

# Cambodia - National Census of Agriculture in Cambodia 2013

**National Institute of Statistics - Ministry of Planning**

Report generated on: December 21, 2013

Visit our data catalog at: <http://nada-nis.net/index.php>

# Overview

## Identification

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### ID NUMBER

KHM-NIS-NCAC-2013-v1.0

## Version

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### VERSION DESCRIPTION

Version 1.0

### PRODUCTION DATE

2013-05-31

## Overview

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### ABSTRACT

The main objective of the NCAC 2013 is to provide data on the current agricultural situation in the country that will be utilized by the planners and policy-makers. Specifically, the census data will be useful in:

1. Providing sampling frame in the conduct of agricultural sample surveys;
2. Providing data at the smallest administrative unit in the country; and,
3. Providing data on the current structure of the agricultural holdings with growing of crops activity and/or raising livestock and/or poultry and aquaculture activities in the county.

### KIND OF DATA

Census/enumeration data [cen]

### UNITS OF ANALYSIS

Households

## Scope

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### NOTES

Form A - Listing Form

1. Geographic information
2. Information on the Involvement of Households in Agriculture and/or Aquaculture Activities

Form B - Basic Information on Agricultural Holding

1. Geographic information
2. Respondent and Agriculture holder information
3. Legal status of the agricultural holder
4. Basic characteristics of the agricultural holding such as size and number of parcels in the holding and location, actual area, main land use and land tenure of each parcel in the holding
5. Presence of forest and other wooded lands
6. Use of irrigation

7. Temporary crops planted
8. Permanent crops planted
9. Main purpose of production
10. Livestock/Poultry raised in the holding
11. Presence of aquaculture
12. Holder's Household Information

#### Form C - Growing of Crops

1. Geographic information
2. Respondent and Agriculture holder information as well as sub-holder information
3. Temporary crops planted and/or harvested including area planted, cropping duration, cropping pattern, area harvested
4. Permanent crops including area of compact plantation and number of productive permanent crops in scattered planting
5. Irrigation and other information regarding parcel
6. Agricultural Activities in the homelot
7. Agricultural practices
8. Implements, equipment and machineries used in the holding
9. Agricultural services
10. Membership in an organization and other relevant information

#### Form D - Raising of Livestock/Poultry

1. Geographic information
2. Respondent, agriculture holder and sub-holder information
3. Livestock/Poultry as of the time of enumeration
4. Inventory of livestock/poultry during the last 12 months
5. Equipment, machineries, buildings and agricultural extension

#### Form E - Aquaculture Activity

1. Geographic information
2. Respondent, aquaculture operator and sub-operator information
3. Details of aquaculture activity including type of culture, location, actual area, production facility, type of water used, main specie cultured and equipment and machineries used.
4. Household involvement and hired labor
5. Other relevant information

#### Form F - Relevant Information on Agricultural Household

1. Geographic information

## 2. Respondent and agricultural holder information

3. Agricultural household population (total number, name, relation to head, sex, age, marital status, highest grade completed, currently attending school, physical/psychological/mental difficulty, primary and secondary economic activity, status of employment and tasks done in own agricultural holding in last 12 months)

## 4. Other farm labor (not household member)

## 5. Food security

6. Other economic activities such as catching of fish and aquatic products in marine/inland waters, forestry-related activities, etc.

## Form G - Village Questionnaire

## 1. Type of soil

## 2. Main topographical feature

## 3. Prone to any calamity/disaster within previous five years

## 4. Economic activities available

## 5. Seasonal labor movement

## 6. Crop Duration

## 7. Agro-processing equipment/machines/facilities

## 8. Mode of transport

## 9. Available school

## 10. Communication facilities

## 11. Health facilities

## 12. Water facilities

## 13. Access to roads and presence of market

## 14. Presence of people's organization

## 15. Presence of NGO/INGO

## 16. Ethnicities/National Races

## 17. Religion

**TOPICS**

| Topic              | Vocabulary | URI |
|--------------------|------------|-----|
| Agriculture Sector | World Bank |     |

## Coverage

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**GEOGRAPHIC COVERAGE**

Nation-wide

Urban/Rural

## Group of Provinces

### Individual Province

01. Banteay Meanchey

02. Battambang

03. Kampong Cham

04. Kampong Chhnang

05. Kampong Speu

06. Kampong Thom

07. Kampot

08. Kandal

09. Koh Kong

10. Kratie

11. Mondul Kiri

12. Phnom Penh

13. Preah Vihear

14. Prey Veng

15. Pursat

16. Ratanak Kiri

17. Siem Reap

18. Preah Sihanouk

19. Stung Treng

20. Svay Rieng

21. Takeo

22. Oddar Meanchey

23. Kep

24. Pailin

## UNIVERSE

All resident households in Cambodia.

All chief of Villages or his represents in Cambodia.

The NACS 2013 is to be undertaken in 2 phases: core module in which the listing of all households in all villages in the country will be undertaken in 45 days from 17 April 2013 to 31 May 2013; and, supplementary module phase, which is to be conducted in 24 June 2013 until 23 July 2013. The first phase will interview all households (using FORM A) to determine their involvement in agricultural holdings; if involved and qualified (according to definition of agricultural holding), the households will be further interviewed using FORM B. Then from FORM A and FORM B, 5% of the total households with agricultural

holdings will be selected using systematic sampling in every village. These sample households with agricultural holdings will be interviewed during the supplementary module phase using appropriate forms (F and C and/or D and/or E).

Likewise in all villages, Form G will be administered by the village leader. All non-household sectors like corporation, cooperatives, government institutions, and private institutions engaged and managed in agricultural holding/aquaculture operation during the census reference period will be enumerated using another forms or questionnaires.

## Producers and Sponsors

### PRIMARY INVESTIGATOR(S)

| Name                             | Affiliation          |
|----------------------------------|----------------------|
| National Institute of Statistics | Ministry of Planning |

### OTHER PRODUCER(S)

| Name                          | Affiliation                                     | Role |
|-------------------------------|---|------|
|                               | Ministry of Agriculture, Forestry and Fisheries |      |
| Food Agriculture Organization | United Nations                                  |      |

### FUNDING

| Name                                    | Abbreviation | Role              |
|---|--------------|-------------------|
| Royal Government of Cambodia            | RGC          | Funding Agency    |
| Food Agriculture Organization           | FAO          | Funding Agency    |
| Sweden International Development Agency | SIDA         | Co-Funding Agency |
| Australian AID                          | AUSAID       | Co-Funding Agency |

## Metadata Production

### METADATA PRODUCED BY

| Name             | Abbreviation | Affiliation                      | Role      |
|------------------|--------------|----------------------------------|-----------|
| MOENG TITHYAROAT | ROAT         | National Institute of Statistics | Archivist |
| NOU THAVY        | NTV          | National Institute of Statistics | Archivist |

### DATE OF METADATA PRODUCTION

2013-07-22

### DDI DOCUMENT VERSION

Version01 (July 2013) - This is the first documentaion file for NCAC 2013, done during the workshop.

### DDI DOCUMENT ID

DDI-KHM-NIS-NCAC-2013-v01.

# Sampling

## Sampling Procedure

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This census will use stratified systematic sampling using one-stage. The two strata that will be used are households with large agricultural holdings and households with small agricultural holdings. All large agricultural holdings will be interviewed while 5 percent of small agricultural holdings will be selected using systematic sampling. Large agricultural holdings are defined in two ways:

1. Households with at least 10 hectares and over used wholly or partly for agricultural activities will be considered to have large agricultural holdings
2. Households with at least 10 cattle/buffaloes/other large livestock and/or at least 20 pigs/goats/other small livestock and/or at least 100 poultry will also be considered to have large agricultural holdings.

Hence, those households cultivating agricultural lands between 0.03 ha. to 9.99 hectares and/or with large livestock ranging from 2 to 9 and/or with 3-19 small livestock and/or with 25-99 poultry will be considered to have small agricultural holdings. These households with small agricultural holdings will be subjected to systematic sampling. The sampling rate will be 5% of the total households with small agricultural holdings. The sample selection will be done at the commune level, which will be the domain for this census. Hence, the lowest administrative unit in which all estimated results from SMISAH will be produced is at the commune level.

The sampling procedures in choosing the sample households with agricultural holdings are as follows:

1. In each commune, number the households with small agricultural holdings consecutively from 1 to the last number.
2. Add all these households with small agricultural holdings. The total should correspond to the last number provided in the last household in the commune.
3. Then compute 5% of these total households with small agricultural holdings and these will be the total sample households with small agricultural holdings for that commune. For example, the total households with small agricultural holdings are equal to 550. 5% of 550 are 27.5 or when rounded off, it will be 28 sample households.
4. Divide the total households with small agricultural holdings by the number of sample households with small agricultural holdings. This will be the sampling interval (SI). For example,  $550/28 = 19.6$  or approximately 20.
5. Get a random start (RS) between 1 and the sampling interval. For example, if the sampling interval is 20; a random start between 1 and 20 should be selected. Let us say 9 is the random start.
6. If between 1 and the sampling interval, a random number has been selected, the numbers of the sample households in the commune are determined using the following series of formulas starting at the random start: RS; RS+SI; RS+2SI; RS+3SI; RS+4SI; RS+5SI; ...; RS+(n-1)SI. For example, if 9 is the random start, #9 household will be the first sample; then followed by  $9+20=29$  will be the second sample household;  $29+20=49$  will be the 3rd sample household;  $49+20=69$ ;  $69+20=89$ ;  $89+20=109$ ;  $109+20=129$ ;  $129+20=149$ ;  $149+20=169$ ;  $169+20=189$ ;  $189+20=209$ ;  $209+20=229$ ;  $229+20=249$ ;  $249+20=269$ ;  $269+20=289$ ;  $289+20=309$ ;  $309+20=329$ ;  $329+20=349$ ;  $349+20=369$ ;  $369+20=389$ ;  $389+20=409$ ;  $409+20=429$ ;  $429+20=449$ ;  $449+20=469$ ;  $469+20=489$ ;  $489+20=509$ ;  $509+20=529$ ;  $529+20=549$ . In summary, the sample households with small agricultural holdings in the given example will be: 9; 29; 49; 69; 89; 109; 129; 149; 169; 189; 209; 229; 249; 269; 289; 309; 329; 349; 369; 389; 409; 429; 449; 469; 489; 509; 529; 549.

Sample selection will be done in the provincial office of the NIS. All NIS/MAFF central census staff acting as the overall supervisor(s) in their respective provinces will be the lead person to select the sample households with small agricultural holdings.

For details on the sampling procedure please refer to Annex 1 of the Training Manual.

# Questionnaires

## Overview

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The NCAC 2013 utilizes six questionnaires for the household sector; two of which will be used in the core module phase and the other four for the supplementary module phase. A listing form to determine the household whether engaged in agriculture activity undertaken in an agriculture holding with size of at least 0.03 hectare is also included in the household sector. There will be separate questionnaires for the non-household sector agricultural holdings as well as non-household aquaculture operators. One questionnaire will be self-administered by the village leaders.

Form A - Listing Form

Form B - Basic Information on Agricultural Holding

Form C - Growing of Crops

Form D - Raising of Livestock/Poultry

Form E - Aquaculture Activity

Form F - Relevant Information on Agricultural Household

Form G - Village Questionnaire



## Data Collection

### Data Collection Dates

| Start      | End        | Cycle |
|------------|------------|-------|
| 2013-04-01 | 2013-05-31 | 1     |

### Time Periods

| Start      | End        | Cycle |
|------------|------------|-------|
| 2012-04-01 | 2013-03-31 | N/A   |

### Data Collection Mode

Face-to-face [f2f]

#### DATA COLLECTION NOTES

CA data processing refers to all activities through which the census documents undergo at the CA Processing Center to prepare them for tabulation of results.

Data processing at the CA Processing Center covers the processing of the following documents:

Form A (Listing of Household);

Form B (Basic Information on Agricultural Holding);

Form C (Growing of Crops);

Form D (Raising Livestock and Poultry);

Form E (Aquaculture Activity);

Form F (Agricultural Household and Its Socio-Economic Characteristics) and

Form G (Village Questionnaire)

Data Processing consists of the following activities:

- Receipt and control of all forms from provincial/municipal office
- Data entry
- Key verification
- Consistency and completeness checking
- Submission of data files and weekly reports to the CA Director General.

### Data Collectors

| Name  | Abbreviation | Affiliation          |
|---|--------------|----------------------|
| National Institute of Statistics              | NIS          | Ministry of Planning |
| Provincial Department of Planning             |              | Ministry of Planning |
| Ministry of Agriculture, Fishery and Forestry | MAFF         |                      |

#### SUPERVISION

There are three provincial census supervisors: the first one is the designated Regional Officers from NIS/MAFF Central Offices, the second is the provincial heads/staffs of NIS/MAFF; and the third one is the NIS/MAFF census staff acting as Assistant Regional Officers (AROs).

##### Pre-Enumeration

To coordinate with the local government / agencies and executives in the province regarding the efficient conduct of the NCAC 2013;

To conduct a publicity and information campaign in the assigned area;

To assist in the recruitment and selection of the animal health workers that will be either assigned as TSs or ENs based on the outcome of the training; and,

To collect, allocate and be responsible for all census forms/questionnaires and materials needed for the enumeration of the assigned area.

To allocate the workload (number of EAs and assigned areas) of the ENs and TSs based on the average EAs per province.

##### Enumeration

To direct and supervise the conduct of the NCAC 2013 (core module and supplementary module) in the assigned province;

To guide and assist the TS in the resolution of problems encountered during the NCAC 2013 core module data collection in

the assigned province;

To spot-check the work of the TSs and ENs as well as to re-interview some households already enumerated by the ENs.

To ensure that households with NCAC stickers are completely enumerated by the ENs;

To endorse/recommend to Central Census Office the replacement of ENs or TSs who are unable to perform their work satisfactorily or for some other reasons;

To scrutinize all accomplished census questionnaires for completeness of entries and to return the incomplete ones to the concerned TS/EN;

To render weekly report regarding the progress of the census work in the assigned province; and,

To perform other duties as may be assigned by the Central Census Office in connection with the NCAC 2013 (core module and supplementary module).

#### Post-Enumeration

To lead the selection of sample households with agricultural holdings as soon as all listing sheets and core module questionnaires have been submitted to the Central Census Office;

To select the best ENs/TSs as enumerators in the supplementary module of the NCAC 2013;

To transmit all accomplished census questionnaires to the Central Census Office within the prescribed period; and,

To issue certificate of completion and clearances to all TSs and ENs after the enumeration period.

## Data Processing

### Data Editing

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Manual processing of questionnaires verified status of completeness, correctness, and consistency of the data entries. Manual editing and coding were performed by four persons (one supervisor and three processors) all of them from NIS. They participated in editing and coding of many surveys conducted by NIS.

### Other Processing

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A verification software package, known as the Census and Survey Processing System (CSPro), was used to verify data entry, correction of inconsistencies and tabulation of survey results. A single supervisor and four data entry personnel performed this 4 process of data process after being trained over the course of four days on entry verification, completeness of entry, correction of entry errors, and coding. Following data entry, a preliminary report was generated. A set of tables were include in this

report and range checks were performed on all variables included in the survey questionnaire. The range checks that were generated indicated the minimum and maximum of all variables. All tabulations reported were extracted after cleaning of data files.

## Data Appraisal

### Estimates of Sampling Error

Not available

# Related Materials

## Questionnaires

### National Census of Agriculture for Cambodia

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|                   |   |
|-------------------|---|
| Title             | National Census of Agriculture for Cambodia   |
| Author(s)         | National Institute of Statistics (NIS)  |
| Date              | 2013-02-01  |
| Country           | Cambodia  |
| Contributor(s)    | Food Agriculture Organization   |
| Publisher(s)      | National Institute of Statistics (NIS)  |
| Table of contents | Form A - Listing of Households<br>Form B - Basic Information on Agricultural Holdings |
| Filename          | NCAC2013_Questionnaires.zip   |

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## Technical documents

### National Census of Agriculture in Cambodia 2013: Presentatioons for Training

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|                   |   |
|-------------------|---|
| Title             | National Census of Agriculture in Cambodia 2013: Presentatioons for Training  |
| Author(s)         | National Institute of Statistics  |
| Date              | 2013-02-01  |
| Country           | Cambodia  |
| Publisher(s)      | National Institute of Statistics  |
| Description       | Powerpoint presentations used during the training for enumerators.  |
| Table of contents | Chapter 1:<br>- Objectives<br>- Responsible ministries<br>- Confidentiality of information<br>- Different Phases of the NCAC<br>- Main scope of the census<br>- Coverage<br>- Reference period<br>- Workload and personnel<br>- Timetable<br>Chapter 2:<br>- How to interview<br>Chapter 3:<br>- Mapping, Canvassing and Enumeration<br>Chapter 4:<br>- Accomplishing FORM A<br>Chapter 5:<br>- Accomplishing FORM B<br>Chapter 6:<br>- Supervisor's manual |
| Filename          | Presentation for Training.zip   |

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### National Census of Agriculture in Cambodia 2013: Manual for Enumerators

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|           |   |
|-----------|---|
| Title     | National Census of Agriculture in Cambodia 2013: Manual for Enumerators |
| Author(s) | National Institute of Statistics  |

Date 2013-02-01  
Country Cambodia  
Publisher(s) National Institute of Statistics  
Description Enumerators Manual in Khmer and English.  
Filename Enumerators Manual.zip

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## Census of Agriculture Data Processing Manual

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Title Census of Agriculture Data Processing Manual  
Author(s) National Institute of Statistics (NIS)  
Date 2013-02-01  
Country Cambodia  
Contributor(s) Food Agriculture Organization (FAO)  
Publisher(s) National Institute of Statistics (NIS)  
CHAPTER 1 OVERVIEW OF THE DATA PROCESSING ACTIVITIES AT THE CA PROCESSING CENTER  
CHAPTER 2 THE CA CENSUS PROCESSING SUPERVISOR (CA CenPS)  
CHAPTER 3 RECEIPT AND CONTROL OF CENSUS DOCUMENTS  
CHAPTER 4 COMPLETENESS AND CONSISTENCY CHECKS AT CA  
CHAPTER 5 DATA ENCODING  
CHAPTER 6 REPORTING AND TRANSMISSION OF FILES  
Table of contents ANNEXES  
Annex 1- The Census Forms  
Annex 2- The Control Forms  
Annex 3- Data Entry Screen Shots  
Annex 4- Data Processing System Screen Shots  
Annex 5- Data Dictionaries  
Annex 6- Reference Files  
Filename Data Processing Manual.zip

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## Other materials

### Code for province, district, commune & village

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Title Code for province, district, commune & village  
Author(s) National Institute of Statistics (NIS)  
Date 2013-02-01  
Country Cambodia  
Publisher(s) National Institute of Statistics (NIS)  
Description Geographic codes  
Filename Code\_GeoUnits.pdf

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### Estimated Workload for NCAC 2013

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Title Estimated Workload for NCAC 2013  
Author(s) National Institute of Statistics (NIS)  
Date 2013-02-01  
Country Cambodia  
Filename Estimated Workload and Personnel.pdf

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### NCAC 2013: Workload to be allocated to Enumerators

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Title NCAC 2013: Workload to be allocated to Enumerators  
Author(s) National Institute of Statistics  
Date 2013-02-01

Country Cambodia  
Publisher(s) National Institute of Statistics  
Filename Workload to be allocated to Enumerators.xlsx

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