

#### KINGDOM OF CAMBODIA

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# Cambodia Agricultural Survey 2020

Statistical Release





September 2022

The data presented in this Statistical Release comes from the Cambodia Agriculture Survey 2020 report (CAS2020), which was produced by the National Institute of Statistics (NIS), 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), under the scope of the 50x2030 Initiative to Close the Agricultural Data Gap. The 50x2030 is 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 to build national statistical capacity and to establish an efficient and durable national agricultural data collection system.

#### 1. Survey methodology overview

In December 2020, two Royal Cambodian Government institutions (NIS and MAFF) undertook the CAS 2020, a follow-up to the Cambodia Inter-Censual Agriculture Survey 2019 (CIAS 2019) and the first survey funded under the 50x2030 Initiative. This national survey collected information on crop cultivation, livestock and poultry raising, aquaculture and capture fishing, Food Insecurity Experience Scale, COVID-19 impact on agriculture, etc.

Figure 1: Methodological overview

Survey preparation

- Methodology adaptation with 50x2030 Initative survey
- Questionnaire design & testing
- Longitudinal sample preloading
- Field staff recruitment (government)

Data collection

- Survey from December 2020 to January 2021
- Using CAPI, completed:
- 14,722 household interviews
- 197 juridical holding interviews

Data management

- From February to September 2021
- Data cleaning & data imputation
- Weighted data analysis
- Tabulation plan

Reporting and validation

- Preliminary report (June 2022)
- Validation provincial & national levels
- Validation from Technical Committee
- Report finalization and translation

Data dissemination

- September 2022
- Thematic tables -> CAMSTAT
- Microdata -> NADA
- Report release workshop

Source: Cambodia Agriculture Survey 2020.

The sampling approach for CAS 2020, relied fully upon the sample from CIAS 2019. Due to the ongoing pandemic safety and budgetary constraints, it was not feasible to conduct a household screening activity. As such, the CIAS 2019 sample was recycled in a panel approach and utilized for the CAS 2020. The CIAS used statistical methods to select a representative sample of Enumeration Areas (EA) throughout Cambodia from the 2013 Agriculture Census Sampling Frame. Households within these EAs were screened for any agricultural activity. Using this basic information, the agricultural households were stratified and sampled for additional data collection. Juridical holdings, which are farm enterprises operated by corporations or government institutions, were also surveyed based on listings provided by MAFF and other governmental offices with knowledge of agricultural juridical holdings.

The CAS 2020 used a Computer Assisted Personal Interviewing (CAPI) data collection method and tablet technology to record and manage data.

Figure 2: Tablet-based data collection for CAS 2020, FAO photograph



The juridical holdings survey was conducted from 12 December 2020 to 4 January 2021 and the household survey was conducted from 28 December 2020 to 10 January 2021.

A total of 429 staff (including 337 enumerators, 46 field supervisors and 46 data supervisors) completed a total of 14,722 household holding and 197 juridical holding interviews, across the 25 provinces of Cambodia.

This Statistical Release presents the main CAS 2020 findings, for the household agricultural holdings only.

## 2. Household agricultural holdings

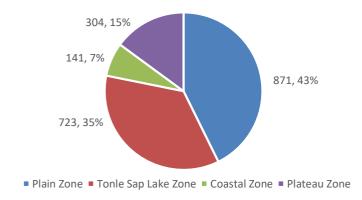
The CAS 2020 survey estimated a total of 2,038,000 household agricultural holdings in Cambodia. Based on the General Population Census of Cambodia 2019, it is estimated that there are 3,553,021 households in the country and therefore an estimated 57 percent of all households are involved in agricultural production.

These household agricultural holdings were unevenly distributed across the country's socio-geographic zones: the Plain Zone has the largest number of agricultural holdings (43%), followed by the Tonle Sap Lake Zone (35%), the Plateau Zone (15%), and finally the Coastal Zone (7%).

Figure 3: Socio-geographic zones in Cambodia



Figure 4: Number (in thousands) and percentage of household agricultural holdings by socio-geographic zone

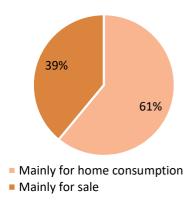


Source: Cambodia Agriculture Survey 2020.

Home consumption was reported as the main agricultural product destination by 61 percent of the household holdings in Cambodia, while the other 39 percent mentioned that agricultural production was mostly for sale. This varied across zones with 85 percent of agricultural holdings in the Coastal Zone producing primarily for home consumption, followed by Plateau

Zone (64%), Plain Zone (62%) and Tonle Sap Lake Zone (54%).

Figure 5: Percentage of household agricultural holdings reporting their main agricultural product destination



Source: Cambodia Agriculture Survey 2020.

# 3. Crop production activity

The survey estimated that approximately 1,920,000 of the 2,038,000 household agricultural holdings were growing crops (94%). Numerous types of crops were reported during data collection, but the survey focused on 30 crops of interest selected by MAFF, for which information on planted and harvested areas, input use (fertilizers, pesticides and irrigation), and production was obtained.

The survey ranked the four most prevalent crops in all four major zones of the country. Non-aromatic paddy was found to be the most widespread crop across the country. The CAS 2020 estimated that non-aromatic paddy had a total planted area of 1.98 million hectares and a total harvested area of 1.89 million hectares. The average production was estimated to be 2,532 kilograms per hectare, with a total national production estimated at 4.68 million tonnes.

The survey showed that Cambodia produces many varieties of fruits including mangoes, bananas, custard apples, dragon fruits, durians, guavas, jackfruits, jambolen plums, longans, milk fruits, papayas and pineapples. Mango was the second most popular crop among farmers in the Plain, Coastal and Tonle Sap Lake Zones (in terms of the number of holdings reporting they grew this crop). At the country level, about 138,000 hectares of mango were planted, and 76,000 hectares were harvested, for a total estimated production of 554,000 tonnes. In the Coastal Zone coconut was the second most popular crop and Mango was third.

Figure 6: Four most prevalent crop types reported in each zone (by number of household holdings reporting; HH: household)

Plain Zone: 821,000 HH holdings 1. Non-aromati

- 1. Non-aromatic paddy
- 2. Mango
- 3. Banana
- 4. Coconut

Tonle Sap Lake Zone: 681,000 HH holdings

- 1. Non-aromatic
- paddy
- 2. Mango
- 3. Banana
- 4. Coconut
- 1,920,000 household agricultural holdings growing crops in Cambodia

Coastal Zone: 130,000 HH holdings

- 1. Non-aromatic paddy
- 2. Coconut
- 3. Mango
- 4. Banana

Plateau Zone: 289,000 HH holdings

- 1. Non-aromatic paddy
- 2. Mango
- 3. Banana
- 4. Cashew

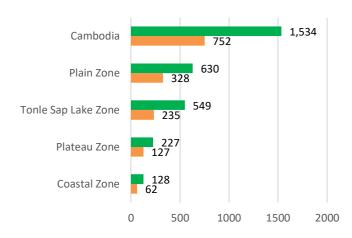
Source: Cambodia Agriculture Survey 2020.

Banana was the third most popular crop for Cambodian farmers in Plain, Tonle Sap and Plateau zones. In total, banana was planted across an estimated 26,000 hectares and harvested in 16,000 hectares, for a total estimated production of about 90,000 tonnes.

# 4. Livestock & poultry raising activity

Raising livestock and/or poultry is an important agricultural activity in Cambodia, supporting livelihoods and providing income to an estimated 1,670,000 household agricultural holdings (82%) in the country. Keeping or raising livestock and/or poultry was highest among agricultural households in the Coastal Zone where they were kept in 92 percent of agricultural households and lowest in the Plain Zone where they were kept in 80 percent. An estimated 1,534,000 holdings reported raising poultry and 752,000 raising cattle.

Figure 7: Number of household agricultural holdings reporting a livestock and/or poultry raising activity, by socio-geographic zone (in thousands)



- Agricultural HH raising poultry last 12 months (thousands)
- Agricultural HH raising cattle last 12 months (thousands)

Source: Cambodia Agriculture Survey 2020.

Although the Plain Zone had the lowest percentage of agricultural households keeping livestock and/or poultry, it was the zone with the largest number of household holdings raising cattle (328,000 household agricultural holdings). This was followed by the Tonle Sap Lake Zone (235,000), the Plateau Zone (127,000) and the Coastal Zone (62,000).

Figure 8: A typical agricultural holding, NIS photograph



The Plain Zone recorded again the highest number of household agricultural holdings raising poultry (630,000), followed by the Tonle Sap Lake Zone (549,000), the Plateau Zone (227,000) and the Coastal Zone (128,000).

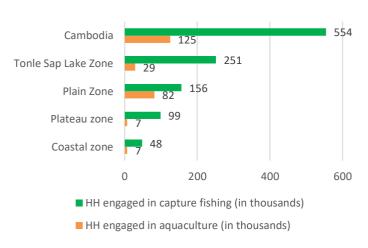
Nationwide, data shows that the average number of cattle per household holding raising cattle was 4.4. As for households raising poultry, the average number of birds per household holding was 41.4.

## 5. Aquaculture & capture fishing activity

Aquaculture is an additional economic activity undertaken by 6 percent of household agricultural holdings (approximately 125,000 holdings) whilst capture fishing occurs in an estimated 27 percent of holdings (approximately 554,000 holdings). Included within the above totals, there were 42,000 (2% of all agricultural holdings) that were involved in both aquaculture and capture fishing activities.

The zone with the largest number of household agricultural holdings practising aquaculture was the Plain Zone (82,000 holdings, 9% of agricultural holdings) whilst the zone practising the most capture fishing was the Tonle Sap Lake Zone (251,000 holdings, 35% of agricultural holdings).

Figure 9: Number of household agricultural holdings reporting aquaculture or capture fishing activity, by socio-geographic zone



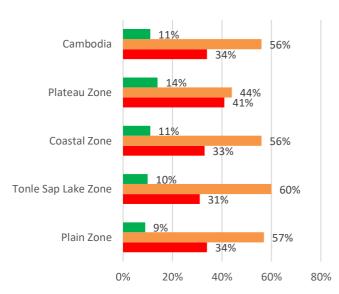
Source: Cambodia Agriculture Survey 2020.

While 98 percent of the holdings who reported the capture fishing activity captured fish, 24 percent captured crabs and 13 percent captured snails. The total catch reported for fish in capture fishing was 86.4 million kilograms. In looking at the species raised in aquaculture settings, the most plentiful species raised on the day of the CAS 2020 interview included Striped Catfish (with 106.9 million inventory), Catfish (with 45.4 million inventory), and Giant Snakehead fish (with 24.8 million inventory).

#### 6. Economy

Agriculture remains essential to secure the livelihoods of the Cambodian population. An estimated 31 percent of holders reported that about half of their total household income (40% to 59%) was accounted for by agricultural income, 16 percent reported that most or almost all (60% to 99%) of their total household income was accounted for by agricultural income, and 4 percent reported that all (100%) of their total household income was accounted for by agricultural income.

Figure 10: Percentage of household agricultural holdings reporting a higher, similar or lower contribution of their agricultural income to their household's total income, compared with the previous year, by socio-geographic zone



- HH reporting higher contribution of agricultural income than previous year (%)
- HH reporting similar contribution of agricultural income than previous year (%)
- HH reporting lower contribution of agricultural income than previous year (%)

Source: Cambodia Agriculture Survey 2020.

Around one third (34%) of the Cambodian household agricultural holdings reported that their agricultural income contributed less to their total household income than during the previous year; 56 percent reported a similar contribution, and 11 percent reported a greater contribution to their total household income than during the previous year.

### 7. COVID-19 and shocks

Approximately 40 percent of agricultural household holdings reported experiencing some form of severe shock during the last 12 months, including weather events like typhoons, floods, landslides or drought and other impactful events including insect infestations, crop disease, or livestock disease. At the national level, approximately 249,000 household agricultural holdings (12%) reported their agricultural activity being impacted in some way by the COVID-19 crisis during the reference period of the survey. Due to the timing of the reference period (from July 2019 to June 2020), it is expected that COVID-19 will have a much greater impact on the CAS 2021 results next year.

Figure 11: Fieldwork conducted with social distancing



#### 8. SDG and FIES Results

Reporting on SDG indicators is not found within the full CAS 2020, yet some indicators were collected as part of the survey.

Figure 12: SDG 2



End hunger, achieve food security and improved nutrition and promote sustainable agriculture

The SDG Indicator 2.3.1 measures the agricultural labour productivity, i.e., the agricultural volume of production per labour input. It is calculated using Purchasing Power Parity (PPP). PPP allows comparison of economic productivity and standards of living between countries. It compares different countries' currencies through a "basket of goods" approach. The CAS 2020 data shows that this indicator was equal to 11.85 PPP per labour day in 2020 dollars. Presented in constant 2011 international dollars it was 9.72 PPP.

Food Insecurity Experience Scale (FIES) data was collected in CAS 2020. In total it is estimated that 24.7 percent of agricultural households were experiencing moderate or severe food insecurity of which 3.6 percent were severe. The percent of households with moderate or severe food insecurity was higher among female-led households with 28.7 percent compared to 23.1 percent of male-led households.

#### 9. Resources

National Institute of Statistics, Ministry of Planning, in collaboration with Ministry of Agriculture, Forestry and Fisheries, Cambodia Agriculture Survey 2020 (CAS20) Final Report, September 2022. The full report and a digital version of this brief can be found through the QR code below:



# 10. Contact

#### Cambodia Agriculture Survey

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