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Items for discussion and decision: demographic statistics

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

Report of the Secretary-General

#### Summary

The present report, which was prepared in accordance with Economic and Social Council decision 2019/210 and past practices, is on the implementation of the 2020 World Population and Housing Census Programme and the results of the survey launched by the Statistics Division in that respect. The report also covers the methodology for delineation of cities and urban and rural areas. The Statistical Commission is invited to take note of the status of implementation of the 2020 World Programme, urge Member States to conduct population and housing census or otherwise generate small area census statistics, and endorse the methodology for delineation of cities and urban and rural areas for international and regional comparison purposes. The report concludes with action to be taken by the Commission.

<sup>\*</sup> E/CN.3/2020/1.





#### I. Introduction

- 1. By its resolution 2015/10, the Economic and Social Council launched the 2020 World Population and Housing Census Programme. In the resolution, the Council urged Member States to conduct at least one population and housing census under the Programme, covering the period 2015–2024, 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 Economic and Social Council also 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 Statistical 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, covering the period 2015–2024. This framework was anchored by the revised *Principles and Recommendations for Population and Housing Censuses*, issued in 2015. It was accompanied by a set of additional handbooks, on population and housing census management, on the use of contemporary technology for population and housing census data collection and on the use of censuses in measuring international migration. The work on the production of the handbook on population and housing census editing, including real-time editing, has also been finalized.
- 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.
- 5. The Division developed and launched the population and housing censuses r-learning course<sup>6</sup> and a repository of census topics and questions from the 2010 and 2020 census rounds.<sup>7</sup>

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<sup>&</sup>lt;sup>1</sup> Principles and Recommendations for Population and Housing Censuses, Revision 3 (United Nations publication, Sales No. E.15.XVII.10).

<sup>&</sup>lt;sup>2</sup> Handbook on the Management of Population and Housing Censuses, Revision 2 (New York, 2017). Available at: https://unstats.un.org/unsd/publication/seriesF/Series\_F83Rev2en.pdf.

<sup>&</sup>lt;sup>3</sup> 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.

<sup>&</sup>lt;sup>4</sup> 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.

<sup>&</sup>lt;sup>5</sup> Handbook on Population and Housing Census Editing, Revision 2 (New York, 2019). Available at: https://unstats.un.org/unsd/demographic-social/meetings/2019/newyork-egm-census/handbook-draft.pdf.

<sup>&</sup>lt;sup>6</sup> Available at: https://360.articulate.com/review/content/cdd741ee-88c2-4b1a-939f-47cc7b9c224c/review.

Available at: https://unstats.un.org/unsd/demographic-social/sconcerns/migration/census/index.html#/home.

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

- 6. The Economic and Social Council, in its resolution 2015/10, also requested the Secretary-General to monitor and regularly report to the Statistical Commission on the implementation of the 2020 World Population and Housing Programme. Subsequently, the Division developed and launched a short, 11-question survey sent to all national statistical offices. Detailed results are presented in a background document. 9
- 7. As at the publication of the present report, the Division had received replies from 158 countries or areas. The results show that a majority of countries (71 per cent) 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 (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. With respect to the data-collection methods to be used in the 2020 census round, the results of the Division's survey showed that a large majority of countries were planning (or had already implemented, depending on the census date) to apply more than one method. The major data-collection methods consist of: face-to-face, pen and paper interviewing (PAPI); using a tablet or similar portable electronic device (computer-assisted personal interviewing, CAPI); and computer-assisted telephone interviewing (CATI), albeit to a lesser extent for initial data collection than for following up on missing values and non-response. In terms of self-enumeration, while it was applied in previous census rounds primarily in a paper form (paper questionnaire with self-enumeration, PASI), in the 2020 round, a large number of countries will administer computer-assisted self-interviewing (CAWI) using an electronic questionnaire provided through an Internet browser application. <sup>10</sup>
- 9. The Division's survey included a question regarding the enumeration methods to be used by the countries in the 2020 census round. The vast majority of the countries undertaking any form of field enumeration (i.e., traditional census, combining registers and full field enumeration or combining registers and sample surveys, and the rolling census) intended to use or already used 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 CAPI, followed by PAPI (43 per cent) and CAWI (35 per cent).
- 10. Given that population and housing censuses require an immense effort and resources in general, it is important to understand the major challenges and obstacles that census-takers will face in conducting censuses in the 2020 round. Three issues were identified by respondents in the Division's survey as a major challenge midway through the 2020 census round: implementing new technologies (75 per cent), improving coverage and data quality (75 per cent) and insufficient financial resources (72 per cent).
- 11. It would, at present, not be possible to assess whether the goal of the 2020 World Population and Housing Census Programme will be successfully achieved by 2024, namely, that every country conducts at least one population and housing census or

<sup>8</sup> Available at: https://tinyurl.com/y4es2mo7.

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<sup>&</sup>lt;sup>9</sup> The background document is expected to be made available in mid-January 2020.

<sup>&</sup>lt;sup>10</sup> For more details, see Guidelines on the Use of Electronic Data Collection Technologies in Population and Housing Censuses, paras. B4–B18.

otherwise produces small area census-like statistics at least once for the period 2015–2024. The fact that 32 countries replying to the Division's survey had already postponed the previously planned census date (approximately 20 per cent of responding countries), most of them owing to a lack of funding, raises concerns in that respect. In addition, the fact that a number of countries are experiencing internal turmoil and conflicts will also have an adverse effect on the successful implementation of the Programme.

- 12. The majority of countries that will conduct a population and housing census will use the traditional method: approaching all the households in the country with a request to provide information. It is nevertheless noticeable that the number of countries relying on registers (registers only or complemented by a full field enumeration or survey) is increasing. What is also evident is that countries are shifting to the use of contemporary technologies, often combining two or more in order to ensure completeness of coverage, timeliness and the production of census statistics in line with expectation and demand.
- 13. Therein lies the most significant challenge: developing in parallel several applications for the use of different enumeration methods. In the case of using Internet self-enumeration combined with the use of tablets for face-to-face interviews, census-takers need to develop separate strategies and planning methods for each in a simultaneous manner, including involving different levels of expertise and skills, the need for extended testing of two solutions, developing meticulous procedures for avoiding the duplication of information and harmonizing the records. If a country needs to add another method, for example, face-to-face interviews with a paper questionnaire for remote areas where there is a lack of infrastructure, then the complexity of the exercise is exacerbated by the need to develop procedures to minimize any possible data comparability and quality issues such as mode effect. <sup>11</sup>
- 14. While it is undisputable that the use of contemporary technologies significantly increases the efficiency and timeliness of the collection, processing and dissemination of census statistics, such use also requires additional efforts to ensure that the planning, development, testing and implementation of these different applications is successfully achieved. In addition, as emphasized by 75 per cent of respondents to the Division's survey, the use of new technologies is seen precisely as a significant or moderate challenge.
- 15. The results from the midway point of the 2020 census round underscore the need for full support for the population and housing census-taking activities in all Member States and to increase efforts in mobilizing resources to enable the successful and meaningful implementation by census-takers of new technologies and methodologies and in complying with international standards and recommendations.

## III. Methodology for delineation of cities and urban and rural areas

16. The 2030 Agenda for Sustainable Development, the New Urban Agenda and the global strategy to improve agricultural and rural statistics contain calls for the collection of harmonized indicators for cities and urban and rural areas to support consistent international comparisons across countries. However, an internationally developed and agreed harmonized method to delineate these areas is not available. National definitions vary significantly, <sup>12</sup> adversely affecting international comparisons. Consequently, six international organizations (the European Union, the

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<sup>11</sup> Ibid., chap. E.

<sup>&</sup>lt;sup>12</sup> Demographic Yearbook 2017 (United Nations publication, Sales No. B.19.XIII.1 H), p. 119.

Food and Agriculture Organization of the United Nations, the International Labour Organization, the Organization for Economic Cooperation and Development, the United Nations Human Settlements Programme (UN-Habitat) and the World Bank) have been collaborating closely to develop a harmonized method to facilitate international statistical comparisons. This work, which is intended to complement national definitions and not replace them, was welcomed by the Statistical Commission in its decision 49/112, adopted at its forty-ninth session.

- 17. This harmonized method is called the "degree of urbanization". At level 1 of this hierarchic classification, there are three classes: cities, towns and semi-dense areas, and rural areas. The method consistently delineates these classes globally on the basis of population size and density thresholds and uses a 1 km² population grid. Using a population grid assists in resolving problems that arise when population size and density thresholds are applied to spatial units with different shapes and sizes. This method has two extensions. The first one is called the "degree of urbanization level 2". It separates towns from semi-dense areas and splits rural areas into villages, dispersed rural areas and mostly uninhabited areas. The degree of urbanization level 2 also offers the possibility of adding other important rural dimensions (land use and remoteness) for analytical use. The second extension creates a commuting zone around each city. The combination of a city and its commuting zone is called a "functional urban area" or a "metropolitan area". It encompasses the extent of the city's labour market and can be used for planning and analytical purposes.
- 18. Pursuant to decision 50/118, adopted by the Statistical Commission at its fiftieth session, a background paper on the methodology for delineation of cities and urban and rural areas for international comparison purposes outlines the above-mentioned harmonized method and provides an assessment of its applicability. The paper also includes a summary of the broad consultation process underpinning this work. UN-Habitat organized seven regional workshops for participants from 86 countries in Africa, Asia, Latin America and the Pacific. Another 20 countries were consulted individually or participated in a pilot project. The Division surveyed 20 countries in 2017 and convened an expert meeting in 2019. This work is timely, given that national statistical offices may use the data from the 2020 census round to create a population grid, which is a necessary component of the harmonized method. The six international organizations mentioned in paragraph 16 above will publish a technical report in the second half of 2020 with more details on how to implement this method.

### IV. Action to be taken by the Statistical Commission

- 19. The Statistical Commission is invited:
- (a) To take note of the status of implementation of the 2020 World Population and Housing Census Programme;
- (b) To strongly urge Member States to conduct population and housing censuses or otherwise generate small area census statistics in the 2020 round of population and housing censuses (2015–2024);
- (c) To endorse the methodology for delineation of cities and urban and rural areas for international and regional statistical comparison purposes;
- (d) To request the Division and partners to continue to test and monitor the implementation of this methodology and to report to the Commission in a future session of the Commission.

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