Asia-Pacific Regional Workshop on the Use of Technology in Population and Housing Censuses

24 – 26 January, 2018

Bangkok, Thailand

Concept Note

Background information

This three-day workshop is part of the implementation of the UN Development Account 10th tranche Programme that brings together the collective efforts of six entities (UNSD, ECA ECE, ECLAC, ESCAP and ESCWA) for strengthening the capacity of national statistical offices, which includes a component on making efficient use of technology in carrying out a census. Population and housing censuses provide fundamental information for monitoring the 2030 Agenda for Sustainable Development on a wide range of statistical areas related to population and housing by allowing disaggregation by small geographic areas and small population groups. As the population and housing census is a fundamental source for producing statistics on small areas, timely dissemination of high-quality census data is crucial for monitoring the SDG indicators at a detailed level. Population and housing census can also be combined with data from surveys and other sources for augmented production of disaggregated data.

Population and housing censuses are one of the most complex and costly statistical operations undertaken by statistical offices due to the involvement of a huge number of field workers, requiring a long time for preparation and post-enumeration activities. Therefore, there is an ongoing effort to improve the use of alternative approaches and technologies as a means of increasing resource efficiency, data quality, and timeliness of census results while considering increasing costs of carrying out the census.

In this context, the project on the use of technology aims to strengthen the capacity of national statistical offices to efficiently use technology as a means of improving data quality and timely dissemination of census results. Through this project, countries would have a better understanding of the pros and cons of the adoption of technologies in conducting censuses, as well as optimal decision-making strategies when considering the most efficient and appropriate uses of technologies in census data collection. For this objective, the guide document is being as a reference document for use by national statistical offices or census authorities. The project also covers regional and national workshops to build a capacity for efficient use of technology in conducting population and housing censuses.

To initiate the process of drafting the guidelines, a global technical meeting was organized in Amman/Jordan in 28 November-1 December 2016 in collaboration with UN Regional Commissions. The meeting reviewed country practices on the use of electronic data collection technologies (such as

tablets, PDAs, laptops, the Internet, GPS and other technologies) for enumeration of population and documented challenges and advantages of adoption of new technologies in censuses. The meeting also gave an opportunity to discuss the content of the guidelines on the use of technology. Following the meeting, a Task Force consisting of members from countries having good experience in the adoption of these technologies was set up in February 2017 for drafting the guidelines. The guidelines aim to help countries especially: (i) to develop an appropriate strategy for using technology in census enumeration and (ii) to build capacity for effective adoption of the selected technology and to maximize the benefits of this investment.

As a second activity of this project, a series of regional workshops will be organized by the respective regional commissions in collaboration with UNSD to introduce the draft guidelines on the use of data collection technologies. This regional workshop is organized jointly between ESCAP and UNSD for the specific benefit of member States in the Asia-Pacific region.

Purpose and expected outcomes of the Asia-Pacific regional workshop

The regional workshop aims to introduce the draft guidelines on the use of electronic data collection technologies in censuses and engage countries in an interactive dialogue regarding the potential experiences, opportunities and challenges in operationalizing the guidelines within national circumstances. Using the draft guidelines as a reference document, the workshop will introduce the main requirements for making sound decisions and common approaches in designing census processes utilizing handheld electronic devices and/or Internet for data collection and monitoring purposes. A critical component of the regional workshop will be to provide a platform to discuss good country practices at the regional level and potential challenges and risks that have to be taken into consideration for the successful adoption of these technologies. An equally important component of the workshop will be in ensuring that countries strongly consider making a transition to electronic data collection methods that will be presented.

The workshop will help in achieving a common and improved understanding of the process of adopting new technologies in conducting population and housing censuses and the importance of efficient use of these technologies in maximizing the benefits from this investment. In particular it is expected that the workshop will provide additional inputs for describing best practices in modernization of census operations with the use of new technologies.

Target participants

The target participants for the workshop are census managers in national statistical agencies which intend to use electronic data collection technologies in the 2020 round of censuses. Also, international and regional organizations and other regional partners that would contribute to the drafting of the guidelines and/or would support to the implementation of censuses with the use of technology will be invited.

Envisioned Pre-Workshop Preparation

To facilitate the review of the draft guidelines considering current practices, participants should review the draft guidelines (to be circulated to confirmed participants) and submit in advance of the workshop a two-page brief providing an overview state of technologies that are planned for use in the 2020 round of censuses. **Confirmed participants will be given additional guidance on this component at a later date.**

Proposed structure of the workshop

The 3-day workshop will tentatively consist of the following substantive sessions corresponding to the parts of the draft guidelines on the use of electronic data collection technologies, outlined in the paragraphs below.

Each substantive session of the workshop will start with a presentation by the UNSD and/or ESCAP to introduce the related part of the guidelines which will be followed by selected country presentations, and concluded by a moderated plenary session. To get inputs from participants on the draft guidelines, substantial time will be allocated during the plenary session for interactive discussions.

Opening Session: Welcome and Introduction

This session will feature opening remarks by the organizers.

Session 1: Use of technologies in conducting censuses: A global and regional overview

In recent decades, census planners have been deploying new technologies (for example: scanning, digital maps, online dissemination and electronic data collection) in carrying out census activities. While the use of technology has improved the overall quality of censuses, it poses many challenges including in designing census operations in a cost-effective manner and building capacity for successful adoption of these technologies.

This session aims to discuss recent experiences in the use of modern technology in conducting population and housing censuses, with a special focus on the use of electronic data collection technologies. This session will review country practices in use of technology based on the experiences gained in the 2010 round and plans for the 2020 round.

Session 2: Adding value to the census: Role of electronic data collection in statistical data integration

The process of establishing linkages between data sources for statistical purposes has been a key driver of innovations in official statistics. Countries across the region are already taking a range of approaches with regards to the statistical use of census data alongside other data sources, addressing the need to add value to census information while still protecting confidentiality. This session will discuss the opportunities and challenges related to data integration and the census and look at the important role electronic data collection can play in this process.

Session 3: Decision making process for adoption of electronic data collection

Recent advances in technology have provided NSOs with the opportunity to modernize their census processes. They have also brought many challenges for NSOs as they attempt to develop a sustainable and affordable approach in their own national context. This session aims to discuss key issues that have to be taken into consideration for making a sound decision on adoption of electronic data collection technologies in censuses, focusing on key requirements and information needed for making a decision and management of this process. The session will also provide a platform, for participants to share country experiences on decision making process and challenges and motivations in selecting the use of hand-held devices and/or Internet for data collection purposes.

Session 4: Data Collection with Hand-Held Electronic Devices

Adoption of hand-held electronic devices for data collection requires significant changes in census design and management of census operations. This session discusses operational aspects that have to be considered for successful adoption of CAPI, including: establishing capacity for managing census operations with this technology; building IT infrastructure; selection of hand-held devices; essential features of CAPI applications; data transfer; field management and organisation; establishing systems for supporting the field enumeration (e.g. Call Centre, remote IT support, etc); data confidentiality; system security, and strategies for reuse of the devices. This session will also allow the exchange of country experience in designing census processes with CAPI.

Session 5: Data collection with Internet

An increasing number of countries are using the Internet for data collection in order to decrease census cost and improve coverage. The successful adoption of this technology requires a good understanding of the requirements as well as feasibility analysis to see if this method is applicable in a country context.

This session will discuss the main aspects of using Internet for data collection, including: the benefits and challenges of using Internet in censuses, designing census procedures, data collection application and portal, identification and authentication of respondents, contact and communication strategies, support for respondents, management and monitoring of Internet response and system security.

Session 6: Considerations for planning census operations with multi-mode data collection methods

Multi-mode data collection (the use of two or more of the following methods: CAPI, CAWI, CATI, PAPI and PASI) can help to improve coverage and decrease census costs, as one method may compensate for the limitations of others. The use multi-mode data collection approach and its benefits and challenges should be carefully examined during the early planning phase of the census.

This session will discuss the potential benefits of the use of multi-mode approaches and the challenges in designing and management of census operations with multi-mode approaches. This session will also discuss possible impacts of the use of multi- mode data collection on the quality of data and ways of mitigating this negative impact.

Session 7: Considerations for management of census operations using electronic data collection technologies

The introduction of electronic data collection technologies in censuses requires a well-organised preparation and institutional capacity for designing and managing census activities. Preparatory activities for the adoption of electronic data collection involve many aspects including human resource development, IT infrastructure development, a well-designed testing programme and management of procurement and outsourcing and. This session will discuss key considerations for successful adoption of electronic data collection technologies in censuses.

Session 8: Use of geospatial technologies for supporting field enumeration

This session is devoted to discussion on how GIS system and other geospatial tools such as GPS can be efficiently used for the modernisation of census enumeration activities. The importance of collecting georeferenced data for field management and monitoring will be covered in the session. Country presentations will also provide an opportunity to discuss the benefits of establishing GIS for supporting field enumeration activities.

Session 9:   Management Information System and other tools for management and monitoring of field enumeration

a. Management Information System (MIS)

Establishing a management information system (MIS) is necessary for the management of field enumeration and monitoring of progress and the quality of enumeration The MIS has a number of important functions including: (i) providing up-to-date information needed by different levels of field staff as well as staff at headquarters regional offices, (ii) establishing easy communication among field staff and (iii) providing reporting tools for real-time monitoring of fieldwork. Such a system is fundamental for identifying problems and taking appropriate corrective actions during the field enumeration.

This session will discuss the importance of establishing MIS as an integral part of the electronic data collection system and its main roles and functions for supporting field enumeration.

b. Call Centre

A Call Centre performs many functions including for providing support to the public during enumeration and to the field staff during field work. The role of this system will be more critical in the case of the use of electronic data collection to provide immediate support to the field staff with regard to technology and other methodological issues. The Call Centre can also serve as a means of data verification as well as a data collection mode especially during follow-up of non-responding households.

This session will discuss some of the possible functions of a Call Centre, how to establish and manage such a Centre during enumeration.

10. Conclusion and closing

Proposed Agenda

Opening

Session 1: Use of technology in census operations: A global and regional overview

Session 2: Adding value to the census: Role of electronic data collection in statistical data integration

Session 3: Decision making process for adoption of electronic data collection

Session 4: Data Collection with Hand-Held Electronic Devices

Session 5: Data collection with Internet

Session 6: Considerations for planning census operations with multi-mode data collection methods

Session 7: Considerations for management of census operations using electronic data collection technologies

Session 8: Use of geospatial technologies for supporting field enumeration

Session 9: Management Information System and other tools for management and monitoring of field enumeration

Session 10: Conclusions and closing