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Polish experiences with respect to the National Population and Housing Census and the
Agricultural Census conducted in 2002

Submitted by the Central Statistical Office of Poland

I. INTRODUCTION

1. In May 2002, Poland conducted two combined national censuses, i.e. the national population and housing census and agricultural census, which were introduced by special acts. Preparations for both censuses were preceded by comprehensive public consultations, as result of which a clear need was determined to obtain the most detailed information, thematically connected with both censuses, which would be available at regional and local level. Due to this, it was necessary to carry out two censuses within a relatively short time. The manner of carrying out both censuses and the implementation of the most efficient organisational solutions were entrusted to statisticians, even though it was known that the total cost of the entire project connected with the execution of two separate censuses would be huge, and obtaining such considerable financial resources was almost impossible. The need to reduce costs and to obtain information as quickly as possible for all levels of administrative divisions of the country, in particular with respect to local units, determined simultaneous performance of two censuses using the state-of-the-art IT solutions and efficient organisational solutions, facilitating the work of census enumerators and statisticians who were processing the results of both censuses.

2. This paper draws attention to issues related to the national censuses which were conducted

by a traditional method, i.e. by using a network of census enumerators, and which seems to be particularly important to us due to the advantages which were achieved, as well as problems which still remain to be solved in the next Polish censuses.

3. The paper focuses on the following subjects regarding Polish censuses and problems related to them:

- (a) combining national population and housing census with agricultural census;
- (b) national census as a source of information on international migration;
- (c) dissemination the census results;
- (d) significance of the promotion of censuses.

A. Combining National Population and Housing Census with Agricultural Census

4. The basic and the most important methodological issue of every national population and housing census is determining the population size. On the one hand, the proper number of population should be obtained at the level of the entire country with a minimum error determining a potential omission or double-counting of persons or groups of people, and on the other hand, the population needs to be 'assigned' to a proper place of residence or stay, which allows for obtaining a correct picture of the territorial distribution of the population. This task was not an easy one and it was additionally complicated by the fact that the population constantly changes the place of residence and some flaws in the functioning of the pre-determined record provisions. Additionally, the diversity of specific circumstances of life of particular individuals and different residential status can amaze even the most experienced methodologists and census organisers.

5. The idea of carrying out in Poland two national censuses at the same time, i.e. the population and housing census and the agricultural census, raised at the very beginning numerous discussions and controversies, when preparatory activities for both censuses were being carried out. A very important issue was to carry out preparatory activities with respect to both censuses, in order to determine beforehand whether among the members of a given private household there was a user (an own-account worker) of an agricultural holding. Determining the date of both censuses was another essential issue, which turned out to be of crucial significance with respect to the agricultural census, due to the necessity of obtaining information about the most recent status of crops, i.e. after the completion of spring field works. With respect to the agricultural census conducted together with the population and housing census - it is necessary to remember that a user of an agricultural holding may not be a resident of a place where his agricultural holding is located, or his agricultural holding may be located in a different place (in that case it would be taken care of by a manager) than the place of residence of such an agricultural holder.

6. In the course of the actual census, information about incidence, location and use of agricultural holdings was verified, as well as the information on the total area and arable area of agricultural holdings. The census data about population, households, and agricultural holdings were collected on separate forms, which were completed by one census enumerator – if it was possible in the course of one visit in a given private household (proxy interview was allowed). A drawback of this solution was a significant extension of time necessary to carry out an interview by a census enumerator, which could have resulted in the enumerator's 'tiredness', as well as

'tiredness' of the respondents, and in consequence a potential decrease of quality of collected information. However, the advantages of such a solution outweighed the drawbacks, in particular the possibility for ongoing verification of the respondents' answers and a rarer occurrence of the so-called positional non-responses (to certain questions).

7. The basic methodological issue that needed to be solved whilst carrying out both the population and housing census and the agricultural census is determining the concept of a private household, because it constitutes a unit of reference in those two censuses. The definition of a private household adopted in the Polish census practice determines that: *it is a group of related or unrelated persons, living together and supporting one another. If one of the persons living together supports himself/herself separately, this person creates a separate one-person household.* This definition is based on the so-called economic concept of a housekeeping unit, as opposed to the concept of a household dwelling, used in some countries, where all persons living together are treated as one household (a dwelling is tantamount to a private household).

8. When both censuses are carried out at the same time, it is difficult to apply the economic definition of a household strictly in all cases, especially in a situation when a given dwelling comprises more than one household, and there is only one user of agricultural holding, whereas a helping person(s) live(s) in a separate household.

9. **The advantages of carrying out both censuses at the same time using the same census infrastructure** was a significant limitation of costs, predominantly with respect to the costs connected with the organization of the entire project and a large portion of costs related to the remuneration of census enumerators. Information obtained with respect to both censuses by one census enumerator was consistent and more complete. At the same time it was possible to prepare the results of both censuses in a shorter period of time and to apply better validation (control) procedures of the collected statistical data already at the stage of electronic data processing, thanks to using one identifier on the census forms used in both censuses and wide-scale implementation of automated coding formulas combined with a large-scale use of numerous dictionaries, specially designed for coding purposes.

10. **In general, combining both censuses provided an opportunity to prepare their results simultaneously, which allowed for extending the characteristics of population related with agriculture and the users of agricultural holdings, as well as for distinguishing additional categories of people, such as:**

- (a) agricultural population, i.e. supporting itself solely from or mainly from agriculture;
- (b) population professionally active in agriculture, selected on the basis of current activity status in accordance with the ILO recommendations (within the scope of definition of people economically active and the unemployed), as well as on the basis of permanent activity according to contribution of work to an agricultural holding (it was possible to maintain the option to compare the results with the data from previous agricultural censuses), including people working in agriculture.

11. There was also possible to compile and disseminate data from the agricultural census according to the place of residence of agricultural holders and location of agricultural lands.

12. The CSO intends to use similar solutions in the future with respect to the manner of carrying out two national censuses at one time, i.e. the population and housing census and the

agricultural census.

B. Population Census as a Source of Information on International Migration

13. The national population and housing census, conducted in Poland in May 2002, provided a great deal of information about migration – in particular with respect to international migration. Obtaining information about stock immigrants, as well as the flow migration was very important to us, because Poland was undergoing a period of social and economic changes. Moreover, this was also a period of accession of Poland to the European Union. We observed an increased demand for data on migration intensity, as well as demographic, social and economic characteristics of immigrants.

14. A wide scope of information was necessary, which would allow for comparing the migration scale before and after the accession of our country to the European Union. Due to this reason, the issues related to the migration were widely explored in the national population and housing census of 2002.

15. The last census investigated issues regarding both geographical and demographic characteristics of the population. The basic questions regarding country of birth, citizenship, period of residence, place of previous residence, and the year of arriving at the place of current residence were included in the basic form – designed for everybody. It is necessary to stress the fact that citizenship was a subject of observation for the first time in the after-war period. The information was also collected on people having double citizenship. Information regarding the place of residence one year before the census (subject recommended in the guidelines as a core topic one) was derived on the basis of other questions.

16. The basic form also included questions allowing for collecting information about immigrants residing in Poland temporarily and emigrants temporarily residing abroad for more than two months. We asked about the reason of migration and the country of previous residence (with respect to immigrants) and departure (with respect to emigrants). Information on emigrants was provided primarily by the members of their families residing in Poland and in the case of emigration of entire families – the basic data were obtained from administrative systems.

17. Moreover, the national census of 2002 was provided with an additional form devoted to long-term migration (internal and international) survey. It was designed for persons who arrived at the place of current residence between 1989 and 2002, i.e. during the inter-census period, or who at the moment of the census resided in a given place for at least twelve months. The survey was carried out in dwellings and places of group accommodation, where people resided in connection with their work or studies.

18. Applying the technology of optic reading (OCR) of data from the forms, automated coding of text variables (e.g. names: country of birth, citizenship, previous or next place of residence), and automatic data control allowed for relatively quick data processing, and then dissemination of the results of research on the population migration. At the stage of compiling the results, the information about long-term migrants from an additional form was combined with information from a basic form, which allowed for obtaining a wide demographic, social, and economic characteristic of the migrating people.

19. It is necessary to underscore the fact that definitions of all terms related to migration in principle complied with the recommendations of the UN ECE and Eurostat regarding population and housing censuses around the year 2000.

20. For the first time in after-war period in Poland, the population and housing census of 2002 investigated affiliation with national or ethnic groups. Apart from this, the subject matter of the census was also supplemented by a question on language used home, moreover the structure of the question made it impossible to register two names of languages other than Polish.

21. **The main problem** in the latest census was obtaining reliable results regarding temporary immigration. We estimate that the number of immigrants temporarily residing in Poland is larger than the figures obtained in the census. Despite the fact that during the training of census enumerators' special attention was given to that issue, the obtained results turned out to be significantly underestimated. The census enumerators did not manage to reach all immigrants, and most probably they did not manage to record immigrants illegally residing in Poland, who did not have a registered status of residence, as well as a certain portion of immigrants having temporary residence permit – due to various reasons – was not recorded. It was difficult to reach those foreigners who sub-leased flats without carrying out administrative and registration procedures.

22. According to the latest census, immigrants residing in Poland temporarily for more than two months constitute less than 0.1% of Poland's population. However, it is necessary to stress the fact that those persons are not included in Poland's population, therefore they do not 'burden' the size and structures of population.

23. We hope that our experiences regarding the population and housing census of 2002 will allow for observing difficulties and that the subsequent census will provide better quality of data within the scope of research on population migration, especially immigration of foreigners to Poland.

24. **Plans regarding research on migration in the next Population and Housing Census:** with respect to the national census scheduled for the year 2011, plans are made to obtain information on the same issues which were included in the census of 2002. Maintaining continuation is crucial for carrying out comparative analyses. Moreover, the scope of information collected during the national census of 2011 will probably be extended onto certain elements – important from the point of view of international obligations. In the context of a Regulation prepared by the European Parliament and Council regarding Community statistics with respect to international migration and international protection (Proposal for a Regulation of the EP and of the Council on Community statistics on migration and international protection), the crucial issue is to obtain information about persons who acquired the Polish citizenship by means of naturalisation. Investigation of reasons of migration will allow for separating non-voluntary (forced) migration, i.e. refugees and persons included under international protection, but it will also allow to observe the escalation of migration flows (including economic migration) in relation to the opening of borders and Poland's accession to the EU. Information on migration is perceived by us as an important element for updating the economic and social diagnoses and determining tasks with respect to shaping labour market policy, education, and

social protection.

25. In order to improve quality of data on international migration we intend to make every possible effort to identify the clusters of immigrants. We plan a wider promotion of the census in those circles of the population. In 2002, the census questionnaires were available on the Internet in four foreign languages (i.e. English, French, German, and Russian). In addition, the census enumerators were handing out the letter of the CSO President during their pre-census rounds. The letter was prepared in five foreign languages (listed above and additionally in Ukrainian). However, as it was mentioned before – those actions did not bring expected results. We plan to undertake similar activities during the next census. We are convinced that more detailed knowledge about the clusters of immigrants and a wider promotion of the census among foreigners will bring better results in the scheduled population and housing census in 2011.

C. Dissemination of Census Results

26. The scope of processing and dissemination of the results of each census is determined by the national information needs, formulated by the authorities, local governments, scientific and research centres, economic entities and – to an increasing extent – international organizations. Within the last few years interest and demand of the users of statistical information has significantly increased at the regional and local level (NUTS 3 and NUTS 5). This is a result of development of management system relying on local governments, the necessity for monitoring social and economic transformations at the local level, and harmonising the Polish approach with the international standards.

27. A rapid development of information technology and in particular the Internet, databases, and information banks is also important with respect to the demand for detailed data by region. Such facilities make it possible to have a quick access to detailed data in a user-friendly manner.

28. At the same time, it is necessary to remember that whilst disseminating information at local level (by gmina, locality or region), the information cannot be unit-identifiable – the statistical confidentiality needs to be kept, in accordance with the appropriate provisions of the Polish law in this respect, i.e. the Law on public statistics and the Law on personal data protection.

29. **The results of the national population and housing census and the agricultural census of 2002 were disseminated in the following manner:**

- (a) tabular and analytical and tabular publications, as well as in-depth analyses prepared mainly by scientific and research institutions;
- (b) IT carriers: floppy discs, CD-ROMs and the Internet;
- (c) databases, including the most useful Regional Database. This is the largest ordered collection of information in Poland with respect to socio-economic situation, and demographic, social and environmental issues. It describes voivodships, *poviats*, and *gminas* as units of a social and administrative system of the country, as well as regions and

sub-regions which constitute elements of the division into territorial units – for statistic purposes.

30. A very important aspect of disseminating the census results, and therefore their ongoing use, is the relevance of data, i.e. short time of processing them. On the basis of a breakdown prepared by Eurostat which was used for the evaluation of population and housing censuses around 2001, it can be noticed that Poland had a relatively short time for compiling the census results (1.5 year) from the moment of conducting the census to the transfer data to Eurostat. The countries which did not conduct a traditional census but obtained census data from their population registers had a comparable period of time for compiling census results.

31. An important factor which shortened the time of compiling the census data was a wide application of modern technologies of data processing; starting from the OCR technology at the stage of entering the collected materials – optical readers (scanners), and not manual entering of data, through automated symbolisation of word records (a wide application of various dictionaries, such as: dictionaries of professions, types of corporate activity, dictionaries of names of countries, languages, dictionary of place names (at the NUTS-5 level), automatic coding and data correction (e.g. regarding households, families, sources of maintenance of population and private households). Fully automated data control was used for the first time – both with respect to the completeness of a collection, as well logical control within the scope of a research unit, i.e. a dwelling, and then the census district and the entire collection. After the control stage a very important element of compilation was combining data from the questionnaires of population and housing census and the questionnaires of agricultural census (this issue was mentioned earlier) and control of common subject matters such as a user of agricultural holding.

32. Evaluation of the collected material – scanning, maintenance and administrative service of all applications of the data processing and editing system – took place in the decentralised system, i.e. in 16 regional (*voivodship*) statistical offices, on the basis of a uniform system which was prepared and implemented beforehand. The decentralisation had its impact on the rapidity of compiling census data, as each of the centres processed its part of the material. The complete collection was archived and processed at the Central Statistical Computing Centre by the Central Statistical Office in Warsaw.

33. The manner of preparing the data which was applied in the census of 2002 brought expected results and can be – taking into account the state-of-the-art IT solutions of the recent years – also implemented in censuses planned around the year 2011.

D. Significance of Promoting the Censuses

34. The condition requisite for the success of the largest project of the Polish statistics, i.e. the simultaneous conducting of the national population and housing census and the national agricultural census in 2002, was a large-scale participation of the inhabitants of the country. It is necessary to stress the fact that – invoking the right to protect personal data – the population limits its acceptance for this type of research. Therefore, the rank of national census requires a

wide-scale promotional and popularising campaign at the stage of preparatory works, which is not necessary in the case of other types of surveys.

35. The programme for promoting the census of 2002 in Poland was an important and carefully prepared organisational element and the following aspects were taken into account:
- (a) which issues should be clarified;
 - (b) which recipients should be reached;
 - (c) what is the time of providing information.
36. The prepared programme took into account the use of various mass media and various forms of interaction. Promotional activities were distributed in time; their culmination took place during the days immediately preceding the census.
37. **The promotional programme comprised the following thematic – genre modules:**
- (a) editing forms – including: graphic sign on publications, leaflets (various versions), brochures, posters, calendars, folders, census newspaper, occasional leaflets, bookmarks, commemorative album ‘213 Years of Censuses in Poland’;
 - (b) promotion of census in the mass media - including: press conferences, thematically related to the censuses of 2002, information for the media and the population, information for the Information Centre of the Government of Poland, wide promotion in selected magazines, including the monthly magazine of the CSO ‘Wiadomości Statystyczne (Statistical News’), promotion in radio and on television;
 - (c) promoting the 2002 census via the Internet, including: legal provisions, documents, census questionnaires, programme for processing and publishing the results, ‘chat rooms’ with respect to census subjects;
 - (d) material forms of promoting censuses – including: items with the census logo, postal stamps, plastic bags, commemorative stamps, cassettes.
38. **Three very successful projects were implemented which had immense significance for the promotion of the census:**
- (a) free-of-charge census hotline – operating between May 6 and June 8, 2002 between 8.00 a.m. and 8.00 p.m. every day two telephone numbers were available;
 - (b) television spots (5 sets), on average lasting approx. 30 seconds, broadcasted in the period before the census and during the census;
 - (c) ongoing monitoring of preparation of the census and its course by the Polish media, as well as the period of presenting the census results.

II CENSUS HOTLINE

39. For the first time in the history of Polish censuses the so-called hotline was organised. Persons calling a given number could clarify their doubts regarding various census issues, both legislative and methodological. The hotline was a well-thought organisational and programme concept. During five weeks of its operation (daily between 8.00 a.m. and 8.00 p.m. – specially trained employees working in 4-hour shifts) more than 12 thousand phone calls were received. The hotline employees provided information for the population and acted as experts for the census enumerators and employees of census local offices. Along with the hotline, information census offices were also operating in voivodships and the CSO head office. This solution

allowed for undertaking immediate interventions and following their results in real time.

40. The hotline also provided a good experience for the statistical personnel responsible for the census implementation. It allowed them to achieve more precision in those aspects of the organization or methodology the interpretation of which was not explicit and to which greater attention should be drawn in the future.

III. TELEVISION SPOTS

41. Those were short films, lasting approx. 30-40 seconds, prepared by teams of experts. The text was read by the most popular Polish presenters, who encouraged participating in the census, stressing its importance. The television spots made use of the census logo and motto, which was also placed in other advertising and promotional materials. The films presented various situations connected with the census, i.e. various types of households – with one or several members, in the city and in the country (different types of buildings), including owners and users of agricultural holdings. The spots were broadcasted with varying frequency: at the beginning they were rare – at that time their objective was to prepare the society for the census, and in the period directly preceding the census and during its first days – more often (three times a day), including prime time, i.e. after the main evening news programme. Those short films were an excellent supplement for the entire cycle of TV programmes (broadcasted in various programmes – news, popular, educational, etc.), where the experts implementing the census (the CSO employees), scientists and journalists expressed their opinions about the census.

IV. MONITORING THE PREPARATIONS AND CONDUCTING THE CENSUS

42. The CSO press team carried out an ongoing monitoring of the information published with reference to the census (16 volumes of press cuttings were compiled from the pre-census period and the duration of the census), provided information and explanations – independently or through the agency of an expert on a given subject, selected from the CSO personnel. Press publications, both in daily and periodical press, as well as radio programmes, including direct interviews with employees of census offices, census enumerators or the population were carefully monitored so that a quick intervention could be undertaken in case of any irregularities. Readiness to cooperate with the media on the part of well-prepared statistics personnel brought good results, and it assured positive approach to the census and explanation of many of its important aspects.

43. The promotional campaign for the national censuses of 2002 was tailored for a very large scale. In general, it was evaluated in a positive manner; however, it was impossible to avoid minor mistakes or certain omissions. Those drawbacks can be justified by the large-scale of the project and lack of experience in applying certain modern tools of public relations for the first time.

44. **With respect to the next census, scheduled for the year 2011**, greater attention should be paid to addressing the promotional programme exclusively to its main recipient – the population. All other tasks, including tasks with respect to census enumerators and the census infrastructure should be implemented as organisational tasks. The future campaign should make use of the verified method of promoting the census subject matter and encouragement to

participate in the census by schools (in the 2002 census there were no brochures for the schools, no discussions or lectures devoted to the census). The basic formula for promotional programmes should comprise interactive systems (Internet chat rooms, hotlines or other forms of providing an instant assistance by phone). Local hotlines could turn out to be an excellent solution.

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