



## Technical Review Meeting on the World Programme for the Census of Agriculture (WCA) 2020

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# Review of the WCA 2010 implementation experiences

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# Outline

- **Objective**
- **Censuses reviewed**
- **Main themes reviewed:**
  - Modular Approach
  - Use of administrative registers
  - Aquaculture census
  - Thresholds and other exclusions
  - Sub-holdings
  - Community-level surveys
  - Census frames
  - PES
  - Operational aspects
- **Some final remarks**





# OBJECTIVE

**To learn from experience**



# Census reviewed

- The **WCA 2010** Programme covers the census undertaking between Jan 2006 and Dec 2015
- The analyzed period was: Jan 2006-April 2014
- **108** countries undertook a CoA in the period
- **100** countries were reviewed (reports available)
- **103** CoA were analyzed (3 countries took 2 CoA in the period)



# Modular approach

- ❑ **WCA 2010** introduced the idea of a modular approach: core module (16 core items) by complete enumeration + supplementary modules (up to 89 items) by sampling.
- ❑ **Country practices** showed that the MA was followed in 11% of the countries. Most countries followed the MA with some slight changes.



# Modular approach (cont'd)

- Some countries included less core items in the core module:
  - Mozambique: 10
  - Myanmar: 11
  - Nepal: 6 (in the agricultural module of the PHC)
  - Thailand: 6
  - Samoa: 13
  - Vanuatu: 14
- **Niger** took the core module by sampling.
- **Cambodia** and **Lao PDR** included in the core module, apart from the 16 core items many others from the supplementary modules.
- **Bangladesh** and **Togo** followed strictly the FAO recommendation and included the 16 core items in the core module (by complete enumeration) and supplementary modules were taken by sampling.



# Other approaches to modularity

**20% of the analyzed censuses collected information in “modules”. Some “modules” were taken by sampling and others by complete enumeration:**

- **17 European countries** took the Farm Structural Survey by *complete enumeration* and the Survey on Agricultural Production Methods by *sampling*.
- **Burkina Faso** introduced agricultural modules in the PHC and the same items were analyzed in-depth by *sampling* in a second phase.
- **Seychelles** and **Uganda** surveyed the core items in the PHC, applied *complete enumeration* of all items for commercial farms and *sampling* of agricultural holdings in the household sector.
- **India** adopted a heterodox approach to modularity undertaken a three-phased census: **1<sup>st</sup> phase** covering 8 out of the 16 core items by (almost) complete enumeration; **2<sup>nd</sup> phase** sample survey of households with agriculture detected during the first phase, for collecting information on some supplementary items and **3<sup>rd</sup> phase** a sample survey on inputs.



# Sampling enumeration

Apart from the 11 countries that followed the MA and the 21 countries with other approaches, 14% (14 countries and 16 censuses) included sampling enumeration: 7 took the CoA by sampling and 9 applied sampling enumeration either to some regions or type of holdings.

Region	Agricultural censuses analyzed	Sample enumeration (total or partial) Modular Approach excluded
<b>AFRICA</b> (Gambia, Malawi, Niger, Rwanda, Tanzania)	12	5
<b>AMERICA North &amp; Central</b> (Puerto Rico -2 censuses, El Salvador)	18	3
<b>AMERICA South</b> (Suriname)	10	1
<b>ASIA</b> (Mongolia, India -2 censuses)	16	3
<b>EUROPE</b> (Moldova, Croatia)	37	2
<b>OCEANIA</b> (American Samoa, Fiji Is)	10	2
<b>Total</b>	<b>103</b>	<b>16</b>



# Use of administrative records

- **Developed** countries increased the use of administrative records to collect census information.
- **About 46%** of census taken in Europe (representing 16.5% of the analyzed censuses) used administrative registers to collect some structural information included in the censuses.



# Aquacultural census

*“For the first time, WCA 2010 provides the option to conduct an aquacultural census at the same time as the agricultural census” (WCA 2010 §7.5)*

From the available information, there is no country having a separate questionnaire on aquaculture. However, several countries took aquacultural information as part of the census of agriculture.



# Fishery census

Only 5 countries (Burkina Faso, South Africa, Philippines; Korea and Viet Nam) undertook a fishery census independently from agricultural production and at the same time as the census of agriculture.



# Inclusion of aquaculture/fisheries in the Census of Agriculture

- 4 countries included a section on fishery in the CoA questionnaire (Korea, Niue, Samoa, Vanuatu)
- 16 countries (Mozambique, Tanzania, Uganda, Cambodia, Myanmar, Saudi Arabia, Fiji Is, Guam, Northern Mariana Is, El Salvador, Nicaragua, Puerto Rico, USA, Virgin Is, Brazil Venezuela) included a section on aquaculture in the CoA questionnaire.
- 9 countries (Burkina Faso, Rwanda, South Africa, Lao PDR, Thailand, Viet Nam, Bangladesh, Philippines, American Samoa) included a section on aquaculture and fisheries in the CoA questionnaire.
- 47 (9 of Africa; 6 of North & Central America; 4 of South America, 7 of Asia; 19 of Europe and 2 of Oceania) included fishing as “other activity” of households’ members.



# Forestry census

11% of the analyzed censuses of agriculture were taken along with a forestry census:

Rwanda

Mexico

Nicaragua

Brazil

Chile

Uruguay

Bhutan

Japan

Mongolia

Viet Nam

New Zealand



# Threshold

*“Ideally, an agricultural census should cover all agricultural activity in a country. In the past, many countries have applied a minimum size limit for inclusion of units in the census”. (WCA 2010 §3.9.)*

The analysis of metadata revealed that 72% of the reviewed censuses reported the use of some type of threshold:

- Minimum size and livestock number: 69% of the censuses that used some minimum cut-off limit.
- Minimum amount of annual revenue or sales: 15%.
- A threshold based only on minimum size: 9.5%.
- A combination of size and/or livestock number and income (mainly developed countries): 9.5%.



# Collecting information in units below the threshold

- *“...in many countries, small-scale agriculture makes a significant contribution to household food supplies, is often an important source of supplementary household income...The inclusion of small holdings is also important to reflect women’s participation in agricultural work” (WCA 2010 §3.9.)*

**BUT ONLY 7% OF THE ANALYZED COUNTRIES (all but 2, small island countries) COLLECTED INFORMATION IN UNITS BELOW THE THRESHOLD!**



# Exclusion of zones

- 13% of censuses excluded some zones according to the reports.
- Most probably country reports under-reported zones excluded.
  - Urban zones: 10 countries reported exclusion of urban zones;
  - Remote areas and highly urbanized areas: **Myanmar**;
  - In **Antigua & Barbuda** the census covered the whole country except commercial district of Saint John and the expatriate enclave of Holly Harbour and Mill Reef,
  - **Gambia** reported the exclusion of all enumeration areas in the non-agricultural communities (urban and some semi-urban) in Kombo North.



# Collecting additional data in rural households

*“WCA 2010 provides the option to widen the scope of the agricultural census to cover all rural households...” (WCA §2.10.)*

## **13 of the analyzed censuses (13%) collected additional information in rural households:**

- In 5 cases in the agricultural module of the PHC: **Burkina Faso; Mozambique; Niger; Rwanda and Cook Is.**
- During the screening of all the households to identify agricultural holdings: **Bangladesh, Niue and Vanuatu.**
- In **China** and in **Malawi** (by sampling) the census covered all rural households;
- **Cambodia** collected additional information on welfare of rural households in forest areas.
- **Mongolia** took additional information about amount and sources of family income, prices received and ways of marketing in all rural households,
- **Viet Nam** specifically defined an area of rural households where additional data were collected



# Sub-holding and sub-holder

*“Data on sub-holdings and sub-holders, introduced for the first time in WCA 2010, enables the specific crop and livestock activities undertaken under the operational/management responsibility of women to be analysed” (WCA 2010 §2.31.)*

**Definitions:** *“A sub-holding is defined as a single agricultural activity or group of activities managed by a particular person or group of persons in the holder’s household on behalf of the agricultural holder... A sub-holder is a person responsible for managing a sub-holding on the holder’s behalf.” (WCA §3.44. & § 3.45.)*



# Sub-holding and sub-holder (contd.)

## The review showed that:

- The concepts were rarely used due to **unclear guidelines**
- In the few countries where the concept was used as such (direct questions) **results were difficult to interpret (e.g Cambodia, Uganda, Antigua and Barbuda, Lao PDR, Saint Lucia)**
- **In several agricultural censuses** (mainly in Africa, 6 of 11 agricultural censuses), in the 2010 round, sub-holder became equivalent of 'parcel/plot manager/responsible' and the information was collected through the parcel / plot modules.



# Community-level surveys

**Another new element of the WCA 2010 is the collection of community-level data.**

- **15%** of the analyzed censuses were conducted along with a community survey.
- **60%** of the countries conducting community-level surveys along with the CoA are in Asia.
- It looks like many countries took community-level surveys during the PHC.



# Census frames

Usually agricultural censuses are based on several frames that must be consolidated and harmonized.

- **Commercial holdings** usually are registered and administrative registers serve for frames whilst non-commercial holdings need lists coming from a recent population census or an ad-hoc field work previous to the actual census taking
- Generally the first available frame comes from **cartography** where enumeration areas (EA) are defined.
- In the analyzed censuses, the **registers alone** or in combination with **cartography** was adopted by 64% of the censuses while the PHC alone was used as census frame in 20% of cases. Ad-hoc listing of holdings or parcels by means either of pre-listing or screening exercises was employed by 8% of the cases and, finally, cartography alone was used by 8% of the censuses.

# Census frames (cont'd)



Region	Census frames			
	Cartography only	PHC only	Ad-hoc	Registers only or combined
AFRICA	1	9	0	2
AMERICA North & Central	1	3	1	13
AMERICA South	2	2	1	5
ASIA	2	3	4	7
EUROPE	2	0	1	34
OCEANIA	0	4	1	5
<b>Total</b>	<b>8</b>	<b>21</b>	<b>8</b>	<b>66</b>



# Post enumeration surveys (PES)

- **All countries** performed some type of quality check for census data. In general they refer to coverage and accuracy of data. The most common type refers to comparisons of census data with external data.
- However few countries (**13%**) undertook a PES.

Region	Agricultural censuses analyzed	PES
AFRICA	12	0
AMERICA North & Central	18	3
AMERICA South	10	1
ASIA	16	4
EUROPE	37	3
OCEANIA	10	2
<b>Total</b>	<b>103</b>	<b>13</b>



# Collection Methods

Region	Collection method				
	Printed questionnaires face to face	Regular mail	CAPI	Internet	Others: combination of methods, CATI, etc.
AFRICA	10	0	2	0	0
AMERICA North & Central	7	0	3	0	4
AMERICA South	5	0	4	0	1
ASIA	13	0	2	0	1
EUROPE	11	4	1	6	13
OCEANIA	8	1	0	0	1
<b>Total</b>	<b>54</b>	<b>5</b>	<b>12</b>	<b>6</b>	<b>20</b>



# Other

- **22%** of the censuses taken by means of paper questionnaires (face-to-face or mailed) were scanned.
- **38%** of the censuses collected coordinates of holding location by means of GPS during the field work. This figure includes 31 European countries.



# Final remarks

- It is important the revision of the concept of **“Modular approach”**. Perhaps censuses to be taken in the new decennial round will apply more and more new technologies that facilitate the application of the MA.
- The importance of collecting information in **agricultural households below the thresholds** should be emphasized
- The identification and characteristics of “sub-holdings” and “sub-holders” have not worked properly in the 2010 round. The new Programme envisages **new ways for collecting gender** related data in the censuses.



# Final remarks (cont'd)

- The low degree of adherence of countries in the collection of information in rural households perhaps is due to the fact that more and more countries have implemented household surveys and Living Standards Measurements Surveys (LSMS). In an **integrated system** it could be derived to such surveys.
- Given the lack of methodological information in many country reports, **Vol II of the WCA 2020** should provide clear guidelines for presenting the census technical reports.



**THANK YOU!**