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Armenia AGRIS SAH 2020

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Study Description

Identification

AGRIS/SAH

Title

AGRIS/SAH

Abbreviation

AGRIS/SAH

Study Type

Sample survey of Agricultural Holdings

Series Information: *Mention that this is the first AGRIS and that SAH is a component. Also mention the other components of AGRIS.*

Since January 2020 Statistical Committee of the Republic of Armenia (ARMSTAT) in collaboration with the UN Food and Agriculture Organization, conducted the Agricultural Integrated Survey (AGRIS) (sample survey) on a quarterly and annual basis in individual (agricultural) households of 4 marzes of the RA. The AGRIS in RA was implemented for the first time. The main goal of the survey was to study the households' agricultural activities. For composing as complete picture about agriculture as possible, it was necessary to do a detailed survey in different households and by summarizing the provided information to have the statistical description of households and agriculture in the Republic. The data collected during the survey can be used to develop appropriate policies for the development of the agricultural sector. In the scope of mentioned program, it is also planned to collect information on the agricultural sector from commercial organizations engaged in agriculture.

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Notes

Overview

Abstract: *The abstract should provide a clear summary of the purposes, objectives and content of the survey. It should be written by a researcher or survey statistician aware of the survey.*

Agricultural Integrated Survey was implemented to collect statistical data on agricultural sector and households, the collected data can be used to develop appropriate policies aimed to develop agricultural sector.

The Agricultural Integrated Survey was conducted by the interviewer via Computer Assisted Personal Interviewing (CAPI) system's SuSo application using the following digital questionnaires:

1. Inception Questionnaire
2. Quarterly Questionnaire
3. Annual Questionnaire

The questionnaires were completed by interviewer during the visits to holdings in the course of the year, through direct interviews with the holder of the holding or another adult (at least 18 years old) member of the holding who is well-informed of the holding's agricultural activities. The interviewer collected information on the status of the agricultural holding, land areas, farm animal numbers, production and processing of agricultural products, consumption, sales, labor, buildings, etc.

Kind of Data

Unit of Analysis

Scope

Description of Scope

The scope is a description of the themes covered by the survey. It can be viewed as a summary of the modules that are included in the questionnaire. The scope does not deal with geographic coverage.

Example:

The scope of the Multiple Indicator Cluster Survey includes:

- HOUSEHOLD: Household characteristics, household listing, orphaned and vulnerable children, education, child labour, water and sanitation, household use of insecticide treated mosquito nets, and salt iodization, with optional modules for child discipline, child disability, maternal mortality and security of tenure and durability of housing.
- WOMEN: Women's characteristics, child mortality, tetanus toxoid, maternal and newborn health, marriage, polygyny, female genital cutting, contraception, and HIV/AIDS knowledge, with optional modules for unmet need, domestic violence, and sexual behavior.
- CHILDREN: Children's characteristics, birth registration and early learning, vitamin A, breastfeeding, care of illness, malaria, immunization, and anthropometry, with an optional module for child development.

Within the mentioned program the enumerator collected data via visits to households, collected data topics included: the household location, information about the holder, the main direction of the activities, number of farm animals, types of animal origin products' production and their volumes, number of parcels and their use, produced crops and their volumes, the directions of realization, types of irrigation, fertilizers, labor, expenses incurred and other.

Topics Classification

Coverage

Country

Geographic Coverage

This field aims at describing at what geographic level the data are representative. Typical entries will be "National coverage", "Urban (or rural) areas only", "State of ...", "Capital city", etc.

Note that we do not describe here where the data was collected. For example, as sample survey could be declared as "national coverage" even in cases where some districts were not included in the sample, as long as the sampling strategy was such that the representativity is national.

National and selected marz level

Universe

We are interested here in the survey universe (not the universe of particular sections of the questionnaires or variables), i.e. in the identification of the population of interest in the survey. The universe will rarely be the entire population of the country. Sample household surveys, for example, usually do not cover homeless, nomads, diplomats, community households. Population censuses do not cover diplomats. Try to provide the most detailed information possible on the population covered by the survey/census.

Example:

The survey covered all de jure household members (usual residents), all women aged 15-49 years resident in the household, and all children aged 0-4 years (under age 5) resident in the household.

Survey take place in agricultural holdings, independent of their size, number of household members, activity type, etc.

Producers and Sponsors

Primary Investigator

FAO and ARMSTAT

Other Producers

ICARE

Funding

FAO

Other Acknowledgments

This optional field can be used to acknowledge any other people and institutions that have in some form contributed to the survey.

Thank you to FAO and ICARE representatives: Armen, Avet, Hasmik, Lusine, etc.

Sampling (c/o Armen?)

Data Collection

Date of Collection

Working tools were the following three questionnaires

1. "Inception Questionnaire", as of January 1st
2. "Quarterly Questionnaire", visits to households two times a year
3. "Annual Questionnaire", at the end of the year, in January

In Armenia, due to the pandemic were imposed restrictions, and in the same year, 44-day war took place, and due to the above-mentioned, tools listed above were changed (reduced).

1. "Inception Questionnaire", as of January 1st
2. "Semiannual Questionnaire", in the first month after the first semester.
3. "Annual Questionnaire", at the end of the year, in January

Time Periods

Reference period for the "Inception Questionnaire" was "as of January 1st", it also included the crops sown in autumn 2019.

Reference period for the "Semiannual Questionnaire" were 1st and 2nd semesters of 2020 (from January 1st-March 31st, April 1st-June 30th).

Reference period for the "Annual Questionnaire" were 3rd and 4th semesters of 2020 (July 1st-September 30th, October 1st-December 31st).

Mode of Data Collection

Notes on Data Collection: *Mention all strengths/best practices/problems/issues/concerns affecting data collection.*

Training with enumerators and supervisors before the field work.
Revelation of problems appeared during the previous field work by enumerators and supervisors, presentation of solutions, discussions, exchange of experience.
Existence of constant communication (via software) between interviewers, supervisors and headquarter during field work.
Via CAPI's SuSo application, quick entry of questionnaires by the enumerators and data control by the supervisors and headquarter.
Big number of missing households/close doors/refuse to answer were present in the sample, as a result of which the selected addresses are changed to backup addresses, additional time is spent on finding new addresses and preparing the household for the interview.
Presence of pandemic, as a result of which it is possible a delay of field work, refusal of household to participate in the program, because people may avoid contact with people.

Questionnaires: *Mention changes made over the FAO template and who contributed to the design of the final questionnaire.*

Discussions with ARMSTAT's FAO's and ICARE's experts were held on all sections of the questionnaire that FAO provided to ARMSTAT, those discussions aimed to match indicators available in the sections to the national peculiarities, particularly crop list included in the questionnaire, gender and age group of farm animals.
FAO and ICARE experts: Armen, Avet, Hasmik, Lusine and others greatly contributed to the finalization of the questionnaire.

Data Collectors

This element is provided in order to record information regarding the persons and/or agencies that took charge of the data collection. This element includes 3 fields: Name, Abbreviation and the Affiliation. In most cases, we will record here the name of the agency, not the name of interviewers. Only in the case of very small-scale surveys, with a very limited number of interviewers, the name of person will be included as well. The field Affiliation is optional and not relevant in all cases.

Example:

Name: Central Statistics Office
Abbreviation: CSO
Affiliation: Ministry of Planning

Statistical Committee
Abbreviation: Armstat
Affiliation: Liable to Government of Republic of Armenia

Supervision

This element will provide information on the oversight of the data collection. The following should be considered:

- Were the enumerators organized in teams that included a controller and a supervisor? With how many controllers/supervisors per interviewer?
- What were the main roles of the controllers/supervisors?
- Were there visits to the field by upper management? How often?

Example:

Interviewing was conducted by teams of interviewers. Each interviewing team comprised of 3-4 female interviewers, a field editor and a supervisor, and a driver. Each team used a 4 wheel drive vehicle to travel from cluster to cluster (and where necessary within cluster).

The role of the supervisor was to coordinate field data collection activities, including management of the field teams, supplies and equipment, finances, maps and listings, coordinate with local authorities concerning the survey plan and make arrangements for accommodation and travel. Additionally, the field supervisor assigned the work to the interviewers, spot checked work, maintained field control documents, and sent completed questionnaires and progress reports to the central office.

The field editor was responsible for reviewing each questionnaire at the end of the day, checking for missed questions, skip errors, fields incorrectly completed, and checking for inconsistencies in the data. The field editor also observed interviews and conducted review sessions with interviewers.

Responsibilities of the supervisors and field editors are described in the Instructions for Supervisors and Field Editors, together with the different field controls that were in place to control the quality of the fieldwork.

Field visits were also made by a team of central staff on a periodic basis during fieldwork. The senior staff of GenCenStat also made 3 visits to field teams to provide support and to review progress.

4 group, 7 controller, 19 supervisor, 111 enumerator
Enumerators collected data from holdings through interview, supervisors checked the filled questionnaires integrity and credibility, controllers controlled the work schedule, as well as the credibility checks carried out by the supervisors.

Data Processing

Data Editing

The data editing should contain information on how the data was treated or controlled for in terms of consistency and coherence. This item does not concern the data entry phase but only the editing of data whether manual or automatic.

- Was a hot deck or a cold deck technique used to edit the data?
- Were corrections made automatically (by program), or by visual control of the questionnaire?
- What software was used?

If materials are available (specifications for data editing, report on data editing, programs used for data editing), they should be listed here and provided as external resources.

Example:

Data editing took place at a number of stages throughout the processing, including:

- a) Office editing and coding
- b) During data entry
- c) Structure checking and completeness
- d) Secondary editing
- e) Structural checking of SPSS data files

Detailed documentation of the editing of data can be found in the "Data processing guidelines" document provided as an external resource.

Data provided by enumerators was checked by supervisors and filled questionnaires were commented by the supervisors as needed which helped to do adjustments, also questionnaires were rejected. The same principle worked also between supervisors and controllers. Computer software gave opportunity to check arithmetic and logic of the questionnaire.

Other Processing

Use this field to provide as much information as possible on the data entry design. This includes such details as:

- Mode of data entry (manual or by scanning, in the field/in regions/at headquarters)

- Computer architecture (laptop computers in the field, desktop computers, scanners, PDA, other; indicate the number of computers used)
- Software used
- Use (and rate) of double data entry
- Average productivity of data entry operators; number of data entry operators involved and their work schedule

Information on tabulation and analysis can also be provided here.

All available materials (data entry/tabulation/analysis programs; reports on data entry) should be listed here and provided as external resources.

Example:

Data were processed in clusters, with each cluster being processed as a complete unit through each stage of data processing. Each cluster goes through the following steps:

- 1) Questionnaire reception
- 2) Office editing and coding
- 3) Data entry
- 4) Structure and completeness checking
- 5) Verification entry
- 6) Comparison of verification data
- 7) Back up of raw data
- 8) Secondary editing
- 9) Edited data back up

After all clusters are processed, all data is concatenated together and then the following steps are completed for all data files:

- 10) Export to SPSS in 4 files (hh - household, hl - household members, wm - women, ch - children under 5)
- 11) Recoding of variables needed for analysis
- 12) Adding of sample weights
- 13) Calculation of wealth quintiles and merging into data
- 14) Structural checking of SPSS files
- 15) Data quality tabulations
- 16) Production of analysis tabulations

Details of each of these steps can be found in the data processing documentation, data editing guidelines, data processing programs in CSPro and SPSS, and tabulation guidelines.

Data entry was conducted by 12 data entry operators in tow shifts, supervised by 2 data entry supervisors, using a total of 7 computers (6 data entry computers plus one supervisors' computer). All data entry was conducted at the GenCenStat head office using manual data entry. For data entry, CSPro version 2.6.007 was used with a highly structured data entry program, using system-controlled approach that controlled entry of each variable. All range checks and skips were controlled by the program and operators could not override these. A limited set of consistency checks were also included in the data entry program. In addition, the calculation of anthropometric Z-scores was also included in the data entry programs for use during analysis. Open-ended responses ("Other" answers) were not entered or coded, except in rare circumstances where the response matched an existing code in the questionnaire.

Structure and completeness checking ensured that all questionnaires for the cluster had been entered, were structurally sound, and that women's and children's questionnaires existed for each eligible woman and child. 100% verification of all variables was performed using independent verification, i.e. double entry of data, with separate comparison of data followed by modification of one or both datasets to correct keying errors by original operators who first keyed the files.

After completion of all processing in CSPro, all individual cluster files were backed up before concatenating data together using the CSPro file concatenate utility.

For tabulation and analysis SPSS versions 10.0 and 14.0 were used. Version 10.0 was originally used for all tabulation programs, except for child mortality. Later version 14.0 was used for child mortality, data quality tabulations and other analysis activities.

After transferring all files to SPSS, certain variables were recoded for use as background characteristics in the tabulation of the data, including grouping age, education, geographic areas as needed for analysis. In the process of recoding ages and dates some random imputation of dates (within calculated constraints) was performed to handle missing or "don't know" ages or dates. Additionally, a wealth (asset) index of household members was calculated using principal components analysis, based on household assets, and both the score and quintiles were included in the datasets for use in tabulations.

Entry was implemented in the communities through the visits to holdings and face to face interviews, by hand during the field work into tablet via CAPI's SuSo application within 15 days.

Inputted questionnaires' primary check was done by supervisors, who made comments (related to data reliability) and sent the questionnaires to enumerators. Enumerators after addressing the comments or making adjustments sent the questionnaires back to supervisors.

The same procedure was implemented between headquarter and supervisors, which can be considered as questionnaires' secondary check.

Data Appraisal

Estimates of Sampling Error

For sampling surveys, it is good practice to calculate and publish sampling error. This field is used to provide information on these calculations. This includes:

- A list of ratios/indicators for which sampling errors were computed.
- Details regarding the software used for computing the sampling error, and reference to the programs used (to be provided as external resources) as the program used to perform the calculations.
- Reference to the reports or other document where the results can be found (to be provided as external resources).

Example:

Estimates from a sample survey are affected by two types of errors: 1) non-sampling errors and 2) sampling errors. Non-sampling errors are the results of mistakes made in the implementation of data collection and data processing. Numerous efforts were made during implementation of the 2005-2006 MICS to minimize this type of error, however, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

If the sample of respondents had been a simple random sample, it would have been possible to use straightforward formulae for calculating sampling errors. However, the 2005-2006 MICS sample is the result of a multi-stage stratified design, and consequently needs to use more complex formulae. The SPSS complex samples module has been used to calculate sampling errors for the 2005-2006 MICS. This module uses the Taylor linearization method of variance estimation for survey estimates that are means or proportions. This method is documented in the SPSS file CSDescriptives.pdf found under the Help, Algorithms options in SPSS.

Sampling errors have been calculated for a select set of statistics (all of which are proportions due to the limitations of the Taylor linearization method) for the national sample, urban and rural areas, and for each of the five regions. For each statistic, the estimate, its standard error, the coefficient of variation (or relative error -- the ratio between the standard error and the estimate), the design effect, and the square root design effect (DEFT -- the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used), as well as the 95 percent confidence intervals (+/-2 standard errors).

Details of the sampling errors are presented in the sampling errors appendix to the report and in the sampling errors table presented in the external resources.

Other Forms of Data Appraisal

This section can be used to report any other action taken to assess the reliability of the data, or any observations regarding data quality. This item can include:

- For a population census, information on the post enumeration survey (a report should be provided in external resources and mentioned here).
- For any survey/census, a comparison with data from another source.
- Etc.

Example:

A series of data quality tables and graphs are available to review the quality of the data and include the following:

- Age distribution of the household population
- Age distribution of eligible women and interviewed women
- Age distribution of eligible children and children for whom the mother or caretaker was interviewed
- Age distribution of children under age 5 by 3 month groups

- Age and period ratios at boundaries of eligibility
- Percent of observations with missing information on selected variables
- Presence of mother in the household and person interviewed for the under 5 questionnaires
- School attendance by single year age
- Sex ratio at birth among children ever born, surviving and dead by age of respondent
- Distribution of women by time since last birth
- Scatter plot of weight by height, weight by age and height by age
- Graph of male and female population by single years of age
- Population pyramid

The results of each of these data quality tables are shown in the appendix of the final report and are also given in the external resources section.

The general rule for presentation of missing data in the final report tabulations is that a column is presented for missing data if the percentage of cases with missing data is 1% or more. Cases with missing data on the background characteristics (e.g. education) are included in the tables, but the missing data rows are suppressed and noted at the bottom of the tables in the report (not in the SPSS output, however).

Contacts

Contact Person: Name, Affiliation, generic/official email (not personal)

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