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## Economic Commission for Europe

### Conference of European Statisticians

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Item 7 (c) of the provisional agenda

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

**Assessing the quality of administrative sources for use in censuses**

### **Results of the consultation on the *Guidelines for assessing the quality of administrative sources for use in censuses***

#### **Note by the Secretariat**

##### *Summary*

This document summarizes the comments made by members of the Conference of European Statisticians (CES) on the *Guidelines for assessing the quality of administrative sources for use in censuses* (ECE/CES/2021/3). The UNECE Secretariat carried out a consultation in March and April 2021.

Forty-five countries and international organizations provided responses to the consultation, all of which supported endorsement by CES, subject to the amendments resulting from the comments provided during the consultation. This document summarizes the comments and suggestions for amendment received and outlines the work that will be undertaken by the Task Force on assessing the quality of administrative sources for use in censuses to amend the Guidelines accordingly.

The 2021 Conference of European Statisticians is invited to endorse the *Guidelines for assessing the quality of administrative sources for use in censuses*, subject to the amendments outlined in this document.



## I. Introduction

1. This document summarizes comments made by members of the Conference of European Statisticians (CES) on the *Guidelines for assessing the quality of administrative sources for use in censuses*.
2. The Guidelines were prepared by the UNECE Task Force on assessing the quality of administrative sources for use in censuses (chaired by the United Kingdom), established in February 2018. The CES Bureau reviewed the draft Guidelines in February 2021 and requested the UNECE Secretariat to send them to all CES members for consultation. The UNECE Secretariat conducted a consultation on the Guidelines in March–April 2021.
3. The following 45 countries and international organizations provided responses to the consultation: Albania, Armenia, Belarus, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Italy, Ireland, Japan, Latvia, Liechtenstein, Lithuania, Malta, Mexico, Republic of Moldova, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, Interstate Statistical Committee of the Commonwealth of Independent States (CIS-Stat), Eurasian Economic Commission, Eurostat, Organisation for Economic Co-operation and Development (OECD).
4. The comments and the Task Force’s responses are summarized in sections II and III. Several countries provided editorial comments and suggestions related to document formatting, typographical and linguistic issues. These are not presented in this note but will be taken into account when editing the Guidelines for publication. Comments and observations about the specific situation in individual countries which have no direct implications for the content of the Guidelines are also not presented in this note.

## II. General comments

5. Many responding countries and organizations expressed their appreciation for the work of the Task Force in this important area in which guidance has been much needed. For example:
  - (a) Serbia: “Most sincere praise for the tremendously dedicated work on creating such a comprehensive document... The Guidelines will make a significant contribution to the future work within [Statistics Serbia]”;
  - (b) Hungary: “The Guidelines are absolutely welcome. Hungary really appreciates the efforts of the Task Force”;
  - (c) Belgium: “A very good guide”;
  - (d) Slovenia: “The Guidelines are structured very well and are very organized”;
  - (e) France: “This document is useful and nice to read”
6. CIS-Stat noted the timeliness of the Guidelines, which have been prepared in good time to permit countries to make use of their recommendations before the next round of decennial censuses.
7. Sweden suggested that the Guidelines could make greater reference to transitions towards increasing use of administrative sources in other statistical areas beyond the census.

### **Response and changes proposed by the Task Force:**

8. The introduction will be amended to ensure that the increasing use of administrative data for censuses is situated more clearly within the broader context of increasing use of administrative data sources across all statistical domains.

### III. Specific comments

9. This section summarizes comments received on specific chapters of the Guidelines, together with the responses by the Task Force where applicable.

#### A. Impacts of the Covid-19 pandemic

10. Having conducted most of its work during the period since the onset of the Covid-19 pandemic, the Task Force is aware that there has been an especially rapid pace of change in the use of administrative sources (for censuses and for other statistical purposes) during this period. The case studies gathered for this work and presented in the draft Guidelines refer to activities undertaken before this period of unprecedented change. While not attempting to capture in detail the full range of all such changes at this late stage, the Task Force was eager to ensure that the Guidelines recognize and reflect the new reality. The consultation feedback form sent to CES therefore asked countries the following question:

*“In light of the changes to censuses of the 2020 round brought about by the Covid-19 pandemic, countries may be applying new practices in the use of administrative sources in their censuses, and/or new approaches to assessing quality and deciding whether an administrative source is ‘good enough’. Do the Guidelines encompass sufficiently all the relevant aspects of any such new approaches in your country?”*

11. Twenty-one countries answered yes; 22 responded that the question was not applicable as there were no such changes in their countries (primarily countries with register-based censuses). One country, Hungary, replied no, noting that for several European Union countries which have postponed their censuses due to the pandemic, the requirement to back-date their data to a 2021 reference date with administrative data will produce new challenges. Hungary recognized that this issue is beyond the scope of the Guidelines, but suggested that since chapters 4 and 5 of the Guidelines are particularly relevant to those countries grappling with this situation, a mention could be made of this in the document.

12. The CES consultation feedback form also invited countries to provide examples of any such changes in the use of or quality assessment of administrative sources brought about by the pandemic. Albania, Belarus, Colombia, Germany, Hungary, Italy, Japan, Latvia Mexico, Poland, Serbia, Slovakia, Turkey and OECD offered comments or provided examples related to such changes resulting from the pandemic.

#### **Response and changes proposed by the Task Force**

13. A box will be added to the Guidelines summarizing the range of comments and experiences shared by countries in relation to the impacts of the pandemic on use and quality assessment of administrative sources for censuses.

#### B. Coverage of hard-to-reach groups in administrative sources

14. In response to a suggestion made by France during an earlier round of feedback on the draft Guidelines, the consultation feedback form invited countries to “share any information on the ways in which [their] country assesses quality with respect to the coverage of hard-to-reach groups in administrative sources”. Responses were provided by Belgium, Colombia, Italy, Latvia, Poland, Slovakia and Sweden.

#### **Response and changes proposed by the Task Force:**

15. The responses provided by these seven countries will be reviewed and included as illustrative examples at relevant points within the Guidelines as appropriate.

16. A point will be added to the recommendations in Chapter 8 proposing further examination of this topic as an area for future work.

## C. Chapter 1 – Introduction

17. The chapter was welcomed as a valuable and clear background to the rest of the Guidelines, notably the summary of recommendations.

18. France suggested that mention be made in this chapter of the particular challenges of groups that are absent or undercounted in administrative sources.

19. Romania offered some additional suggestions for section 1.3, key risks to quality, namely: (i) absence of a unique identifier permitting record linkage; (ii) update frequency of data included in administrative sources and (iii) the use of different classifications or nomenclatures in administrative sources and in the census.

20. Canada suggested some areas for cross-referencing to later parts of the document, and called for a more explicit definition of ‘administrative purposes’.

### **Response and changes proposed by the Task Force:**

21. The comment made by France regarding hard-to-reach groups will be addressed by the actions outlined in section B above.

22. Romania’s suggestions will be added to section 1.3.

23. A footnote will be added in paragraph 7 expanding upon the definition of administrative purposes. Cross-references will be added according to Canada’s suggestions.

## D. Chapter 2 – Census methodologies and uses of administrative data

24. Hungary suggested that the distinction between administrative and statistical population registers should be more clearly explained as this would aid understanding throughout the Guidelines.

25. Italy proposed adding to the list of use cases for employing administrative data in censuses, the case of using them to correct for survey undercoverage.

### **Response and changes proposed by the Task Force:**

26. The distinction between administrative and statistical registers will be clarified both in the chapter and in the glossary. The Task Force will check the rest of the document to ensure consistency of usage.

27. The use case proposed by Italy will be added as a bullet in paragraph 39.

## E. Chapter 3 – Quality framework

28. OECD suggested clarifying the explanation of the relationship between the quality dimensions used by the European Statistical System (ESS) and the Stages put forth in these Guidelines (paragraph 86). They proposed also mentioning in this paragraph other quality dimensions such as transparency, quality of metadata, confidentiality and security.

29. Switzerland noted that administrative sources are not always produced by external entities as implied in section 3.2.

### **Responses and changes proposed by the Task Force:**

30. Paragraph 86 will be amended to make it clear that the ESS dimensions are used within the Guidelines and that they have been augmented with additional dimensions to capture other relevant aspects of the use of administrative data for censuses. The aspects highlighted by OECD are captured within the Guidelines under other headings: quality of metadata is covered in the accessibility dimension under the indicator “interpretability of the source – clear and comprehensive metadata”; transparency is covered under the “public acceptability” indicator and the discussion of legal constraints; confidentiality and security are covered under the “restrictions on data access and use” indicator. The amendment to

paragraph 89 will make clear that under each dimension there are multiple indicators, each dealing with a different aspect of the overall dimension.

31. A footnote will be added to clarify that some registers are produced and owned internally to the NSO in some countries.

## **F. Chapter 4 – Source Stage**

32. Canada proposed mentioning the importance of storing and maintaining metadata in an obvious location (a ‘metadatabase’), once identified.

33. Hungary suggested that references or links to further information should be added to the case studies.

34. New Zealand called for an explicit reference to indigenous communities in the section on public consultation and engagement.

35. Sweden pointed out that ethnicity, which is mentioned as a possible target concept in section 4.2.1.2, is a non-core topic according to the CES Recommendations and suggested that an alternative, core-topic example be offered.

### **Responses and changes proposed by the Task Force:**

36. A sentence on metadata storage will be added to section 4.2.4.

37. References will be included in all case studies, not only in this chapter but throughout the Guidelines in cases where they are not already present.

38. A sentence will be added to section 4.2.4.2 stating that public consultation and outreach is essential for indigenous communities, ethnic minorities or other key groups in society where data about them are to be used for a purpose other than that for which they were collected.

39. The reference to ethnicity will be deleted. No alternative will be inserted as the point is sufficiently exemplified by the other concepts mentioned.

## **G. Chapter 5 – Data Stage**

40. In the section on accuracy and reliability (section 5.1.2), Colombia suggested adding an indicator of the success of merging or matching between databases to update the administrative source.

41. Colombia suggested that including definitions and methods of estimation for the indicators described in section 5.2.2.1 (representation errors) would aid understanding.

42. In the section on timeliness and punctuality (5.2.3), Colombia suggested adding a third measure of time gap in addition to these two, namely the gap between the update of each observation and the date of data delivery.

43. With respect to implausible or missing values discussed in section 5.1.2.2 (measurement errors), Hungary observed that one reason for this could be that a register is newly created and not yet fully populated, as it contains data only for those people for whom an administrative event has occurred. This is the case for example with the Hungarian register of higher education which contains information only on graduations that have taken place since 2005.

### **Responses and changes proposed by the Task Force:**

44. If datasets are merged to check and update the administrative source prior to its receipt by the NSO, then the NSO should receive information on the outcomes of such assessment from the data provider—in which case, such a measure falls under the Source Stage. If, in contrast, the NSO performs such merging itself, then the measurement of success falls under the Process Stage in the area of record linkage. Section 5.2.4 of the Guidelines discusses linkability and provides cross-reference to Chapter 6 for further information. The Task Force

considers that the addition of an indicator related to the success of merging is not necessary in the Data Stage.

45. The Task Force will include cross-references to the German and Polish case studies in section 5.2.2.1 to direct the reader to more detail about the definitions and estimation methods for the indicators mentioned in the text.

46. The Task Force notes the suggestion by Colombia to mention the gap between the update of each observation and the date of data delivery. While timeliness and punctuality can be measured with reference to the dataset as a whole, this time lag could in principle differ for each record. The Task Force does not have experience with such a measure, either in its calculation or its interpretation. After consultation with Colombian experts, the Task Force has decided to add in section 5.2.3, timeliness and punctuality, a discussion of this proposed indicator. This indicator will be defined as ‘percentage of observations updated within the past year’ (counting from the date of delivery to the NSO). The discussion will note that use and interpretation of this indicator would be context-dependent, since in some circumstances there might be good reasons for a lack of update, e.g. if there has been no relevant event to trigger a change (a ‘sign of life’) in the register since the last update for a given record.

47. The observation made by Hungary is welcomed and will be added into the section, exemplified by the situation mentioned by Hungary as well as a related example from Austria, in which there are missing values following the introduction of a new attribute (legal marital status) to the central population register.

## **H. Chapter 6 – Process Stage**

48. Switzerland observed that the chapter focuses on the roles of register owners and the NSO and suggested mentioning also the roles of upstream data suppliers (e.g. municipal authorities which supply data for the registers) and end users. In particular, if someone simultaneously fills the role of both supplier and user (such as a municipality) they have a special interest in high quality data.

49. Switzerland also noted the importance of user-friendly tools for data entry, and clear definitions, in facilitating supply of high quality data.

### **Responses and changes proposed by the Task Force:**

50. The Task Force will incorporate the two points raised by Switzerland in the introduction to the chapter.

## **I. Chapter 7 – Output Stage**

51. Canada raised the possibility that the rank order of items given in Table 7 (‘Initial proposal of categories indicating source quality by type’) might be different from the order portrayed, since imputation with a good model could potentially result in higher quality data than data from a previous census or even from a direct source that is not current.

52. Switzerland suggested that an aspect of internal consistency worth mentioning is an arithmetic check to ensure sub-totals sum to the overall population total.

### **Responses and changes proposed by the Task Force:**

53. The point raised by Canada is well noted. The actual rank order of quality of the different sources is clearly dependent on the specificities of the sources, imputation models, etc. in a country. This fact will be clarified in text introducing the table, to make clear that the table is a ‘most likely scenario’ rather than a universal order.

54. The point suggested by Switzerland will be added to section 7.1.4, coherence and comparability.

## J. Chapter 8 – Conclusions and recommendations

55. Italy supported the proposed areas for further development, and suggested that an additional area be included, namely a focus on the inclusion of hard-to-reach population groups in administrative sources.

56. The Russian Federation proposed including a recommendation for countries which plan to transition from a traditional to a register-based census to conduct the two types in parallel for several census rounds in order to permit comparison between the two, thus facilitating quality checking of the register approach.

### **Responses and changes proposed by the Task Force:**

58. Italy's suggestion is welcomed by the Task Force and, as discussed in section B above, will be added to the section on areas for further development. The additional information on this topic gathered from countries during the consultation confirms the view that this will be an important area for future work.

59. While the Task Force recognizes the possible value of the 'parallel methodologies' approach suggested by the Russian Federation, they do not feel that there is sufficient justification from countries' experiences to add this as an overall recommendation in the concluding chapter of the Guidelines. Instead the possibility of using this approach will be mentioned in Chapter 7, Output Stage, where the Task Force will include a brief discussion of how countries often compare selected administrative-data-based census outputs with the results of a traditional census to gain an understanding of coverage and measurement errors before making the decision to transition to a fully administrative-data-based census.

## IV. Conclusion

60. All 45 countries which responded to the consultation supported endorsement of the Guidelines, subject to the amendments presented in this document. The Guidelines will be edited professionally prior to publication.

## V. Proposal to the Conference

61. In view of the support received from countries and organizations in response to the consultation, the 2021 Conference is invited to endorse the *Guidelines for assessing the quality of administrative sources for use in censuses*, subject to the amendments being made as outlined in this document.

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