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Items for discussion and decision: population and housing censuses

Implementation of the 2020 World Population and Housing Census Programme

Report of the Secretary-General

Summary

The present report, which was prepared in accordance with Economic and Social Council decision 2021/224 and past practices, is a follow-up to the implementation of the 2020 World Population and Housing Census Programme, as reported to the Statistical Commission at its fifty-first session, and to the results of the surveys and the census dashboard launched by the Statistics Division, in which the adverse impacts of the COVID-19 pandemic on census-taking worldwide are documented. The report also provides an elaboration on the interpretation of the Fundamental Principles of Official Statistics in respect of establishing national statistical population registers on the basis of population and housing census records. The Statistical Commission is invited to take note of the status of implementation of the 2020 World Population and Housing Census Programme, urge Member States to conduct population and housing censuses or otherwise generate small area census statistics, and endorse the establishment of national statistical population registers based on census records exclusively for statistical purposes and within the legislative framework disallowing its use for any other purposes.

Action to be taken by the Commission is set out in paragraph 26 of the report.

* E/CN.3/2022/1.



I. Introduction

1. The 2020 round of population and housing censuses was launched by the Economic and Social Council in its resolution 2015/10 on the 2020 World Population and Housing Census Programme on 10 June 2015. The Council urged Member States to conduct at least one population and housing census under the 2020 World Population and Housing Census Programme, covering the period from 2015 to 2024, taking into account international and regional recommendations relating to population and housing censuses and giving particular attention to advance planning, cost efficiency, coverage and the timely dissemination of, and easy access to, census results for national stakeholders, the United Nations and other appropriate intergovernmental organizations in order to inform decisions and facilitate the effective implementation of development plans and programmes.

2. In the same resolution, the Council requested the Secretary-General to prepare international statistical standards, methods and guidelines to facilitate activities for the 2020 World Population and Housing Census Programme, to ensure coordination of activities among stakeholders in assisting Member States in the implementation of the Programme, and to monitor and regularly report to the Commission on the implementation of the Programme.

3. Subsequently, the Statistics Division of the Department of Economic and Social Affairs of the Secretariat undertook the preparation of the methodological framework for population and housing censuses in the 2020 round. The framework was anchored by the revised *Principles and Recommendations for Population and Housing Censuses*, issued in 2015.¹ It was accompanied by additional handbooks on population and housing census management,² the use of electronic data collection technologies for population and housing census data collection³ and the use of censuses in measuring international migration.⁴ The work on the production of the handbook on population and housing census editing, including real-time editing, was also finalized.⁵

4. With the support of the United Nations Population Fund, the third revision of the *Principles and Recommendations for Population and Housing Censuses* and the second revision of the *Handbook on the Management of Population and Housing Censuses* have been translated into French, allowing for the development of training workshops for francophone countries. The training workshop for francophone African countries will be held in mid-January 2022, in close cooperation with the Economic Commission for Africa. The training workshop will introduce the methodological framework for the implementation of the 2020 World Population and Housing Census Programme, provide an opportunity to exchange national experiences and census-taking practices among participating countries, assess the impact of the COVID-19

¹ *Principles and Recommendations for Population and Housing Censuses, Revision 3* (United Nations publication, Sales No. E.15.XVII.10).

² *Handbook on the Management of Population and Housing Censuses, Revision 2* (United Nations publication, 2017). Available at https://unstats.un.org/unsd/publication/seriesF/Series_F83Rev2en.pdf.

³ *Guidelines on the use of electronic data collection technologies in population and housing censuses* (New York, 2019). Available at <https://unstats.un.org/unsd/demographic/standmeth/handbooks/data-collection-census-201901.pdf>.

⁴ [Draft] *Handbook on Measuring International Migration through Population Censuses* (New York, 2017). Available at <https://unstats.un.org/unsd/demographic-social/Standards-and-Methods/files/Handbooks/international-migration/2017-draft-E.pdf>.

⁵ *Handbook on Population and Housing Census Editing, Revision 2* (New York, 2019) Available at https://unstats.un.org/unsd/publication/SeriesF/seriesf_82rev2e.pdf.

pandemic on census preparation and execution, and provide an overview of the state of the art of census-taking and adjustments that are being made worldwide.

5. In addition, the Statistics Division developed and launched the population and housing censuses e-learning course, which will be posted on the United Nations Global Platform by February 2022, and a repository of census topics and questions from the 2010 and 2020 round of censuses⁶ to support national capacity-building efforts in the context of the 2020 round of population and housing censuses.

II. Reporting on the implementation of the 2020 World Population and Housing Programme

6. The Economic and Social Council, in its resolution [2015/10](#), requested the Secretary-General to monitor and regularly report to the Statistical Commission on the implementation of the Programme. Accordingly, the Statistics Division introduced a number of activities aimed at documenting the state of the art with respect to the world's population and housing censuses.

7. On the basis of the information obtained, the Division submitted to the Statistical Commission, at the mid-point of the 2020 round, the report of the Secretary-General on the implementation of the 2020 World Population and Housing Census Programme and the methodology for delineation of cities and urban and rural areas for international comparison purposes ([E/CN.3/2020/14](#)). The report was issued before the onset of the coronavirus disease (COVID-19) pandemic. In the report, it was noted that a majority of countries (71 per cent of 158 responding countries/areas) had applied or were planning to apply the traditional census approach in the 2020 census round, whereby each household in the country is approached with a request to provide the relevant information. A minority of countries/areas (approximately 28 per cent) had used or would use registers, either producing small area census statistics from registers only (10 per cent) or complementing the registers with full field enumeration (13 per cent) or with sample surveys (5 per cent).

8. Furthermore, the report indicated that the vast majority of countries undertaking any form of field enumeration (i.e., the traditional census, combining registers and full field enumeration or combining registers and sample surveys and the rolling census) intended to use a combination of enumeration methods. By far the most frequent enumeration method (72 per cent) was administering face-to-face interviews using portable devices, primarily tablet computers (computer-assisted personal interviewing (CAPI)) for field enumeration, followed by face-to-face interviews using a paper questionnaire (pen and paper interviewing (PAPI)) (42 per cent) and Internet self-enumeration (computer-assisted web interviewing (CAWI)) (38 per cent).

9. The first cases of COVID-19 began to be recorded and documented in December 2019. In March 2020, the World Health Organization declared COVID-19 a global pandemic. It was apparent from the outset of the pandemic that it would have an adverse impact on the implementation of the 2020 World Programme on Population and Housing Censuses, given the fact that a majority of countries planned a traditional door-to-door canvassing of all households and housing units in the country using face-to-face interviews, which could have disastrous results in terms of spreading the virus among the population at large.

10. Consequently, the Statistics Division introduced a series of surveys to document the impact of the pandemic on national population and housing census planning, preparations and operations. The first such survey was launched in March and April

⁶ Available at <https://unstats.un.org/unsd/demographic-social/sconcerns/migration/census/index.html>.

2020,⁷ and the second in December 2020 and January 2021.⁸ From 9 to 12 February 2021, the Division organized and held the United Nations Expert Group Meeting on the Impact of the COVID-19 Pandemic on Conducting Population and Housing Censuses and on Census Data Quality Concerns, the conclusions and recommendations of which were submitted to Statistical Commission at its fifty-second session as a background paper,⁹ to the report of the Secretary General on Demographic Statistics (E/CN.3/2021/18).

11. In his report, the Secretary-General, indicates that, based on surveys and other documentation, as well as direct contact with the national authorities in charge of the population and housing censuses, it is evident that the pandemic is having a significant adverse impact on the conduct of the censuses. Data collection is being postponed; enumeration time has been extended, sometimes to over six months; the need for protecting enumerators and respondents has raised a number of issues such as availability of protective gear and interviewing while respecting social distancing; and questionnaires are being shortened. In addition to the negative impact from census postponements, the pandemic has made some segments of the population more difficult to enumerate. During periods of lockdown, travel restrictions and mandatory quarantines, students have left their place of education and workers have moved away from their workplaces. Countries plan the timing of the census to capture the maximum number of people at their place of usual residence. The pandemic has prompted changes to the expected location of some population groups, which is likely to negatively impact the quality of census statistics in the 2020 round of censuses.

12. In a majority of the countries participating in the Division's monitoring exercises, the COVID-19 increased the cost of census-taking. The postponement of planned activities, such as field work, meant that the costs of providing, disseminating and storing census materials and devices would be likely to be much higher than initially planned. The switch to data collection techniques that do not require direct contact with the respondents requires meticulous and extended testing, which was not included in the original census budget. Furthermore, the implementation of such techniques requires significant additional investment, for example, in developing detailed geographical frames, as address registers are not readily available in many countries.

13. The Division continued to monitor the implementation of the 2020 World Programme on Population and Housing Censuses throughout 2021, focusing primarily on countries/areas that initially scheduled their national census in 2020 or 2021 to comply with the recommendation in *Principles and Recommendations for Population and Housing Censuses, Revision 3*, that population and housing censuses should be conducted in a year ending in "0" or "1" in order to ensure better comparison at the regional and global levels. The Division instituted a census dashboard,¹⁰ which provides up-to-date information regarding the status of national censuses originally planned to take place in 2020 and 2021.

⁷ The results are available at <https://unstats.un.org/unsd/demographic-social/census/COVID-19-SurveyT1/>.

⁸ The results are available at <https://unstats.un.org/unsd/demographic-social/census/COVID-19/>.

⁹ Available at https://unstats.un.org/unsd/statcom/52nd-session/documents/BG-4a-Conclusions_and_Recommendations_EGM_Census-2021-E.pdf.

¹⁰ See <https://unstats.un.org/unsd/demographic-social/census/COVID-19/>.

14. The results were summarized and presented in a policy brief of the Department of Economic and Social Affairs in October 2021.¹¹ The results indicate that, of the 110 national censuses for which data were available and that were scheduled to take place in 2020 and 2021, 71 (65%) were either postponed or their status was unknown, and 39 had been conducted or were planned to be conducted by the end of 2021, with a number of them significantly extending the census enumeration period.

15. Consequently, the capacity to accurately and consistently assess the development and impact of developmental policies at the national level, and especially at the subnational level, may be hampered by the lack of granular and comprehensive statistics that only the population and housing census provides. Census data are essential, for example, for accurate planning for service delivery in terms of locating and building hospitals, schools and transportation infrastructure; the allocation of budgetary resources; the delineation of electoral districts; and the monitoring of the implementation of 2030 Sustainable Development Agenda at the level of minor civil divisions.

16. In that context, all Member States should be urged to remain firmly committed to the goals of the 2020 World Population and Housing Census Programme and to continue planning and preparing to conduct their population and housing censuses when national conditions permit, taking into account international and regional recommendations and using recently developed methodological solutions and successful national practices.

17. From 2 to 5 November 2021, the Statistics Division organized and conducted the Second United Nations Expert Group Meeting on the Impact of the COVID-19 Pandemic on Conducting Population and Housing Censuses and on Census Data Quality Concerns. The following points summarize the conclusions and recommendations of that meeting:¹²

(a) Listening to the presentations delivered at the meeting, the experts concluded that a number of countries were successfully adapting their census-taking operations to the epidemiological circumstances and were able to conduct the population and housing censuses amidst the pandemic, and the experiences shared at the meeting were extremely valuable in terms of lessons learned. At the same time, the experts concluded that not all countries/areas were in a position to implement such adaptations, resulting in repeated postponements of their national censuses;

(b) The experts highlighted increased costs as one of the major impacts of the COVID-19 pandemic on census-taking in the majority of countries. The postponement of enumeration activities meant that the costs of field staff and storing census materials and devices would be much higher than initially planned. Furthermore, adoption at a later stage of new data collection modes, including those that do not require direct contact with respondents, increased the census budget beyond what was originally planned. The experts also noted that, in addition to the modifications in data collection procedures, census-taking during the pandemic increased costs owing to the implementation of additional measures to minimize the adverse impact of the COVID-19 pandemic, such as the procurement of personal protective equipment for field staff and enhanced publicity campaigns to inform the

¹¹ United Nations, Department of Economic and Social Affairs, "Policy implications of the disruption of the implementation of the 2020 World Population and Housing Census Programme due to the COVID-19 pandemic", policy brief No. 118 (8 October 2021). Available at <https://www.un.org/development/desa/dpad/publication/un-desa-policy-brief-118-policy-implications-of-the-disruption-of-the-implementation-of-the-2020-world-population-and-housing-census-programme-due-to-the-covid-19-pandemic/>.

¹² Available at <https://unstats.un.org/unsd/demographic-social/meetings/2021/egm-covid19-census-20211102/c-and-r.pdf>.

public and educate field staff on new modes of data collection. The cost of telecommunications for telephone interviews and data for mobile devices also had an impact on the census budget in several countries. The experts further noted that census budgets in several countries saw reductions, as Governments shifted funds to fight the COVID-19 pandemic;

(c) The experts noted that the concept of usual residence might prove ambiguous for certain population groups, such as people who moved several times during the pandemic, students who usually live away from their family home but are staying with their family during the pandemic and workers who had to move back to their family house from their place of usual residence because of the COVID-19 lockdowns. Countries that have yet to undertake the census in the 2020 round should consider providing additional clarification and guidance to enumerators/respondents;

(d) The meeting noted that for the majority of census questions, for example those on sociocultural topics, the pandemic would have little or no impact on responses. The pandemic could potentially affect responses, either through a change in circumstances or because of a change in interpretation and understanding, on such topics as those who usually live in the household, visitors, migration, economic activity, occupation, industry, hours worked and travel to work. The experts emphasized that additional guidance about how to answer specific questions should be provided to self-respondents and cautioned that comprehensive testing was required before making any changes;

(e) The experts noted that collecting information on the exact date of events for certain census topics (deaths, births and migration), rather than asking questions about the occurrence of events during a reference period, is advantageous in terms of analysing the changes in the level and pattern of such events during the pandemic, particularly for countries that do not have reliable registers for such events;

(f) The experts underscored the challenges of adjusting census procedures to reduce the impact of the COVID-19 pandemic. Some of the adjustments pertained to the adoption of new data collection modes (CAWI, CAPI and CATI) and other activities related to field enumeration, such as changing training methods and plans for enumeration of special population groups that are difficult to enumerate. The experts pointed out that, in some cases, the preparation of plans and actions for different scenarios would allow statistical authorities to be flexible and responsive to the situation during the pandemic. The experts recommended that before adjustments were made to the design of the enumeration modes, sufficient time must be allocated for testing new processes, systems and actions. They experts further recommended that consideration be given to overcoming the difficulties in resolving double records when using multiple collection modes. The experts drew attention to the challenges faced by countries utilizing administrative records in the census, owing to the unavailability of updated records because of the COVID-19 pandemic;

(g) The experts had an extensive discussion on the potential impacts of the COVID-19 pandemic on census results and the comparability of the results over time. They noted that the circumstances of the pandemic, including mobility restrictions within the country and between countries, would have a significant influence on population distribution, the level of fertility and mortality, internal and international migration, and employment and unemployment rates. It is expected that the census data collected during the pandemic could show some extraordinary patterns, but it is currently unclear to what extent those patterns are attributable to the pandemic and whether they are short-term changes or more permanent ones;

(h) The experts noted that, as the census provides a snapshot and the impact of the COVID-19 pandemic is still an evolving situation, census results may not describe the full impact of COVID-19 on societies. Consequently, before releasing

census data it would be of paramount importance to contextualize the findings from the census by contrasting them with recent data and analysis from other sources and previous censuses;

(i) The experts emphasized that communication with stakeholders and data users is extremely important when it comes to data analysis and the release of censuses conducted during the COVID-19 pandemic. Engagement with stakeholders and data users ahead of data releases, especially on census subject matter areas more impacted by the collection of the data during the pandemic, is key to managing the expectations of data users and explaining trends, changes and patterns not seen in previous census results and in other statistical data collections.

18. The impact of the pandemic on census-taking worldwide was adverse on multiple levels, including: the postponement of the conduct of censuses, which has had a negative impact on the defined periodicity of the census, which is one of the essential features of the census, according to the *Principles and Recommendations for Population and Housing Censuses*;¹³ increased costs, combined with the costs of mitigating the spread of the virus and the decrease in economic activities and revenue, resulting in a shift of resources away from the census; the endorsement of data collection methods that minimize or completely eliminate face-to-face interviewing, such as Internet and mail self-enumeration or telephone interviewing, thus potentially introducing challenges to the overall quality of the census, as applying these methods requires meticulous testing, both from a substantial point of view (designing the e-forms and real-time editing) and an operational point of view (avoiding duplication); increased costs for the provision of appropriate personal protection equipment for the enumerators; concerns regarding the interpretation of the census results and the overall quality of small area census statistics; and the delay in the availability of granular data for monitoring the implementation of policies and developmental agendas.

19. At the same time, countries/areas that were able to adapt to the circumstances of the pandemic implemented a number of changes in their methods of data collection, adjusting the questionnaire instructions, as well as operations, and relying primarily on Internet self-enumeration, which proved to be an efficient mode of data collection. The Statistics Division is documenting these successful experiences and will continue to make them available to census-takers worldwide. It should be emphasized that not all countries/areas will be in a position to implement all of these solutions, given their costs and the limited availability of Internet and telecommunications networks, in some cases.

III. Building and operating statistical population registers

20. Faced with the COVID-19 pandemic and its impact on census planning, preparations and operations, a number of countries explored the use of administrative sources to enhance census data collection and to complement and check the information collected by the census. The Statistics Division received queries regarding the establishment of statistical population registers to serve as the basis for generating small area census statistics in the 2030 round of censuses and the appropriateness of using the census records as the starting point in that respect.

¹³ Paragraph 1.12 of the *Principles and Recommendations for Population and Housing Censuses, Revision 3* stipulates that censuses should be taken at regular intervals so that comparable information is made available in a fixed sequence. A series of censuses makes it possible to appraise the past, accurately describe the present and estimate the future. It is recommended that a national census be taken at least every 10 years.

21. In that context, the Division initiated the preparation of a handbook on the use of registers for population and housing censuses, a draft of which has been completed. The expert group meeting to review the draft is scheduled for 15 to 17 December 2021, and the revised draft will be introduced as a background paper to the present report. The handbook complements and builds upon the guidelines developed by the Conference of European Statisticians.¹⁴ The final handbook will be available by mid-2022.

22. The statistical population register is a systematized and indexed collection of individual records for every resident of the country. Where developed and functioning, it serves as the basis for the compilation of official statistics and as a master sample frame for designing and running statistical surveys. Connected on a regular basis and under the provisions of the law with administrative registers, starting with the administrative population register, it is regularly updated with pertinent information. The legal framework for establishing, maintaining and exploiting the national statistical population register must ensure that it is used solely for compiling aggregate statistics and that it cannot be accessed for any other purposes within or outside of the national statistical authorities.

23. The establishment of a national statistical population register involves extensive investment in collecting records from different existing administrative registers, harmonizing the records, linking information from different registers and running complex editing procedures to ensure the consistency and quality of individual records. Once established, and under the protocols spelled out in legal provisions, the national statistical population register is updated from administrative registers on a regular basis.

24. In the context of the obstacles census-takers encountered owing to the COVID-19 pandemic, the discussion on the need to establish the national statistical population registers became more urgent, especially in the context of the 2030 census round and beyond. While Internet self-enumeration proved to be highly effective in countries/areas with developed information technology infrastructures,¹⁵ it is clear that the level of information technology facilities needed to reach all households and housing units has yet to be achieved in the majority of countries/areas worldwide. Consequently, national statistical authorities are increasingly considering the establishment and maintenance of national statistical population registers.

25. In that context, a number of national statistical authorities have considered using the master census file from the 2020 round of censuses as the major basis for the establishment of the national statistical population register, as a first step. Taking into consideration the paramount importance of complying with the Fundamental Principles of Official Statistics (see General Assembly resolution 68/261) and the requirement to protect the confidentiality and privacy of individual records, using population and housing census individual records to establish the national statistical population register would not contravene the Fundamental Principles of Official Statistics, provided that there are clear and unambiguous legal provisions for

¹⁴ See *Guidelines on the use of registers and administrative data for population and housing censuses* (United Nations publication, Sales No. E.19.II.E.4) (available at <https://unece.org/DAM/stats/publications/2018/ECECESSTAT20184.pdf>) and *Guidelines for assessing the quality of administrative sources in censuses* (United Nations publication, Sales No. E.21.II.E.13) (available at <https://unece.org/info/publications/pub/360852>).

¹⁵ As reported to the Second United Nations Expert Group Meeting on the Impact of the COVID-19 Pandemic on Conducting Population and Housing Censuses and on Census Data Quality Concerns, in the case of the 2021 census of Portugal, 90 per cent of the responses were filled in online; in the census of England and Wales of the United Kingdom of Great Britain and Northern Ireland, 89 per cent were filled in online; and in Australia, 80 per cent were filled in online (see <https://unstats.un.org/unsd/demographic-social/meetings/2021/egm-covid19-census2/>).

establishing, operating, maintaining and exploiting the national statistical population register solely for the purposes of compiling aggregate statistics and that it cannot be accessed for any other purposes within or outside of the national statistical authorities.

IV. Action to be taken by the Statistical Commission

26. The Commission is invited:

(a) **To express concern about the impact of the COVID-19 pandemic on the implementation of the 2020 World Programme on Population and Housing Censuses, resulting in postponements in the conduct of censuses and difficulties in ensuring the quality of census planning and operations and the overall quality of the resulting census statistics;**

(b) **To urge Member States to implement the 2020 World Programme on Population and Housing Censuses and to conduct the national population and housing census, or to otherwise produce census-like small area statistics, as soon as circumstances allow and to continue to secure financial and human resources to that end;**

(c) **To encourage national statistical authorities to consider the establishment of national statistical population registers on the basis of the census master file produced in the 2020 round of censuses in full compliance with the provisions of the Fundamental Principles of Official Statistics;**

(d) **To request the Statistics Division, in its role as the secretariat of the 2020 World Population and Housing Census Programme, to continue to monitor the implementation of the Programme; to continue to develop platforms for exchanging national experiences, practices and lessons learned in conducting population and housing censuses during the COVID-19 pandemic; and to continue to develop the components of the methodological framework for population and housing censuses.**