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Lessons learned from censuses of the 2020 round

## The importance of conducting trial censuses, lessons learned from them, and their role in the 2021 population and housing census of Poland

Note by Statistics Poland\*

### *Summary*

Based on the experience of people and units participating in the 2010/2011 and 2020/2021 round of censuses, Polish public statistics has developed a comprehensive set of conclusions and recommendations, constituting a knowledge base that will allow for even more effective and efficient performance of the tasks to be faced in subsequent censuses.

Particularly noteworthy among a number of recommendations that were not widely presented by the Statistics Poland in previous years is the stage of preparatory work, which in Poland included conducting two trial censuses. They were a testing ground for the general agricultural census in 2020, and the solutions tested in it were also used in the population and housing census in 2021. The primary goal of this stage of work was to verify methodological, organizational, technical and awareness-raising solutions, in particular checking the possibility of conducting the second trial census in the conditions of the intensified COVID-19 pandemic. Initially, abandoning the implementation of this second trial census was considered, due to the extremely difficult pandemic conditions; but finally it was decided to adapt the solutions in such a way as to perform this task, taking the necessary precautions.

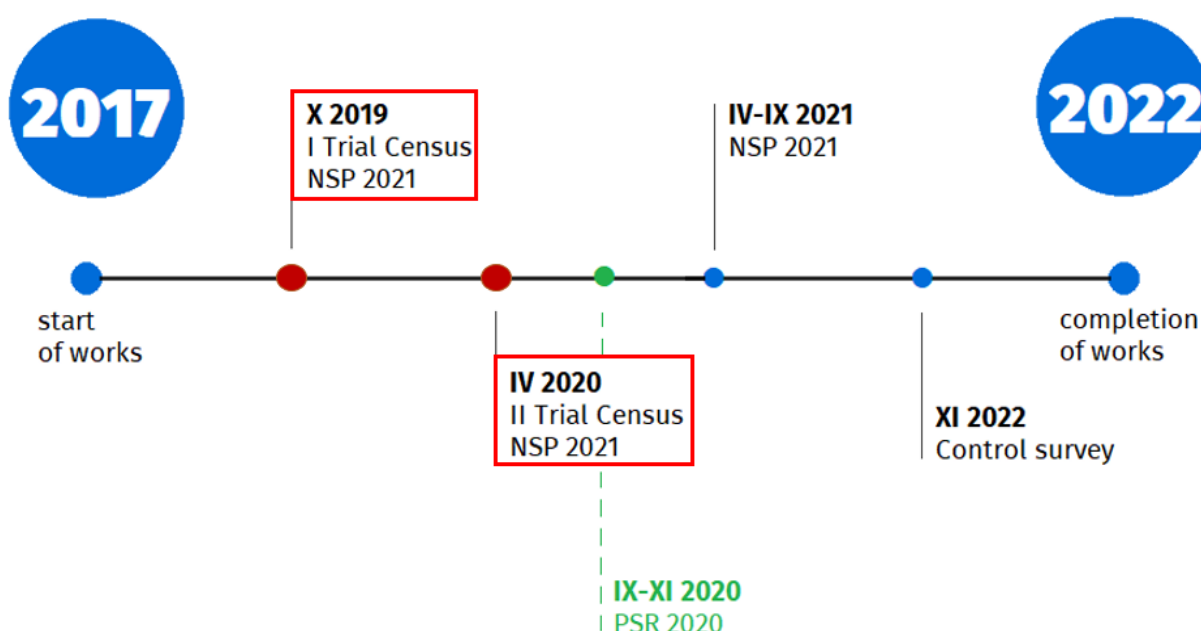
The success in censuses proves the accuracy of the methods and solutions finally used and the validity of conducting the second trial census, as one of the key operational decisions.

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NOTE: The designations employed in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

## I. Introduction

1. The Population and Housing Census is a huge nationwide undertaking involving a wide range of work, starting with the development of general assumptions, preparation and conduct of trial censuses, and ending with a post-census control survey and dissemination of the resulting statistical information compiled from the data collected in the censuses.
2. In this document we will focus on a stage that is very important for the success of the entire project, namely the trial censuses, as one of the most important lessons that Polish statistics learned during both the 2010 and 2020 censuses. This stage, from the point of view of Statistics Poland, was one of the most important tests before the main exam, which is the census carried out in a country with a population of over 38 million people, in which therefore the scale of the activities carried out is enormous.
3. In Poland, two trial censuses were conducted before the national population and housing census 2021. Following the adopted schedule, they took place in 2019 and 2020.



**Figure 1: Timetable for the implementation of the censuses in Poland**

4. The purpose of the trial censuses was to verify the methodological, organizational and technical solutions initially adopted for use in the censuses. The experience and conclusions from their implementation made it possible to indicate the areas in which it will be necessary to conduct an enhanced analysis or change the adopted assumptions.
5. In particular, the data collection methods were checked and the quality of the data collected by these methods was assessed. The operation of the census structures and the use and efficiency of the information technology (IT) system were checked.

6. Moreover, the trial censuses made it possible to check the functioning of the census apparatus set up to prepare and conduct the censuses. The functioning of the Voivodship Census Bureaus, Voivodship Census Management Centres (WCZS) and Commune Census Bureaus was examined. The structures of the census apparatus included central and voivodship dispatchers, WCZS managers, helpline coordinators, commune coordinators, helpline consultants and census enumerators (field and telephone). At the stage of logistical and organizational work, assumptions were also checked regarding the organization of training for the various levels of the census apparatus structures.
7. The trial censuses checked the validity of the procedures adopted and the functioning of the different organizations in the census structure.
8. It was also important to revise the methodological assumptions for the censuses prepared by the working groups.
9. From the point of view of completeness, the activation of the society for the online self-enumeration, as well as the success of the whole undertaking, it was important to check the effectiveness of the activities planned to promote the census.
10. An equally important area was the analysis of the functioning of the IT tools using in the trial censuses, which, after properly scaling, were the basis for IT support of the censuses.

## II. First trial census

11. The first trial census was conducted between 1 and 31 October 2019 with a reference moment of 30 September 2019, 00:00, and targeted two rural communes:
  - a) Czerwińsk nad Wisłą (in the Mazowieckie Voivodship) - selected due to its location in a voivodship characterized by a significant inflow of foreigners. Large differences are recorded between the number of employers' declarations of the intention to employ foreigners and work permits, and the number of foreigners registered in this municipality for a temporary stay of more than three months. In addition, movement rates indicate that this is a municipality with low mobility and at the same time with a rather significant unemployment rate.
  - b) Sierakowice (in the Pomorskie Voivodship) - selected for its age structure, i.e. convenient indicators for the population in the mobile age group, which made it possible to verify the propensity to participate in the self-enumeration. In addition, the municipality was selected due to the indicators of internal and foreign migration. Furthermore, it is a so-called 'minority' municipality, in which the proportion of the community speaking the Kashubian language is 53.8 per cent (data from the 2011 Census). The commune is characterized by a low unemployment rate.
12. The first trial census was conducted as a full survey through computer-assisted web interviewing (CAWI), computer-assisted telephone interviewing (CATI) and computer-assisted personal interviewing (CAPI) channels, by using the interactive form application only. Telephone and face-to-face interviews were conducted by selected staff from statistical offices.
13. The particular methods were launched successively, allowing respondents to fulfil their obligation to complete the online self-enumeration in the first instance, according to the following schedule:

- a) 1-31 October - online self-enumeration (CAWI);
  - b) 8-31 October - telephone interview (CATI);
  - c) 17-31 October - face-to-face interview with the respondent (CAPI).
14. The census helpline and the REDMINE reporting system were launched. It was possible to verify the identity of census enumerators, and the progress of the census and the work of the enumerators was monitored in the CORstat system.
  15. All of this was done in order to effectively test the methodological, organizational, technical and dissemination solutions used.
  16. The major focus of the first trial census was to test the effectiveness of the online self-enumeration and the efficiency of respondents logging into the web application from different types of devices (using the chosen authentication method) and to verify the functionality and communicativeness of the interactive form application.

### III. Second trial census

17. The second trial census was conducted between 1 and 30 April 2020 with a reference moment of 31 March 2020, 00:00, in 16 selected communes (one in each of the 16 voivodeships in Poland, as shown in the figure below).



Figure 1. Map showing the communes selected for the second trial census

18. It was conducted as a full survey through CAWI and CATI channels – using only an interactive form application. The mandatory method for carrying out the census was online self-enumeration. **The CAPI method was abandoned due to the COVID-19 pandemic that started in Poland shortly before the trial census.** Telephone interviews were conducted by selected staff from statistical offices.

19. The various methods were launched successively in order to allow respondents to fulfil their online self-enumeration obligation in the first instance, according to the following schedule:
  - a) 1-30 April - online self-enumeration (CAWI);
  - b) 8-30 April - telephone interview (CATI);
  - c) CAPI channel scheduled for 8-30 April - face-to-face interview with respondent - not used for reasons stated above.
20. The census helpline and REDMINE reporting system were launched, as in the first trial census. It was possible to verify the identity of the census enumerators and the progress of the census; the work of the enumerators was monitored in the CORstat system. The second trial census made it possible to test the solutions on a larger scale.
21. In addition, rooms with computer equipment with software installed to carry out the online self-enumeration (free of charge) were made available in the communes' offices; the possibility of an on-request census on the census helpline was added.
22. The principal objective of the second trial census was to verify the methodological, organizational, technical and awareness-raising solutions applied, and in particular to check the possibility of conducting the census under conditions of the intensified COVID-19 pandemic and the validity of implementing the recommendations resulting from the first trial census (including, inter alia, corrections in the list of persons, addresses and dwellings, changes in the web application and the scope of the interactive form, and improvements in the functionality and efficiency of the helpline, communication channels and training materials).
23. Percentage results of the second trial census:
  - a) **Considering the dwellings** to be enumerated, a result of 40.9 per cent was achieved. When considered by the channel in which the census was carried out, higher results were registered in the CATI channel with 32.6 per cent. In CAWI, 10.3 per cent of enumerated dwellings were achieved. The daily increase in the CAWI channel was consistent but relatively small. In the CATI channel, the daily increase was higher, but dependent on the days of the week, with the increase declining significantly at weekends.
  - b) **Considering the persons** enumerated, a result of 54.6 per cent was achieved. Considering the channel in which the census was carried out, higher results were recorded in the CATI channel with 43.2 per cent. In CAWI, 12.4 per cent of enumerations were achieved.

## IV. Conclusions and recommendations for the 2021 population and housing census

24. Based on the experience of the trial censuses, some of the key conclusions and recommendations for the 2021 census are presented:
  - a) **on the organization of the census:**
    - providing flexibility for field enumerators, who were obliged to carry out telephone interviews on the mobile devices provided to them in a high risk COVID-19 environment;

- extension of the CAWI method until the end of the census;
  - ensuring greater flexibility in the use of CATI and CAPI channels;
  - ensuring the possibility of transferring funds from budget allocations for non-personal salaries to those for staff salaries, in order to increase the possibility of carrying out telephone interviews using telephone interviewers employed within the framework of official statistics services;
  - an early start to work on the organizational instructions for the 2021 census - in consultation with the statistical offices - to eliminate any doubts and so that the statements in the instructions (including deadlines) do not change during the census;
  - ensuring access to a larger telephone base, with particular importance to voice call services;
  - eliminating the problem of calls that cannot be answered at the helpline.
- b) on training:**
- maintenance of the cascade training scheme applied to the second trial census;
  - change of the format of training from in-person to remote;
  - maintaining the possibility for central and voivodship dispatchers to test the real management application (not a demonstration version);
  - retaining the organizational and methodological manuals as basic training materials;
  - adding instructional videos to the training materials on how to behave as census enumerators (for both field and telephone interviews);
  - adding to the procedures prepared for the second trial census, the procedures to be used in the event of a major COVID-19 threat.
- c) on the interactive form application:**
- the experience of the second trial census showed that no significant changes to the application were necessary. However, measures were taken to improve the functionality of the electronic application, including simplifying the determination of the personal composition of persons in a dwelling, clarifying the logical arrangement of questions, especially in the personal questionnaire, completing explanations to support the answering of questions, improving the functionality and further simplifying the dictionaries (especially the dictionaries of occupations and type of activity);
  - translation of the questions and guidelines for filling in the form into selected languages (English, Russian, Ukrainian recommended) in order to reach the largest possible group of foreigners who are not fluent in Polish;
  - in accordance with the law of 4 April 2019 on digital accessibility of websites and mobile applications of public entities, the application was digitally accessible for citizens with disabilities.
- d) on awareness-raising strategies:**
- actions to increase the participation of respondents in CAWI (with a particular focus on the first month for this census channel);

- building public engagement in completing the self-enumeration through social media and competitions;
- increasing awareness-raising activities at regional level, modelled on engagement in the second trial census;
- increasing the involvement of the institutional environment;
- recommended topics for communication: logging, census methods, data security, obtaining data from registers.

## V. Adaptation of census regulations to the COVID-19 pandemic

25. Amendments proposed to the Public Statistics Act of 29 June 1995:
  - a) As a result of the COVID-19 epidemic and the associated restrictions on the conduct of statistical surveys by interviewers in the form of face-to-face interviews, as well as the need for statistical observation of social phenomena, events and economic events affected by the COVID-19 epidemic, there was a need to expand access for official statistics to identification and address data (e.g. telephone numbers, e-mail addresses) from new data sources.
  - b) These data will also be used in post-epidemic surveys, which will help to improve the completeness of the surveys and thus the quality of statistical compilation, i.e. the process of creating datasets from the statistical data collected and then making calculations, studies and analyses based on these datasets.
26. Amendments proposed in the law of 9 August 2019 on national population and housing census 2021:
  - a) introduce more flexibility in the use of census methods, i.e. ways of collecting data from natural persons, especially in cases where the use of some methods would not be possible, for example due to the COVID-19 threat. This mainly concerns the creation of a legal framework for the possible non-use of the face-to-face interview method (CAPI), which involves direct contact between the census enumerator and the natural person, while ensuring that this method can be replaced by other methods;
  - b) increasing the efficiency of data collection from natural persons covered by the census;
  - c) clear assurance that statistics staff can be used to collect census data from natural persons using the face-to-face interview method (CAPI);
  - d) ensuring that field enumerators, i.e. persons selected after an open and competitive recruitment process, can be used to collect data from natural persons by telephone interview (CATI);
  - e) regulation of the method of determining the pay for census enumerators (including its amount).

## VI. Conclusions

27. Trial censuses deserve special attention among a number of recommendations, as they are a testing ground during which various solutions are tested, which are later applied in the population and housing census. They thus constitute a knowledge base that allows for even more efficient and effective performance of the tasks faced during the censuses.
28. It is noteworthy that it was originally considered to abandon the second trial census due to the COVID-19 pandemic. However, it was finally decided to adapt the organizational arrangements in the face of this threat in such a way as to carry out this task with the necessary precautions, bearing in mind, above all, the health of the respondents and the census enumerators. With this decision, it was possible to verify the flexibility of the management system and its resilience to crisis events that could occur unexpectedly in the near future.
29. The success achieved in both censuses confirms that the methods and solutions ultimately applied were correct, as well as the above decision to conduct a second trial census as one of the key operational decisions.