

The Second United Nations Expert Group Meeting on the Revision of the Principles and Recommendations for Population and Housing Censuses

13-15 December 2023

New York

Organized by UNSD and UNFPA

Summary of discussions for further consideration by Task Teams

I. General points

(i) Ensure alignment between global and regional census recommendations to maintain message consistency, while also providing some flexibility to cater to diverse regional contexts.

(ii) Consider reviewing and updating: (a) the primary purpose of a census, considering the evolving nature of data sources and methodologies, particularly in the context of rapid technological advancements. To ensure the P&R remains pertinent throughout the 2030 census round, should the primary goal of a census be to provide comprehensive and granular data on the demographic and socio-economic characteristics of a population at the small area level? Or are there broader purposes the census needs to serve? (b) the criteria employed to classify census topics as either core or non-core; and, (c) the classification of census methodologies to more accurately represent the full spectrum of approaches, utilizing more refined categories as an alternative to the 3-way classification (traditional; combined; fully register-based).

(iii) Maintain balance in content and language throughout the P&R to: (a) preserve the nature of the publication as a set of principles and recommendations, rather than detailed guidelines; and, (b) ensure the relevance of the publication for both traditional censuses based on field enumeration and those relying on the use of administrative data sources. Much of the text in the document will need to be revised in order to acknowledge and reflect differences in approach between traditional and register-based methodologies. It will be necessary to cross-reference within the publication and to relevant existing UN guidelines.

(iv) Geospatial topics should not be confined to a single chapter in the P&R. The publication is filled with outdated understanding of census geography, with numerous instances demonstrating a disconnection between the collected statistical data and the geospatial information about the location of its collection. Effort should be made to integrate geospatial considerations throughout the publication.

(v) Consider aligning census business processes to the *Generic Statistical Business Process Model (GSBPM)* and its geospatial counterpart, the GeoGSBPM. The GSBPM offers a framework and harmonized terminology to assist statistical organizations in updating their statistical production processes. The framework is independent of data source and thus applicable to both traditional and register-based censuses. It can be used for integrating data and metadata standards and serve as a template for process documentation and for process quality assessment and improvement.

(vi) To the extent possible, harmonize the concepts, definitions, and classifications employed in the P&R with other international recommendations and guidelines, including those in the System of National Accounts (SNA) 2025, resolutions of ILO's 2023 International Conference of Labour Statisticians (ICLS), and the recommendations of the Expert Group on Refugee, IDP and Statelessness Statistics (EGRISS).

(vii) Enhancing the integration of administrative data into census processes is a significant aspect of the revision of the P&R. The conclusions and recommendations from the Expert Group meeting (jointly organized by UNFPA and UNSD, and conducted from 11 to 12 December 2023), which centered on the synergies between census and administrative data systems, have been shared at this meeting. A report of the aforementioned meeting will be provided to the relevant Task Teams engaged in the revision of the P&R.

(viii) In terms of the P&R's presentation, besides the traditional pdf and print formats, consider publishing the content on an e-publishing portal, based on available resources. This would allow for an initial display of high-level information with hyperlinks for drilling down into detailed content, case studies on best practices, and illustrations. Consider transforming the P&R into a living document that documents national experiences, developments, and innovations as the census decade progresses. Include a glossary of key terms to ensure clarity and uniformity in language, especially for technical terminologies.

II. Census planning, organizing and management (TT1) (Session 5 of EGM)

Contingency planning/emergency preparedness. Reviewing the framework for contingency planning and addressing adaptation strategies can help ensure its relevance for countries with diverse institutional capacities, including those that are resource constrained. It would be beneficial to receive input on the framework from countries with less resources and capacity.

Legal basis. The legal framework for censuses relying on administrative data-based methodology should not only set out the roles and responsibilities of the NSO but also the obligation of register holders to provide the requisite data and the requirement to inform the NSO of any changes to the content and structure of the relevant registers. Provisions for access to administrative data (individual records), maintaining data

confidentiality, and collaboration between the NSO and register holders should be elaborated upon. Additionally, the linkage of census-specific legislation to the overall statistical legislation should be explained. Where relevant, reference should also be made to the *Fundamental Principles of Official Statistics*.

Planning combined/register-based census. Adding cross-references to information resources and guidance on the topic can be helpful. Elaborate on the importance of assessing all aspects of readiness to transition to the use of administrative data, including their accuracy, alone or in combination with field-based enumeration.

Human Resources Management. Elaborate on the value of *Human Resource Information Systems* for streamlined and optimized recruitment and deployment of a large workforce such as that required for a census operation. Such a system can help identify personnel with relevant skills and experience who can be cross trained for additional data collection tasks. Such systems can automate job postings, online applications, and applicant tracking systems to facilitate a faster and more efficient hiring process. It's also important to address the retention of relevant census staff and redeployment for other data collection activities.

Logistics management. Elaborate more on the value of a logistics management system for tracking inventory movement. When integrated with geospatial information, such a system can help optimize and facilitate logistics management by providing a visual and integrated display of information.

Resource mobilization. Address the need for national resource mobilization. It's important to consider the challenges of shifts to different financial models by development partners, and the subsequent impact on planning and resource allocation, including for procurement of census assets.

Project management. In addition to elaborating on *workplans* that provide the overarching roadmap for the census project, it's important to address *workstreams* and *workteams*, including their interconnectedness and the need for effective coordination and communication.

Change control/management. Elaborate more.

Geospatial information. Geospatial information should be considered and integrated into the census planning process from the earliest stages, and this integration should continue throughout all stages of the census.

Gender bias. Consider reviewing the text on "gender bias" through a more inclusive lens that reflects current social norms. Consider input from gender and minority advocacy groups.

III. Census methodologies, use of administrative data, and population concepts and definitions (TT2) (Session 6 of EGM)

Essential role of census. Enhance the elaboration on the role of the census in a country's statistical system.

Key features of census. Not all census methods strictly comply with the current five key features of a census, which include individual enumeration, universality, simultaneity, defined periodicity, and capacity to produce small area statistics. It may be necessary to revisit each feature from the perspective of different census methodologies (especially, register-based censuses), and there may be a need to relax compliance.

Uses of census. Elaborate on how the census can be used as a source of auxiliary variables to construct statistical models that produce estimates of many characteristics of interest that are not covered by the census (e.g., in small area estimation). It is important to maintain a balance between the use of population census and housing census. While the use of population censuses is discussed at great length, the use of housing censuses is not given as much attention."

Typology of census methodologies. The current classification of census methodologies can be improved to better reflect the full spectrum of approaches and avoid potential confusion. It's necessary to explore more nuanced categories as an alternative to the 3-way grouping (traditional/combined/fully register). Additionally, it's important to find an alternative term for the "traditional" census and clarify the distinction between "register-based" censuses and those produced entirely from administrative sources. A typology based on the underlying principles driving each approach, including factors such as data source, enumeration method, and coverage, could be considered.

Secondary data. Elaborations on census methodology in the draft P&R overlook the use of secondary data, such as utility, electricity, or water consumption data, which can be valuable for various purposes, such as determining the occupancy status of a household.

Transition to register-based PHCs. While the benefits of register-based censuses are well elaborated, the disadvantages and cautions are not mentioned at all. For instance, the compilation of census statistics from registers may result in the loss of certain information on socio-economic characteristics such as religion and ethnocultural characteristics. Additionally, privacy concerns may arise from the linkage of individual records.

Register-based censuses. Elaborate on how to improve the coverage of hard-to-reach populations for censuses compiled from administrative registers.

Small area estimation and small area statistics. Distinguish these terms which have been used interchangeably throughout the P&R. Make it clear that census statistics for small areas are not equivalent to statistics obtained by applying small area estimation methods, although these methods can also be used in providing data at low levels of spatial aggregation.

IV. Use of geospatial information in census operations (TT3) (Session 8 of EGM)

Integrate geospatial concerns. Provide more elaboration on the importance of using geospatial information in all phases of the census operation. Review the P&R with a view to identifying parts of the publication where the deployment of geospatial information can enhance data collection, analysis, and visualization.

GIS capacity. When making recommendations in the P&R, it is important to consider that GIS capacity across NSOs is highly variable.

Grid-based outputs. The draft P&R focuses solely on square grids for the dissemination of census data, potentially overlooking alternative grids such as hexagons. Refer to resources comparing and contrasting the advantages and disadvantages of using square and hexagonal grids, based on the specific needs and objectives of census programs.

Geofencing. Discuss the potential applications of geofencing in a census operation, including its use in managing field-based enumeration.

Quality of geospatial data. Discuss the methods for evaluating the quality of geospatial data used in a census operation.

Open geospatial information and tools. Address the potential applications of open-source software (e.g. R, Python, QGIS), open data sources (e.g. OpenStreetMap) and open code in supporting a census geospatial program, including the potential for reduced costs, enhanced efficiency, and improved access to and analysis of data. *[Note that the P&R will neither mention nor recommend specific software/product.]*

Software functionalities. Discuss the essential features and functionalities of GIS packages and data collection software. *[Note that the P&R will neither mention nor recommend specific software/product.]*

V. Quality, indicators, assessment (TT4) (Session 9 of EGM)

Dedicated section on quality. Consider re-structuring the P&R so that all quality-related issues are discussed together in a single dedicated section, with cross-references to relevant sections of the document.

Generality vs. specificity. Consider the level of detail of discussions on quality-related issues and strike a balance between general versus specific quality issues.

Evaluation process. Discuss the timing, methods, and entity involved in evaluations, including self-evaluations by NSOs versus independent evaluations, as well as the role of managers in the evaluation process.

Census as enabler of quality. Discuss the census as a primary operation of the NSO that has the potential to impact quality assurance processes in the overall statistical system.

Add elaboration on:

- multimode data collection
- the CATI collection mode
- field management and monitoring systems that can assess the progress and quality of coverage in real-time
- quality of field operations (including re-interviews to check the quality of data collection, and monitoring the quality of field operations)
- coding (within the section on data processing)
- impact of extended periods of enumeration on quality
- acceptance of census results
- disclosure avoidance (perturbation/suppression) and the trade-off between data protection methods and quality
- quality recommendations from frameworks other than the UN NQAF (which is already reflected)

Adjustment of census results. The adjustment of census results is a complex process that varies widely across countries. Adjustments can be made at either the aggregate or record level, and the decision to adjust may depend on the level of coverage. Decisions about adjustment methods can be sensitive due to their impact on budget allocation or the size of the electorates. Consider adding more detail on adjustment methods, and the different levels to which adjustments can be made.

Documentation. Since census teams can vary from one round to the next, it is crucial to document census experience and maintain institutional memory, particularly in very small teams working with admin-based censuses.

Leaving errors unchanged (paragraph 2.250). Consider revising or deleting paragraph 2.250 referring to the suggestion that not all errors need to be corrected. It is a fact that not all errors (or omissions) are corrected. Therefore, there needs to be some criteria for establishing which errors should, or need not, be corrected.

Communicating quality. Currently there is no elaboration on how to communicate quality. Consider adding discussion on communicating the approach to quality either in section on quality or in the section on communication.

User satisfaction. Elaborate on the need for continuous consultation with users, including after the release of data. The quality dimension of 'relevance' can best be measured by assessing the degree to which the published census outputs meet users' requirements and expectations. This can be achieved by carrying out a formal post-census user satisfaction survey. Furthermore, the collection of information on web usage/web analytics can help identify popular census products.

VI. Data collection and processing (TT5) (Session 10 of EGM)

Multi-mode data collection. The use of multimodal data collection is increasing due to its numerous benefits. However, it is important to also recognize the challenges it poses in terms of operations and IT infrastructure needed for field operations management, case management, and help desk. It is important to consider the design options, including parallel vs sequential approaches, to ensure that the data collection process is efficient and effective. Additionally, it is crucial to provide guidance for cases when "switching of modes" occurs to avoid any data loss or inconsistency. Data integration is another challenge that needs to be addressed to ensure that the data collected from different modes is integrated seamlessly.

Pooling and sharing of tablets. Elaborate on the benefits of pooling and sharing of tablets among countries, including for "greening" the census.

Cloud-based solutions. The discussion on the benefits of cloud-based solutions needs to be balanced with the drawbacks. It is important to note that cloud-based solutions are subject to laws and regulations that vary by country. These regulations dictate where data can be stored and how it can be accessed. It is crucial to comply with these regulations to avoid legal issues and ensure data security.

Security during data transmission and storage. Elaborate on general recommendations for security of data in transit and at storage, including on the importance of coordination with IT infrastructure authorities to ensure the security of data transmitted over cellular networks.

Dashboards. Further elaborate on the importance of dashboards, which provide a bird's eye view for operational control.

Technology and skills. Emphasize the opportunity the census creates for skills enhancement.

Field-based data collection modes. Provide specific guidelines for each mode of data collection. Emphasize the importance of control of field operations, including the use of dashboards and field checks by supervisors.

Extension of enumeration period. Address cases when the duration of the enumeration period is extended over several months, including the impact of the extension on data quality.

Data processing and coding. Address the importance of templates for data processing to save time and ensure quality. Emphasize training for NSO staff in data science, especially with the introduction of GIS data layers.

VII. Communication, dissemination, utilization (TT6) (Session 11 of EGM)

Promotion. Address the value of publicity not only to encourage participation in, but to promote interest in, and value of, the census. In particular, education modules can be encouraged to promote and raise awareness of the census as part of the school curriculum. This is particularly important to reach immigrant communities that are challenging to engage due to language barriers.

Customized communications plans. Consider adding elaborations on the importance of customized communications plans for specific populations (e.g. nomads, immigrants, refugees, students) so communication activities are more inclusive.

Multi-mode data collection. Part of the communications strategy should address the changes from previous censuses, particularly for multimode collection. The sequencing of collection activities should be communicated to the public, particularly if there had been changes since the previous census.

Register-based census. Elaborate further on the communication strategies required in the context of register-based and combined censuses to cover the different messages needed in this situation.

Fundamental principles of official statistics. Add references to the fundamental principles, particularly principle 3 and principle 1, on transparency on data sources, methods and procedures and on citizens' entitlement to public information, respectively. Additionally, include discussion on the laws and regulations under which the statistical system operates and compliance to these, particularly in relation to provisions on data dissemination and accessibility of outputs.

Staggered release of reports. Consider the impact on timeliness and quality of producing all reports in a fixed timeframe after the census. The release of a publication calendar can be a double-edged sword. Failure to meet promised deadlines can impact badly on the credibility and reputation of the NSO. NSOs should be encouraged to decide how essential tabulations should be published. Key unidimensional counts and percentages can be published as formal online or paper reports, but the growing tendency now is for multivariate tabulations and analyses to be created through flexible table builder technologies rather than in predetermined thematic reports. Data

processing, analysis and the preparation of thematic reports take time and should not be rushed to meet release calendars.

User support. Suggest adding content on the management of user support, including the creation of FAQs for repeated and similar questions. User support can be tiered to optimize cost, by relying on technology (e.g. chatbots) at the first point of contact and then offering more customized support, if necessary.

Accessibility. Digital formats may not be accessible to all. Use inclusive and hybrid approach, with a mix of paper and digital products. Consider encouraging the use of international standards to make websites/products accessible to people with visual and auditory disabilities. Note that accessibility to data is a key metric of quality measurement.

Visualizations and mapping. Encourage the adoption of interactive visualization tools that narrate compelling stories. The creation of engaging visual products may require specialized expertise. If such expertise is not present within the NSO, outsourcing may be considered. For enhancing geospatial analysis, promote the dissemination of shape/boundary files. Consider the inclusion of examples of visualization and mapping as annexes to highlight the type of outputs that can be produced.

Discoverability of data. The P&R should promote the dissemination of metadata to enhance the discoverability of data, particularly those that are challenging to locate due to their storage in spreadsheets, PDF files, and tabulation tools. The application of search engine optimization techniques and APIs can improve data discoverability. Consider adding references to guidelines on constructing APIs for census data and addressing concerns related to data access, as well as the volume and frequency of such access.

Re-use of census data. NSOs should be encouraged to collaborate with others (e.g. academia, private sector, international organizations) to expand the accessibility and use of census data, including through potentially employing technological tools like APIs. NSOs should be encouraged to formulate open data licenses that clearly define the terms of reusing census data. One term on legal re-use could be the stipulation that any attempt to extract personal information from the census data is strictly prohibited.

Microdata. The various methods for disseminating/accessing anonymized microdata—including as public use files (PUS) and scientific use files (SUF)—as well as for selecting samples and their sizes should be briefly mentioned. The existing references on the topic need to be updated to refer to the latest developments and techniques in statistical disclosure control.

Archiving of individual records. Consider adding a discussion on the long-term preservation of digital individual records. This is to guarantee that census information is not only accessible but continues to be so, even as certain formats risk becoming

obsolete over time. One way to achieve this could be the adoption of international metadata standards, like the Data Documentation Initiative (DDI), and a comprehensive data dictionary. These tools facilitate the documentation of the entire census process.

Documentation. Encourage the recording of all activities, particularly decisions pertaining to management and design changes, in a formal report so that institutional knowledge is not lost and can be passed on to the next generation of census takers.

VIII. Recommended topics on population and housing characteristics (TT7) (Session 4 of EGM)

Core topics vs. non-core topics. Reevaluate and refine the criteria used to classify topics as core or non-core, considering factors such as the presence of international standards, the ability to compare across countries, the feasibility and maturity of the methodology, the source of the data, and the topic's relevance to policy, among other things.

Supplementary population counts. Expand on the concept of 'daytime population'. Additionally, clarify the term 'service population' to avoid confusion among data users.

Place of work. Consider classifying the subject as a core topic (from a non-core one). In addition to providing insights into the labour market, it can assist in quantifying the daytime population, as traditional census data predominantly captures the night-time population.

Difficult to enumerate groups. Review and provide clarity on the list of groups that are difficult to count, in order to enhance the coverage and quality of census data. Consider including categories such as seasonal workers, refugees and internally displaced persons (IDPs), individuals who refuse to participate in the census due to political reasons, the homeless, and indigenous people. The review should consider the data source (traditional vs register-based). Also, ensure coordination with ECE recommendations to maintain consistency across regional and global guidelines.

Definition of household. Review, given the dynamic nature of households and the prevalence of cohabitation, as well as the variety of household structures and living arrangements in contemporary societies, particularly in the context of countries that depend on administrative data sources.

Definition of the usually resident population. Review, considering the threshold period needed to determine the place of usual residence and the context of countries that utilize administrative data sources for compiling census statistics.

Temporarily absent residents. In de jure censuses this information should be collected anyway. In de facto censuses the same information will be captured by including a

question on 'place of usual residence' and transferring absent residents back to their usual household.

Homeless/informal dwelling. Provide guidance on classifying individuals residing in condemned buildings or squatter settlements as either homeless or part of a conventional household.

Reason for change of usual residence (internal migration) / Reason for immigration (international migration) (non-core). Measuring these topics in the census can be complex due to potential multiple reasons, overlapping response categories (not mutually exclusive), dependency on the household respondent, temporal changes in reasons, and sensitivity of the question, particularly concerning Internally Displaced Persons (IDPs). If asked, the focus should be on the primary reason. Further discussion by TT7 is needed to determine whether or not these topics should be incorporated.

Ever resided abroad. The question about whether a person has ever resided abroad is important for understanding international migration patterns. Further deliberation by TT7 is required, including whether to classify the subject as a core topic.

Registration of births, deaths, marriages, and divorces (non-core). Data on the registration of these vital events is pertinent to countries progressing their CRVS systems. However, this data collection may not be required in countries with well-established CRVS systems. Further consideration by TT7 is needed, which includes revisiting the findings and suggestions from the Expert Group meeting that focused on the synergies between census, CRVS and administrative data systems, held 11-12 December 2023.

Gender identity (non-core). The proposal to include a question about gender identity in the census did not receive significant support. The topic is considered sensitive and lacks clear definition, which could pose challenges when translating into multiple languages. There are also concerns about privacy in smaller areas, suggesting that gender identity data should be reclassified into binary categories during the dissemination phase. Even though many countries may not include this in their census, if it is to be asked, it should be voluntary and posed as a follow-up to the "sex at birth" question to avoid confusion or contamination of responses. Any question on this topic should be thoroughly researched and successfully tested before being included in the census. Further deliberation by TT7 is required.

Household deaths in the past 12 months (core topic). This topic is recognized as relevant to countries with low CRVS coverage. The proposal to extend the reference period to 24 months or more didn't garner substantial backing, given the potential sensitivity of the subject and recall issues leading to poor data quality. Furthermore, the deaths of individuals living alone won't be documented.

Ownership of communication devices, access to Internet and ICT skills (non-core).

The Expert Group noted that ICT skills are not suitable for collection in censuses as it is a subjective question. The ITU recommends the collection of information on ownership of communication devices and access to Internet at the individual level, as these are relevant for measuring the digital divide and gender equality. Indicators on individual Internet use and individual mobile phone ownership are each referenced through SDG indicators 17.8.1 and 5.b.1, respectively. With regard to communication devices, some members of the Expert Group were of the opinion that the measurement should be as to “usage” rather than “ownership”. Remove these subjects from the list of housing/household topics, since they are now to be queried at the individual level.

Climate change/environment. The Expert Group did not support the addition of new topics on environment/climate change. Censuses already collect information on environment related topics through the household questionnaire, so it would be better to focus on the possibility of using the census for producing data on the environment. The census can be used to analyse both emission patterns and the impact of climate change on livelihoods. Furthermore, census information can be combined with data from other sources for analyses of the impacts of climate change. The potential for better utilization of the census for climate-related analyses can be highlighted under the section on census data utilization.

E-waste. The Expert Group did not endorse the inclusion of a new question on e-waste, as the question hasn’t been tested in censuses across a range of countries. However, it may be possible to revise the response categories of the current topic on solid waste disposal to capture information on e-waste. The formulation of the question and response categories requires guidance. It is advisable to test this approach in surveys before recommending it for use in censuses.

Disability. It was noted that the measurement of disability in the census using Washington Group question design is likely to be of less quality than that using specific disability survey methods with appropriately trained interviewers. NSOs were invited to share lessons on the quality of disability data collected through the census, to better inform the revision of the P&R on this topic.

Economic characteristics. The topics related to the ‘labour force’ are to be reviewed by TT7 upon receipt of proposals for revisions from the International Labour Organization (ILO), based on its most recent recommendations, including ICLS 2023.