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Report on the results of the UNSD survey on 2020 round population and housing censuses

Prepared by United Nations Statistics Division

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Introduction

1. Population and housing censuses are one of the primary sources of data needed for formulating, implementing and monitoring policies and programmes aimed at inclusive socioeconomic development and environmental sustainability. Population and housing censuses are also an important source for supplying disaggregated data needed for the measurement of progress of the *2030 Agenda for Sustainable Development*, especially in the context of assessing the situation of people by sex, age, ethnicity, migratory status, labour force status, disability and geographic location, or other characteristics.
2. The importance of population and housing censuses was underscored in the *2020 World Population and Housing Census Programme* which was approved by the *Statistical Commission* at its 46th session and adopted by the *United Nations Economic and Social Council* in resolution E/RES/2015/10.
3. The *2020 World Population and Housing Census Programme* comprises a number of inter-related objectives and activities aimed at ensuring that:
 - i) Member States conduct at least one population and housing census during the period from 2015 to 2024;
 - ii) Member States take into account international and regional recommendations relating to population and housing censuses and give particular attention to advance planning, cost efficiency, coverage and the timely dissemination of, and easy access to, census results;
 - iii) Member States set quality standards for the conduct and evaluation of population and housing censuses in order to uphold the integrity, reliability, accuracy and value of the population and housing census results;
 - iv) Full-fledged support is rendered to the Programme given its importance for sustainable development planning, especially in the context of the 2030 Agenda for Sustainable Development;
 - v) International statistical standards, methods and guidelines are prepared to facilitate the conduct of population and housing censuses;
 - vi) Activities among stakeholders are coordinated in assisting Member States to plan and carry out a census; and,
 - vii) Implementation of the Programme is monitored and regularly reported to the Statistical Commission.
4. In its role as the Secretariat to the 2020 World Programme, the *United Nations Statistics Division (UNSD)* has undertaken a variety of activities aimed at ensuring that countries undertake a census during the 2020 round, covering the period 2015–2024. It prepared the methodological framework for 2020 round population and housing censuses. This framework was anchored by the revised *Principles and Recommendations for Population and Housing Censuses*, issued in 2015.¹ This was accompanied by a set of additional handbooks, on population and housing census management,² on the use of

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* (New York, 2017). Available at: https://unstats.un.org/unsd/publication/seriesF/Series_F83Rev2en.pdf.

contemporary technology for population and housing census data collection³ and on 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, has also been finalized.⁵

5. As part of its responsibility to monitor and regularly report to the *Statistical Commission* on the implementation of the 2020 World Programme, the Division developed and launched a short, 11-question survey⁶ sent to all national statistical offices in July 2019. The purpose of the survey was to collect information on plans and outcomes of 2020 round censuses. The present report provides detailed results based on replies received from 158 countries or areas. The results of the survey provide an overview of the status of census taking among United Nations Member States at the midway point of the 2020 census round.

6. However, it is important to recognize that the information that was provided by countries or areas relates to the situation as of the time of the survey, i.e., mainly July-August 2019. Of the 158 countries or areas that responded to the survey, only about 23 per cent had already carried out their censuses when they participated in the survey. The interpretation of the results should, therefore, take into account the fact that for the majority of the responding countries or areas, the information provided relates to what was planned which is subject to change as these plans get implemented. An end-of-decade study will provide a more accurate assessment of the national implementation of the 2020 census round.

I. Implementation of the 2020 census round

7. The survey requested countries to provide information on the census reference date for their 2020 round of population and housing censuses. Annex Table 1 presents the reported schedules of population and housing censuses distributed over the 2020 census round, which spans the period 2015-2024. As at the end of the year 2019, 36 countries (representing 23 per cent of responding countries) had already carried out their population and housing censuses.

8. If censuses are carried out as planned, the peak years for census taking will be the years 2020 and 2021, when 49 and 53 responding countries, respectively, plan to conduct their censuses. In these two peak years 65 per cent of all the responding countries will carry out a census (see Figure 1). The concentration of census activity in these two years can partly be explained by adherence to United Nations recommendations⁷ that call for conducting censuses in the year ending in “0” or at a time as near to it as possible as well as the drive for regional coordination whereby countries in regions resolve to have their censuses around the same date/year. A prime example of this is European countries that, under the terms of the European Community Regulation, plan to conduct their censuses in the year 2021.

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 *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>.

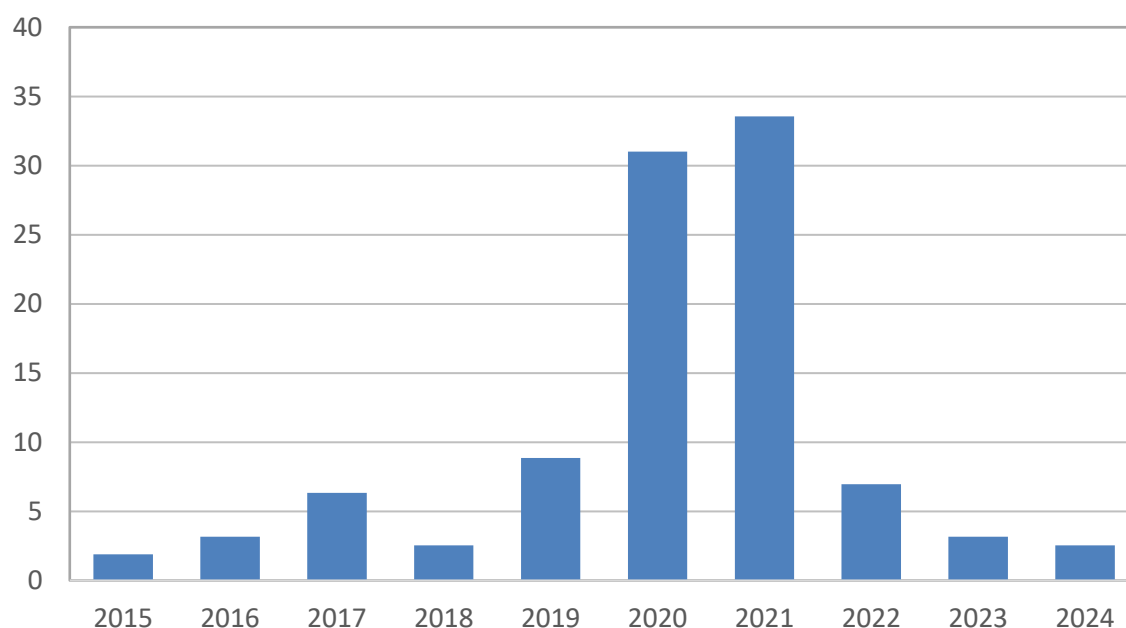
⁵ *Handbook on Population and Housing Census Editing, Revision 2* (New York, 2019). Available at: <https://unstats.un.org/unsd/demographic-social/meetings/2019/newyork-egm-census/handbook-draft.pdf>.

⁶ Available at: <https://tinyurl.com/y4es2mo7>.

⁷ *Principles and Recommendations for Population and Housing Censuses, Revision 3*, para 1.13.

9. It should be noted that initial scheduling as reported by countries may not hold for a variety of reasons. Past census rounds were marked with postponements of census dates due to reasons such as budgetary constraints, technical issues, lack of skilled staff and political situations. As noted in section X, 32 countries (representing approximately 20 per cent of responding countries) have already postponed their previously planned 2020 round census date. It is highly likely that as the 2020 census round progresses, additional countries will postpone their scheduled censuses. Only an end-of-decade study can provide a more accurate assessment of national implementation of 2020 round censuses.

Figure 1: Distribution of population and housing censuses over the 2020 census round spanning the period 2015-2024, percentage



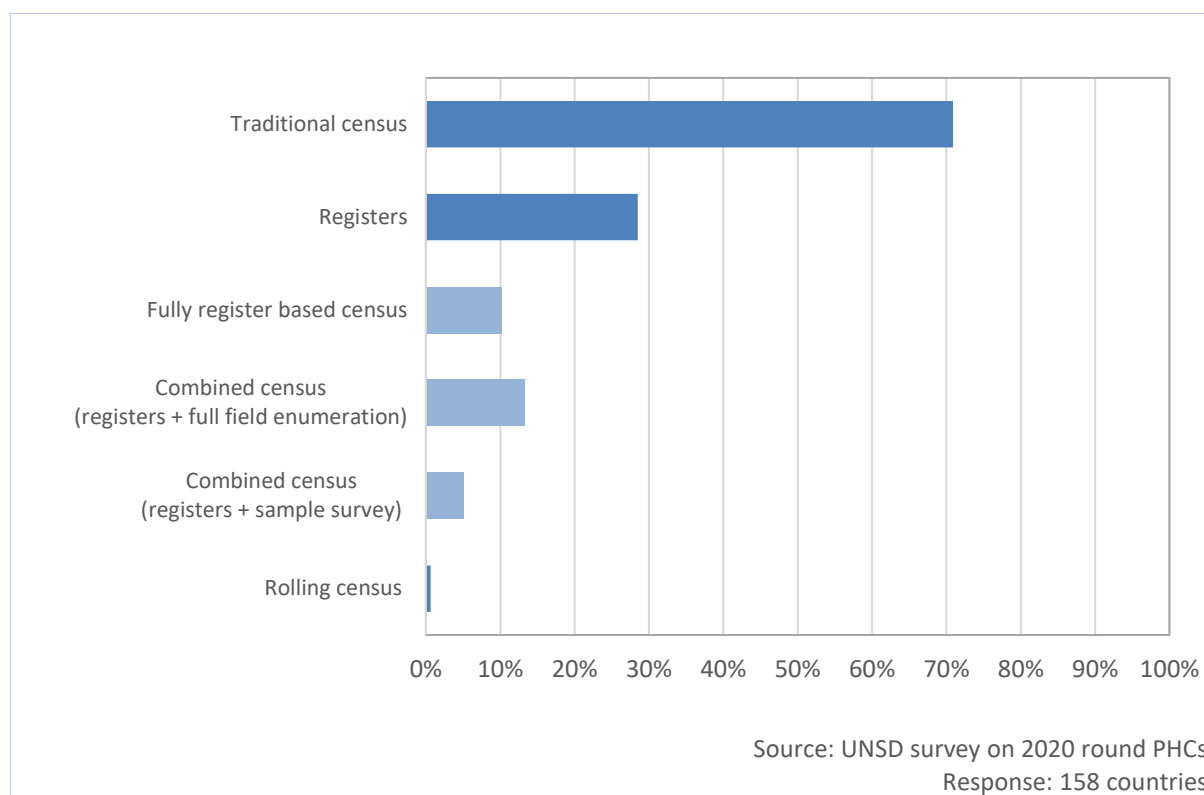
II. Main census methods

10. The survey collected information on the main census method used by countries in the 2020 round. In the survey, countries were requested to indicate the main census methodology from five options: (i) traditional census (full field enumeration); (ii) fully register-based census; (iii) combined census with full field enumeration and registers; (iv) combined census with registers and sample survey(s) and (v) rolling census. The responses are summarized in Annex Table 1 (also, see Figure 2).

11. The results indicate that the traditional census, based on full field enumeration whereby each household in the country is approached with a request to provide information, is the predominant methodology in conducting population and housing censuses. Out of 158 countries that responded to the survey, 112 countries (71 per cent) used or will use the traditional approach to censuses. A significant number of countries (45 countries out of 158) had used or will use administrative registers for producing small area statistics, either using administrative registers with full field enumeration (13 per cent) or combining registers with sample surveys (5 per cent) for compiling data on census topics that are not available in administrative registers. Among countries which use administrative registers, only 10 per cent

fully rely on administrative registers for producing small areas statistics. The rolling census methodology is so far used only in one country.

Figure 2: Main census methods for 2020 round population and housing censuses, percentage



12. The survey results indicate regional variation in the main census methodology used for producing population counts and compiling data on demographic, social and economic characteristics of population at the small area level. In Europe and North America, registers are used to a large extent. The majority of the countries in these regions conduct their censuses using administrative registers mostly in combination with full field enumeration or household survey. About 25 per cent of countries in these regions use registers solely for producing census statistics. With the exception of Latin America and the Caribbean, all other regions show evidence of use of the traditional approach as well as alternative methods in the 2020 round. 30 per cent of countries in Asia and 18 per cent of those in Oceania used or will use alternative methodologies involving the use of administrative registers.

III. Methods of enumeration for field-based data collection

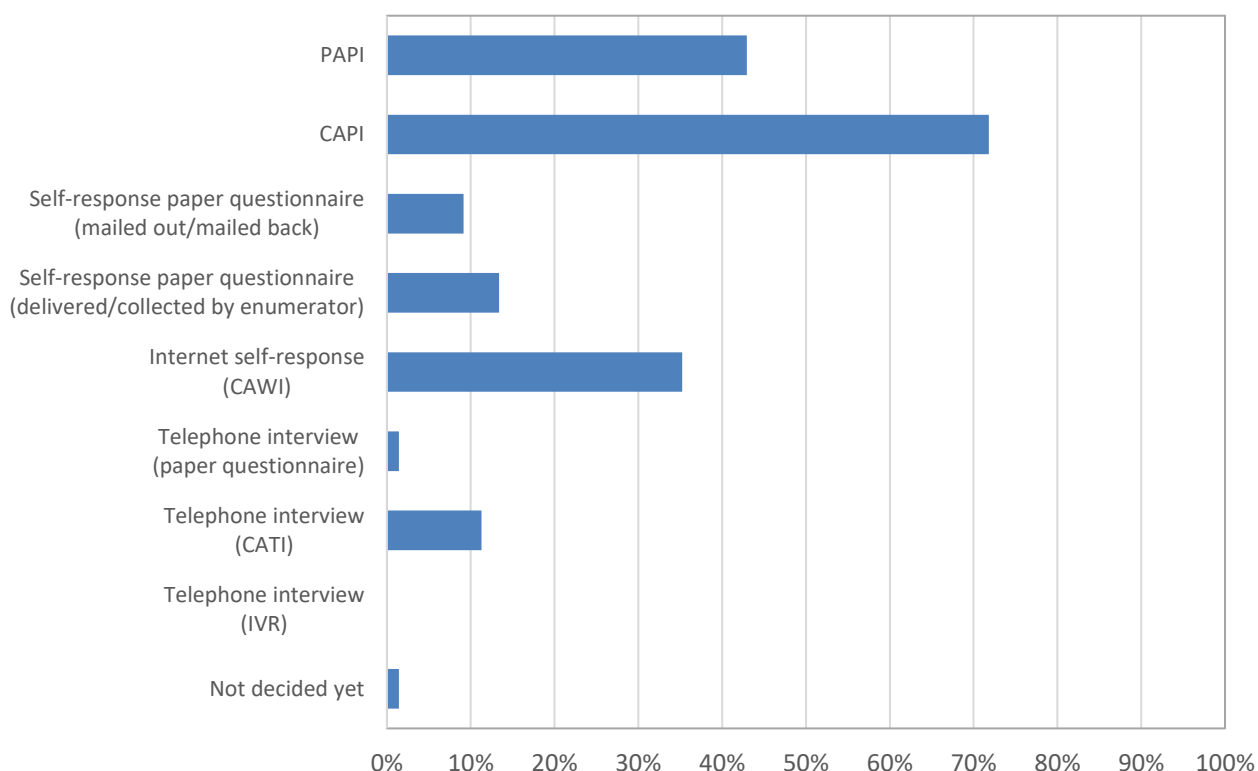
13. The survey included a question regarding the enumeration method(s) used or to be used by countries in the 2020 census round (i.e. the methods to be used for collecting data in the field). The major data collection methods provided as possible responses included: face-to-face interview with paper questionnaire (PAPI) or with portable electronic devices (computer-assisted personal interviewing, CAPI); telephone interview with paper questionnaire or assisted with computer (CATI) or using automated telephone interviewing/interactive voice response (IVR); self-response with paper questionnaire (with either the questionnaires mailed out/mailed back or delivered/collected by enumerators) or

with Internet (CAWI). Annex Table 3 shows the results of the survey on this topic (also, see Figure 3).

14. The vast majority of the countries undertaking any form of field-based enumeration (i.e., traditional census, registers combined with either full-field enumeration or with sample surveys, and the rolling census) intended to use or already used a combination of enumeration methods. Out of 142 responding countries conducting field-based data collection, the most frequently used enumeration method is face-to-face interviewing using portable electronic devices (CAPI) (72 per cent) followed by PAPI (43 per cent) and self-enumeration with Internet (CAWI) (35 per cent).

15. The survey result display remarkable variation among regions, especially in the use of the three most commonly used data collection methods mentioned above. By far, face-to-face interview with CAPI is the primary data collection method in Africa (89 per cent), Asia (82 per cent) and Latin America and the Caribbean (71 per cent), while self-enumeration with Internet (CAWI) is the primary method in Europe (66 per cent) and Northern America (100 per cent).

Figure 3: Methods of enumeration in the 2020 round of population and housing censuses, for field-based data collection, percentage



Source: UNSD survey on 2020 round PHCs

Note: Excluding the 16 countries that conduct fully register-based censuses, 142 responding countries conduct field-based data collection (of which 112 conduct the traditional census and 29 conduct a combined census combining data from registers with those collected from field operation via full-field enumeration on selected topics or sample surveys).

16. The results of the survey clearly show that there is a general tendency in the 2020 round of replacing paper-based data collection methods (PAPI and PASI) with electronic data collection methods (CAPI and CAWI). In terms of self-enumeration, while it was applied in previous census rounds primarily in paper form (self-enumeration paper questionnaire, 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. Telephone interview using electronic questionnaire (CATI) was used to a lesser extent as an initial data collection method. In most countries CATI was used for following up with respondents in order to address missing values and non-response.

17. It is expected that the trend of using electronic data collection methods would significantly improve census coverage and the quality and timeliness of census results. Furthermore, the use of such technologies facilitates the collection of geographical information, thereby allowing the linkage of census data with location information and the production of geo-referenced census data.

IV. Types of census forms for field-based data collection

18. The purpose of the census questionnaire is to capture data from respondents. Countries decide what type of census questionnaire(s) to use taking into consideration such factors as costs, national legal requirements, burden on the respondents, and demand to add topics to those historically covered by the population and housing census. Countries' decision is also impacted by whether alternative sources of data, such as registers, are to be used for compiling census data. Countries facing demand to broaden the scope of the census by adding topics often decide to collect data on the additional topics through the use of sampling methodology that utilizes long questionnaires. In this approach, two questionnaires are used: (a) a short questionnaire containing only those questions intended for universal coverage and (b) a long questionnaire containing detailed questions on the specific census topics and administered to a sample population only.

19. The survey requested countries to indicate what type of census forms they used or planned to use in the 2020 round: i) single form (the questionnaire consists of a standard set of questions applied to all individuals and housing units covered in the census); ii) short form only (census form contains only those questions intended for universal coverage); iii) long form only (census form contains detailed questions intended for sample population); and, iv) both short and long forms. The results of the survey on this topic are presented in Annex Table 4.

20. The results of the survey show that the "single form" whereby all census questions are applied to all individuals and housing units covered in the census is used in more than two-thirds (67 per cent) of responding countries. Both the short and long forms were or will be used in 15 of the responding countries (9 per cent). In the remaining countries with field-based data collection, either the "short" form or "long" form was exclusively used.

V. Concept of population count

21. With regard to population count in the census, there are two internationally recommended concepts for identifying the total population. The two concepts are: a) usual resident count (also called *de jure* count; a count on the basis of the place where a person

usually resides), and b) population present count (also called de facto count; a count on the basis of the place where a person is present at the time of the census). In practice, the two concepts can be applied in one census. For example, when a census is carried out on a population present (de facto) basis, it is still possible to produce figures for the usual resident (de jure) population if information is collected on the place of usual residence of individuals. The choice between a de jure and a de facto approach has major implications on the organisation of the enumeration phase. Also, the census results in terms of de jure population will be directly influenced by the definition of place of usual residence adopted and by its implementation during the census.

22. According to the survey results (see Annex Table 5), about half of all responding countries adopted the usual resident count (a person's usual residence should be that at which he/she spends most of his/her daily night-rest), while 43 countries (representing 27 per cent) relied on the concept of population present count. The survey results indicate that a substantial number of countries (32 countries; 20 per cent) conducted or will conduct their censuses using both concepts.

23. A review of the responses also shows that there is significant variation among regions. In Africa and Oceania, while about half of the responding countries used or will use the population present concept only, approximately 30 per cent of the countries in these regions used or will use both concepts. On the other hand, the survey results show that 85 per cent of countries in Europe and 75 per cent of those in Northern America conducted or will conduct their censuses based on the concept of usual resident only. It should be noted that a few countries reported that they used or will use another concept of population count (legal place of residence) which is probably not compatible with the place of usual residence concept.

VI. Collection of geographic coordinates

24. In recent decades, the use of technology in conducting population and housing censuses has intensified in all phases of the census operation including in the planning, mapping, data collecting, processing and dissemination stages. One of the most significant developments in the use of technology in census operations lies in the integration of geographical information systems (GIS) throughout the census operation. The use of electronic data collection technologies with capability for capturing GPS coordinates has provided opportunities for linking census data with the location of enumeration units and generating geo-referenced census data.

25. The collection of GPS coordinates enables developing effective geo-referenced statistical information infrastructure for better interpretation of census data by aggregating the same data to different geographical hierarchies such as administrative units, regions, functional areas and grids.

26. The survey included a question aimed at compiling information on country practices in the collection of GPS location information. Countries were requested to indicate the units for which they collected GPS coordinates: (a) enumeration areas, (b) building and housing units, and (c) roads and other features such as railroads, landmarks, etc. Annex Table 6 presents the results.

27. The survey results indicate that most of the responding countries collected or are planning to collect GPS coordinates in connection with their 2020 round of population and

housing censuses. Based on the results, it can be deduced that 86 per cent of the countries collect GPS data for enumeration areas, while 70 per cent collect location information for buildings and housing units. Out of the 158 responding countries, only 14 per cent indicated no intent to collect this information (some of these countries rely on the use of registers for compiling their census statistics).

VII. Methods of evaluation to measure the quality of census data

28. It is commonly accepted that a population census is not perfect and that errors can and do occur at all stages of the census operation. The quality of population and housing census data is very important for many reasons, including building public trust in the national statistical system. It is therefore imperative that census evaluation is undertaken in order to provide users with a level of confidence when utilizing the data, and to explain errors in the census results. Numerous methods are available for measuring and evaluating the quality of census data.

29. The vast majority of responding countries have either undertaken or plan to carry out evaluation of their censuses. The results of the survey show (see Annex Table 7) that post enumeration surveys (PES) and demographic analysis are the two major methods for evaluating census data. Of these 99 countries or areas (66 per cent) indicated that the PES method will be used to evaluate the census. A nearly equal number of countries will conduct demographic analysis.

30. There are observed regional differences in the methods of census evaluation. Use of the PES is predominant in Africa and Asia, while Europe and Latin America and the Caribbean rely on the use of record checks with administrative data (eg. vital registration) more than any other region of the world.

VIII. Data dissemination products

31. The survey gathered information on digital dissemination products that enhance accessibility and interactivity with data. Data stored in census databases represent a rich source of information. Online access to such databases could potentially enhance the accessibility of census data to a large user base. On-demand and direct access to a census database allows fast and relatively inexpensive production of tables and maps. Countries or areas were requested to indicate data products they intended to produce from the following list: (i) interactive online databases; (ii) GIS and web-based mapping tools; (iii) grid-based outputs; and, (iv) anonymized microdata. Annex Table 8 shows a summary of the responses received from the responding 158 countries.

32. A review of the results illustrates that the overwhelming majority (90 per cent) of responding countries disseminated or planned to disseminate census data through online, interactive databases. Countries in both developed and developing regions already offer or will offer interactive online databases to census data users, indicating that this media of dissemination will be the primary tool of dissemination in the 2020 round of population and housing censuses.

33. GIS and web-based mapping tools for data users will be also be offered in the majority of responding countries (67 per cent). Use of GIS and web-based mapping tools will

be less common as compared to interactive online databases (for generating tabulations on-demand), possibly indicating that challenges exist in many countries in utilizing and integrating geographic information systems (GIS) in statistical production systems.

34. Annex Table 8 shows that a total of 104 countries (about two-third of responding countries) already disseminated or plan to disseminate anonymised sample of census microdata (individual records that contain information collected in a census on the characteristics of each person, household and housing unit). Microdata-sets link household information with individual information, thus allowing researchers to know the characteristics of the individual and other household members.

35. Some responding countries indicated that, pursuant to applicable census laws and other statistical legislations, they routinely apply confidentiality rules to avoid the disclosure of identifiable personal or household information. Some of the measures reported by countries or areas responding to the survey include anonymizing microdata samples, requiring data protection and privacy contracts, and allowing access to microdata only in a secure and controlled environment. Several countries or areas that responded to the survey restrict the use of microdata only for academic, research and policymaking purposes.

36. A total of 39 countries (representing 25 per cent of respondent countries) reported offering or planning to offer grid-based census outputs, thus disseminating geo-referenced census data along with tools for visualizing, analyzing, modelling and presenting spatially referenced census data. Geo-referenced data allow the use of models for granular assessment of population distributions and require advanced capacity in integrating geographic information systems (GIS) into statistical production systems.

37. Europe stands out as the region where nearly two-thirds of the countries will disseminate grid-based census outputs. This reflects the existing capacity in national statistical offices in the region as well as the strong response of countries in the region to the recommendations of the Conference of European Statisticians Recommendations⁸ for the 2020 round of population and housing censuses which requests countries to adopt a 1 km² grid geography as a key census topic.

IX. Challenges in planning and conducting censuses

38. 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. The survey requested countries to provide information on the challenges they faced in planning and conducting 2020 round of population and housing censuses. For each pre-specified area of challenge, countries were requested to rate the degree of challenge according to the following scaled responses: “significant challenge”; “moderate challenge”; “not a challenge”; and, “not applicable”. In interpreting the responses, it is important to keep in mind that this information for countries that are still planning their censuses which are some years away from the time of the survey may not know the full extent of the challenges they would face at the time of census operations.

⁸ *Conference of European Statisticians Recommendations for the 2020 Censuses of Population and Housing*. Available at: https://www.unecce.org/fileadmin/DAM/stats/publications/2015/ECECES41_EN.pdf.

39. As presented in Annex Table 9, the top three issues identified as “significant challenge” or “moderate challenge” midway through the 2020 census round include: implementing new technologies (75 per cent), improving coverage and data quality (75 per cent) and insufficient financial resources (72 per cent). Other challenges highlighted in the responses include: implementing new methodologies (66 per cent), timeliness (66 per cent), managing public trust and perceptions about the census (66 per cent), keeping to budget (65 per cent), and, improving data dissemination (65 per cent).

40. While the majority of countries that will conduct a population and housing census will use the traditional method (whereby all the households in the country are approached with a request to provide information), an increasing number of countries will be relying on registers (registers solely or complemented by a full field enumeration or sample survey). What is also evident is that countries are shifting to the use of contemporary technologies, often combining two or more methods of enumeration in order to ensure completeness of coverage, timeliness and the production of census statistics in line with expectation and demand.

41. 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.

42. While it is indisputable 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.

43. 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 methods of data collection.

X. Postponement of scheduled census dates

44. The survey requested countries whether they postponed their census schedule at least once during the 2020 round. The survey also requested countries to specify the reason for postponement. Annex Table 10 presents the results of the survey.

45. Among the responding 158 countries or areas, 32 (representing approximately 20 per cent of responding countries) indicated that they had already postponed the previously planned census date. The most cited reason for postponement is lack of funding for the census operation. This was a particular concern in Africa, Asia and Latin America and the Caribbean. In addition, several countries indicated experiencing internal turmoil and conflicts that have resulted in an adverse effect on the successful implementation of their censuses.

Problems or delays with preparations also seems to have impacted the census timeline in a number of countries. Other reasons mentioned for postponement include the need for regional coordination in order to have census around the same date/year.

46. At present it is 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 otherwise produces small area census-like statistics at least once in the period 2015–2024. An end-of-decade study is necessary to provide a more accurate assessment of national implementation of 2020 round censuses.

Annex Tables

Annex Table 1. Scheduled census dates for 2020 round population and housing censuses, number and percentage

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<i>Number</i>										
All 158 responding countries	3	5	10	4	14	49	53	11	5	4
Africa (38)	1	1	3	2	5	8	7	5	2	4
Asia (36)	2	0	3	0	4	16	10	1	0	0
Europe (41)	0	1	0	0	2	9	27	0	2	0
Latin America and the Caribbean (28)	0	0	2	1	1	10	8	5	1	0
Northern America (4)	0	2	0	0	0	2	0	0	0	0
Oceania (11)	0	1	2	1	2	4	1	0	0	0
<i>Percentage</i>										
All 158 responding countries	2	3	6	3	9	31	34	7	3	3
Africa (38)	3	3	8	5	13	21	18	13	5	11
Asia (36)	6	0	8	0	11	44	28	3	0	0
Europe (41)	0	2	0	0	5	22	66	0	5	0
Latin America and the Caribbean (28)	0	0	7	4	4	36	29	18	4	0
Northern America (4)	0	50	0	0	0	50	0	0	0	0
Oceania (11)	0	9	18	9	18	36	9	0	0	0

Annex Table 2. Main census methods for 2020 round population and housing censuses, number and percentage

	All 158 responding countries	Africa (38)	Asia (36)	Europe (41)	Latin America and the Caribbean (28)	Northern America (4)	Oceania (11)
	<i>Number</i>						
Traditional census	112	37	25	12	28	1	9
Fully register based census	16	0	3	12	0	1	0
Combined census - <i>Registers and full field enumeration</i>	21	1	5	11	0	2	2
Combined census - <i>Registers and sample survey</i>	8	0	3	5	0	0	0
Rolling census	1	0	0	1	0	0	0
Other	0	0	0	0	0	0	0
	<i>Percentage</i>						
Traditional census	71	97	69	29	100	25	82
Fully register based census	10	0	8	29	0	25	0
Combined census - <i>Registers and full field enumeration</i>	13	3	14	27	0	50	18
Combined census - <i>Registers and sample survey</i>	5	0	8	12	0	0	0
Rolling census	1	0	0	2	0	0	0
Other	0	0	0	0	0	0	0

Annex Table 3. Methods of enumeration in the 2020 round of population and housing censuses, for field-based data collection, number and percentage

	All 142 countries with field-based data collection*	Africa (38)	Asia (33)	Europe (29)	Latin America and the Caribbean (28)	Northern America (3)	Oceania (11)
	<i>Number</i>						
Face-to-face interview with paper questionnaire	61	13	17	7	15	2	7
Face-to-face interview with electronic questionnaire (CAPI)	102	34	27	16	20	2	3
Self-response with paper questionnaire (questionnaire mailed out/mailed back)	13	0	3	6	0	2	2
Self-response with paper questionnaire (questionnaire delivered/collected by enumerator)	19	1	6	8	0	1	3
Internet self-response (CAWI), on-line or off-line (using downloadable form)	50	2	18	19	6	3	2
Telephone interview, using paper questionnaire	2	0	1	0	0	0	1
Telephone interview, using electronic questionnaire (CATI)	16	1	6	4	2	3	0
Telephone interview, using automated telephone interviewing/interactive voice response (IVR)	0	0	0	0	0	0	0
Other	2	0	0	2	0	0	0

	<i>Percentage</i>						
Face-to-face interview with paper questionnaire	43	34	52	24	54	67	64
Face-to-face interview with electronic questionnaire (CAPI)	72	89	82	55	71	67	27
Self-response with paper questionnaire (questionnaire mailed out/mailed back)	9	0	9	21	0	67	18
Self-response with paper questionnaire (questionnaire delivered/collected by enumerator)	13	3	18	28	0	33	27
Internet self-response (CAWI), on-line or off-line (using downloadable form)	35	5	55	66	21	100	18
Telephone interview, using paper questionnaire	1	0	3	0	0	0	9
Telephone interview, using electronic questionnaire (CATI)	11	3	18	14	7	100	0
Telephone interview, using automated telephone interviewing/interactive voice response (IVR)	0	0	0	0	0	0	0
Other	1	0	0	7	0	0	0

* Excluding countries with no field-based data collection (i.e. fully register based censuses).

Annex Table 4. Census forms used in the 2020 round of population and housing censuses, for field-based data collection, number and percentage

	Not applicable <i>(no field-based data collection; fully register based census)</i>	Single form only <i>(all census questions applied to whole population)</i>	Short form only <i>(census form contains only those questions intended for universal coverage)</i>	Long form only <i>(census form contains detailed questions intended for sample population)</i>	Both short and long forms
<i>Number</i>					
All 158 responding countries	16	106	8	13	15
Africa (38)	0	32	0	1	5
Asia (36)	3	25	1	6	1
Europe (41)	12	14	6	6	3
Latin America and the Caribbean (28)	0	23	0	0	5
Northern America (4)	1	3	0	0	0
Oceania (11)	0	9	1	0	1
<i>Percentage</i>					
All 158 responding countries	10	67	5	8	9
Africa (38)	0	84	0	3	13
Asia (36)	8	69	3	17	3
Europe (41)	29	34	15	15	7
Latin America and the Caribbean (28)	0	82	0	0	18
Northern America (4)	25	75	0	0	0
Oceania (11)	0	82	9	0	9

Annex Table 5. Concepts of population count used in 2020 round population and housing censuses, number and percentage

Population present count	Usual resident count	Both Population present and Usual resident count	Other
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Number

All 158 responding countries	43	80	32	3
Africa (38)	16	10	12	0
Asia (36)	8	17	10	1
Europe (41)	3	35	1	2
Latin America and the Caribbean (28)	10	13	5	0
Northern America (4)	0	3	1	0
Oceania (11)	6	2	3	0

Percentage

All 158 responding countries	27	51	20	2
Africa (38)	42	26	32	0
Asia (36)	22	47	28	3
Europe (41)	7	85	2	5
Latin America and the Caribbean (28)	36	46	18	0
Northern America (4)	0	75	25	0
Oceania (11)	55	18	27	0

Annex Table 6. Collection of geographic coordinates in the 2020 round of population and housing censuses, number and percentage

	All 158 responding countries	Africa (38)	Asia (36)	Europe (41)	Latin America and the Caribbean (28)	Northern America (4)	Oceania (11)
	<i>Number</i>						
Not applicable <i>(no plan to collect GPS coordinates)</i>	22	3	7	6	2	1	3
Enumeration area <i>(centroid and/or boundary)</i>	136	35	29	35	26	3	8
Building and housing unit location	110	28	20	31	20	3	8
Roads and other features <i>(such as railroads, water bodies, facilities, landmarks, etc.)</i>	39	14	5	9	9	1	1
Other	15	6	6	2	1	0	0
	<i>Percentage</i>						
Not applicable <i>(no plan to collect GPS coordinates)</i>	14	8	19	15	7	25	27
Enumeration area <i>(centroid and/or boundary)</i>	86	92	81	85	93	75	73
Building and housing unit location	70	74	56	76	71	75	73
Roads and other features <i>(such as railroads, water bodies, facilities, landmarks, etc.)</i>	25	37	14	22	32	25	9
Other	9	16	17	5	4	0	0

Annex Table 7. Methods of evaluation for measuring the quality of census data in the 2020 round of population and housing censuses, number and percentage

Not applicable (no plan to conduct census evaluation)	Post enumeration survey	Demographic analysis	Comparison with results of existing household surveys	Record checks with administrative data (eg. vital registration)	Interpretation studies on current census	Other
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Number

All 158 responding countries	8	99	97	77	63	19	5
Africa (38)	0	31	27	19	8	4	0
Asia (36)	0	28	20	19	14	8	1
Europe (41)	4	19	22	18	20	5	3
Latin America and the Caribbean (28)	3	14	20	17	17	2	0
Northern America (4)	0	1	3	0	1	0	1
Oceania (11)	1	6	5	4	3	0	0

Percentage

All 158 responding countries	5	63	61	49	40	12	3
Africa (38)	0	82	71	50	21	11	0
Asia (36)	0	78	56	53	39	22	3
Europe (41)	10	46	54	44	49	12	7
Latin America and the Caribbean (28)	11	50	71	61	61	7	0
Northern America (4)	0	25	75	0	25	0	25
Oceania (11)	9	55	45	36	27	0	0

Annex Table 8. Data dissemination products in the 2020 round of population and housing censuses, number and percentage

	Interactive online databases	GIS and web-based mapping tools for data users	Grid based outputs	Anonymized microdata
<i>Number</i>				
All 158 responding countries	142	106	39	104
Africa (38)	34	30	5	32
Asia (36)	30	21	5	18
Europe (41)	38	27	26	29
Latin America and the Caribbean (28)	26	19	3	18
Northern America (4)	4	4	0	3
Oceania (11)	10	5	0	4
<i>Percentage</i>				
All 158 responding countries	90	67	25	66
Africa (38)	89	79	13	84
Asia (36)	83	58	14	50
Europe (41)	93	66	63	71
Latin America and the Caribbean (28)	93	68	11	64
Northern America (4)	100	100	0	75
Oceania (11)	91	45	0	36

Annex Table 9. Challenges in planning and conducting 2020 round of population and housing censuses, number and percentage

	Significant or Moderate challenge	Significant challenge	Moderate challenge	Not a challenge	Not applicable
<i>Number</i>					
Legal authority / Governmental support	54	15	39	91	13
Financial resources	114	52	62	37	8
Keeping to budget	102	37	65	45	11
Timeliness	105	30	75	46	7
Improving coverage and data quality	118	33	85	33	7
Privacy and confidentiality concerns	77	20	57	72	9
Managing public trust / perceptions about the census	104	30	74	44	10
Identifying residential addresses	72	17	55	76	10
Recruiting and training field staff	92	33	59	44	22
Implementing new technologies	119	55	64	22	17
Implementing new methodologies	104	33	71	40	14
Improving data dissemination	103	26	77	43	12
Other	16	8	8	16	126
<i>Percentage</i>					
Legal authority / Governmental support	34	9	25	58	8
Financial resources	72	33	39	23	5
Keeping to budget	65	23	41	28	7
Timeliness	66	19	47	29	4
Improving coverage and data quality	75	21	54	21	4
Privacy and confidentiality concerns	49	13	36	46	6
Managing public trust / perceptions about the census	66	19	47	28	6
Identifying residential addresses	46	11	35	48	6
Recruiting and training field staff	58	21	37	28	14
Implementing new technologies	75	35	41	14	11
Implementing new methodologies	66	21	45	25	9
Improving data dissemination	65	16	49	27	8
Other	10	5	5	10	80

Annex Table 10. Postponement in census schedules by reason in 2020 round population and housing censuses, number and percentage

Census postponed at least once	Reason for postponement					
	Lack of budget	Problems / delays with preparations ¹	Lack of legal authority / Government support ²	Political or civil disturbance	Lack of technical skills/capacity	Other ³

Number

All 158 responding countries	32	17	12	10	8	2	7
Africa (38)	6	4	4	3	0	1	1
Asia (36)	6	2	4	2	2	1	2
Europe (41)	6	4	0	1	3	0	1
Latin America and the Caribbean (28)	12	7	3	3	3	0	2
Northern America (4)	0	0	0	0	0	0	0
Oceania (11)	2	0	1	1	0	0	1

Percentage

All 158 responding countries	20	11	8	6	5	1	4
Africa (38)	16	11	11	8	0	3	3
Asia (36)	17	6	11	6	6	3	6
Europe (41)	15	10	0	2	7	0	2
Latin America and the Caribbean (28)	43	25	11	11	11	0	7
Northern America (4)	0	0	0	0	0	0	0
Oceania (11)	18	0	9	9	0	0	9

Note:

1. For example, delay in purchase of tablets.

2. For example, decree/proclamation for census not issued yet.

3. For example, regional coordination to have census around the same date/year, election related, NSO busy with other data collection activities, etc.