

Cambodia - Cambodia Agriculture Survey 2020

**National Institute of Statistics (NIS), Ministry of Planning, Ministry of Agriculture,
Forestry and Fisheries (MAFF)**

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Identification

SURVEY ID NUMBER

KHM_2020_CAS_v01_EN_M_v01_A_OCS

TITLE

Cambodia Agriculture Survey 2020

COUNTRY

Name	Country code
Cambodia	KHM

STUDY TYPE

Agricultural Survey [ag/oth]

SERIES INFORMATION

The Cambodia Agriculture Survey (CAS) 2020, conducted between December 2020 and January 2021, was a comprehensive statistical undertaking for the collection and compilation of information on crop cultivation, livestock and poultry raising, and aquaculture and capture fishing operations. The survey was conducted by the National Institute of Statistics (NIS) of the Ministry of Planning, in collaboration with the Ministry of Agriculture, Forestry and Fisheries (MAFF), and with technical support from the Food and Agriculture Organization of the United Nations (FAO).

CAS 2020 was developed under the scope of “The 50x2030 Initiative to Close the Agricultural Data Gap”, a multi-donor initiative implemented through a unique partnership between the World Bank, FAO and the International Fund for Agricultural Development (IFAD), with the aim of building national statistical capacity and establishing efficient and durable national agricultural data collection systems.

ABSTRACT

The CAS 2020 was a comprehensive statistical undertaking for the collection and compilation of information on crop cultivation, raising livestock and poultry, and aquaculture and capture fishing operations.

The main objective of the CAS 2020 is to provide data on the current agricultural situation in the country that can be utilized by the planners and policy-makers. Specifically, the survey data is useful for:

1. Providing an updated sampling frame in the conduct of agricultural surveys;
2. Providing data at the country and regional level, with some items available at the province level;
3. Providing data on the current structure of the country’s agricultural holdings, including cropping, raising livestock and poultry, and aquaculture and capture fishing activities.

The data collected and generated from this survey effort will help reflect progress towards the 2030 Sustainable Development goals for the agricultural sector, focusing on:

- Goal 1: End poverty in all forms everywhere.
- Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- Goal 5: Achieve gender equality and empower all women and girls.
- Goal 6: Ensure availability and sustainable management of water and sanitation for all.

The questionnaire collected data on several aspects of the agricultural holding, including demographic information about the holder and the household members, crop production, livestock and poultry raising, aquaculture, capture fishing, and labour used by the holding. New for the CAS 2020 were additional questions on the impact of the COVID-19 pandemic on agricultural activities and a household-based Food Insecurity Experience Scale.

Data was collected from household agricultural holdings and juridical agricultural holdings. Only the household agricultural holdings are included in the released microdata.

KIND OF DATA

Sample survey data [ssd]

UNIT OF ANALYSIS

Household agricultural holdings and juridical agricultural holdings.

NOTE: the juridical agricultural holdings are not included in the released microdata

Scope

NOTES

The CAS 2020 was undertaken in two overlapping phases: One phase focused on the juridical holdings, with data collection taking place from 12 December 2020 through 4 January 2021. The other phase included the interviews of agricultural households was conducted during the period 28 December 2020 to 10 January 2021.

The 12-month period prior to 1 July 2020 (i.e., from 1 July 2019 to 30 June 2020) was used as the reference period for the data collection effort. However, the reference period for some of the items was different from the time period specified, and is thus indicated separately for data items as needed. For example, for some livestock items the number of animals on a holding is collected with the day of 1 July 2020 as the reference date.

The CAS 2020 used a panel approach utilizing the CIAS 2019 household holding sample, which was extracted through a two-stage stratified sampling procedure, with EAs as primary units and households engaged in agriculture as secondary units.

TOPICS

Topic	Vocabulary
Agricultural Production	World Bank
Economy	World Bank
Labour	World Bank
Production Methods and Environment	World Bank

KEYWORDS

Keyword
Agricultural production
Crops
Livestock
AGRISurvey
Agricultural practices
Agricultural households
Aquaculture
Capture fishing

Coverage

GEOGRAPHIC COVERAGE

The CAS 2020 provides national coverage. The national territory is divided in four Regions or Zones (Coastal Region, Plains Region, Plateau and Mountain Region, and Tonle Sap Region) and 25 Provinces (Banteay Meanchey, Battambang, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kampot, Kandal, Kep, Koh Kong, Kratie, Mondul Kiri, Otdar Meanchey, Pailin, Phnom Penh, Preah Sihanouk, Preah Vihear, Prey Veng, Pursat, Ratanak Kiri, Siem Reap, Stung Treng, Svay Rieng, Takeo, and Tboung Khmum.).

UNIVERSE

Agricultural households, i.e. holdings in the household sector that are involved in agricultural activities, including the growing of crops, raising of livestock or poultry, and aquaculture or capture fishing activities. It was not considered a minimum threshold to determine a household's engagement in the above mentioned activities.

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
National Institute of Statistics (NIS), Ministry of Planning	Royal Government of Cambodia
Ministry of Agriculture, Forestry and Fisheries (MAFF)	Royal Government of Cambodia

PRODUCERS

Name	Affiliation	Role
Food and Agriculture Organization of the United Nations	United Nations	Technical support
Ministry of Economy and Finance	Royal Government of Cambodia	Provided budgetary support
Ministry of Water Resources and Meteorology	Royal Government of Cambodia	Technical Committee member
Ministry of Industry, Science, Technology and Innovation	Royal Government of Cambodia	Technical Committee member
Ministry of Land Management, Urban Planning and Construction	Royal Government of Cambodia	Technical Committee member
Council of Ministers	Royal Government of Cambodia	Technical Committee member

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
United States Agency of International Development	USAID	Funding
Bill and Melinda Gates Foundation	BMGF	Funding
Royal Government of Cambodia	RGC	Funding
50x2030 Initiative (www.50x2030.org)	50x2030	Technical and Financial Assistance

Sampling

SAMPLING PROCEDURE

The CAS 2020 utilized the same sample from the CIAS 2019, which was the 2013 Agriculture Census Sampling Frame. This frame consisted of around 14,000 villages and 35,000 Enumeration Areas (EAs).

The target population comprised the households that were engaged in agriculture, fishery and/or aquaculture. Given their low number of rural villages, the following districts were excluded from the frame: Krong Preah Sihanouk (province Preah Sihanouk), Krong Siem Reap (province Siemreap). Khan Chamkar Mon, Khan Doun Penh, Khan Prampir Meakkakra, Khan Tuol Kouk, Khan Ruessei Kaev, and Khan Chhbar Ampov (province Phnom Penh).

Since the number of rural households per EA was not known, in order to calculate the number of rural households in each province the sum of the households in the villages that were classified as rural was computed. The listing operation in each sampled EA was conducted for the CIAS 2019 with the aim of identifying the target population, i.e., the households engaged in agricultural activities.

The CAS 2020 used a panel approach utilizing the CIAS 2019 household holding sample, which was extracted through a two-stage stratified sampling procedure, with EAs as primary units and households engaged in agriculture as secondary units. In the CIAS 2019, 1,350 EAs and 12 agricultural households for each EA were selected, for a total planned sample size of 16,000 households. The 1,350 EAs were allocated to the provinces (statistical domains) proportionally to the number of rural households. Since there are no rural villages in Phnom Penh, 50 EAs (corresponding to 60,000 rural households) were allocated to Phnom Penh Province by default and 1,320 EAs were allocated to the other provinces. In order to select the EAs within each province, the villages were ordered by district, then by commune, then by type of village (Rural-Urban) and a systematic sampling was performed, with probability proportional to size (number of households). The total effective sample size of the survey was 14,722 agricultural households.

WEIGHTING

The sample design and stratification procedures resulted in agricultural households having different probabilities of selection. With this under consideration, a sampling weight was calculated for each agricultural household in the sample. The weights were then corrected for non-response and attrition, and calibrated using the number of agricultural households by province obtained through the Cambodia General Population Census 2019. Finally, this reported data was summed to the province, region and national levels.

Data Collection

DATES OF DATA COLLECTION

Start	End	Cycle
2020-12	2021-01	Data collection for household holdings
2021-01		Data collection for juridical holdings

TIME PERIODS

Start date	End date
2019-07-01	2020-06-30

DATA COLLECTION MODE

Computer Assisted Personal Interview [capi]

SUPERVISION

Both Data and Field Supervisors assisted Enumerators in their work. Field Supervisors were responsible for assisting with enumerator issues in the field, encouraging good relationships with village contacts and promoting cooperation from the agricultural household respondents. Data Supervisors were responsible for conducting data quality control checks, assisting with tablet technical issues and distributing survey assignments to the enumerators. A Headquarters Supervisory team was created to perform the final data quality checks, with this group reviewing the work of all enumerators and communicating issues to the Data Supervisors as needed throughout the survey process.

DATA COLLECTORS

Name	Abbreviation	Affiliation
National Institute of Statistics (NIS), Ministry of Planning	NIS	Royal Government of Cambodia
Ministry of Agriculture, Forestry and Fisheries	MAFF	Royal Government of Cambodia

Data Processing

DATA EDITING

Data editing for CAS 2020 took place throughout all the survey implementation, particularly during the following stages:

- data entry, thanks to consistency checks included in the CAPI tool that made use of Survey Solutions software;
- data approval by Data Supervisors, who checked the interviews sent by enumerators through the Survey Solutions software and, in case of errors or suspicious data detected, returned the record to the enumerator to address the issues with the respondent if needed;
- data approval by Headquarter Supervisors, who double-checked the completed questionnaires after being approved by Data Supervisors. If any issues or suspicious data were discovered, the records were returned back to the enumerators for verification or correction.
- data-cleaning phase, where approved data were cleaned in Rstudio through automatic detection of outliers and suspicious records, using validation rules that also took into account validity ranges and comparison with similar data from other sources. In this phase, some respondents were also recontacted to fix possibly wrong responses;
- data-imputation phase, where some values coming from item non-response or systematic errors were imputed.

Access policy

CONTACTS

Name	Affiliation	Email	URL
H.E. Nor Vandy	Director of the Economic Statistics, National Institute of Statistics	norvandy@gmail.com	www.nis.gov.kh
H.E. Saint Lundy	Deputy Director General, National Institute of Statistics	saintlundy@yahoo.com	
Mr Chao Pheav	Director of ICT Department, National Institute of Statistics	chaopheav@yahoo.com	

CONFIDENTIALITY

Article 22 of the Statistics Law of the Kingdom of Cambodia stipulates that staff and employees working in the National Institute of Statistics of the Ministry of Planning and statistical units in ministries and other institutions of the Royal Government, as well as the designated statistical officers of these organizations 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. All information collected in the CAS 2020 survey will be treated as strictly confidential and used for statistical purposes only. The microdata are released under terms and conditions requiring that the data are not redistributed or sold, are used only for statistical purposes and reporting aggregated information, and that there is no attempt to identify statistical units (e.g. respondents). In addition, Statistical Disclosure Control (SDC) methods have been applied to anonymize the microdata and protect the confidentiality of individual data.

ACCESS CONDITIONS

The anonymized microdata of the CAS 2020 are released as Public Use Files, accessible to all according to the following terms and conditions:

Terms and conditions

1. Statistical Law. The National Institute of Statistics (NIS) 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 the Statistics Law of Cambodia is to be used only for statistical purposes. (Statistics Law of the Kingdom of Cambodia, Article 22)
2. Data redistribution and safe storage. The data and other materials retrieved from the NIS National Data Archive will not be redistributed or sold to other individuals, institutions, or organizations without the written agreement of the NIS National Data Archive. The applicant will ensure, through the safe storage of the micro data retrieved from the NIS National Data Archive, that no other person can access the micro data files.
3. Intended use of the data. The data will be used for statistical purposes only and in accordance to the above application form only. The data will be used solely for reporting of aggregated information, and not for investigation of specific individuals or organizations. No attempt will be made to link datasets provided by the NIS National Data Archive, or to link with other datasets that could lead to the identification of statistical units (e.g. individuals or organizations).
4. No disclosure of information on statistical units. The applicant will ensure that no other person will have access to results where information on any statistical unit can be disclosed. The applicant will ensure that the identity of any person or establishment, who have provided data to the NIS will not be disclosed during the analysis and/or when releasing results.
5. Reporting breaches of confidentiality. No attempt will be made to re-identify statistical units, and no use will be made of the identity of any person or establishment discovered inadvertently. Any such discovery would immediately be reported to the NIS using nada@nis.gov.kh and nis.nada@yahoo.com (with Cc to Director General of the NIS, ina@nis.gov.kh).
6. Citation requirement. Any books, articles, conference papers, theses, dissertations, reports, or other publications that employ data obtained from the NIS National Data Archive need to cite the source of data in accordance with the Citation Requirement provided with each dataset.
7. Reporting on results. An electronic copy of all reports and publications based on the requested data must be sent to the NIS National Data Archive (nada@nis.gov.kh and nis.nada@yahoo.com).
8. Responsibility disclaimer. The original collector of the data (the NIS) and the relevant funding agencies bear no responsibility for use of the data or for interpretations or inferences based upon such uses.

To access the microdata, the user must agree to comply with the above-stated terms and conditions and assure that the use of statistical data obtained from the NIS National Data Archive will conform to widely-accepted standards of practice and

legal restrictions that are intended to protect the confidentiality of respondents.

CITATION REQUIREMENTS

National Institute of Statistics of the Kingdom of Cambodia, Cambodia Agricultural Survey 2020 (CAS 2020), public use dataset (December 2022), retrieved from the NIS National Data Archive (nada.nis.gov.kh).

ACCESS AUTHORITY

Name	Affiliation	URL
Director General	National Institute of Statistics	www.nis.gov.kh

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Metadata production

DDI DOCUMENT ID

DDI_KHM_2020_CAS_v01_EN_M_v01_A_OCS

PRODUCERS

Name	Abbreviation	Affiliation	Role
National Institute of Statistics	NIS	Ministry of Planning, Cambodia	Documentation of the study
Food and Agriculture Organization	FAO	United Nations	Technical assistance for CAS2020
Office of the Chief Statistician	FAO	United Nations	Metadata adapted for FAM

DATE OF METADATA PRODUCTION

2022-12-31

Data Dictionary

Data file	Cases	Variables
CAS2020_MAIN	14722	140
S2_PARCEL	26097	8
S3_CROP	49827	22
S4_LIVESTOCK	6582	20
S4_POULTRY	13417	25
S5_AQUACULTURE	1200	13
S5_CAPTURE	5026	15
S6_COVID	2178	32
S6_FOREST	3901	7
S6_OTHER	2204	4
S7_HHROSTER	63190	29
S8_FIES	14722	19
S9_EXT_ACTIVITY	248	6
S9_OCC_ACTIVITY	3486	7