

Nepal - National Sample Census of Agriculture 1991-1992

**Central Bureau of Statistics - National Planning Commission Secretariat,
Government of Nepal**

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Overview

Identification

ID NUMBER
NPL-CBS-NSCA-1991-v0

Version

VERSION DESCRIPTION
Version 0: Microdata is not available.

Overview

ABSTRACT
Objectives of the National Census of Agriculture of Nepal, 1991/92

The main objective of the census of agriculture of Nepal is to publish data at district level on the following:

1. Structure and characteristics of the holding such as size, agricultural land use, land tenure, land fragmentation, area planted to crops, number of livestock, and others;
2. To provide benchmark data for improving the reliability of estimates from current agricultural survey; and,
3. To provide basic data for national, ecological belts and development regions levels for national as well as sub-national policy, planning and decision making purposes.

The National Sample Census of Agriculture, 1991/92 of Nepal (NSCA 1991/92) was conducted by the Central Bureau of Statistics. The 1991/92 NSCA was undertaken in two phases. The first phase involved the complete enumeration of all agricultural holdings in the country including the area of the holding and livestock number. The enumeration of all the holdings was an integral activity of the first phase of the Census of Population 1991, which undertook the operation in June 1991. Some questions on agricultural activities were asked to identify the agricultural holding. The second phase of the 1991/92 NSCA was the selection and enumeration of sample holdings to widen the scope of the census from January to June 1992. Data on agricultural crops gathered refer to calendar year 1991 while the livestock and poultry population refers at the time of enumeration, from January to June 1992.

KIND OF DATA
Census/enumeration data [cen]

UNITS OF ANALYSIS
Agricultural holdings and individuals

Scope

NOTES
The scope of the 1991/92 NSCA is almost the same as that in 1981/82 National Sample Census of Agriculture which adopted most of the recommendations of the Food and Agriculture Organization (FAO) in the collection of data under the following main headings:

1. Identification - Holding and holder identification.
2. Holder characteristics - Age and sex of holder; legal status of the holding; use of produce from holding; whether received agricultural loan and the source.

3. Demographic and other characteristics - Age and sex of household members. Characteristics of the farm population were gathered in the Census of Population 1991 but will be included in the NSCA 1991/92 analysis of results.

4. Employment - For agricultural labour: permanent workers by sex and employment of occasional workers. Economic activities of the members of the household of the holder were not taken in the agriculture census because these were already covered in the Census of Population 1991 but will be included in the analysis of results of the 1991/92 NCA.

5. Land and water - For holding as a whole: number of parcels; area; type of land; irrigated land, source of irrigation; etc. For each parcel: area; type of land; type of soil, color of soil; irrigated; area rented from others; whether rented out land; land use (whether arable, land under temporary crops, temporary meadow, temporary fallow; land under permanent crops; permanent meadows and pasture; pond; woodland/forest; and land not elsewhere classified) land tenure; and part of holding made uncultivable due to flooding and/or soil erosion during the reference year.

6. Crops - Temporary crops: name of crops grown and area harvested on each parcel. Permanent crops: name of crops grown for each parcel; number of trees of productive and non-productive ages in compact plantations; and number of scattered trees. Use of agricultural inputs for major crops: type of seed; fertilizers, organic and inorganic: area and quantity of inorganic (chemical) fertilizer used; pesticides; use of irrigation and high yielding varieties of seeds; cropping patterns for each parcel, whether pure stand, mixed crop, or associated crop.

7. Livestock - Animal numbers by type according to age and sex; poultry numbers: chicken classified by sex and for female, whether laying eggs or not.

8. Machinery and equipment - Use of items of agricultural machinery and equipment; number of items; and source (owned by holder, common, landlord, or others).

9. Buildings and other structures - Whether non-residential buildings used for agricultural purposes; tenure and type of these buildings.

10. Ancillary activities on the holding - Existence of forest trees and fisheries on the holding; number of forest trees; type and area of fishing installation.

TOPICS

Topic	Vocabulary	URI
agricultural, forestry and rural industry [2.1]	CESSDA	http://www.nesstar.org/rdf/common
Food (production, crisis)	World Bank	

Coverage

GEOGRAPHIC COVERAGE (1)

National

GEOGRAPHIC COVERAGE (2)

Urban and rural areas

GEOGRAPHIC COVERAGE (3)

Ecological belt

GEOGRAPHIC COVERAGE (4)

Development Region

GEOGRAPHIC COVERAGE (5)

District

GEOGRAPHIC UNIT

District

UNIVERSE

Holdings having area under crops less than 0.01355 ga (8 dhurs) in Terai or 0.01272 hs (4 anas) in Hilly and Mountains region, but raising at least 2 productive animals or 20 poultry birds are included in the category "Holding without land". Agricultural activities undertaken by government organizations, businesses like corporations and other juridical persons were not covered by the NSCA, 1991/92.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Central Bureau of Statistics	National Planning Commission Secretariat, Government of Nepal

OTHER PRODUCER(S)

Name	Affiliation	Role
United Nations Development Program		Financial and technical assistance in training, computer equipment and technical personnel to assist the CBS to formulate project, sample design and for data processing in undertaking the the census
Food and Agriculture Organization		General assistance

FUNDING

Name	Abbreviation	Role
His Majesty's Government	HMG	
United Nations Development Program	UNDP	Financial support for sample design, training and data processing.

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Central Bureau of Statistics	CBS	National Planning Commission Secretariat, Government of Nepal	Documentation of the study

DATE OF METADATA PRODUCTION

2012-03-12

DDI DOCUMENT VERSION

Version 01: Central Bureau of Statistics - Original documentation of the study.

Version 02: Revised version of metadata as per the recommendation of ADP assesement report, 25 October 2015.

DDI DOCUMENT ID

DDI-NPL-CBS-NSCA-1991-v02

Sampling

Sampling Procedure

CENSUS METHODOLOGY

A. Complete Enumeration of Holdings, Area and Livestock

The census methodology in undertaking the 1991/92 National Sample Census of Agriculture of Nepal is a combination of complete enumeration and sampling.

The Census of Agriculture was implemented in two phases. The first phase was the complete enumeration of all holdings, their area and the number of livestock and poultry raised by all households in the country as an integral activity in the listing operations of the Census of Population 1991. Two questions were asked concerning agricultural activities of households, namely: total area of the agriculture holding and total number of livestock/poultry kept by the households. All households listed in the Population Census 1991 that possessed the characteristics of the holding as defined in the agriculture census were identified as agricultural holdings. These holdings and their corresponding areas and number of livestock kept including their household population were compiled by ward for all the 75 districts of Nepal from which the sampling frame was constructed.

B. Sampling Design

A two-stage stratified sampling was employed in the selection of the samples for enumeration to obtain the characteristics of the holdings for the NSCA 1991. This design is similar to that of the 1981/82 sampling design, which is a self-weighting sample.

Construction of the sampling frame

The listing of the wards in each district with the summarized data of the number of holdings and area was used to form enumeration areas (EA's). However, wards containing less than 30 holdings were combined to form one EA. The EAs in each district were stratified according to the number of holdings enumerated, arranged from the highest to the lowest.

Selection of samples

The basic sampling methodology used was two stage area sampling as below:

First stage : selection of a stratified sample of enumeration areas (EAs) with probability proportional to expected number of holdings (stratified PPS sampling). i.e. the first stages of sample selection involved the primary sampling units (PSUs), where sample enumeration areas (EAs) were selected with probability proportional to size (PPS). The measure of size is the number of holdings enumerated in the EAs during the Census of Population 1991 listing operations.

To measure the importance of each district, the total area under 8 major crops was determined (paddy, wheat, maize, millet, barley, sugarcane, oilseed and potato). Districts were stratified into four groups according to this criterion. Group I represented the 10 least important districts; Group II, the next 15 important districts and Group III, the next 25 important districts and Group IV, the 25 most important districts. The number of selected EAs per district in each group follows:

Group I - 50 EAs per district (total of 450 EAs because one district, specifically Manang district was taken as a certainty sample district)

Group II - 60 EAs per district (total of 900 EAs)

Group III - 70 EAs per district (total of 1,750 EAs)

Group IV - 80 EAs per district (total of 2000 EAs).

Second stage : within selected EAs, the selection of a sample of agricultural holdings using stratified systematic random sampling. That is, the second stage of sample selection involved the selection of sample holdings systematically in each sample EA. Before the sample selection was done, a listing of holdings in each sample PSU was conducted to update the listing during the Population Census. The target number of holdings for enumeration in each sample EA was 25.

Altogether, 5,100 enumeration areas were selected from the 74 districts. The final sample of holdings for the country was about 122,000. A complete enumeration of all holdings was carried out in Manang District.

The details of the sampling procedures and the estimation of parameters for each district are found in the report 'Reliability of Data', which is one of the series of reports prepared for reliability of NSCA 1991/92.

Weighting

The Census of Agriculture sample was designed to be self-weighting within each district, i.e. all holdings within a district have the same chance of being included in the sample.

Questionnaires

Overview

The questionnaires for the National Sample Census of Agriculture were structured questionnaires based on FAO recommendation with some modifications and additions and it was written in Nepali language. The main questionnaire was Schedule-2 which contains the following topics:

- Part 0: Identification Information
- Part 1: Information on Holder and respondent
- Part 2: General Information
- Part 3: Description of Population
- Part 4: Description for Land and Water
- Part 5: Crops
- Part 6: Livestock and Poultry
- Part 7: Agriculture Machinery by Source and Use
- Part 8: Non-Residential Building
- Part 9: Forest and Fishery
- Part 10: Agricultural Loan

The total area of the holding was reported in the district where the holder resides, regardless of the physical location of the parcels comprising the holding. Although in Nepal a holding is usually equivalent to the household and it is very rare where a household operates a holding where some parcels are located in other districts.

Data Collection

Data Collection Dates

Start	End	Cycle
1992-01	1992-03	First phase
1992-04	1992-06	Second phase

Time Periods

Start	End	Cycle
1991-01-17	1992-01-16	N/A

Data Collection Mode

Face-to-face [f2f]

Data Collection Notes

The pilot survey was conducted one year before the agriculture census 1991/92.

For the Agricultural Census, training for district officer and supervisor were held in centre and training for the field supervisors and enumerators are held in districts at the beginning of the field work.

On an average one and quarter hour was taken for filling the questionnaire i.e. schedule. Nepali national language was used for conducting interview.

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Data Collectors

Name	Abbreviation	Affiliation
Central Bureau of Statistics	CBS	National Planning Commission Secretariat

Supervision

There were two types of supervisors. First is the central supervisor and the other is field Supervisors. Central supervisors are from Central Bureau of Statistics and Branch Statistics Office (BSO) whereas the field supervisors are from BSO and districts government offices as well as in contract.

Field Supervisors supervised day to day work of enumerators. One supervisor controls 4 enumerators. Supervisors supervised daily works of the enumerators and selected Secondary Sampling Unit (SSU) from selected EAs after listing all Agricultural households of selected wards. District Officers and Supervisors supervise the field work intensively. In addition to this central supervision were also frequently done.

Data Processing

Data Editing

The data were subjected to the following editing process:

- 1) Editing and coding were done manually at the head office after collecting the filled questionnaires
- 2) Completeness check after data entry done by a completeness checking computer program
- 3) Machine editing

Other Processing

The data entry process includes the following steps:

- 1) Structure and completeness checking
- 2) Verification entry
- 3) Comparison of verification data
- 4) Tabulation and the others

Data Appraisal

Estimates of Sampling Error

Sampling errors were calculated for a selection of census estimates. These can be used as a guide to levels of sampling error for the other estimates. Programs written in CLIPPER 5.01 were used to calculate standard errors for the following items:

1. Total area of holdings;
2. Area under temporary crops;
3. Area under paddy;
4. Area under maize;
5. Area under wheat;
6. Area of irrigated land;
7. Number of cattle;
8. Number of buffaloes;
9. Number of chickens; and
10. farm population.

Sampling errors are discussed in detail in the 'Reliability of Data' report.

Other forms of Data Appraisal

Data quality of NSCA 1991/92 was further assessed by comparing the its results with the previous series of agriculture census data (NSCA1981/82) and data of population census 1991. See 'Reliability of Data' report for more details.

File Description

Variable List

Documentation

Questionnaires

National Sample Census of Agriculture 1991-92, Individual Questionnaire

Title	National Sample Census of Agriculture 1991-92, Individual Questionnaire
Author(s)	Central Bureau of Statistics (CBS)
Date	1991-06-01
Country	Nepal
Publisher(s)	Central Bureau of Statistics, Nepal
Description	It contains different type of questions for collecting agricultural information. The questionnaire is divided into 10 parts.
Filename	Qestionare2048.pdf

National Sample Census of Agriculture 1991-92, Listing Questionnaire

Title	National Sample Census of Agriculture 1991-92, Listing Questionnaire
Filename	QuesLagat2048.pdf

Reports

National Sample Census of Agriculture 1991-92, Report (Highlights)

Title	National Sample Census of Agriculture 1991-92, Report (Highlights)
Author(s)	Central Bureau of Statistics
Date	1994-01-01
Country	Nepal
Language	English
Publisher(s)	Central Bureau of Statistics
Description	This report highlights some of the major findings from the National Sample Census of Agriculture, 1991/92. The report contains a set of summary tables, featuring data from the range of topics covered in the census and providing comparisons with previous censuses. Some commentary on the data and graphical presentations are also provided. The report is the first analytical study of the 1991/92 census data. Summary of Finding
Table of contents	Tables (table 1 to table 17) Notes on the tables Charts (chart 1 to chart 11)
Filename	Highlights.pdf

National Sample Census of Agriculture 1991-92, Analytical Report

Title	National Sample Census of Agriculture 1991-92, Analytical Report
Filename	Analysis of results.pdf

Technical documents

National Sample Census of Agriculture 1991-92, Reliability of data

Title National Sample Census of Agriculture 1991-92, Reliability of data

Filename Reliability of data.pdf
