



Economic and Social Council

Distr.: General
8 November 2017

Original: English
English and Russian only

Economic Commission for Europe

Conference of European Statisticians

Group of Experts on Population and Housing Censuses

Nineteenth Meeting

Geneva, 4–6 October 2017

Report of the meeting

Note by the Secretariat

I. Attendance

1. The meeting of the joint UNECE/Eurostat Group of Experts on Population and Housing Censuses was held on 4–6 October 2017 in Geneva, at the Palais des Nations, back-to-back with the UNECE Workshop on Population and Housing Censuses for countries of Eastern Europe, Caucasus and Central Asia (2–3 October).
2. The meeting was attended by participants from Albania, Armenia, Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Canada, Croatia, Czechia, Estonia, Finland, France, Georgia, Germany, Hungary, Ireland, Israel, Italy, Japan, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Mexico, Montenegro, Netherlands, Norway, Poland, Portugal, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Switzerland, Tajikistan, the former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America and Uzbekistan. The European Union was represented by participants from Eurostat and the Delegation of the European Union to Bosnia Herzegovina. The Food and Agricultural Organization, United Nations Population Fund (UNFPA), United Nations Statistics Division (UNSD), Interstate Statistical Committee of the Commonwealth of Independent States and IPUMS International (Census Dissemination Partnership) were also represented. The meeting was attended by the expert invited by the Secretariat from the IntCensus.
3. The attendance of a number of participants was supported financially by UNFPA and the United Nations Development Account.

GE.17-19798(E)



* 1 7 1 9 7 9 8 *

Please recycle A recycling symbol consisting of three chasing arrows forming a triangle.



II. Organization of the meeting

4. Marc Hamel (Canada) was elected as Chairperson of the meeting.
5. The following substantive topics were discussed at the meeting:
 - (a) Innovations in census methodology and use of new data sources;
 - (b) Innovations in census technology;
 - (c) Evaluating the census and measuring data quality;
 - (d) Meeting users' needs;
 - (e) Production and dissemination of geo-referenced census data;
 - (f) Cooperation models among countries;
 - (g) Integration between census and social surveys;
 - (h) Sustainable Development Goals' needs and censuses.
6. A panel session was conducted on the topic 'What will be the future of censuses beyond 2020?'
7. The discussion at the meeting was based on 32 papers submitted by the participants. The papers and presentations are available on the UNECE website at the following address: <http://www.unece.org/index.php?id=43939>.

III. Recommendations for future work

8. The Expert Group recommended that its next meeting be organized over three days on the week of 17–21 September 2018 (note: after the meeting the dates of the 2018 census meetings were changed to the week of 24–28 September 2018). UNECE will hold a workshop for countries of Eastern Europe, Caucasus and Central Asia back-to-back with the Expert Group meeting.
9. The following topics were suggested for discussion in the 2018 Expert Group meeting:
 - (a) Methodology, new data sources, estimation methods including small area estimation;
 - (b) Technology;
 - (c) Dissemination;
 - (d) Statistical disclosure control;
 - (e) Geo-spatial information;
 - (f) Census content: design of questionnaire for paper, internet and tablets; compliance with the CES Recommendations;
 - (g) Relation between censuses, household surveys and other statistics, such as demographic, labour and regional statistics.
10. The Expert Group agreed to propose to the CES Bureau the establishment of a new UNECE Task Force in the course of 2018, to work on one of the following two alternative topics:
 - (a) The future of censuses beyond 2020

- (i) Build on work done by existing Eurostat TF on future censuses
- (ii) Looking at issues such as:
 - innovative methods, multi-mode approaches using surveys, administrative data, big data, and new sources
 - the increasing importance of geo-referenced information
 - move from a decennial census to annual data collections
 - use of 'big data', competition with 'big data' companies
 - how to capture societal change: will concepts like 'household' and 'usual residence' still be relevant?
- (iii) Output could be an advisory paper for chief statisticians
- (b) Measurement of quality of administrative sources for use in censuses
 - (i) Build on work of the current UNECE Task Force on Register-based Censuses, and of Eurostat's ESS.VIP ADMIN project
 - (ii) Looking at issues such as:
 - potential of administrative sources to provide the data required for the census
 - quality requirements: how good is good enough: how to decide whether administrative data sources and/or administrative data are fit for use.
 - (iii) Output could include guidelines, good practices.

IV. Adoption of the report of the meeting

11. The present report was adopted with amendments during the closing session.
12. A summary of the discussion in the substantive sessions of the meeting will be presented in an annex to this report, to be prepared by the Secretariat after the meeting.

Annex

Summary of the main issues discussed at the substantive sessions

A. Innovations in census methodology and use of new data sources

Documentation: Papers submitted by Germany, Israel, Italy, Latvia, Netherlands, Poland, United Kingdom, United States, and Eurostat. Presentation by UNECE.

Discussant: Diana Beltadze (Estonia)

1. The presenters covered a broad range of innovations in census methodology being introduced in view of the 2020 census round, including: the shift from traditional censuses towards registered-based and combined censuses; increased use of administrative and survey data; and innovative approaches in reaching out to hard-to-count populations. This advancement of methodology brings various challenges, which were discussed by participants in this session following the contributions of the presenters.
2. The session began with the presentations from UNECE and Eurostat with a regional overview of census plans in the upcoming 2020 round.
3. The U.S. Census Bureau presented the preparations for the upcoming census focusing on the strategies to tackle two main challenges – decreasing the costs and increasing the response rate among the difficult to reach population groups. It was recognized that the generic outreach programme used in the past is not efficient enough. Therefore, tailored strategies are being put in place to increase the likelihood of response of each group based on their characteristics and the preferred mode of enumeration. New strategies include using social media and intensifying statistical education in schools.
4. A representative of ISTAT (Italy) presented the methodology to define the usually resident population of Italy based on continuity patterns in administrative data, being developed in preparation for a registered-based census. This also provided an opportunity to deal with the challenge of defining usual residence in countries with increasingly mobile populations and/or significant populations of refugees and illegal immigrants.
5. Representatives of ONS (United Kingdom) provided the participants with an update of the preparations for an administrative data census.
6. In their preparation for the first registered-based census, the Central Statistical Bureau of Latvia is examining the availability of data in administrative sources and the extent to which they can replace the current estimates produced from census or sample surveys. As much as maintaining the continuity is desired, it needs to be recognized that even small changes in census or survey methodology can result in breaks in series. Preserving continuity should not be the main criterion in the process, since for some variables administrative data can be more accurate. Therefore, the process is not straightforward and involves evaluating both the quality of administrative sources and the current survey- or census- based estimates.
7. Representatives of Destatis (Germany) shared their experience of conducting the combined census, including both the historic and future perspectives. Specifically, the challenge of matching data without a common unique identifier across the registers was discussed, resulting in the necessity of matching records by names and addresses. Additional challenges were represented by planning the budget of the census under the uncertainty of the success of self-enumeration, and the increasing costs of more and more

advanced technologies. It was also discussed that various security and procurement regulations restrict the possibility of re-using the mobile devices after the census is completed.

8. The Central Bureau of Statistics of Israel presented their work towards further improvement of the integrated census model. The contribution focused on the challenge of estimating the total population in light of significant differences between the Central Population Register, being the census frame, and the census population, owing to a high share of Israelis abroad as well as foreigners living legally and illegally in Israel.

9. A representative from Poland shared the experience of creation and development of a building and dwelling database, and matching of the dwellings with individuals. Of special interest to the participants were the attempts to use data from private service providers, which in spite of varying quality can be an important source of updates of the existing building database.

10. The Dutch statistical office presented a method of mass imputation for the educational attainment variable, based on the Education Attainment File constructed from several registers and sample surveys. The presentation gave an opportunity to raise more general questions on the loss of dimensionality of statistics produced by relying on imputation techniques and the challenges of evaluating the quality of statistics produced using such methods.

11. Subsequent to all presentations, the Chair of UNECE Task Force on Register-based and Combined Censuses gave an overview of the new draft guidelines developed on this subject, and the participants in the meeting were encouraged to share their comments. A participant noted that the information in the case studies presented in the appendices will soon become outdated. It was clarified that the information presented in the case studies refers to a specific date. It was also suggested that an online 'living' version of the case studies could be produced, where they could be updated regularly. In this case the report could include a 'static' version of the case studies with links to the online updated versions.

12. It was suggested that it would be useful to have some recommendations on how to move toward register-based censuses if the data are not of good quality, for instance when names, addresses etc. are not standardized, or an ID number is not used. The Chair of the Task Force noted that moving to a register-based censuses is not possible if the data in the registers are not good. It was also suggested that it would be useful to have a case study for Germany to see how data were linked without a unique ID.

13. In the discussion that closed the session it was noted that the shift towards register-based censuses poses a particular challenge for obtaining the same granularity of information if the information in administrative records is not complete or not geo-referenced.

B. Innovations in census technology

Documentation: Papers submitted by France, Mexico, Russia, the United Kingdom and UNSD.

Discussant: Janusz Dygaszewicz (Poland)

14. The presentations described a range of technological solutions being employed or developed for data collection and protection of confidentiality.

15. It was noted that across the wide range of different countries presenting, there is some degree of mixture of pen-and-paper and modern technology. Speakers were asked whether this is an unduly costly solution since it requires the design and support of two

different infrastructures—does this negate any costs savings from moving to modern technology? Discussion of this question showed that those countries using paper fallbacks, in-person follow-up visits, etc., view them as essential in spite of their costs. Mexico stressed that a paper backup is a less costly option than having to make repeat visits in case of power loss in handheld devices; Russia stated that follow-up visits are necessary to check on accuracy given that this is the first time the online completion mode is offered; and France noted that the amount of financing given to municipalities for census enumeration is mode-independent, so it is in their interests to promote the cheapest mode to enable them to pay enumerators sufficiently.

16. Discussion covered the techniques to be used in collective dwellings and use of proxy respondents; analyses currently being conducted of completion time and data quality using different modes; and the use of administrative data to validate field work outcomes.

17. Concerns were raised about the use of memory card backups in Russia and the implication that data were stored in two places, but it was emphasized that this is only an emergency backup with strong security provisions.

18. The high response rate in France was partially explained by the establishment of partnerships with municipalities which are responsible for employing and deploying enumerators. Different municipalities use different remuneration models (per form, fixed wage, etc.), and some even pay out more than they receive from the state, since the census is seen as beneficial for municipalities as much as for the country as a whole.

C. Evaluating the census and measuring data quality

Documentation: Papers submitted by Croatia, Czechia, Estonia, Republic of Moldova, and Spain.

Discussant: Harald Utne (Norway)

19. Following the presentations, the discussant noted that coverage and data quality is a concern for all countries, the main question being how to secure the data quality in different modes of census taking. Czechia, Republic of Moldova and Croatia conduct traditional censuses, and in the Republic of Moldova and Croatia a post enumeration survey (PES) is conducted after the census. The other two countries which presented at the meeting, Estonia and Spain, will join the list of countries with a register-based census in the 2021 round.

20. In the follow-up discussion, Croatia discussed ways to improve the quality of the PES in the future. The main reason indicated for the difficulties with their first PES was the lack of promotional activities for the PES, whereas the census itself was promoted massively through the media. Some analysis shows that young women moving from rural areas to the city to study were the population group with most missing observations. A question was raised about measuring the coverage across regions within the country, and in particular, whether a person registered in the wrong region would create an underestimation in one region and overestimation in the other.

21. The adjustment of population figures for the capital in the Republic of Moldova was substantial: however, the correction was in line with the expectations from the users and made the users more confident in the statistical data.

22. The possibility of using electricity consumption data for quality assessment of the census as in the Republic in Moldova has also been discussed in other countries, such as Norway. The issue, however, is that electricity consumption is a household variable and that makes it difficult to use for checking data reported at the individual level.

23. Estonia has built a very efficient system to measure the quality of the input data coming from the register holders. The main conclusion of the Estonian study is that data quality management is very important not only for the statistical office but for the state users as well. The manual issued by the statistical office has helped register holders realize that they can plan their actions better if they know where they stand, and therefore, improve the quality of their registers.

24. The dwelling number issue is complicated in Czechia as there is no dwelling registry. The discussion started in the 1970s but still today every person has an address only for the building and not for the dwelling. To overcome this issue, separate forms were introduced during the census for individuals, dwelling and building. Unfortunately, there were many forms without dwelling numbers since the fieldwork was poor, and this complicated the work of the statistical office.

25. In Spain, it was difficult to decide on using some sources, e.g. because of overlapping information when using different sources for the same variable. It was decided to distinguish between direct and indirect sources; the latter using computed data by applying models and not specifically by collecting the information directly from the person. At the moment, the sources are categorized into five categories but there is still room to improve the procedures. The 'plan B' scenario is a survey to complete those variables that are not good enough. However, before that the criteria for what is 'not good enough' have to be determined.

D. Meeting users' needs

Documentation: Papers submitted by Canada, Estonia, United Kingdom.

Discussant: Barica Razpotnik (Slovenia)

26. The presentations described various ways in which user consultation is undertaken and how the results of such consultation are used to shape census content, method and dissemination. As a result of such engagement, censuses are expected to better reflect the needs of the society and to permit higher quality data that is gathered more efficiently.

27. Canada outlined engagement strategies and the potential content changes resulting from feedback received (on topics such as gender identity, indigenous issues, and others). Estonia described two major user surveys and the main findings in terms of desired topics and intended use. There was a tension between a desire for the NSOs to use more administrative and private sources to gather data, with a continued demand for data on topics that such sources would not be able to provide. The United Kingdom described how advances in disclosure control methodology could enable them to better meet user demand for customized data tables by querying unit record level data while remaining within the requirements of confidentiality. A layered approach means that dissemination can range from high-level to very specific according to the degree to which a user chooses to drill down through the data.

28. In the discussion it was noted that the public in some countries is increasingly accepting the idea that administrative sources can and will be used. They are starting to accept that, in the interests of only answering a given question once, they will provide data in one place and it will be linked to different sources. This strong approval of use of administrative sources and record linkage is not universal across countries, however.

29. Discussion considered the trade-off between loss of information on some topics versus increased efficiency and reduced respondent burden with the move to registers and administrative sources. Estonia argued that the loss of topics was minimal and easily mitigated by census-specific collection for those variables.

30. There was discussion about the degree to which users actually do use the data that they claim to need when consulted: for example, they may report that they need unit-level data but actually end up using aggregates. While the presentations emphasized topic-level needs, it is also important to analyse variable-level needs, e.g. by considering download numbers.

31. The United Kingdom's presentation on responding to users' dissemination needs led to discussion of the importance of communicating messages, analyses and storylines rather than only data —so that media pick them up and act as a conduit to the public. It was noted that the role of NSOs is to explain, although others urged caution and careful oversight in engaging non-statisticians to lead this explanation or 'storytelling'.

32. Questions were raised about the 'official' status of statistics produced via dynamic disclosure control. It was stressed that it is not only the outputs but the collection and processing that makes something an 'official statistic'. Furthermore, the techniques being employed by the United Kingdom will ensure that the same query will always result in the same result. It was noted that there is a project ongoing to improve international comparability through increased harmonization of disclosure control methods.

33. In light of the discussions in this session, participants were urged to refer to the stakeholder consultation section of the CES census recommendations.

E. Production and dissemination of geo-referenced census data

Documentation: Papers submitted by Italy, Poland and Eurostat.

Discussant: Eric Schulte Nordholt (Netherlands)

34. This session was dedicated to discussing the different needs for geo-referenced data and its current uses. Eurostat highlighted the need for geo-referenced census data, which complements and enhances social and economic statistics. It also underlined the availability in the European Statistical System of data geo-coded to a single point, which could be assigned to standard grid. Italy reported that the increasing demand for territorial data is challenging the current spatial data infrastructure. The country shared its experience in transitioning to a system based on registers and the use of new analytical tools. Poland presented new developments in its Geostatistics Portal, which addresses several needs of the users and offers the possibility to enable them to create analyses based on their own models and enrich the content of the database.

35. Eurostat mentioned that the use of administrative data could ease the challenges related to disclosure control and grid data. Italy noted that on a national level moving from local municipal registers to a unique register that integrates all the administrative and geographical data is a process that requires some years to achieve. The country is integrating data from different sources at both municipal and national levels, to compile them into a unique register. Concerning gathering data for the grids, the goal is to have good quality point coordinates for all addresses and to have the data linked to the addresses. Italy also mentioned the need to increase the budget to be able to produce and expand geographical data. Also concerning budgeting, the statistical office of Poland is integrating estimates of the grid needs and will benefit from the same budget as in the previous census.

36. Poland expressed its willingness to share its knowledge and help countries in preparing geo-statistical analyses. However, due to confidentiality issues, access to the portal cannot be shared. Data confidentiality is of primary importance. Another feature of the portal is that it enables users to introduce their own data and undertake some processing and analyses. However, it is the mandate of the statistical unit in charge to process, control

and eventually produce the data. Regarding capacity building, communication with users and with the various types of stakeholders is very important.

37. Italy is starting to use different registers like cadastres to count housing units. Good knowledge of buildings can, for example, help to improve the response to natural disasters such as earthquakes. However, at the moment it is still impossible to cover housing topics for illegal immigrants.

F. Cooperation models among countries

Documentation: Papers submitted by the Baltic countries (Estonia, Latvia and Lithuania) and the United States.

38. This session looked at some examples of cooperation among countries in the field of population and housing censuses.

39. The International Census Forum presented by the United States is a model that enables a limited number of countries to meet regularly to discuss in detail and exchange experiences about census methods and practices. It also aims to build and maintain effective partnerships.

40. The Baltic Census Seminar (BCS) is an example of cooperation at sub-regional level that could enable the development of a sustainable infrastructure using the available budgetary resources, and at the development of synergies between countries.

41. Canada commented on its experience as a member of the International Census Forum. Cooperation within a community of practice is invaluable, especially at the working level. Canada cited the example of testing questions relating to gender identity and the development of electronic questionnaires, which were the result of cooperation among the different entities. It also emphasized the role of the forum in providing quick access to shared expertise.

G. Integration between census and social surveys

Documentation: Papers submitted by Italy, United Kingdom, and IPUMS International.

Discussant: Arona Pistiner (United States)

42. All presentations addressed the harmonization of data across various data sources. The presentations of the national statistical offices of Italy and the United Kingdom dealt with national developments in the integration of social surveys and administrative data sources for improvement of census results. The presentation from IPUMS focused on micro data methodologies for data harmonization from the perspective of researchers.

43. The discussant noted that historically every 20–30 years there is a major shift in how censuses are made. While it has always been difficult to do a census, now it is becoming a very complex exercise. As a result, many national statistical offices have to invest resources to develop new methods. It is therefore important in moving towards the next census round to keep in mind the ultimate goal and what is absolutely needed to get a census done. While statisticians are entrenched in the current time, which is defined by the administrative and registers data space, it is necessary to have our eyes open to see what is coming.

44. In the follow up discussion, the representative of IPUMS noted the challenges in addressing the societal and cultural differences that make a country unique. Researchers could try to identify which parts of the population are marginalized, but otherwise it is with the national offices to decide how to handle societal and cultural differences. A full

bibliography is available online as well as an article in the Journal of Official Statistics that describes the IPUMS methodologies.

45. The United Kingdom confirmed that they are building on the recommendation going towards the 2030 census round and are planning to compare the results of the Administrative data census and the traditional census. This is part of a wider strategy to better meet users' needs. The development of the digital economy will give a lot more access to data, and tests have shown that they are able to receive a high number of responses using the online data collection system in addition to doorstep and telephone interviews.

46. Italy elaborated on the use of survey data, clarifying that survey data support the checking and imputation of data from population registers. They also complement the results of the census and allow improvement of the level of coverage and quality. Data from surveys are of good quality as they spread throughout the country at municipality level. In order to use variables at micro level, Italy can also use the longitudinal part of the Labour Force Survey, Living Conditions Survey, EU-SILC and Consumer Expenditure surveys. The current debate in Italy refers to the possibility of aligning the register with the survey data and of producing provisional micro data at the time of the survey. In addition to the work of producing census results on an annual basis, Italy is also discussing the possibility of pooling of the sample survey data to produce results at a fine geographic level.

47. The issue of reconciling the underestimation corrected directly in the database using survey data with updates received from census data was discussed. Italy uses calibration methods to correct the stocks and flows.

H. Sustainable Development Goals' needs and censuses

Documentation: Papers submitted by CIS-Stat and Ian White.

48. CIS-Stat presented the main results of a special survey conducted in 2016 on the views of the countries of the Commonwealth of Independent States (CIS) on the list of global Sustainable Development Goal (SDG) indicators, and on methods and statistics available in the countries to monitor progress towards the SDGs.

49. The second presentation provided an interesting example of the extent to which the data collected in a recent census – namely the one carried out in Myanmar in 2014 – allow monitoring of progress towards fulfilling SDGs in relation to a number of indicators.

I. Panel Session: What will be the future of censuses beyond 2020?

Documentation: Paper submitted by Eurostat.

Discussion Moderator: Ian White

Panellists: Janusz Dygaszewicz (Poland), Marc Hamel (Canada), Eric Schulte Nordholt (Netherlands), David Thorogood (Eurostat), Irina Zbarskaya (CIS-Stat)

50. The session on the future of censuses started with a presentation by Eurostat on the strategy for censuses in Europe beyond 2021. The presentation was followed by a panel discussion and a general discussion.

51. The participants in the panel reiterated that even if the national statistical offices rely increasingly on administrative data sources, they need to maintain readiness and infrastructure to respond to unexpected demands and provide survey data addressing user demand. There was a consensus among the participants that providing data on a decennial

basis will not be acceptable any more, and that with the current pace of change occurring in the population and environment, more frequent updates will be necessary. Reducing the delay in the publication of census results was mentioned as one of the important areas for improvement in the future.

52. Furthermore, it was noted that the basic concepts used in census, such as usual residence or nuclear family, are already being challenged by the high mobility of population and increasingly complicated types of households. It is possible that in future rounds of censuses beyond 2020 these concepts will not be relevant any more. With the ongoing development of societies and technology, panellists saw the multimodality of census data collection as a necessity rather than an option. Moreover, changes in technology and methodology are occurring faster than in the past, and statistical offices need to be prepared. They also pointed out that in the process of introducing these technical or methodological innovations, special attention should be paid to maintaining the international comparability of data.

53. It was underlined that in order to ensure the good quality of register-based statistics, it is important to maintain good cooperation with administrative agencies collecting the data, and to adopt legislative measures that guarantee statisticians access to administrative data sources used for statistical purposes. At the same time, it was recognized that the management and quality assessment of administrative data requires a different skillset than working with survey or census data, which should be taken into account by the management of statistical offices.

54. It was also noted that the administrative processes vary among countries. Therefore, with the shift towards register-based censuses, there may be a significant diversity in the future solutions adopted by countries.

55. Finally, it was emphasized that the most important census requirement is to provide the basic measure of the population and all additional data demands come from user requirements, but it is not necessary that they all be satisfied with census data. The discussion on the future of censuses should not therefore focus solely on incremental improvements based on the past, but may require a paradigm shift.
