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##### Lessons learned from censuses of the 2020 round

### Lessons learned from censuses of the 2020 round

#### Note by the Central Statistical Office of Poland (Statistics Poland)\*

##### *Summary*

The population and housing census in the 2020/21 round in Poland took place under the influence of the COVID-19 pandemic (as in the rest of the world). Statistics Poland prepared solutions that enabled the census to be conducted successfully and with the necessary precautions.

Preparatory work for the census had been underway since 2017, with the aim of introducing modernization changes, following on from the census carried out in 2011, to further facilitate respondents' participation.

The pandemic circumstances prevailing during the implementation of the census, the behavioural and psychological behaviour of the population due to health risks, and restrictions on basic freedoms also affected the census. Hence, it was necessary to monitor the data collection phase even more rigorously than under 'normal' conditions on an ongoing basis and to take additional measures, if necessary, to support efforts to obtain the most complete and high quality census results possible.

The experience of the 2021 census also influences the recommendations for the next round of censuses.

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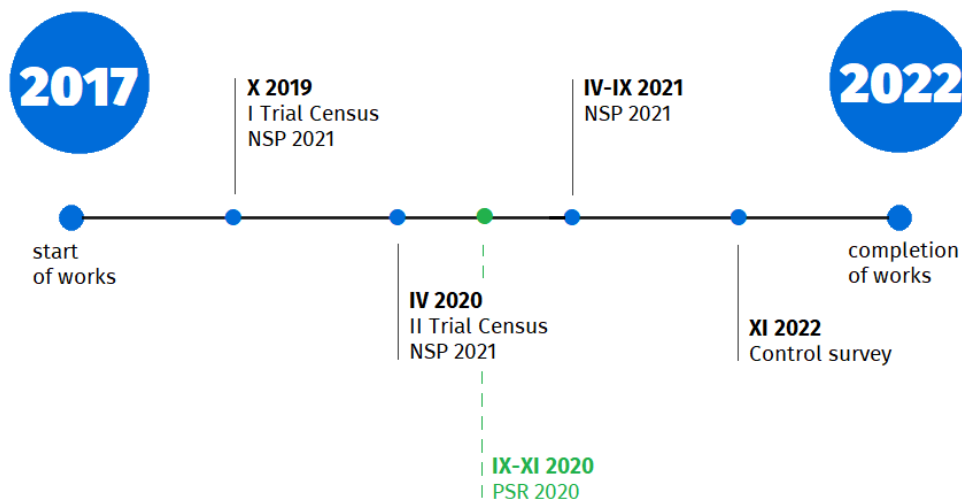


## I. Introduction

1. The population and housing census 2021 was preceded by two trial censuses carried out in Poland in October 2019 and April 2020. There was also a post-census study conducted after the census in November 2021. Figure 1 shows the timeline of these activities:

Figure 1

### Timeline for implementation of Polish census 2017–2022



*Note: PSR 2020 stands for the abbreviation of the Polish name of the agricultural census, NSP 2021 the abbreviation of the Polish name of the population and housing census.*

2. The intensive work schedule included labour-intensive and high-responsibility tasks, the implementation of which resulted in the development of the most optimal solutions. It should be mentioned here that a general agricultural census was carried out in Poland in 2020, which also made it possible to gather valuable experience and use it during the population and housing census. This was possible due to the fact that the management structure of both censuses was the same, in the form of the Central Census Office and the regional census offices. Moreover, both censuses were conducted according to the same data collection scenario, using the same technology, the same methods (CAxI) and even using the same mobile devices. The only difference was the use of a different methodology.

3. The time sequence, visualized on the timeline in Figure 1, made it possible to learn from the successive phases of the work and to modify the solutions and concepts tested during these phases or to use them in further tasks without changes (if they turned out to be relevant).

4. Particularly noteworthy is the fact that in connection with the COVID-19 pandemic, the withdrawal from the second trial census was considered. However, it was finally decided to adapt the organizational solutions in such a way as to perform 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 might occur unexpectedly in the future.

5. The suitability of the methods and solutions that were finally applied, as well as the correctness of the above-mentioned decision to conduct the second trial census, as one of the key operational decisions, is evidenced by the achievement of success in both censuses conducted.

## II. Concepts and solutions implemented in the population and housing census based on the experience of the 2011 census

6. The census was conducted without the use of paper forms, exclusively using an interactive form application, installed on mobile devices with Internet access or using an ICT system.
7. The census was carried out using the following methods:
  - (a) Internet self-enumeration (computer-assisted web interview, CAWI) – the channel was operational during the period 1 April to 30 September 2021;
  - (b) Computer-assisted telephone interview (CATI) – the channel was operational during the period 4 May to 30 September 2021;
  - (c) “Interview on request” (telephone interview on the respondent’s request) – the channel was operational during the period 1 April to 30 September 2021;
  - (d) Direct interview (computer-assisted personal interview, CAPI) – the channel was operational during the period 21 June to 30 September 2021.
8. Online self-enumeration was a mandatory form of participation in the census. Complementary methods were telephone or direct interviews conducted by the census enumerators. If someone failed to self-enumerate online, interviewing by an enumerator became mandatory.
9. Online self-enumeration could be carried out by respondents on their own electronic device (computer, tablet, smartphone), either by themselves or with help, e.g. from a family member or a census helpline consultant (by calling the Census 2021 helpline).
10. In cases where there was a lack of technical capabilities or computer skills, respondents were able to self-enumerate using census points equipped with computer hardware with dedicated software and Internet access, provided by municipalities, regional statistical offices or the Central Statistical Office (CSO). Respondents could also make use of substantive and technical support (in terms of computer and application use) of a specially trained and certified employee of the office. A summary list of census points with address details and telephone numbers was available throughout the census period on the Census 2021 website.
11. A ‘Census on request’ option on the census helpline was also made available. This option was available to everyone, during the working hours of the helpline. One had to call the census helpline number and select a dedicated channel. The call was then connected to the census enumerator who was carrying out the census. In addition, after optionally selecting a province code, the call was directed to the regional statistical office in the province according to the respondent's place of residence.
12. A helpline dedicated to the census was launched, where respondents could receive information about the census, including factual assistance on census questions, check the identity of the enumerator, take the census or request contact with the census enumerator. The helpline was open from 8:00 am to 6:00 pm, Monday to Friday, excluding weekends and public holidays.
13. A dedicated census website was established with helpful materials and guidance for respondents, including: information on census methods, data security, instructions for online self-enumeration in four languages, a list of questions included in the census form, FAQs on the census, and information on competitions.
14. The online self-enumeration form application was available in 4 language versions (Polish, English, Ukrainian and Russian) on the census website and sub-linked on the websites of the CSO and regional statistical offices.
15. There were three methods to log in to the self-enumeration application, through:
  - (a) *National Electronic Identity Node* – logging in by means of electronic identification (Trusted Profile, Internet banking);

(b) *Personal ID (PIN) number and mother's maiden name*, which required the respondent to immediately define an individual access password (during which a unique user account was created);

(c) *Email address and user-defined individual password* (during the definition of which a temporary user account was created) – this method was intended for foreigners without a PIN number.

16. On subsequent login attempts users were required to use the same login method as for the first correct login.

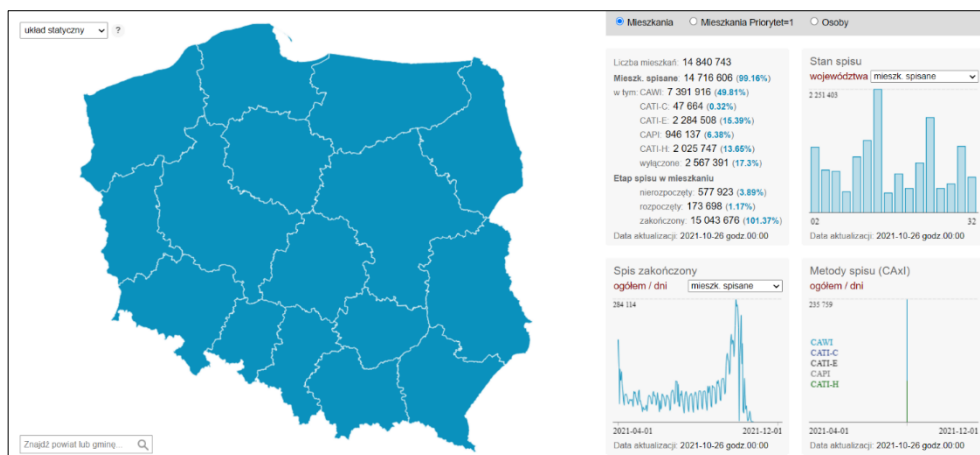
17. New methods and tools were introduced to confirm the identity of census enumerators, giving respondents a sense of security and confidence that they were being contacted by a genuine census enumerator. An application allowing the verification of the enumerator was made available throughout the census period on the Census 2021 website and on the websites of the regional statistical offices. In addition, the identity of the enumerators could be verified by calling the census helpline or, if the enumerators called the respondent, then during the phone call it was possible for the enumerators to provide one digit of their choice from the last five digits of the respondent's PIN number, which, if matched, authenticated the enumerators.

18. Numerous information and promotion campaigns concerning the census were carried out using various media channels (Internet, press, radio and television) and advertising activities (indoor and outdoor). The greatest emphasis was placed on the promotion of online self-enumeration as the fastest and safest method of completing the census. Many competitions with prizes were organized to further encourage participation in the census, as well as many educational activities, among adults, youth and children.

19. The census managers were provided with a tool to monitor the status and progress of the census at the national and local level in the form of an information dashboard, which enabled the generation of reports, statistics and their visualization by dwelling and by person, and with a distinction between the different census methods.

Figure 2

#### View of the dashboard screen



### III. The most important changes introduced in relation to the original assumptions of the 2021 population and housing census (resulting mainly from the COVID-19 pandemic)

20. The census was conducted from 1 April to 30 September 2021, with reference to a census moment of 31 March 2021 at 00:00. It was originally planned to be completed by 30 June 2021. With an amendment to the Census Act extending the duration of the census by an additional three months, it was possible to manage the census methods flexibly, taking into account, in particular, the degree of COVID-19 risk and the areas of highest incidence. Health security was a priority during the implementation of the census.

21. The list of information system operators providing data in the census was expanded (to include providers of publicly-available telecommunications services) in order to feed the list with current telephone numbers of respondents. This change minimized face-to-face interviews in favour of telephone interviews.
22. The technologies and organization of data collection were adapted to pandemic conditions, with the aim of reducing or avoiding direct contact as much as possible.
23. Flexibility in the use of data collection methods was introduced by allowing methods to be combined or replaced, depending on the needs.
24. Census applications and systems were adapted and provided with additional functionality to enable census enumerators to conduct both telephone and face-to-face interviews using the same mobile device.
25. Most of the census documentation was updated (instructions, procedures, guidelines, content of the contracts with the enumerators). The rules for carrying out the census by direct interviewing in the field were also worked out, in accordance with current sanitary recommendations and applicable national regulations. Each enumerator was required to read and accept these documents via the e-learning platform.
26. Organization of the work of the census enumerators was adapted to the changing pandemic conditions, including allowing them to work remotely or face-to-face, depending on the local pandemic situation. Their areas of operation were expanded from municipality to province. They were provided with appropriate equipment to support both telephone and face-to-face interviews, were equipped with personal protective equipment, and were assigned by the provincial dispatchers to conduct interviews for a given period of time using the CATI or CAPI method, depending on the degree of COVID-19 risk present in the region served by the enumerator.
27. Most of the work was carried out remotely. Recruitments for enumerators, including sign language enumerators, were carried out remotely. All training was conducted remotely, both for the enumerators and other members of the census apparatus. A large number of staff performed their duties remotely, including those on duty as dispatchers. The online platform was also used for most of the contact between the census enumerators and the dispatchers managing them, working in the regional statistical offices.
28. In connection with COVID-19, all publicly accessible online self-enumeration points were made available under a sanitary regime. This meant equipping all census points with personal protective equipment appropriate to the current pandemic threat, and requiring respondents interested in using this solution to make an appointment for a specific day and time, in order to avoid the accumulation of people.

#### **IV. The most important solutions and changes introduced to increase the possibility of participation in the census for people with various disabilities**

29. In the 2021 Census, a number of solutions were implemented to enable people with disabilities (hearing impaired, deaf and deafblind people, people with mobility impairments, including those in wheelchairs, as well as blind and partially sighted people).
30. Cooperation was established with numerous organizations and institutions professionally supporting people with various disabilities and dysfunctions. These entities took additional measures to support such persons in completing the census, e.g. assistants were activated to help them fill in the census forms.
31. The census website and web-based form application were designed with digital accessibility and the needs of people with disabilities in mind, in accordance with the Web content accessibility guidelines (WCAG) 2.1 standard.

32. The 2021 census was the first ever to allow active participation by people with hearing disabilities. This was made possible thanks to:

(a) The involvement of census enumerators with sign language skills, so-called sign enumerators;

(b) The establishment of a census website dedicated to deaf, deaf-blind and hard-of-hearing people, including MP4 video files with the census questions translated into Polish sign language and a form where they could request sign language contact for enumeration purposes;

(c) The establishment of a video chat function with a Polish Sign Language interpreter to provide assistance with census-related issues;

(d) Preparation and provision of guidelines for those involved in census work related to the census of deaf and hard of hearing persons.

33. Information material in Braille was developed for visually impaired and blind people. An adaptation of the census website and the web-based form application enabled them to fill in the form themselves. An additional solution was the possibility to sign in on the census helpline.

34. An instructional video for self-enumeration with audio-description, subtitles and sign language translation was developed for people with hearing and visual impairments and made available on the census website, television, social media and other outlets for contact with people with special needs.

35. Census desks were adapted to the needs of persons with disabilities, i.e. they had architectural and communication access. In accordance with the Act on Sign Language and Other Means of Communication, sign language service was provided in municipal offices and regional statistical offices.

36. The person-address-housing list imported in the CORstat\_census management system was equipped with so-called flags, to which corresponded the priorities affecting the order of the census, e.g. priority 2 included dwellings inhabited by persons with disabilities and priority 3 by only older persons aged 70+. This arrangement made it possible to reach out specifically to people with disabilities and people with special needs and enable them to take the census.

## **V. The most important solutions introduced to increase the completeness of the census**

37. During the census, meetings of the top management were held once a week to discuss current activities and the progress of the census (based on the dashboard reports), and to resolve emerging issues and decide on possible changes (usually in the area of organization or functionality of the census systems and applications).

38. The dashboard was also used to calculate daily targets, i.e. the number of dwellings that should be enumerated by census enumerators in municipalities, regions and Poland as a whole, allowing for greater control and appropriate response in the event of unsatisfactory progress.

39. Meetings were also held between the representatives of the regional census offices and the central dispatchers and their management (two to three times a month), as well as meetings between the regional census helpline coordinators and the central level helpline management. These served to discuss and resolve any problems encountered by census enumerators, helpline staff and regional and central dispatchers in the course of their work. Issues that could not be resolved at these meetings were referred to the census staff for discussion and decision-making at central level.

40. Census points, open during the working hours of the respective office, were available at the end of the census for additional hours in the afternoon and even at night on the last day of the census.

41. To meet the needs of respondents, the regional statistical offices – with the support of the municipal census offices – organized mobile self-enumeration points during special events taking place outdoors, in shopping malls and in places related to culture or leisure.

42. In many *voivodeships*, census buses running between communes were also launched, where the census could also be carried out. In particular, smaller towns and villages with difficult access to census points or with poor Internet access were chosen.

43. Special events were organized throughout the country to allow respondents to complete their census at unusual times, such as late afternoons, evenings and even nights, or on Sundays. These were events such as 'Open Days in the municipalities' and 'Census Night' on 25 September 2021, with census taking available until midnight on the last census day, 30 September 2021.

44. In the last month of the census the census helpline also operated on Sundays and with extended hours until 8 p.m. In addition, on 25 September 2021, when a 'Census Night' was organized, and on 30 September 2021, i.e. the last day of the census, the helpline operated until midnight. All these changes were dictated by the huge number of calls, a large proportion of which were calls from respondents wishing to enumerate on request.

## **VI. Lessons learned from the 2011 and 2021 censuses as recommendations for the next round of censuses in 2031**

45. On the basis of the experience gained during the censuses, comments and reports, conclusions and recommendations were prepared as a knowledge base for the next censuses. Many valuable tips have been gathered in all areas of activities, i.e. organization, methodology, ICT, census helpline and publicity, which will be worth applying again in the next censuses. Some of the most important ones are presented below.

46. The shift to electronic modes for the census in Poland, which began in 2011 and continued and expanded during the 2021 census, has proved to offer an excellent protection against the impact of uncontrollable extraneous events, e.g. through offering the possibility to eliminate direct contacts with respondents. The flexible use of CAxI methods during data collection made it possible to avoid postponing the census until after the pandemic, and to complete it on time while adhering to safety rules (and these were a priority).

47. It is recommended to carry out further work on the development of key census solutions, particularly in the area of increasing use of electronic modes, which will make it possible to carry out the census under a variety of conditions, including during unpredictable random events, and in practice will also be much more cost-effective.

48. It is recommended to conduct a wide-ranging information campaign and promotion of the Internet self-enumeration in all available media and advertising media.

49. It is recommended to use telephone and face-to-face interviews interchangeably. Twenty-five per cent of the information obtained from respondents came from the telephone channel and only 15 per cent from the face-to-face method, with the quality of the results obtained by both methods being the same (given the design of the census application which continuously monitors the reliability and completeness of the answers provided).

50. It is recommended to use the following organizational solutions in future censuses:

- (a) Continuing to use only electronic census questionnaires;
- (b) Using the organizational structure at the central, *voivodship* and commune levels, thanks to which it was possible to efficiently and effectively manage census work, both in the 2011 and 2021 censuses;
- (c) Carrying out trial censuses, which made it possible to test organizational and methodological solutions in the 2011 and 2021 censuses;
- (d) A flexible approach to the work of census enumerators in conducting telephone or face-to-face interviews;

(e) Carrying out a significant part of the work remotely (if the nature of the task allows it, e.g. recruitment of candidates for enumerators, training of participants in the census apparatus);

(f) Calculation and communication of daily targets, i.e. the number of dwellings and persons to be enumerated on a *voivodship* basis;

(g) Providing respondents with free Internet self-enumeration stations by all field census bureaus, with the provision of technical assistance and with the use of the computer and form application.

51. It is recommended to use the following solutions in the area of methodology, census systems and applications in future censuses:

(a) Providing a demonstration version of the online form application to allow respondents to familiarize themselves with the electronic form and the range of questions before taking the actual census;

(b) The provision of different language versions of the online form application with user manuals prepared in those languages;

(c) Equipping census enumerators with mobile devices suitable for both telephone and face-to-face interviews;

(d) Maintenance and further development of the REDMINE Notification System, the place where technical, organizational and content-related problems (including emergencies) encountered by census participants were reported and handled;

(e) Further cooperation with administrators of administrative data, especially in order to support them in improving the quality of data in dedicated registers. This is important, not only because of the ever-increasing share of data from these sources in the various surveys carried out by statistics Poland, but also because of the future use of the registers according to the new European Union Regulation on Population Statistics (ESOP), which is expected to be in force in just two years. The data to be provided according to the ESOP will include, among others: an annual update of the population number, including selected characteristics at the grid level;

(f) As part of the preparatory work for the censuses, conduct further public consultations with users who use statistical data to fulfil their statutory tasks, as well as cooperation with selected scientific and research communities and government administration bodies. Public consultations were conducted when the thematic scope of the census was determined, and are a proven solution that was also applied in the 2011 census round.

52. Recommendations for changes or improvements to the solutions adopted in the Census 2021:

(a) Consider a shorter census period – too long a period results in slackening among enumerators and less mobilization of respondents (especially if the census falls during the holiday season);

(b) Increasing the share of the "Census on request" method, which was much more popular than expected; it is estimated that the reason why it was often chosen by respondents was the possibility for them to decide themselves when the census should be conducted. By calling the helpline at a time that was convenient for them, respondents were assured of contact with a real census enumerator and also received the necessary substantive support from the enumerator;

(c) Spending more time on practical training, i.e. filling in the online form application for different possible scenarios;

(d) Providing a free helpline for respondents (mainly due to the fact that censuses are mandatory), as well as better quality of telephone calls and adequate capacity (verified by tests of the helpline's performance before the census);

(e) Conducting consultations on the online form application and the solutions used with independent experts.



## VII. Summary

53. The execution of the activities presented in this paper, both those previously planned and those that required changes (mainly due to the unforeseen COVID-19 pandemic), allowed the census to be completed successfully. The objective of the census was achieved, a very high census completion rate was obtained and the data collected is complete and of good quality. The census ran on time and on schedule. The safety of all those taking part was taken care of and, in addition, significant financial savings were achieved in relation to the planned census budget, benefitting the country (especially important in times of crisis due to the pandemic). An important aspect that deserves to be highlighted is the large proportion of people enumerated through online self-enumeration (CAWI) – around 60 per cent of all enumerated people. It can be seen that this method is gaining more and more trust among respondents as it is safe and at the same time convenient and does not limit them in terms of time or place of taking the census. Taking into account the development of ICTs and the tendency towards greater adoption of electronic tools in social behaviour, the future of successive censuses promises good prospects, as it makes it possible to improve the organization of future censuses, reduce their costs and perhaps even minimize or even eliminate the participation of census enumerators.

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