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**Reports, guidelines and recommendations prepared
under the umbrella of the Conference**

Use of registers and administrative data for population and housing censuses

Addendum

Results of the consultation on the Guidelines on the use of registers and administrative data for population and housing censuses

Note by the secretariat

Summary

The document summarizes the comments by members of the Conference of European Statisticians (CES) on the *Guidelines on the use of registers and administrative data for population and housing censuses* (ECE/CES/2018/4). The Secretariat carried out the electronic consultation in March/April 2018.

A total of 40 countries and 3 international organizations replied to the consultation. All of them supported the endorsement of the Guidelines, subject to the comments provided in the consultation. This note presents the substantive comments received, together with the replies of the UNECE Task Force on Register-based and Combined Censuses, including suggestions for amendments to the Guidelines to address the comments. The revised Guidelines, taking into account the comments are available as document ECE/CES/2018/4/Rev.1 at: <http://www.unece.org/index.php?id=47411>.

In view of the support received, the 2018 Conference of European Statisticians plenary session will be invited to endorse the *Guidelines on the use of registers and administrative data for population and housing censuses* (ECE/CES/2018/4/Rev.1).

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I. Introduction

1. The document summarizes comments made by members of the Conference of European Statisticians (CES) on the *Guidelines on the use of registers and administrative data for population and housing censuses*. The Secretariat carried out an electronic consultation on the Guidelines in March/April 2018.
2. The Bureau of the Conference of European Statisticians (CES) reviewed the draft guidelines in February 2018 and requested the Secretariat to send the document to all CES members for electronic consultation.
3. The following 43 countries and international organizations replied to the consultation: Armenia, Australia, Austria, Belarus, Bosnia and Herzegovina, Canada, Colombia, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Israel, Italy, Japan, Latvia, Lithuania, Mexico, Mongolia, New Zealand, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, CIS-Stat, UN-ECLAC and UNSD.
4. Some countries that were represented in the Task Force on Register-based and Combined Censuses which drafted the guidelines did not provide comments but supported endorsement of the Guidelines by the CES plenary session.
5. The updated Guidelines taking into account the comments received through electronic consultation are available at: <http://www.unece.org/index.php?id=47411>.

II. General comments

6. All responding countries and organizations considered the guidelines ready for approval by CES, subject to the amendments resulting from the comments provided in the consultation.
7. All responding countries and organizations also indicated that the guidelines provide useful guidance on the use of registers and administrative data for population and housing censuses, and agreed with the conclusions.
8. Many countries acknowledged the value of the Guidelines. General remarks of appreciation for the importance and usefulness of the Guidelines were made by a number of countries including: Austria, Croatia, Cyprus, Georgia, Germany, Hungary, Lithuania, Mexico, Serbia, Slovakia, Sweden, Switzerland, United Kingdom. Countries made the following general remarks:
 - (a) Excellently written document with great information value. (Austria);
 - (b) The guidelines provide a useful overview of the key concepts as well as valuable guidance for countries aiming at the introduction of a register-based or combined census system. (Germany);
 - (c) The document is easy to understand, not overloaded and also covers all key aspects, so it will be a handy tool to be consulted by specialists working in the area of the forthcoming census. (Lithuania);
 - (d) Gratitude for the praiseworthy efforts in creating the Guidelines. Given that the Republic of Serbia plans introduction of the register-based census after the 2021 Census, while working on creating the prerequisites for this activity, the document will be of great benefit. (Serbia);

(e) The new UNECE guidelines focusing on register-based and combined censuses are welcome. They will be a good complement to the UNECE Recommendations to each census round (Sweden);

(f) Switzerland endorses this useful document and congratulates the experts of the task force for the excellent work (Switzerland);

(g) United Kingdom was delighted to play a significant part in the development of these Guidelines through what has been a successful task force. A lot of good discussion has been generated resulting in some new guidelines which take into account both countries who have already led the way in moving away from traditional censuses, and those who are just now considering such a transition. The country-specific case studies are especially helpful to learn about different approaches that are being taken in this space (United Kingdom).

III. Specific comments on various chapters of the Guidelines

9. Several countries provided specific comments on various chapters of the Guidelines. The substantive comments are presented in this section, together with the responses by the Task Force. The following text also includes changes introduced by the Task Force to the Guidelines to address the comments received. Editorial comments and suggestions provided by countries (including Austria and the United States) were taken into account in revising the Guidelines but are not included in this note. Comments on the specific situation in individual countries, that have no direct reference to the content of the guidelines, are not reported in this note.

A. Chapter I. Introduction

10. Germany (on Figure 1): “A link with the up-to-date list of country practices at <https://statswiki.unece.org/display/censuses/2020+Population+Census+Round> could be added.”

Response and changes proposed by the Task Force

11. Agreed and done.

B. Chapter II. Scope of the new UNECE guidelines and definitions of register-based and combined censuses

12. Estonia: “The complexity of the combined census method in organising a census could be specifically highlighted.”

Response and changes proposed by the Task Force

13. This becomes clear in several of the case studies.

C. Chapter III. Essential features of a population and housing census

14. Australia: “It would be useful to directly address the range of information (variables) considered essential to a running Census. It appears to be assumed that basic demographic information to support population counts is required, and that a range of other socio-economic information will also be collected; however this range of information is not

specified, even in broad terms. This hampers the discussion for Chapter IV as the range of required variables is a key consideration in a country's ability to transition from away from a traditional Census. The issue is indirectly acknowledged in paragraph 41 where it references "the whole range of Census variables" and that a combined or register-based Census might only provide a reduced set. However, agreeing on a broad set of essential variables would assist countries in identifying more quickly whether a change in Census model is viable, or what they might need to sacrifice in considering a change"

15. Canada: "Some paragraphs use very specific examples (e.g. #26). Since some of these relate to specific time periods, it will create a challenge in keeping the guidelines up to date. I suggest to present these examples in more generic way to avoid this problem".

16. Germany: "Under III.4, the growing demand for georeferenced data on the population as well as buildings and dwellings, and the improved possibilities to produce these in register-based censuses should be added to para. 34. As a case in point the EU initiative to require annual, georeferenced population figures could be mentioned."

17. Romania: "It is necessary to describe how we can check that registers cover the whole census population of the country."

Response and changes proposed by the Task Force:

18. The Task Force agrees with Australia's comment in principle, but it would be difficult to tackle this issue in general in the core text. Some examples of country situations are described in the annexes. The Task Force agrees with Canada that it will be a challenge to keep the guidelines up-to-date. In the current version a balance has been found between being specific and being more generic on the other hand. The aspect mentioned by Germany is specific for the EU countries and therefore not included. The comment by Romania will be picked up in the new Task Force on measuring the quality of administrative sources for use in censuses.

D. Chapter IV. Considerations when transitioning from a traditional census to a register-based or combined census

19. Australia: "An emerging consideration which could be referenced is the growing value of directly-collected (traditional) Census data within increasingly linked data environments. Collected Census data is becoming more and more valuable in linked micro-data analysis that cuts across various multiple policy domains. It is particularly useful for providing either outcomes or explanatory factors for longitudinal studies that are enabled by linking Census data with sources covering future or past time points for individuals. It is ironic that while increasing linkage of administrative data is enabling us to consider Census models requiring less data collection, that these same linked environments are becoming increasingly reliant on Census data to produce valuable statistical analysis."

20. Chile suggested moving para. 60 ("It is always the case...") after para. 76 ("When a country..."), and adding the following text as a new paragraph at the end of section IV.2.7: "As it is important to know the quality of the existing registers that are initially collected and managed by other public officials from institutions other than the NSIs, it is also important that long-term staff in the institution as well as the newly arrived staff are trained in new concepts, new techniques and technologies." Chile also suggested adding the following sentence at the end of para. 77 ("If there are planned moves..."): "For this purpose is necessary that the processes are documented and that these documents are made available to the users."

21. Germany: “Under IV.3.2 (para. 80; differences in concepts and definitions), a recommendation for the post 2020 census rounds should be added to review international standards regarding basic concepts (e.g. population base) taking into account an assessment of the possibility to obtain the required data from registers. This could help to facilitate the use of registers and at the same time guarantee international harmonisation.

22. Hungary: “**Section IV.3** - Even though combined or completely registered based censuses are less expensive than a traditional one (as mentioned among advantages), the budget of such censuses in a transition period, especially detailed by tasks differs significantly from that of a traditional census. Census costs might arise earlier, and it might be challenging for the NSI’s to convince the decision makers about the census costs years before the census will take place. (See Measuring population and housing, Practices of the UNECE countries in the 2010 round of censuses, Chapter 7.) This chapter is recommended to be complemented with a mention of this issue. **Para. 55** could be complemented with the time factor: “The number of these necessary conditions present some challenges to the NSI and therefore require more time in the preparation phase.” **Para. 84** might be complemented with the issue of missing variables. Countries starting to use administrative sources may face the problem of previously collected variables not available in the future.

23. Romania: “Another condition for the **point IV.2**, first of all, is “The existence of the administrative sources and they should be usable for statistical purposes.” For the **point IV.3** another difficulty in producing census statistics using registers is the following: we do not have an external reference against what to compare the census results. Sample surveys are weighted with population estimates which are derived from census population also. A better title of the **point IV.1.4** could be “Possibility of producing of census statistics more frequently”.

24. Slovakia: “Due to fact that legislation is a key aspect of transformation chapter IV.2.1 should be more concrete”.

Responses and changes proposed by the Task Force

25. The comments of the responding countries have been taken into account. Some of the comments were country specific. In the main text the general situation is described and in the annexes some examples of country approaches can be found.

E. Chapter V. Common framework for register-based and combined censuses

26. Canada: “Same comment as for chapter 3 [some examples relate to specific time periods, should be more generic] – I would remove reference to Poland in paragraph #90 as it is too time specific.”

27. Estonia: “The users of census data as an important target group have been left out of the framework, while they require a lot of informing when using registers for a census for the first time.”

28. Romania: “The first two paragraphs in point V.2 should be: “The data sources can include census variables or other information from which the census variables can be derived by applying a specific algorithm.” And “The first step of the transformation process is to define who is included in the census target population (census units) and to build a selection algorithm of the eligible units from the registers.”

29. Slovakia: “Construction of the statistical registers is based on creation of separate linked base statistical registers. As base registers four registers are mentioned. There is no

mention about situations, where address register exists, but dwelling register does not exist. In reality there can be other combinations of this problem.”

Responses and changes proposed by the Task Force

30. The comments of the responding countries have been taken into account in the final version of the text.

F. Chapter VI. Data sources and their quality

31. Canada: “Same comment [some examples relate to specific time periods, should be more generic] for paragraph #114. This paragraph will probably be outdated in a year from now.”

32. Estonia: “There is a need to create an extra manual of data quality measurement for the register holders. It will be helpful to develop a comprehensive, simple and implementable methodology for assessing the current state, identifying the optimal required quality level, planning developments for individual levels, and creating procedures for moving from one level to the next.”

Responses and changes proposed by the Task Force

33. With regard to the comment by Estonia, a new UNECE Task Force has been created in 2018 to work on the measurement of the quality of administrative sources for use in censuses.

G. Chapter VII. Linkage and transformation

34. Hungary: “**Para. 115:** For more detailed methodological information it might be useful to mention in a footnote the UNECE-HLG MOS Data Integration Guide (<https://statswiki.unece.org/display/DI/Guide+to+Data+Integration+for+Official+Statistics>)”

Responses and changes proposed by the Task Force

35. A footnote to the UNECE-HLG MOS Data Integration Guide has been added.

H. Chapter VIII. Statistical registers

36. Estonia commented: “Statistical registers are registers created for statistical purposes. They are typically created by transferring or transforming data from registers and/or other administrative data sources. Usually statistical registers belong to NSIs. The legality of statistical registers must be warranted by the National Statistics Act. As a rule, data saved in a statistical register are not public and it is not allowed to transfer data from the statistical register to any other register or data bank.

37. *Statistical registers and the quality of data.* The more users a system has, the better the quality one can expect. In using such a system for the census, it is the quality of the resulting statistical register rather than the quality of the underlying administrative data sources that counts: are the data of good enough quality to serve as a reliable basis for census tables? The statistical registers become the key driver of coherence in national statistical systems. Quality checks and standards that will support the process after the traditional census is no longer available as a benchmark must be developed and rigorously tested. Surveys to assess quality and imputations or modelling to produce robust outputs

would be other necessary steps typically involved in the transformation of administrative data to a statistical register. In this case, plausible results can be derived from these newly defined (via a special algorithm) variables in a statistical register.”

Responses and changes proposed by the Task Force

38. The comment by Estonia is taken into account.

I. Chapter IX Output quality

39. Estonia: “Output quality has been ensured, but it could be described in more detail which possibilities exist for assessing census quality.

40. Latvia: “Dempster-Shafer theory is mentioned in Box 4 – page31; paragraph 127 – a reference to the description of this theory would be very useful. Please, add a reference to source - page 34; paragraph 141(The Estonian assessment of the census quality)”

41. Romania: “It is not very clear what “factual population” means in Box 5.”

Responses and changes proposed by the Task Force

42. The comments have been taken into account.

J. Chapter X. Approaches and case studies from different countries – Annexes and glossary

43. Belarus noted that it would be useful to add an Annex J with the experience of Netherlands of their register-based census to illustrate practical problems they might have had to overcome.

44. Lithuania: “We would welcome more information about technical parts of some countries which have shared best practice, like algorithms for distinguishing between usual residents and not usual, algorithms for formation of families and households, schemes for evaluation of quality of the final results, etc.”

45. Romania (with regard to Annex A): “It would be interesting to know who (Statistics Ireland or other institution) is building and maintains the Person Activity Register and if the production of statistics is the main purpose of this register.”

Responses and changes by the Task Force

46. With regard to the proposal from Belarus, the task force clarifies that the guidelines present case studies for countries that moved recently from traditional to combined or register-based censuses. For this reason a case study for the Netherlands is not included. However, the task force proposes to amend para. 151 as follows “...Examples include Denmark (first complete register-based census conducted in 1981), Finland (1990), and the Netherlands* (2001). Other countries have made the transition more recently...” and the following footnote “* For the 2001 and 2011 Dutch censuses, see: <https://www.cbs.nl/en-gb/publication/2005/43/the-dutch-virtual-census-of-2001>; <https://www.cbs.nl/en-gb/publication/2014/47/dutch-census-2011>.”

47. The other comments have also been taken into account.

IV. Conclusion

48. All responding countries and organizations supported the endorsement of the guidelines.

49. The comments and views expressed during the electronic consultation were carefully reviewed by the Task Force. In many cases the Task Force recommends amendments to the Guidelines to address the issues raised by the countries and organizations. In other cases the Task Force provides clarifications or explains why – in its opinion - there is no need to amend the Guidelines.

V. Proposal to the Conference

50. In view of the strong support expressed by countries and organizations, the Conference is invited to endorse the revised Guidelines (ECE/CES/2018/4/Rev.1) that take into account the comments received through electronic consultation.
