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Economic Commission for Europe

Conference of European Statisticians

Group of Experts on Population and Housing Censuses

Seventeenth Meeting

Geneva, 30 September – 2 October 2015

Report of the Meeting

Note by the secretariat

I. Introduction

1. The meeting of the joint UNECE/Eurostat Group of Experts on Population and Housing Censuses was held on 30 September – 2 October 2015 in Geneva, at the Palais des Nations, back-to-back with the UNECE-UNFPA Workshop on Population and Housing Censuses for countries in Eastern Europe, Caucasus and Central Asia (EECCA) (28 -29 September).

2. The meeting was attended by participants from Albania, Armenia, Australia, Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Canada, Croatia, Czech Republic, Estonia, Finland, France, Georgia, Germany, Hungary, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Republic of Korea, Latvia, Luxembourg, Republic of Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovenia, Spain, Switzerland, Tajikistan, the former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom, 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 (FAO), United Nations Population Fund (UNFPA), United Nations Mission in Kosovo (UNMIK), United Nations Statistics Division (UNSD), Eurasian Economic Commission and Interstate Statistical Committee of the Commonwealth of Independent States (CIS-STAT) were also represented. The meeting was also attended by a number of experts invited by the Secretariat.

3. UNFPA supported financially the attendance of a number of participants.

II. Organization of the meeting

4. Danilo Dolenc (Slovenia) and Garnett Compton (United Kingdom) were elected as Chairpersons of the meeting.
5. In the opening of the meeting, UNECE and UNSD gave two presentations on the planning and preparation for the 2020 round of population and housing censuses from a regional (UNECE) and global (UNSD) perspective.
6. The following substantive topics were discussed at the meeting:
 - a) Efficient approaches for the census in a time of increasing financial constraints
 - b) Innovations planned for 2020 census round, and results of tests
 - c) Experiences with census users: who they are, what they need, how they are involved
 - d) Grid statistics: opportunities and challenges
 - e) Expected issues in complying with the new CES recommendations and results of work to address them.
7. The discussion at the meeting was based on 21 papers submitted by the participants. The papers and presentations are available on the UNECE website at the following address: [http://www.unece.org/stats/documents/2015.09.census1.html#/.](http://www.unece.org/stats/documents/2015.09.census1.html#/)
8. The summary of the main items discussed at the substantive sessions will be sent by UNECE to participants by email after the meeting.

III. Future work

9. The meeting recommended the following plan for future work on Population and Housing Censuses in the UNECE region:
 - (a) Meetings: “Census week”, tentatively on 26-30 September 2016, including:
 - (i) **UNECE-Eurostat Groups of experts (3 days), to discuss tentatively the following topics:**
 - a. Assessing costs and benefits of censuses
 - b. Alternative methods for counting of population, in particular hard-to-count population groups
 - c. Possible uses of new data sources (e.g. “Big Data”) for censuses
 - d. Innovations in census methodology and technology (e.g. geo-referencing), and results of testing
 - e. Methods for assessing quality and usability of registers and administrative sources
 - f. Frameworks and tools for bilateral and multilateral cooperation among NSIs with regard to censuses
 - (ii) **Workshop for EECCA countries (2 days)**
 - a. Review of the availability of administrative sources and possible use to support field collection

b. Technological innovations for the 2020 round, including:

- Internet response
- Mobile devices, tablets, GPS
- Geographic Information Systems (GIS)

c. Implementation of the CES Recommendations for the 2020 round
(usual residence, migration, economic char.)

(b) Other activities:

(i) UNECE and Eurostat should investigate the possibility of cooperation in the field of assessment of the quality of administrative sources, considering activities under Eurostat's ESS.VIP.ADMIN project (part of ESS Vision 2020).

IV. Adoption of the report

10. The meeting adopted the present report before it adjourned.

Summary of the main issues discussed at the substantive sessions

A. Efficient approaches for the census in a time of increasing financial constraints

Documentation: Papers submitted by Australia, United Kingdom, and United States.

1. The countries presented their efforts to improve their census processes. Australia focused on improving the sustainability of the household survey programme, making better use of census and administrative data and creating ways to develop agile and responsive statistical solutions. They have responded to these challenges by moving towards a solution-centred design and culture, maximizing the use of all available data and using a wider range of methods and statistical solutions. They have also aligned their resources to high value-added activities.

2. The United States are developing ways to cut the cost of the census, which have been driven up by increased diversity in the population, demand to improve accuracy of censuses, decreasing public participation in the census, and investments made in the systems. The United States have set four goals to respond to the increased costs. They plan to: (i) reduce the need for a nationwide in-field address canvassing operation, (ii) improve the communication to the public about the importance of participating in the census, (iii) use administrative and other information to reduce non-response follow-up, and (iv) use technology to manage field work more efficiently.

3. The United Kingdom reported that ONS was asked to justify the census in cost-benefit terms. Therefore ONS conducted a thorough cost-benefit analysis on the census. It was known that the value of the census arose when decisions based on the census data were made, but it was difficult to quantify these benefits. ONS also worked together with the users of the data to make sure that all the benefits were taken into account. Factors taken into account include the high quality of the census, the education of users on how to use the results, the availability of census results through multiple channels, and their promotion to users. The ONS used innovative methods such as social media, infographics, user case studies, and other public relations efforts to advertise the census data. With active promotion of the census results, the ONS found that the benefits of the census were higher than the costs.

4. In the discussion that followed the presentations, the participants asked what was the impact of the changes in the Australian statistical programme on the organizational plan. It was clarified that Australia has been changing infrastructure, business processes, and updating computer systems, and at this stage the improvements in the statistical programme will not result in further changes of the organizational structure.

5. There were also questions on the ways in which the United States expect to reduce the census costs. It is estimated to have a 50% take up of internet response, which should also help to improve the overall response rate. It should also be possible to respond to the census without using a unique identifier code; the Census Bureau would verify the response using the address provided by the respondent and comparing it with administrative data. In the United States, the use of technology has improved the productivity of enumerators, and technology is expected to be the largest area of cost savings in 2020.

6. With regard to the United Kingdom, it was clarified that in estimating the benefits of the censuses a relative “depreciation” over time of the value of census results was taken into account. Moreover, to help assess the costs the ONS hired a consultant with relevant experience.

B Innovations planned for 2020 census round, and results of tests – Censuses based mainly on direct collection

Documentation: Papers submitted by Australia, Canada, Serbia, United Kingdom, and United States.

7. This session looked at the innovations in the census process, mainly based on the increased use of technology, and the testing of new innovations. Australia reported that they were moving towards using more technology, because of the changes in society, expectation of people to be able to conduct government business online, problems of recruiting field officers and rising non-response rates and costs. The use of technology has enabled Australia to train staff online, use smart forms and hand-held devices when collecting information. While the online census form has received positive feedback, there are still some difficulties that they are trying to solve. The goal, however, is to increase the use of technology in the 2021 census.

8. Canada presented some of the tests performed for the 2016 census. These included tests on how respondents and personnel would respond to new systems and approaches, on the increased use of administrative data, and on using a personal identifier. The relatively short, 5 year census cycle allows Canada to introduce new innovations and see quickly how they work. Based on the testing Canada decided to increase the use of administrative data in the future. Tests also showed that the use of a personal identifier impacted the return rate negatively and raised the costs of follow-up, so it was abandoned. During the 2016 census, Canada plans to do more testing on the collection of e-mail addresses as contact information and the use of a digital mail box for contacting households electronically. Legally, there is no obstacle to collecting e-mail addresses and respondents have not voiced any concerns. The system has had difficulties in recognizing e-mail addresses optically.

9. Canada reported that they had built an address register from past census data and listed all dwellings as part of the census exercise. Most updates in the register are based on administrative data. However, administrative data creates noise and overcoverage, which Canada is looking to reduce by removing dwellings from the register that have not shown signs of life, e.g. based on utility bills. Canada has been able to improve self-response rates by updating methodology and providing multiple response options.

10. Australia noted that online questionnaires and paper questionnaires are different in terms of set up. Online forms ask different preliminary questions, for example. In general the question categories used in both forms are the same. There are a few more targeted supplementary questions in the online form. In Canada, the differences between the forms are in navigation only.

11. The United Kingdom is also moving to implement a predominantly online census in 2021. Similar to Australia, this move is driven by changes in society, technology, user needs, and improvements in administrative data sources. The goal is to develop a method to eventually replace census direct collection with administrative data. As the UK government has experience with online forms, the ONS is working together with government offices to identify characteristics to put in place in the new system to encourage filling census forms online. The ONS is developing a simulation model to help inform the design and operation of the 2021 Census.

12. The United States, in their effort to decrease the cost of the census, is developing ways to optimize self-response. They are researching new techniques to offer respondents multiple channels of participating in the census, using for example e-mail, text messaging, social media etc. The United States have tested several ways of using technology and automating processes in order to increase efficiency. The results show that smartphones and data collection applications have been useful for enumerators, but that e-mail was not an effective contact strategy compared to normal mail.

13. The concept of “bring your own device”, i.e. enumerators using their own devices to perform the work, that is used in the United States, raised a lot of questions among the participants. The United States explained that privacy and security issues had been considered in detail. A certain portion of the memory of the device is partitioned and can only be used by the administrator at the statistical office. Once the interview is done, the information is sent out and cannot any longer be accessed using the device. The application is available through installation of census administrators only.

C Innovations planned for 2020 census round, and results of tests – Censuses based mainly on registers

Documentation: Papers submitted by Austria, Latvia, Israel, Italy, and Serbia.

14. The presentations held during this session described some of the innovations developed by statistical offices using registers as the basis for census. Austria described a method they use to generate and categorize households and figuring out relationships between people (parent/child, grandparent/child, couples). Austria explained that when they were developing the method, they took a traditional census against which to test the results. This test showed that the method had categorized 95 per cent of all households correctly. Among consensual unions, the method gets 80 per cent of the cases right. All in all, the method has shown to be accurate.

15. Latvia presented their plans to develop a Social Statistics Warehouse in which to store administrative data and described the models they use to estimate the resident population on annual basis. Latvia plans to move towards using only administrative data for the census. They use unique ID codes for census, which makes easy linking of information with, for example, address registers.

16. Israel has also been under pressure to change its census process due to organizational constraints, the need to produce more timely estimates, reduce costs, and move towards a full register based census. Israel tested the use of rolling census, but based on the test results decided to abandon those plans. Israel has two years to further test the rolling census, but if it won't work out, they will return to the integrated census.

17. Italy reported that they are also moving away from the plan of a rolling census, due to a new plan to modernize and move to an integrated system of registers. The drivers for this change are costs and data demands and the reluctance of people to participate in the census. In 2011 Italy already introduced new methods, including integration of data from administrative sources, internet response option, and web management of systems. The results of the first round of modernization were encouraging. During the next round of modernization, Italy plans to maximize the use of available administrative and statistical sources, improve quality control, and integrate sample social surveys in a unique centralized system. The goal is to produce census data every year and be ready by 2021. Italy highlighted the need for strong cooperation among countries on new methodologies involving multiple sources and the need to modernize statistical processes inside NSIs.

D. Experiences with census users: who they are, what they need, how they are involved

Documentation: Papers submitted by Canada, Eurostat, France, and Switzerland.

18. Eurostat described the Census Hub and the efforts to improve the service, also in view of the future 2021 census round. They have reviewed the use of the tables available and made efforts to harmonize data output. The experience of Eurostat also highlighted the effectiveness of reaching out to census users: the use of the Eurostat Census Hub peaked after press releases or information campaigns targeting users.

19. France and Switzerland gave a joint presentation on how officials in both countries work together in the Cross-border Statistical Observatory of the Geneva-border Area, to gain a better understanding of the population structure and dynamics in an area where there is a lot of cross-border movement. They explained how the cross-border statistical observatory was developed, and how administrative registers and census data are used together to get a comprehensive view of the population of the region. As people move across borders more and more, it is becoming increasingly important to have census data that are comparable across countries. It was noted that the fact that many people living in the region have dual citizenship complicates the analysis. It is hoped that in future more information be available on multiple citizenship.

20. The second presentation from France described the use of census data by local communities, in the specific case by the Town planning agency of the Lyon metropolitan area. It was explained how census data is important for local communities, because government subsidies, grants and fees are based on population figures. Census data is also a building block for various policies at national and local level.

21. Switzerland has seen major changes in the migrant population over the past 10 years. The proportion of skilled people among immigrants has increased, and that of less skilled workers has decreased. Switzerland has been basing its census on registers and surveys from 2010, and there are some issues with the migration data available from the census. The current system makes it difficult to identify small minorities on basis of survey data. However, the current method of collecting data has given Switzerland the opportunity to work with longitudinal data, and some very interesting examples of this analysis were presented.

E Grid statistics: opportunities and challenges

Documentation: Papers submitted by Ireland, Spain, and Poland. Presentation on Eurostat activities.

22. Ireland described their move from boundary code approach to the use of GIS in the 2011 census. There had been some shortcomings in the boundary code approach with enumerators misreading boundaries and other errors. The work was also very labour intensive. The move to using GIS has eased the establishment of address lists, enabled the use of up to date digital mapping and the production of new statistical processes, and it has cut costs.

23. The use of geo-referenced information has also enabled Spain to develop new innovative products, such as geographical thematic maps. Spain has considered the production of grid statistics an important project, but the actual use of the grid products has been lower than expected.

24. Poland presented some of the benefits of grid statistics, observing that grids are easily comparable because they have same size, they are stable over time, they integrate

easily with other scientific data, and can be assembled to form areas reflecting a specific purpose and study area. The challenge with grids is to collect the data with the best possible accuracy. Grids are gaining international recognition and could be used to support the measurement of SDGs.

25. Eurostat is also working actively on grid statistics. With its Geostat 1 project it is producing a 1km² population grid of the 2011 census from as many national datasets as possible and at the same time developing a methodology to draw population grids from statistical and spatial data sources. They are looking for solutions to address data confidentiality, which still remains a problem.

26. During the discussion the problem of accounting for homeless people was raised. Countries have taken various approaches to this issue. In Poland, because of the use of handheld devices, the position of the homeless person can be established on the spot. Hungary geocodes people in the institutions in which they are found, otherwise they are geocoded in the middle point of the city. In Ireland local authorities conduct a homeless count during census night.

27. Another issue that was discussed is the treatment of grids on national borders, since normally countries have data only for the part of the grid cells that are within the national borders. Work could be promoted to collaborate with neighbour countries to produce data for cross border grid cells.

28. It was observed that different categories should be used for “0” and “1-...” values, and that while 1km² grids can be sufficient for most uses, for some detailed analysis 100 m² grids would be more useful although there could be more serious concerns about confidentiality.

29. It was also stressed that grids have many advantages for disseminating data, but are not suitable for collection. With regard to collection, it was noted that collecting xy coordinates would allow countries producing data for grids and many other possible dissemination formats.

F Expected issues in complying with the new CES recommendations and results of work to address them

Documentation: Papers submitted by Slovenia

30. Slovenia presented the methodology used in the country to derive information on labour force status from multiple sources, including administrative data and Labour Force Surveys.

31. In the discussion that followed the presentation it was noted that one of the limitations of this approach is that it would not cover forms of illegal work (black economy), since they would not be recorded in administrative sources.
