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## Agenda Item 11

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## The Cambodia Socio-Economic Survey

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### 1. Background and Introduction

The Cambodia Socio-Economic Survey (CSES) has been conducted by the National Institute of Statistics (NIS) in 1993/94, 1996, 1997, 1999 and 2004. Since 2007 NIS conducts the CSES annually. The CSES is a household survey covering many areas relating to poverty and living conditions. Questions are asked for the household and for the household members.

The CSES is a sample survey and the sample used in 2007 is a subsample of the sample used in 2004.

In the 2004 survey the diary method for collecting data about household expenditure/consumption and household income was introduced. As the recall method has been used in the previous rounds it was decided to include also the recall modules. Both methods are retained in the annual CSES.

The following main areas have been surveyed in the previous survey rounds and in the annual CSES as well:

1. Level and structure of household expenditure/consumption, including poverty
2. Household production and cash income-earning activities by the labour force
3. Education and literacy
4. Health and access to medical care
5. Housing and amenities
6. Family and social relations, including gender and vulnerability issues.

In CSES 2007 some changes have been introduced in the household questionnaire.

## 2. Objective of the survey

The main objective of the survey is to collect statistical information about living conditions of the Cambodian population and the extent of poverty. The survey can be used for identifying problems and making decisions based on statistical data.

The main user is the Royal Government of Cambodia (RGC) as the survey supports monitoring the National Strategic Development Plan (NSDP) by different socio-economic indicators. Other users are university researchers, analysts, international organizations e.g. the World Bank and NGO's. The World Bank has published a report on poverty profile and social indicators using CSES 2007 data<sup>1</sup>.

## 3. Sampling

The sampling design in the CSES survey is a three-stage design. In stage one a sample of villages is selected, in stage two an Enumeration Area (EA) is selected from each village selected in stage one, and in stage three a sample of households is selected from each EA selected in stage two. The sampling designs used in the three stages were:

*Stage 1:* A stratified systematic  $\pi ps^2$  sample of villages was selected. Strata were defined by provinces and the urban/rural classification of villages. The size measure used in the systematic  $\pi ps$  sampling was the number of households in the village according to the population census 1998.

*Stage 2.* One EA was selected by Simple Random Sampling (SRS), in each village selected in stage 1.

*Stage 3.* In each selected EA a sample of households was selected by systematic sampling.

The design described above was used for the CSES 2004 survey.<sup>3</sup> In 2007, a subsample of the villages, or EAs, in the 2004 sample was selected by SRS. The villages and EAs surveyed in 2007 were thus included in the sample in both years. In each selected EA a sample of households was selected by systematic sampling. The selected households in 2007 are not necessarily the same as those included in the sample in 2004.

The selection of households in stage three was done in field by first listing the households in the selected EA, and then selecting a systematic sample of households. Selected households were observed during one calendar month. The allocation of the households over the months in 2007 was done so that each village in the 2007 sample was observed in the same calendar month as in 2004.

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<sup>1</sup>

World Bank (2009). Poverty profile and trends in Cambodia, 2007 - Findings from the Cambodia Socio-Economic Survey (CSES). Report No. 48618-KH.

<sup>2</sup> Systematic sampling with probabilities proportional to size.

<sup>3</sup> National Institute of Statistics (2005b). Cambodia Socio-Economic Survey 2004. Technical report on Survey Design and Implementation. September, 2005.

The sample size in 2007 was 360 villages or 3,600 households, compared to the sample for the 2004 survey of 720 villages or 12,000 households.

Some provinces were excluded, due to cost and other reasons, in the sample for 2007. The estimates are however, adjusted for the under coverage error caused by excluding those provinces.

## 4. Estimation

Totals and ratios such as means or proportions are estimated for the total population or for subgroups of the population, i.e. domains of study. The domains are defined by, for instance, age groups or sex. In the CSES 2007 the sample size is not large enough for a detailed breakdown on e.g. provinces. Means and proportions are estimated by first estimating totals and then calculating the ratio of two estimated totals.

In order to estimate population totals or totals in domains from a sample, weights are needed. An estimator of a population total of a variable is the sum of the weighted variable values for the observed sample units.

The weights are determined by the sampling design, design weights, and adjusted for nonresponse and other imperfections such as under coverage or, adjusted to improve the precision of estimates. In

SES 2007, the design weights were adjusted using preliminary data on the number of persons and households from the population census 2008 and also the Neupert population projections<sup>4</sup>.

## 5 Questionnaires

Four different questionnaires or forms were used in the CSES 2007:

### 1. Household listing form

The listing of households was used for sampling households, see section 4.3.

### 2. Village questionnaire

The village questionnaire was responded by the village leader or a representative of the village leader. The questions are about economy and infrastructure, crop production, health, education, retail prices, rental and sales prices of land etc.

### 3. Household questionnaire

The household questionnaire was responded by the head of the household, spouse of the head of the household or of another adult household member.

The household questionnaire includes questions about housing conditions, crop production and other agricultural activities, liabilities, durable goods, construction activities and income from other sources than economic activity.

The household questionnaire also includes questions for each household member about education and literacy, migration, current economic activity and employment, health, smoking, HIV/AIDS awareness, and victimization. Some of these questions were responded by the head of household/spouse and some were responded by each household member.

The questions in the first part of the household questionnaire are posed during the initial visit to the household. This part includes questions about e.g. the household member's age, sex, marital status, relation to head of household, and questions about household expenditure/consumption of food and non-food items.

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<sup>4</sup> National Institute of Statistics (2005a). Cambodia Inter-Censal Population Survey 2004. Demographic Estimates and Revised Population Projections. June, 2005.

During a survey month different questions have been asked different weeks according to the following:

- Week 1. Questions about education, migration, and housing
- Week 2. Questions about economic activity, agricultural and non-agricultural business, household liabilities and other incomes.
- Week 3. Questions about construction, durable goods, and child health
- Week 4. Questions about current economic activities, health and victimization

#### **4. Diary sheet**

The diary sheet on daily household expenditure, including value of own production, and income have been filled in during the entire month.

## **6. Data collection and field work**

The fieldwork started in October 2006 and finished in the end of December 2007. The results in this report are based on data from the calendar year 2007, i.e. only 12 of the 15 survey months are included in the estimation.

Supervisors and enumerators were recruited by NIS and trained for the field work. The training took place at NIS in Phnom Penh. A comprehensive field manual was used during the training and the field work.

Each fieldwork team consisted of one supervisor and three enumerators. For each selected village one enumerator was assigned as responsible and carried out interviews of ten households in the village.

Altogether 30 enumerators and 10 supervisors, divided into 10 teams carried out the fieldwork at the same time. Two groups of teams were formed and alternated monthly so that each interviewer and supervisor worked in the field every second month.

For a given month the team arrived in the village 2–3 days before the first day of the month for preparatory tasks like discussing with village authorities, filling in the Household listing form and sampled the households to be interviewed.

The supervisor was the leader of the team and was responsible for the coordination of the interviews, collaboration with local authorities, and checking of the questionnaires during the interview month. If errors were found in the responses the enumerator was required to re-interview. The supervisor was also responsible for the village questionnaire and the interview of the village leader or representative of the village leader.

Any survey of the CSES dimensions needs a comprehensive system of quality management and monitoring. The CSES management group within NIS therefore is using a careful monitoring scheme. The monitoring team included four NIS staff including top ranked NIS officers. The supervision took place during the last two weeks of the interview month.

Before going to the villages the teams were briefed and introduced to adjustments of the interviewing procedure that had to be made as a result of monitoring activities and feed-back from the data processing.

## **7. Data processing**

The data processing was done at NIS in Phnom Penh using the SQL data management system that verifies the data entry operation. A team of data editors, data coders and data entry staff was formed. The data editors were checking the questionnaires before the data entry and also took care of errors to ensure that entered data were consistent with the collected data in the questionnaires or diaries. Before the data entry the coders also put relevant codes in the questionnaire and diary.

## 8. Comparability

Comparisons of the results from the 2007 CSES with previous surveys, CSES 1993/94, 1996, 1997 and 1999, are not recommended due to differences in the survey design.

The CSES 2004 was conducted from November 2003 to January 2005, and the 2007 survey from October 2006 to December 2007. The monthly sample sizes were 1,000 households in the 2004 survey and 300 households in the 2007 survey. Concerning CSES 2004 the, results presented in 2005<sup>5</sup> were based on both the 12 months and the 15 months samples, whereas in this report all estimates presented are based on the 12 month sample, i.e. the calendar year 2007.

The weights used in the reports from CSES 2004 are adjusted by using the preliminary population projections<sup>6</sup> which give over estimated population counts. The weights in CSES 2007 are adjusted by using the preliminary result from 2008 Population Census. A recalculation of the weights in CSES 2004 will be made for the coming analyses to obtain higher comparability between CSES 2004 and the surveys conducted from 2007 and onwards.

## 9. Definitions

### Geographical domains

The geographical domains used in this report are

1. Phnom Penh
2. other urban
3. other rural,

where Phnom Penh includes both urban and rural areas.

### Age

Age is defined as completed years at the initial visit to the household.

### Household

The survey covers private households with one or more persons. Nomadic households are included in principal. Households excluded from the survey are:

1. People living in institutions such as long term hospitals, prisons, monasteries, military quarters.
2. Diplomatic and UN households in the country.
3. Armed forces in military bases.

A household is defined as a group of persons, or a single person, who usually live together and have a common arrangements for food, such as using a common kitchen or a common food budget. The persons may be related to each other or may be non-relatives, including servants or other employees, staying with the employer.

### Educational attainment

The respondent were asked the following question: "What is the highest level ... successfully completed?"

The response alternatives were aggregated to the classification of educational attainment used in the 1998 Population Census.

No or only some education:

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<sup>5</sup> National Institute of Statistics (2005). Cambodia Socio-Economic Survey 2004, Summary Subject Matter Report , September 2005.

<sup>6</sup> Neupert R.F.(2005). New Demographic Estimates and Updated Projections for Cambodia. UNDP.

- Pre-school/Kindergarten
- No class completed/Never attended school

Primary school not completed:

- Class one to five completed

Primary school completed:

- Class six to eight completed

Lower secondary school completed:

- Class nine to eleven completed
- Lower secondary school certificate

Upper secondary school completed:

- Class twelve completed
- Upper secondary school certificate
- Technical/vocational pre-secondary diploma/certificate

Post-secondary education:

- Technical/vocational post-secondary diploma/certificate
- College/university undergraduate
- Bachelor degree (B.A., BSc)
- Masters degree (M.A., MSc)
- Doctorate degree (PhD)

Other:

- Other

## **10. Confidentiality**

The Statistics Law Article 22 specifies matters of confidentiality. It explicitly says that all staff working with statistics within the Government of Cambodia “shall ensure confidentiality of all individual information obtained from respondents, except under special circumstances with the consent of the Minister of Planning. The information collected under this Law is to be used only for statistical purposes.”