

Cambodia - Socio-Economic Survey of Cambodia 1996

National Institute of Statistics

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Overview

Identification

ID NUMBER
KHM-SESC-NIS-1996-v1.0

Version

VERSION DESCRIPTION
Version v1.0 - Edited data for internal use only

PRODUCTION DATE
1997-09

Overview

ABSTRACT

The Socio-Economic Survey of Cambodia (SESC) 1996 is a two-round sample survey of households in Cambodia conducted by the National Institute of Statistics (NIS) of the Ministry of Planning and sponsored by the Asian Development Bank (ADB) in collaboration with UNICEF, UNDP/CARERE and ILO. This survey is second in the series, the first SESC being conducted in four rounds beginning in October 1993 to September 1994 and funded by the UNDP and ADB.

The first round of the SESC 1996 was conducted in May-June and the second round was in November-December. The survey entailed listing and recording of the characteristics of each individual person in the sample households. It gathered data on the demographic, social and economic characteristics of the population as well as on household and housing characteristics. The information collected are vital in making rational plans and programs for the country.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS

1. Individuals
2. Household

Scope

NOTES

The scope of the survey with respect to items of information is as follows:

1. Demographic Characteristics of Household Population

- Relationship to Household Head
- Age
- Sex
- Marital Status
- Disability

- Current School Attendance

- Highest Educational Attainment

- Literacy

- Migration

2. Economic Characteristics of Household Population 5 Years and Over

- Usual Activity in the Last 12 Months

- Current Activity Last Week (including number of hours worked)

- Persons Seeking Additional Work

- Nature and Status of Employment, and Kind of Industry in Primary Occupation

- Nature and Status of Employment, and Kind of Industry in Secondary Occupation

- Income Derived from Primary and Secondary Occupation, and Other Receipts in Cash or in Kind

- Reasons for not Being Available for Work

3. Child Labour

- School Attendance in the Past Week

- Reasons for Dropping Out or Not Attending School

- Main Reason for Working or Having a Job

- Age the Child Started to Work

- Place of Work

- Proportion of Child's Earnings Given to Household

- Illnesses, Injuries and Other Health Problems of Working Child

- Recruitment of Children to Work Elsewhere

4. Health and Nutritional Status of Children and Mothers

- Pregnancy and Tetanus Toxoid Vaccination

- Breastfeeding

- Child Immunization

- Diarrhoea Episode and Treatment

- Vitamin A Administration

- Weight, Height and Mid-Upper Arm Measurement

- Number and Sources of Injections Received by Households

- Salt Iodization

- Other Health Practices

5. Housing and Other Household Particulars

- Type of Building and Year the Building was Constructed
- Type of Construction Materials of Roof, Outer Walls and Floor
- Number of Rooms in the Housing Unit and Total Floor Area
- Tenure Status of Housing Unit
- Rent/Imputed Rent
- Household's Main Source of Drinking Water, Dishwashing and Handwashing
- Toilet facilities
- Type or Source of Lighting Used
- Type of Fuel Used for Cooking
- Ownership of Appliances and Other Equipment
- Access to Basic Services Such As Schools, Clinics/Hospitals and Road Passable by Car
- Landholdings (Tenure Status and Size of Land)
- Economic Activities Carried Out in the Household
- Household Expenditure
- Credit Behaviour of Households
- Accidents

TOPICS

Topic	Vocabulary	URI
consumption/consumer behaviour [1.1]	CESSDA	http://www.nesstar.org/rdf/common
income, property and investment/saving [1.5]	CESSDA	http://www.nesstar.org/rdf/common
economic conditions and indicators [1.2]	CESSDA	http://www.nesstar.org/rdf/common
EDUCATION [6]	CESSDA	http://www.nesstar.org/rdf/common
HEALTH [8]	CESSDA	http://www.nesstar.org/rdf/common
housing [10.1]	CESSDA	http://www.nesstar.org/rdf/common
TRANSPORT, TRAVEL AND MOBILITY [11]	CESSDA	http://www.nesstar.org/rdf/common

Coverage

GEOGRAPHIC COVERAGE

A. National, Urban and Rural

B. Phnom Penh, Other Urban and Other Rural

C. The 10 Domains:

1. Banteay Meanchey

2. Battambang

3. Kampong Thom
4. Pursat
5. Ratanakiri
6. Siem Reap
7. Svay Rieng
8. Phnom Penh
9. Other Urban
10. Other Rural

The SESC 1996 covered 87.26 per cent of Cambodian villages.

GEOGRAPHIC UNIT

Village (Province, District, Commune, Village)

UNIVERSE

All non-institutional households in Cambodia (All regular resident households in Cambodia)

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
National Institute of Statistics	Ministry of Planning

FUNDING

Name	Abbreviation	Role
Asian Development Bank	ADB	Funding
United Nations Development Programme/Cambodia Area Rehabilitation and Regeneration Project	UNDP/CARERE	Funding
UNited Nations Children's Fund	UNICEF	Funding
International Labour Organization	ILO	Funding

OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Chao Pheav	CHP	NIS	Archivist
Shine Cagas	MATC	ADP-Asia	DDI Reviewer
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Saint Lundy, Chao Pheav	SL,CHP	NIS	Archivist
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DDI DOCUMENT VERSION

Version 1.3 (July 2010). This version contains edits on version 1.2 of the DDI document.

Version 1.2 (February 2010). This version contains edits on version 1.1 of the DDI document.

Version 1.1 (October 2009). This version contains edits on the original DDI document.

DDI DOCUMENT ID

DDI-KHM-NIS-SESC-1996-v012

Sampling

Sampling Procedure

The SESC used a stratified two-stage probability sampling technique with the following areas as domains of analysis: Banteay Meanchey, Battambang, Kampong Thom, Pursat, Ratanak Kiri, Siem Reap, Svay Rieng, Phnom Penh, Other Urban, and Other Rural. The number of strata was increased to come up with estimates for the above mentioned provinces.

For each survey round, 390 primary sampling units (PSUs) or a total of 780 PSUs (villages) for the two rounds were selected using the linear systematic sampling with a random start method, with probability proportional to size. The number of households in the village was used as a measure of size. These information are based on the population database compiled in the National Institute of Statistics, Ministry of Planning, and from several sources including a gazetteer of the Geographic Department, a village file constructed in 1993 by the United Nations Transitional Authority in Cambodia (UNTAC), population statistics of Battambang province constructed by the United Nations High Commissioner for Refugees (UNHCR), and supplemental population estimates supplied by the Ministry of Interior and the Municipality of Phnom Penh. The merger of these multiple sources constitutes the sampling frame for the Socio-Economic Survey of Cambodia (SESC) 1996.

The households constituted the secondary sampling units (SSUs). From each PSU, 10 or 20 households were selected systematically with a random start. The method of selecting the samples is explained in the next section.

The first stage of sample selection involved the drawing of sample villages from each stratum. Within each stratum, villages were arranged by geographic codes and the number of households for every village based on the sample frame records was cumulated. Sample villages were selected using the linear systematic sampling with random start method, with probability proportional to size (pps). The number of households in the village was used as a measure of size. Sample village selection was done through the use of a computer program.

For each sample village (PSU), a field listing operation was undertaken except for large villages. Large villages were segmented first, comprising about 300 households or less based on the current household estimates by the commune or village leaders. A segment was then chosen randomly in which a complete listing of households was done. This entailed carrying out a complete canvass of the PSU in order to make a current and complete listing of households contained within. The procedure involved creating a sketch map for the PSU where physical boundaries in the village and the location of each household were sketched. Canvassing, on the other hand, entailed a systematic covering of the entire village following a prescribed path of travel in order to make sure that all housing units in which the households reside will be accounted for.

After the listing operation was completed, a fixed sample size of 10 households was selected in each PSU for the following strata: Banteay Meanchey, Phnom Penh, Pursat, Siem Reap, Other Urban and Other Rural, while 20 households were selected from each PSU for Battambang, Kampong Thom, Ratanakiri and Svay Rieng. The selection was carried out using circular systematic random sampling with a random start. The sampling interval was equal to the current household estimates in the PSU divided by 10 or 20, as the case maybe.

The sampling strategy required the selection of a total of 9,000 sample households from 780 sample villages for the two rounds.

Deviations from Sample Design

Pailin was excluded from the sampling frame due to security issues.

Response Rate

100%

Weighting

Basic Weights

The basic weight (that is, the weight before any other adjustments are made such as those which might be necessary for non-response), for all households in a given PSU/village, is equal to the reciprocal of the overall probability of selection

Thus, there will be a different weight for every PSU, that is, 750 separate weights for the two rounds. Likewise, the data file must provide therefore for storing values of M_{hi} and M_{hi}^* for every PSU, so that their ratio can be calculated easily.

In applying the weights to the data files in order to make estimates, every sample household and every sample person in a given PSU will receive the same weight, that is, whatever the calculated basic weight is for that PSU.

Weight Adjustments for Large PSU's

Since large villages or those with an estimated number of households with 300 or more will be segmented, and only one randomly selected segment will be listed, and from the selected segment, the sample of 10 or 20 households will then be selected.

Please see the sampling file in external resources.

Questionnaires

Overview

Listed below are the forms that used during the field enumeration:

SESC Form 1 - Listing Sheet: This is a sheet wherein buildings, housing units and households within an enumeration pertaining to population of households are listed

SESC Form 2 - Household Questionnaire: This is the basic SESC questionnaire which was used for interviewing and recording information about a household. This questionnaire contains information on the following: demographic, social and economic characteristics of the population, household and housing characteristics. The Questionnaire consists of 4 parts, namely:

1. Part II - Demographic and Economic Characteristics of the Household Population
2. Part III - Child Labour (For Children 5 - 17 Years Old)
3. Part IV - Health and Nutritional Status of Children Under 5 Years Old
4. Part V - Household and Housing Particulars

SESC Form 3 - Appointment Slip: This form is used to set an appointment with the household head (or spouse) in case the interviewer was unable to interview anyone during the first visit. The date and time of next visit is jotted down in the form.

Data Collection

Data Collection Dates

Start	End	Cycle
1996-05	1996-06	Round 1
1996-11	1996-12	Round 2

Data Collection Mode

Face-to-face [f2f]

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Data Collectors

Name	Abbreviation	Affiliation
National Institute of Statistics	NIS	Ministry of Planning

Supervision

The Senior Statistics Advisor functions as the Project Director and, together with the Statistical Experts, comprise the ADB project staff. They are responsible for the survey and sampling design, data processing systems and programming technical supervision of all phases of survey operations, training of field staff, analysis of survey results, and preparation of final reports.

Organizational Structure: ADB Project Staff, Project Director, Survey Director, NIS Survey Staff

Coordination/Training: Area Coordinators

Field Staff:

NIS:

1. Team Supervisors
2. Enumerators

Provincial Office:

1. Team Supervisors
2. Enumerators

The Director of NIS functions as the Survey Director, and the six officers are designated as the area coordinators. The Survey Director will be responsible for the control and supervision of NIS Staff as well as the staff engaged from the Provincial Planning and Statistics Services who will function in the capacities of supervisors and enumerators.

The work of field enumerators will be supervised by field supervisors (1 field supervisor supervising the work of 3 to 6 enumerators), who will edit the completed questionnaires.

The middle level staff of NIS and Provincial Planning and Statistics Services will be engaged as supervisors. The success of the fieldwork will depend so much on the recruitment, training and deployment of NIS and provincial staff. The engagement of the provincial staff for field supervision and enumeration will make it possible to enjoin the active cooperation of commune and village workers for the survey.

In general, a supervisor is assigned to supervise enumerators during field operations. The major duties and responsibilities of a supervisor in relation to the work of an enumerator are the following:

As a supervisor, supervisor is responsible for the successful and timely completion of the field operations in the area where supervisor is assigned which may be a whole village or a segment of a big village. Following the principle of command responsibility, supervisor is answerable for the inefficiencies and wrong doings of the people supervisor supervises. To be effective, supervisor must be a leader and be capable of propelling your subordinates to work for the attainment of the objectives of the survey. Supervisor must be ready to assist them in the performance of their duties. Supervisor subordinates should be able to rely on you for the solution of the day-to-day problems of their work. To effectively carry out supervisor 's duty as a supervisor, each of supervisor will be assigned 3 to 6 Enumerators.

Supervisor's basic duties and responsibilities are listed below. In addition, supervisor is expected to perform such duties that may be assigned by the Area Coordinators and Survey Director in connection with survey work.

- a. attend the training to gain an understanding of the concepts, definitions and procedures regarding the conduct of the SESC and to be familiar with the duties and responsibilities of supervisor 's ENs;
- b. coordinate with the village leader on the enumeration of the sample villages;
- c. supervise closely the work of the ENs during listing and enumeration;
- d. identify the sample households which would respond to the questions in the SESC Form 2 (Household Questionnaire);
- e. verify the area coverage of supervisor 's ENs;
- f. help solve problems encountered by supervisor 's ENs;
- g. scrutinize the accomplished questionnaires submitted by supervisor 's ENs for completeness, correctness and legibility of entries; and
- h. accomplish and/or submit the required forms and materials to the Area Coordinators and/or Survey Director within the prescribed period.

Data Processing

Data Editing

All completed questionnaires were brought to NIS for processing. Although completed questionnaires were checked and edited by supervisors in the field, especially because of the length of questionnaires and the complexity of the topics covered the need for manual editing and coding by trained staff was accepted as an essential priority activity to produce a cleaned data file without delay. Processing staff and supervisors were trained for three days by the project staff. An instruction manual for manual editing and coding was prepared and translated into Khmer for the guidance of processing staff.

In order to produce an unedited data file, keying in the data as recorded by field enumerators and supervisors, (without subjecting data to manual edit as required by the Analysis Component Project staff), it was necessary to structure manual editing as a two-phase operation. Thus in the first phase, the processing staff coded the questions such as those on migration, industry, and occupation which required coding. Editing was restricted to selected structural edits and some error corrections. These edits were restricted to checking the completeness and consistency of responses, legibility, and totalling of selected questions. Error corrections were made without cancelling or obliterating the original entry made by the enumerator, by inserting the correction close to the original entry.

Much of the manual editing was carried out in the second phase, after key entry and one hundred percent verification and extraction of error print outs. A wide range of errors had to be corrected which was expected in view of the complexity of the survey and the skill background of the enumeration and processing staff. The manual edits involved the correction of errors arising from incorrect key entry, in-correct/ failure to include identification, miss-coding of answers, failure to follow skip patterns, misinterpretation of measures, range errors, and other consistency errors.

Other Processing

An in-house survey processing centre was established at the NIS to process the SESC 1996. A network of PCs with high capacity PCs as servers was installed and NIS staff were trained to use the network system. The network can be strengthened with additional workstations to process a survey sampling of all households referred to in the project document.

Entire data processing was done on microcomputers and data entry and editing was carried out using Integrated Micro-Computer Processing System(IMPS) package developed by the US Bureau of the Census. Statistical Package for Social Sciences (SPSS) was used to obtain tabulations.

At the end, the keyers and verifiers were trained for three days and key entry operations commenced. In all key entry and verification staff and supervisors were trained by the Data Processing Specialist to use the data entry screens prepared using IMPS software.

Four data entry systems were created to input the data from the four questionnaires. The data entry system for the listing form contains one record type . After keying in the data one hundred percent verification was done on all card types. In spite of this safeguard to minimize errors it was found that verifiers had not only failed to detect errors but had introduced errors during verification. The set of consistency edit checks prepared for the survey when applied for a sample of three villages, the error printouts were so voluminous that it was decided to clean the files in stages, selecting a single record, question or

a topic at a time. The first computer edit was applied to check the basic structure of the data and to check the skipping patterns. The errors were corrected manually and the data file was updated using IMPSS programs. After completing the structural edit, the data file was re-edited for validity of records. Consistency edits were designed to detect responses that appeared to be inconsistent with other responses or in conflict with definitions and processing rules. It was necessary to run several edit checks to clean some data items. For tabulation several sub-master files were created for most data items. The inflation factors that should be assigned to each village were applied to the data at the tabulation stage.

Data Appraisal

Estimates of Sampling Error

It has to be noted that the data were obtained through a sample survey and are therefore subject to both sampling and nonsampling errors. Sampling errors are those that are related to the sample size and the kind of samples selected. Nonsampling errors include those such as errors committed by the interviewers in recording

responses, errors made by respondents and coding errors. Moreover, the 1996 population and other estimates from the SESC may not be directly comparable with estimates based from other surveys because of differences in the sampling frame, survey design and concepts used. The concepts used in this survey are found