | 59 |
| Figure 12: Percent of household use fertilizer .....   | 65 |
| Figure13: Percent of household use Pesticides .....  | 65 |
| Figure 14: Time use for activity business.....   | 78 |

# **1 SURVEY METHODOLOGY**

## **1.1 Scope and Purpose of the Survey**

The fourth expenditure and consumption survey (LECS 4) in Lao PDR is a survey in terms of socio-economy at the household echelon. This survey is conducted in every 5 years. The present round of surveys started from 1992 and the main statistical collection unit is the household. This survey is a sample survey which is carried out in every province and district over the whole country. The survey was undertaken from April 2007 to March 2008 (for a period of 12 months), in order to be able to provide data on expenditure and consumption covering all seasons and relating to aspects of every area and region in the Lao PDR.

The purpose of the expenditure and consumption survey (LECS) is to estimate the expenditure and consumption of household as well as production, investment, accumulation and other socio-economic aspects of the households in the formal and informal sector of the economy.

The results of expenditure and consumption survey in Lao PDR will provide necessary data to be used for calculation of various indicators and are intended for socio-economic planning. It will also provide data for calculation of GDP, definition of poverty line, data on nutrition and other important information. The LECS surveys are the most important surveys in the statistical data collection system of Lao PDR.

The main objectives of this survey are:

- Estimation at macro level for national accounts, including private consumption, household investment, production and income from agriculture and household business;
- Structure of household consumption (weight system) for consumption price index calculation (CPI);
- Estimation on labor force;
- Nutrition statistic;
- Poverty statistics and statistics of income distribution.

The sample size of LECS 4 is composed of 8,304 household from 518 villages. The villages are the same villages as in the survey LECS 3. In every village 16 households were selected in the sample. The field work was conducted for a period of 12 months starting from April 1, 2007 to March 31, 2008. People undertaking the survey (enumerators) are always being on place in the village during the month the survey is undertaken in the respective village.



## 1.2 Sample Design and Selection

### 1.2.1 First Step: Description of Sample Village

The survey design for the LECS 4 uses the same methodology and sampling technique as used in the LECS 3. The sample selection is conducted in two steps. The first step is selection of sample villages using the zoom selection methodology according to the proportion of the population (PPS). Village unit is distributed according to the following echelon: village classified by province, district, rural area with access to road and rural area without access to road. The number of sample villages in each province is in between 17 to 48 villages depending on the number of villages, and the number of households in every survey area (see Table i).

**Table i : Number Sample for Survey**

| <b>Target</b> | <b>LECS 1<br/>(92/93)</b> | <b>LECS 2<br/>(97/98)</b> | <b>LECS 3<br/>(02/03)</b> | <b>LECS 4<br/>(07/08)</b> |
|---------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Villages      | 147                       | 450                       | 540                       | 518                       |
| Households    | 2 937                     | 8 882                     | 8 092                     | 8 296                     |

Comparing the last two surveys, LECS 3 and LECS 4, the number of sample villages is decreased from 540 to 518 villages. This is due to the situation of allocation and unification of small villages into larger villages, which in past years has appeared in every province in the whole country. In order to assure normal rule of distribution of sample, the number of sample households has been from 15 to 16 per village.

Each month the number of sample villages is almost the same, because the sample has been selected as zoom for every month.

### 1.2.2 Second Step: Selection of Sample Household

In the present expenditure and consumption survey half of the number of households are the same as households that were surveyed in the LECS 3, and the other half are new households that previously were not surveyed. The selection of households in the sample uses the zoom methodology on arbitrary and systematic basis. Selection of the 8 sample households from the survey of LECS 3 uses the zoom methodology on arbitrary basis by taking part in a lottery among LECS 3 households. New 8 sample household are selected among the other

households in the village using the same methodology. Together the number of sample households in one village is 16. The selection of sample household is based on the number of existing households in the village at the time of the conduction of the survey. If the village has 16 or less households all households are covered by the survey,

**Table ii: Sample allocation over survey months <sup>1</sup>**

|      | <b>Month</b> | <b>Villages</b> | <b>Households</b> | <b>Persons</b> |
|------|--------------|-----------------|-------------------|----------------|
| 2007 | April        | 45              | 752               | 4 364          |
|      | May          | 42              | 672               | 3 993          |
|      | June         | 43              | 688               | 3 907          |
|      | July         | 43              | 686               | 4 083          |
|      | August       | 43              | 688               | 3 872          |
|      | September    | 43              | 688               | 3 781          |
|      | October      | 42              | 672               | 3 797          |
|      | November     | 42              | 688               | 4 111          |
|      | December     | 44              | 688               | 3 979          |
| 2008 | January      | 43              | 688               | 4 227          |
|      | February     | 43              | 682               | 3 938          |
|      | March        | 45              | 704               | 3 973          |
|      | <b>Total</b> | <b>518</b>      | <b>8 296</b>      | <b>48 025</b>  |

---

<sup>1</sup> Remark: Number of village and household are actual sample in survey.

**Table iii: Number of sample villages in each stratum**

| <b>Code</b> | <b>Province</b> | <b>Urban villages</b> | <b>Rural villages with access to road</b> | <b>Rural villages without access to road</b> | <b>Total</b> |
|-------------|-----------------|-----------------------|---|--|--------------|
| 01          | Vientiane C.    | 33                    | 15  | 0  | 48           |
| 02          | Phongsaly       | 3                     | 8   | 13   | 24           |
| 03          | Luangnamtha     | 5                     | 13  | 5  | 23           |
| 04          | Oudomxay        | 5                     | 13  | 3  | 21           |
| 05          | Bokeo           | 4                     | 15  | 5  | 24           |
| 06          | Luangprabang    | 5                     | 19  | 10   | 34           |
| 07          | Huaphanh        | 5                     | 27  | 2  | 34           |
| 08          | Xayabury        | 10                    | 24  | 1  | 35           |
| 09          | Xiengkhuang     | 5                     | 17  | 3  | 25           |
| 10          | Vientiane       | 17                    | 21  | 0  | 38           |
| 11          | Borikhamxay     | 3                     | 16  | 4  | 23           |
| 12          | Khammuane       | 5                     | 28  | 1  | 34           |
| 13          | Savannakhet     | 10                    | 36  | 2  | 48           |
| 14          | Saravane        | 4                     | 30  | 2  | 36           |
| 15          | Sekong          | 5                     | 8   | 4  | 17           |
| 16          | Champasack      | 9                     | 17  | 10   | 36           |
| 17          | Attapeu         | 2                     | 12  | 4  | 18           |
|             | <b>Total</b>    | <b>130</b>            | <b>319</b>                                | <b>69</b>                                    | <b>518</b>   |

### 1.3 Methodology and Main Contents of the Survey

Ministry of Planning and Investment authorized the Department of Statistics to conduct the LECS survey, in cooperation with the division of planning and investment of each province.

In this survey, data on expenditure and income was collected from households. Data was collected during one month using the daily recording principle. All transactions were captured in a diary and classified by kind of consumption, or by result of agricultural production and business of the household. Data on purchase of goods with long life-time (durables) such as furniture, television, automobile, motorcycle and others were also recorded for the period of the past 12 months.

Data on time use was captured in the middle of the month for all household members aged 10 years and higher.

The LECS 4 survey covers five main topics:

- questions on expenditure and daily consumption of the household,
- questions on the situation of the household,
- questions on the time used of the household,
- questions on prices in the market and in the shops,
- questions concerning the village, for the chief of village.

The structure of the contents of the questionnaire is as followed:

| Module                  | Contents  | Data specified for:  |
|-------------------------|---|--|
| Diary                   | All household transactions during sampled months. Transactions coded to consumption/expenditure, household business, agriculture and investment outlays   | Household  |
| Household questionnaire | <ul style="list-style-type: none"> <li>- Household composition</li> <li>- Parents</li> <li>- Education</li> <li>- Labour force participation</li> <li>- Victimization</li> <li>- Nutrition</li> <li>- Health check, measurements of heights and weights</li> <li>- Possession of durables and assets values</li> <li>- Housing conditions – household</li> <li>- Construction activities – household</li> <li>- Household business</li> <li>- Agriculture – household</li> <li>- Health – evaluation of health, use of health services, health seeking behavior, health costs</li> <li>- Purchases and selling of durables during the last 12 months</li> <li>- Income and transfers – by all members of household</li> <li>- Borrowing and lending – by household</li> </ul> | <ul style="list-style-type: none"> <li>All household members</li> <li>Non-household member</li> <li>6 years and above</li> <li>10 years and above</li> <li>Household</li> <li>All household members</li> <li>Children 4 years and below</li> <li>Household</li> <li>Household</li> <li>Household</li> <li>By business</li> <li>Household</li> <li>All household members, costs for household</li> <li>Household</li> <li>All household members</li> <li>Household</li> </ul> |
| Time use                | Time spent recorded for a period of 24 hours in a sampled day for 22 activities   | 10 years and above   |
| Prices                  | Prices for 92 basic goods and services recorded in nearest local market   |  |
| Village questionnaire   | <ul style="list-style-type: none"> <li>- demograph</li> <li>- access to services</li> <li>- prices</li> <li>- general economic conditions</li> <li>- agriculture</li> </ul>   | Village<br>Data provided by village heads on situations in the village   |

## 1.4 Terms, Concepts and Definition of Words used in the Survey

**Household**: is a group of people making common arrangements, searching for foods, having a common house and conduct different daily activities in common. A normal household consists of people having a link together such as: husband, wife, children and father, mother. In some cases are also included people having no relative's link such as: co-living or employee or worker who lives together in the household having different activities in common.

**Household with one person**: is one person who lives alone in a house or in a part of a house, searching for food and other necessary goods for living life for himself without searching together with other people.

**Household with many people**: is a group with two peoples or more living together in a house or in a part of a house, together searching for food and other necessary goods for living life. Normally, the household like this is composed of: husband, wife, children, relatives, co-living people.

**Head of household**: the head of household plays an important role and gets the respect from the members of the household. In most case, she/he usually owns more income than the other members of the household and is also looking for the welfare of the household. The head of household may be male or female.

**Household expenditure**: includes purchase, or other exchange, of goods and services in the market. Consumption of the household is equal to the expenditure of the household plus the value of own produced goods. The difference between expenditure and consumption, is basically consumption of own produced goods, free collected firewood and the use of owner occupied houses.

$$\text{CONSUMPTION} = \text{EXPENDITURE} + \text{VALUE OF OWN PRODUCED GOODS}$$

The expenditure and consumption of different items are shown in values, and as percentage of total expenditure/consumption. The change in consumption between periods may have its cause from change of volumes (quantities) and the variation of price.

**Quantities consumed**: have been captured. However, quantities are not easy to add together as the unit of quantities varies a lot (kg, liter, bundle, etc). Consumption quantities (or eating quantities) are essential for nutrition analysis. Household food consumption is not exactly the same as “eating”, but more or less the same for a period of a whole year. The amount of “eating” is measured with rice intake (in grams per persons) and intake of fish and vegetables. Changes in consumption volumes can also be obtained by deflating values with

proper price indices. Therefore, prices for basic goods and main services are collected in the survey.

**Household income:** is the sum of income from all sources that household members have. It contains wages and social benefits, pensions, dividends and royalties received, transfers from abroad in cash or kind, entrepreneurial income from household businesses and agriculture, fishery and forestry.

**Entrepreneurial income:** is defined as income less current operational costs. This income is supposed to cover owners' remunerations, payments for work done by other (non-paid) household members, financing of investments and profit.

**Household savings:** is defined as household total income less expenditure and less the value of own produced food.

**Household production:** is captured both in the diary and in other household survey modules but in different ways. The recording of transactions in the diary provides estimation of production values, the running costs and entrepreneurial income. The entrepreneurial income should be large enough (if profitable) to cover investments and remuneration for the owner and other unpaid household members, interest and repayments of loan taken for the operations and profit.

Production in agriculture is also captured in the household module in terms of farming area operated, main output planted, harvested and output, livestock by number and disposition of livestock, poultry, etc.

Information on household businesses is also found in the household module which also provides for classification according to activity.

**Household assets value:** this item is captured for the first time in the fourth Household expenditure and consumption survey. Households have provided data of the value of their land, buildings, and durables such as motor vehicles, etc. and the value of specific agriculture assets such as livestock.

**Person as an employee:** is a person who works for someone else outside the own household and receives salary for that. People working in own business or agriculture is self-employed and do not get a salary but take a share of the entrepreneurial income.