



Food and Agriculture  
Organization of the  
United Nations



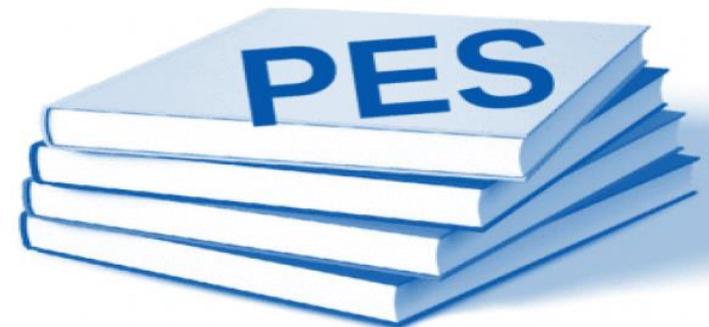
# Regional Workshop on the Operational Guidelines of the WCA 2020

Amman, Jordan

1-4 April 2019

## Post-enumeration Survey (PES)

*Technical Session 8.2*



**Jairo Castano**

Senior Statistician, Agricultural Censuses Team

FAO Statistics Division (ESS)



# CONTENTS

- **Purpose**
- **Objective**
- **Recommendations**
- **Country experience**





# PES purpose

- In any census some coverage and content errors are unavoidable, and it is important to measure, analyze and report on them.
- PES aims to assess the quality of the census data collected through the field operation.
- PES is an independent re-numeration (on few key variables) of a representative sample of census holdings followed by matching each holding enumerated in the PES with the census holding.





## PES purpose (cont'd)

- The extend of the measurement depends upon the evaluation objectives, national census experience, user/public concerns and financial/technical resources.
- Help data users to be aware of data limitations in order to assist in decision making.
- Help countries to plan better future censuses/surveys and improve census methodology.
- PES may create pressure on respondents and enumerators to supply more accurate data. They will be alert and conscious that data inaccuracies could be detected at a later time.





# PES objective

The PES aims to assess the magnitude of non-sampling errors in terms of i) coverage errors and ii) content errors (quality of census data collected).

- i. **Coverage errors:** include omissions (under-coverage); duplications (over-coverage); and erroneous inclusions (over-coverage).
- ii. **Content errors:** includes under-reporting, errors in measurement units (area, quantities), item non-response.

The decision whether to measure coverage error, content error or a combination of the two depend upon the evaluation objectives.



# Organizing the PES

- The objective of the PES should be clearly outlined
- PES is organized on a sample basis
- PES should be conducted qualitatively better than the census
- Its cost and size would be relatively small
- The utility of the PES is of even more value in countries that are at the initial stages of statistical activities. There may not be data validation to evaluate the consistency of census results.





# Recommendations on PES

**Plan:** should be carefully planned and synchronized with the planning of the overall AC activities.

**Timing:** PES should be carried out right after the census enumeration is completed. In the cases of the modular and integrated sample/survey modalities, the PES should be conducted soon after the core module.

**Staff:** should use the best supervisors and enumerators assigned to other EAs to ensure the best quality of data.



## Recommendations on PES (cont'd)

**Design:** a sample survey to be conducted independently from the AC enumeration.

**New listing:** agricultural holdings must be listed again in sampled EAs.

**Data collection:** on key selected census variables. It should attempt the use of physical measurement of area and actual count of livestock and trees.

**Reference period:** the same as for the census enumeration.

**Further info:** Reader is referred to Chapter 23 and Annex 5 of the WCA 2020, Volume 2 and the *UN PES Operational Guidelines (2010)*.



# Country experience: Thailand PES 2013

- After the completion of census fieldwork (in May 2013), the NSO carried out the PES to evaluate the quality (both in *coverage and response*) of census data.
- The PES was conducted for all holdings in selected EAs throughout the country.
- PES sample design:
  - Stratified single-stage sampling was applied;
  - Four strata referring to four regions – Central, North, Northeast and South;
  - Provinces in each region were represented as substrata;
  - Within each substratum, the EAs were systematically selected;
  - The total sample size was 1,280 EAs.
- Then, information between the AC and the PES was processed for matching checks on census coverage and content, such as information on livestock, planted rubberwood, permanent crops and field crops.



**THANK YOU!**