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UPDATE ON THE WORLD CENSUS OF AGRICULTURE 2020 PROGRAMME

1.0: Introduction

FAO is currently in the process of developing the World Census of Agriculture (WCA) 2020 Programme, which will cover the period 2016-2025. For each WCA round, FAO's Statistics Division prepares and issues Guidelines, monitors and documents the censuses conducted during that round to serve as feedback for the next WCA round; and prepares reviews of results and methodologies of the censuses conducted during the past round.

1.1 International Context

The WCA 2020 Programme is being developed at a crucial time for the international statistical agenda, in the context of the Busan Plan for Statistics and the Post 2015 Development Agenda, which highlight new and emerging needs for statistics. In addition, specific to the agriculture sector, the Global Strategy to Improve Agricultural and Rural Statistics sets the framework for improved production of agricultural statistics. The aspect of these new initiatives, which is of particular importance for the WCA 2020 programme is the focus on meeting the needs of users through provision of more relevant, timely and better quality data and through empowering users to have more direct access to and increased analysis of the data.

At the same time, there are methodological changes which make use of innovative technologies from both the traditional statistical communities and new producers of data. The agricultural census must recognize new and emerging issues to remain relevant and to remain a key source for production of quality agricultural data. The agricultural census shares a common aim with the emerging international agenda, to provide better statistics to design, monitor and assess national agricultural policies, development programmes and meet the data needs for monitoring international policies. The plans stress the need to integrate statistics in decision making, with data needed for monitoring and evaluation, as a sound evidence base, and to encourage accountability. One aspect of this is the need for statistical offices to have a sound engagement with policy users to produce statistics which meet their needs.

A second emerging focus of the new agendas is the goal to increase the understanding of how to use statistics among policy makers and managers. The focus is on use of statistics, promoting open access to statistics, and increasing data accessibility to promote government effectiveness and transparency and public confidence. Greater use of statistical data will ensure increased support for statistical systems and resources for these systems. The access to and use of statistics is, therefore, highlighted, and production is seen not as the end stage in the statistical business process but as the first stage in the cycle of data use.

1.2 Need for agricultural data

The development of the WCA 2020 Programme comes at a time when the need for agricultural data is greater than ever. The World Bank Action Plan for Agriculture (2009, p 1), stresses the crucial role of agriculture, not only for poverty reduction, but also as a precursor to economic development and industrial transformation: *"Improved agricultural performance can lead to dramatic improvements in the incomes of the poor, provide affordable food, and spur structural transformation"*.

The Global Strategy to Improve Agricultural and Rural Statistics (2011) and its Action Plan (2012) address the needs expressed by users to improve data on agricultural production. Its aim is to improve evidence-based decision making for poverty reduction, increased food security, sustainable agriculture and rural development by enabling target countries to develop sustainable statistical systems for production and dissemination of accurate and timely agricultural and rural statistics, comparable over time and across countries. These new and emerging needs include the interaction between agriculture and environment, known as Green Growth, food security and sustainable agricultural development, increased volatility in the agricultural industry, and the increasing call by the international community and national governments to measure the impact of development policies and programmes. Structural data on agriculture remains crucial, with emerging needs pointing to data on climate change, environment, land and water use; and data on food security and rural poverty.

It should be noted that for many developing countries, this is a unique opportunity to mobilise resource and renew the focus on agricultural statistics, in order to provide statistical units with operational and technical expertise and resources needed for policy and programme requirements.

2.0 Positioning the Census in the Integrated Survey Framework

The current WCA Programme reports on agriculture within the framework of the system of national accounts. This has certain implications for the scope of data collection activities, as well as the definition of an agricultural holding. As such, the WCA Programme has been rightly focused on agriculture holdings in the past, and it should continue to fill this key role for the agriculture sector, particularly for crops and livestock. The statistical unit for agriculture should remain the agriculture holding, as used in WCA 2010, and coverage should continue to be all such holdings, or a representative large sample of these holdings. This is to ensure comparability of the statistical series over time and to enable the production of economic data on the agriculture industry for the System of National Accounts.

The Global Strategy has recognized the increasing demand from users for agricultural data covering a broader context - not only the economic dimension of production data traditionally covered in the agricultural census, but also the social and environmental dimensions. There has also been an increasing demand for data from areas such as forestry and fisheries. The 2010 Programme has already provided guidance on collection of aquaculture data within the census. Similarly,

consideration will be given as to whether items can be introduced covering data collection on broader activities, such as those related to forestry and fisheries, but which take place on the holding.

However, in addition to the traditional domain of agriculture, there is also demand for data in areas such as aquaculture, fishing and forestry, not just at the holding level, but also for rural households and at community level. In order to meet the need for this broader scope of data outside the statistical unit of the agricultural holding, the census should be linked to the Integrated System of Agricultural Statistics. Guidance will be given on the role of the census and other data collection operations, from more frequent sample surveys, administrative data etc., in meeting the expanding needs for data.

One of the most important roles of the Census is to provide the frame for ongoing agriculture-related surveys. However, for surveys whose unit of enumeration is not the holding, but rather rural households, the forest land area, etc., the frame would not be produced entirely by the Census but rather by a range of data sources. There would thus be a need to understand the relationship between the agriculture census and other censuses, such as fishery and aquaculture, forestry and rural surveys, particularly in terms of the units of enumeration.

In the integrated statistical system, the position of the census is as part of a programme of agricultural surveys, based on the agricultural census. The role of the census is to provide:

- structural data on the agricultural sector;
- benchmarks for current agricultural statistics;
- a sampling frame for the annual and other ongoing agricultural surveys;
- current operational and performance data
- small/custom geographic areas'; *and*
- data on rare or emerging commodities.

The programme of surveys in the Integrated Survey Framework may cover surveys with a broader scope than the holding unit, often covering all rural households, including such items as food consumption, income and expenditure, rural labour force and household food security. Other agriculture-related surveys cover other types of units, such as surveys of agricultural service establishments. While these are important to consider under the broader scope of agriculture, the detailed framework would be provided by a range of data sources, and only partly by the Agricultural Census. The agricultural census is often, in some countries a unique opportunity for data collection, and as a result there is often pressure to cover a wide range of topics. However, it is also important to keep in mind that the Agricultural Census cannot meet all the data needs of users. It is only one source of data in an integrated statistical system, focusing on structural data on agriculture. Therefore, when planning the census it is also important to consider how the census fits into the entire statistical programme, in order to meet users' needs.

3.0 Focus for the Census

Countries face not only increased pressure to ensure that the data collected meets priorities and requirements for policy and program purposes, but, in the current economic climate, to also ensure that data collection is efficient, costs are minimized, and response burden is reduced. Censuses are usually conducted every 10 years, but there is also a need for more timely and frequent data. In some cases, more often in middle income countries, urbanization and encroachment on agricultural lands and changes in intensification of agriculture result in rapid change in the structure of the agricultural sector, also requiring more frequent data collection. On the other hand, countries face

challenges in funding agricultural censuses every 10 years, let alone additional or more frequent data collection activities.

The census programme will take into account the changing context, including providing greater efficiencies for the data collection and producing more timely data. One area which will be explored is lessons which can be learned from other large scale data collections. For instance, the use of new technologies and innovative methods of data collection (CAPI, GPS) have been more widely tested by countries undertaking the population census than in the agriculture census. The applicability of such methods of data collection, and tailoring these to the agriculture census could be explored.

Countries support for the new methodologies of the WCA 2010 Programme were expressed in the reports on the WCA 2010 Programme presented at previous international and regional meetings, including the 22nd session of the African Commission for Agricultural Statistics (AFCAS). These methodologies were designed to increase the efficiency of the census operation by ensuring that census data collection is placed as the backbone of the integrated statistical system. By considering in a planned way the data needs for the frame for ongoing surveys, the resources for the census collection are maximized for collecting key structural data and data for the frame for ongoing surveys. The modular approach combines complete enumeration with sample surveys and allows more data to be collected by focusing the complete enumeration on key data and using a sample based approach for collection of more detailed data. The sub-holder concept was useful in some regions to increase availability of gender disaggregated data.

Other efficiency savings recommended by FAO in WCA 2010 included linkages with the population census for collecting key items for the frame for agricultural surveys, and inclusion of community level data. Due to the widespread support for the new methodologies introduced in the 2010 Round, these will be retained for the 2020 Round. There is however, a need for guidance to clarify the modular approach and on the operationalization of this approach during field collection. Other areas for clarification include the sub-holder concept. Operational guidance on the linkage of agricultural and population census has been published by FAO and UNFPA (2012).

The WCA Programme provides the framework and recommendations for the Census of Agriculture, and includes operational guidance to countries. FAO has previously published operational guidance on implementing the census, but this needs to be updated and supplemented by further guidance for operationalizing additional aspects of the census. This is particularly true for those aspects of data collection which are fairly new, such as the use of new technologies such as Computer Assisted Personal Interviewing (CAPI), Global Positioning Systems (GPS), etc. The work of the Global Strategy will contribute to this by the development of guidelines on improved methodologies pertinent to the census, such as improving the use of GPS, GIS and remote sensing for setting up a master sampling frame; improving the methodology for using remote sensing; and adoption of new technology for field data capture, compilation, transfer and dissemination.

As such, the 2020 Programme will provide guidance on the definitions, concepts and standards for the agricultural census. In addition, during the 2020 round, the guidance will be extended to include a complementary series of guidelines which will provide guidance on how to operationalize key aspects of the census, such as data collection using new technologies, gender disaggregated statistics, enhancing data analysis etc. Consultation with countries during international and regional meetings will be taken into account in prioritizing and selecting topics.

3.1 Providing Useful data by Innovations in Census Taking

One challenge facing the World Census Programme 2020 is how to provide the framework and guidance for countries to meet the increasing demands expressed by users, while increasing

efficiency and timeliness, as well as increasing relevance, accuracy, coherence, comparability and accessibility, which form the elements of a quality assurance framework and the UN Principles of Official Statistics. As such, further innovation is needed beyond those of the 2010 round.

The Global Strategy calls for an integrated statistical system, and it is therefore imperative for agriculture to look within the wider statistical domain, as well as in the agricultural sector, for good practices in methodology. In many countries, the data collection issues faced by the Population and the Agricultural censuses are similar. The 2020 World Programme for the Census of Agriculture can, however, draw from the lessons learned in the 2010 rounds of the Population and Agricultural censuses.

Areas which will be explored for the WCA 2020 are the use of: new technologies such as CAPI using laptops, tablets, smart phones and Personal Data Assistants (PDAs); remote sensing technologies; mobile and geo-referencing technologies such as GPS; and sample censuses and rolling censuses, which are innovations in census design. In many countries, meeting societal and technological changes requires multiple methods of data collection to obtain census data using modern technologies. Some of these have already been tried during the 2010 round of Agricultural Censuses.

New technologies, with the advantage to produce more timely data and reduce non-sampling errors, have been used successfully in some countries during the 2010 Agricultural Census Round. Non sampling error consists of coverage error, non-response error, measurement error and processing error. Some examples include the use of CAPI, which can reduce non-sampling error compared to Paper and Pencil Interviews (PAPI) by incorporating checks during data collection, leading to both improved data quality and, time savings in data processing, resulting in more timely data. Use of online data collection has also been conducted successfully in countries, such as Canada, for the population census. This may prove a useful adaptation for the Agricultural Census, particularly for large commercial farms which usually have good internet access and are listed in a separate frame than household based holdings.

Similarly, collection of geo-referenced data has enabled countries to build better sampling frames, better update these frames, reduce enumeration omissions, link data between sources, and enhance the analysis of census data. It also allows for more innovative methods of census data dissemination and understanding by users, through GIS and mapping. Similarly, remotely sensed data has been used to assist in generating census frames and for management of field work.

New approaches to census design, already used in the population census, could also be explored, such as the rolling census, which form the model for the French Population Census, where a census periodic non-overlapping sample is surveyed yearly. Each year, data collected during the last five years is used to produce updated estimates. This approach is usually used to spread the census budget over several years and to smooth collection capacity requirements over the census cycle. This has the advantage of producing more timely data, but the impact of using a sample rather than a census and comparing census data from different periods still needs to be investigated. The cost and impact on resources, greater processing burden and yearly enumeration also needs to be investigated. Initial feedback from the International Conference on Agricultural Statistics VI (ICAS-VI) suggests that there are several complexities in conducting a rolling census which still need further exploration

Many countries are also exploring the use of administrative records, such as community data, farmers' registers, and data from crop associations and cooperatives, as a way of assisting or supplementing the census. The suitability of this approach depends greatly on the quality of administrative records.

The feasibility of including recommendations on these methods will be examined based on criteria to be developed, such as potential uses, suitability, efficiency, and accuracy. FAO will examine what methods could be included in the WCA 2020 Programme based on these rationale and the value added through potential new approaches. No decision has yet been taken on recommendations for the new approaches mentioned and these remain open to discussion. .

3.2 Connecting with the User

The WCA 2020 Programme will remain focused on providing guidance on data collection, processing and dissemination. However, there will be a greater focus on user needs and the place of the census in an integrated statistical system. This can be achieved by linking the agricultural census through the Sector Strategic Plans to Agricultural Statistics (SSPARS) to the National Strategies for Development of Statistics (NSDS). Separate guidance is being produced under the Global Strategy for conducting SSPARS and their integration. However, the WCA 2020 Programme will provide recommendations on the role of the census in the integrated statistical system, the importance of addressing user needs, and the place of the census in the SSPARS and the NSDS, such as its role in providing the frames for ongoing surveys. The WCA 2020 Programme will, therefore, address the new international context by addressing the role of the user and the importance of addressing user needs.

In addition, the 2020 Programme will place greater emphasis on archiving and dissemination of census results. This will encourage greater availability of data for bona fide users while respecting the UN Principle of Official Statistics 6 on data confidentiality; and respecting countries statistical laws, frameworks and principles on data access and dissemination.

4.0 Other Details of the programme

The WCA 2020 Programme will also update the WCA 2010 Programme concepts and definitions of data items and methodological issues to reflect changes in the past ten years. The updates needed have not yet been decided, but the ongoing review will examine the need and feasibility of the areas listed below. A decision will then be taken on the priority areas for updates.

Among the methodological issues expressed are a need for data on new areas, while remaining within the concept of the agricultural holding. The revisions will examine the possibility of expanding data on cultivated forestry, aquaculture and agricultural service activities in order to capture new environmental dimensions of agriculture.

In order to enhance international comparability and meet reporting needs it is important to provide clear guidance on norms and standards for international classifications and definitions which apply to the agricultural census. The Programme will also address the how need for national level definitions and classifications can be harmonized with international norms and standards. As such, during the period of the 2020 Programme, pertinent issues that should be addressed include:

- The need to meet new standards, particularly the Common Product Classification (CPC) 2.0, the Harmonized Commodity Description and Coding System (HS) and the System of Environmental and Economic Accounts (SEEA).
- Updates on international classifications used with respect to land cover, crops, machinery and equipment, and livestock

- Updating to align with the International Standard Industrial Classification 4.0
- Definition of standards on the definition of urban and rural areas
- Guidance on setting thresholds on size of the holding enumerated during the census. For practical purposes of census taking thresholds on the holding are often set to limit the scale of data collection.
- Definition of farm typologies
- Definition of agricultural employment

The FAO review also highlighted new and emerging data needs, and will also consider the feasibility of new modules or items on emerging agricultural trends. For example, users expressed the need for better data covering gender, land, labour, farm practices and the environment. Further reviews will be conducted to identify additional areas for expansion.

5.0 Process

To facilitate the WCA 2010 review, the process will cover a number of activities and consultations with agricultural statisticians, both from at country level and from regional statistical organizations. Several external consultations have already taken place at regional and international meetings, including African Commission for Agricultural Statistics (AFCAS) 2011, Asia and Pacific Commission for Agricultural Statistics (APCAS) 2012, and International Conference on Agricultural Statistics (ICAS) VI, and through the discussion of technical papers at international meetings. A series of internal consultations has been held with subject matter experts at FAO. Needs expressed during consultations will be prioritized, including new data needs. A methodological review is being conducted of the WCA 2010 Programme. The draft programme will be produced and this will be subject to a broad review and validation by countries, regional and international institutions and subject matter experts.

The planned review process for the 2020 Programme is:

- The different themes, core items and classifications will be reviewed and updated with the help of experts in each subject-matter
- The needs expressed during consultations will be prioritized
- New data needs (including those from Global Strategy) will be covered to the extent possible
- Non-essential changes should be avoided as countries that have collected some of these data elements in WCA 2010 will not want to lose the benefit of historical comparisons.

6.0 Next Steps

The following are ongoing and next steps:

- Internal and external ongoing consultations; together with a methodological review of agriculture censuses in Asia-Pacific, Africa, Americas and Europe to prioritize recommendations and lessons learnt.
- Discussion of the planned approach for the WCA 2020 Programme in regional and international meetings, including AFCAS, IICA, ICAS-VI, IAGFS, APCAS, UNSC.
- Drafting of the Programme and validation by peer review of experts from countries, technical experts, international organizations, regional and international meetings during 2014 and 2015.
- Presentation at governing bodies of FAO as mandated, and possibly presentation at the United Nations Statistical Commission (UNSC).
- Final publication and dissemination in 2015 and 2016

References

FAO and UNFPA (2012). *Guidelines for Linking Population and Housing Censuses with Agricultural Censuses*. Rome: FAO.

FAO, World Bank, United Nations Statistical Commission (2012). *Action Plan Of The Global Strategy To Improve Agricultural And Rural Statistics: For Food Security, Sustainable Agriculture and Rural Development*. Rome: FAO.

Paris 21 (2011). *Statistics for Transparency, Accountability and Results: A Busan Action Plan for Statistics*.

UNECE Secretariat (2009). Joint UNECE/Eurostat/OECD Work Session on Statistical Metadata(METIS): Generic Statistical Business Process Model.

United Nations (2013). *A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development*. New York: United Nations Publications.

World Bank (2009). *Implementing Agriculture For Development : World Bank Group Agriculture Action Plan: FY2010–2012*. Washington DC: World Bank.

World Bank, FAO and UNSC (2011). *Global Strategy to Improve Agricultural and Rural Statistics*. Report no 56719-GLB. Washington DC: World Bank