Metodologia badań statystycznych
Statistical research methodology

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Zeszyt metodologiczny
Ruch naturalny. Bilanse ludności.

Methodological report
Vital statistics. Population balances.

Warszawa Warsaw 2025

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Methodological report
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Główny Urząd Statystyczny Statistics Poland

Warszawa Warsaw 2025

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Methodological report reviewed by Methodological Commission of Statistics Poland

Publication available on website https://stat.gov.pl/

When publishing Statistics Poland data – please indicate the source

Metadata

Title of the methodological report	Vital statistics
Authors	Demographic Surveys Department Statistics Poland in cooperation with the Statistical Office in Olsztyn
Scope of the survey by subject	Vital statistics events recorded in the territory of the Republic of Poland
Objective scope of the survey	Information on births, deaths, marriages, divorces, and separations by administrative and statistical division
The type and method of survey	The survey was conducted based on administrative sources and information systems.
Type and method of the survey/ survey area	Data sets from the Ministry of Digital Affairs, the Ministry of Health and from the information systems of district courts
Presentation of survey results	Publications: „Demographic situation of Poland up to ...", „Population. Size and structure and vital statistics in Poland by territorial division", „Demographic Yearbook". Databases: Demography database: https://demografia.stat.gov.pl/bazademografia/Tables.aspx Local Data Bank: https://bdl.stat.gov.pl/BDL/dane/podgrup/temat Knowledge Databases: https://dbw.stat.gov.pl/en
Classifications used	International Statistical Classification of Diseases and Related Health Problems 10th Revision https://icd.who.int/browse10/2019/en National Official Register of the Territorial Division of the Country (TERYT) https://eteryt.stat.gov.pl/eTeryt/english.aspx?contrast=default Classification of Territorial Units for Statistics (NUTS) https://stat.gov.pl/en/regional-statistics/classification-of-territorial-units/classification-of-territorial-units-for-statistics-nuts/
Date of methodological report	First edition – January 2019 Update – November 2025

Metadata

Title of the methodological report	Population balances
Authors	Demographic Surveys Department Statistics Poland in cooperation with the Statistical Office in Olsztyn
Scope of the survey by subject	People living in Poland and people residing in Poland (residents).
Objective scope of the survey	Population by sex and age by administrative and statistical divisions
The type and method of survey	The secondary survey
Type and method of the survey/ survey area	Results of the following surveys: 1.21.01 Births. Fertility, 1.21.02 Marriages. Divorces. Separations, 1.21.03 Internal migration of population, 1.21.04 International migration of population, 1.21.09 Deaths. Mortality. Life expectancy, 1.80.02 System of Social Research Units – surveys.
Presentation of survey results	Publications: „Demographic situation of Poland up to …”, „Population. Size and structure and vital statistics in Poland by territorial division”, „Demographic Yearbook”. Databases: Demography database: https://demografia.stat.gov.pl/bazademografia/Tables.aspx Local Data Bank: https://bdl.stat.gov.pl/BDL/dane/podgrup/temat Knowledge Databases: https://dbw.stat.gov.pl/en
Classifications used	International Statistical Classification of Diseases and Related Health Problems 10th Revision https://icd.who.int/browse10/2019/en National Official Register of the Territorial Division of the Country (TERYT) https://eteryt.stat.gov.pl/eTeryt/english.aspx?contrast=default Classification of Territorial Units for Statistics (NUTS) https://stat.gov.pl/en/regional-statistics/classification-of-territorial-units/classification-of-territorial-units-for-statistics-nuts/
Date of methodological report	First edition – January 2019 Update – November 2025

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Abbreviations

BDL	Local Data Bank
DBW	Knowledge Databases
Eurostat	Statistical Office of the European Union
ICD-10	International Statistical Classification of Diseases and Related Health Problems 10th Revision
IRIS	Information software used for automatic coding of causes of deaths
MC	Ministry of Digital Affairs
MZ	Ministry of Health
OECD	Organization for Economic Co-operation and Development -
EP	European Parliament
PESEL	Universal Electronic System for Registration of the Population
PBSSP	Programme of statistical surveys of official statistics
RP	the Republic of Poland
RSC	register of civil status
UNICEF	United Nations Children's Fund
UE	the European Union
SO	Statistical Office
CRO	Civil Registry Office
WHO	World Health Organization

Introduction

Current observation of basic demographic phenomena, i.e. annual survey results concerning the level, structure and intensity of different events on vital statistics, will facilitate - in longer periods - conducting analyses of conditions for development of population, impact of economic, social and even cultural factors on the bases in the scope of creating and dissolution of families, procreation behaviors and on life expectancy. At the same time those results reflect social and economic development of the country, among others: development of medicine, operation of health system and prevention, as well as labor conditions and finally satisfaction and well-being. All those combined conditions and behaviors affect size and structure of the population.

Data within the scope of vital statistics are collected under surveys presented in the Programme of statistical surveys of official statistics (in the section "Demography") in the following manner:

- "Births. Fertility" (1.21.01),
- "Marriages. Divorces. Separations" (1.21.02)
- "Deaths. Mortality. Life expectancy" (1.21.09).

Such formulated topics include: individual surveys (births, marriages, divorces, separations and deaths), for which the source are administrative registers and information systems of the Ministry of Health and the secondary surveys based on the results of individual surveys on specific demographic events (fertility and mortality as well as life expectancy).

This Report contains methodology of the vital statistics and balance of population.

Surveys on vital statistics include demographic events (births and deaths) and events sanctioned by Polish law (marriages, divorces, separations) occurring (or registered) in Poland in the given year. These are permanent and full surveys conducted continuously; data are collected in the form of individual records. In turn, determination of size and structure of the population is a secondary survey, based upon the results of the survey on vital statistics and migration.

Data on population and demographic events are the basic element of every diagnosis and social-economic planning of the country. Results of those surveys constitute the basis for development of the report of the Government Population Council on the demographic situation in Poland. Every year the document is presented to the Prime Minister of the Republic of Poland.

Balance of population developed by Statistics Poland is indicated in the Local Government Act as the basis for determination by the Ministry of Finance of the amount of general subsidy for every gmina, as well as education subsidy, sołecki fund, rehabilitation fund and other decisions. Data on the size and structure of the population and those concerning births and deaths also are a starting point for development of life expectancy tables, which in turn (in accordance with The National Pension Act) constitute the annual basis for calculation of the amount of retirement benefits.

In addition, in accordance with the in force EU law, the size of population balances by Statistics Poland is, among others, provided to the European Commission for the purpose of qualified majority voting in the European Council. The data on demographic events are also obligatorily fed into the international database of Eurostat, WHO, OECD, UNICEF, constituting the basis for comparisons between countries and regions of the world, and are subject to quality assessment.

Moreover, results of the present surveys are the source of information for scientific and research centers, medical institutes, physicians - for conducting scientific research, analytical studies and implementation of research projects, as well as individual domestic and international users and the media.

Legal grounds for conducting surveys in the Act of 29 June 1995, on official statistics (Journal of Laws. of 2024, item 1799) and issued each year Regulation of the Council of Ministers on the Programme of statistical surveys of official statistics .

The international legal act imposing on Poland the obligation of implementation of surveys on vital statistics and balancing size and structure of the population in accordance with specific principles in the Regulation of the European Parliament and the Council (EU) no. 1260/2013 of 20 November 2013, on European statistics on demography and the Commission Implementing Regulation (EU) no. 205/2014 of 4 March 2014 establishing

uniform conditions for implementing Regulation of the EP and the Council (EU) no. 1260/2013, as regards breakdowns of data, deadlines and data revisions.

The above-mentioned Regulation will be replaced in the coming years by the Regulation of the European Parliament and of the Council (EU) on European statistics on population and housing, amending Regulation (EC) No 862/2007 and repealing Regulations (EC) No 763/2008 and (EU) No 1260/2013 (ESOP). The ESOP Regulation will enter into force on 1 January 2028, and the adoption of the implementing acts specifying its detailed scope is planned by the end of 2026.

Additionally, collection of detailed data on causes of death (in the survey on deaths and stillbirths) results from the Regulation of the European Parliament and the Council (EC) no. 1338/2008 of 16 December 2008, on Community statistics on public health and health and safety at work, as well as the Commission Regulation (EU) no. 328/2011 of 5 April 2011, on implementing Regulation of the EP and the Council No. 1338/2008 as regards statistics of causes of death.
Compliance with the guidelines contained in the EU regulations provides coherence of domestic surveys with the international methodology.

The general part of the Report consists of six chapters. Five of them present full surveys concerning specific demographic events (births, marriages, divorces, separations, deaths) and the last chapter concerns population balances. Each chapter comprises of seven sub-chapters; six of them present status/course of each survey in its current form, of which: purpose of the survey, subjective and objective scope, organization and method of data collection, variables present in the survey and main terms and rates, forms of presentation of results, survey assessment, while the last sub-chapter contains historical background.

The chapters are complemented with Annex containing appendices with regulations of the Minister of Health on birth and stillbirth certifications and death certifications (app. 1 and 2), as well as the structure of data sets for demographic events (app. 3-7). Additionally, it contains information about changes compared to the previous edition of the Methodological report (Annex 8).

As the last part, the methodological report contains additional material in the form of a historical supplement. It contains information on methodology and organization of demographic surveys in 1918-1939. Author of this study is Tadeusz Stpiczyński - expert in the field of demography and migrations, former long-term employee of Statistics Poland.

1. Births

Information on births is gathered as part of the survey “Births. Fertility” (1.21.01) presented in the Programme of statistical surveys of official statistics, in section “Demography”. Such formulated topic includes: individual surveys, i.e. births; and secondary surveys - fertility, the mains source of which are detailed data on births. Methodology of the individual survey is presented below.

1.1. Purpose of the survey

Purpose of the survey is to obtain data on the number and structure of births, enabling conducting observations of conditions for population growth, as well as basic demographic processes in the scope of fertility. The level of birth by different characteristics specific for this event and intensity of births reflect (in longer periods) social growth of the country directly or indirectly resulting from: development in medicine, level of healthcare system operation as well as the choice made by subsequent generations in terms of development of family.

Births are also an element of balance of size and structure of the population and constitute the basis for development of demographic projections.

1.2. Subjective and objective scope

Births (live and still) constitute the object of the survey. This survey covers:

- births, which occurred within the territory of the Republic of Poland. This means that birth statistics also collects the information on births from mothers temporarily residing in Poland - the data are developed and included in the total number of births. Births where the mother's country of residence is abroad are not included.
- births which occurred abroad. This concerns mothers/parents temporarily residing abroad, who will decide that the child born abroad is to be additionally registered in Poland (then it will receive Polish birth certification). Limited scope of characteristics is collected in case of those births. The data are not included in birth statistics.

The subject of the survey are the data in the scope of demographic characteristics of the child born, demographic and social characteristics of its mother and father as well as medical data and birth circumstances.

1.3. Survey organization - sources and data collection method

Source of the statistical data on births are administrative systems and registers, i.e., register of civil status (RSC) PESEL register and information systems of the Ministry of Health.

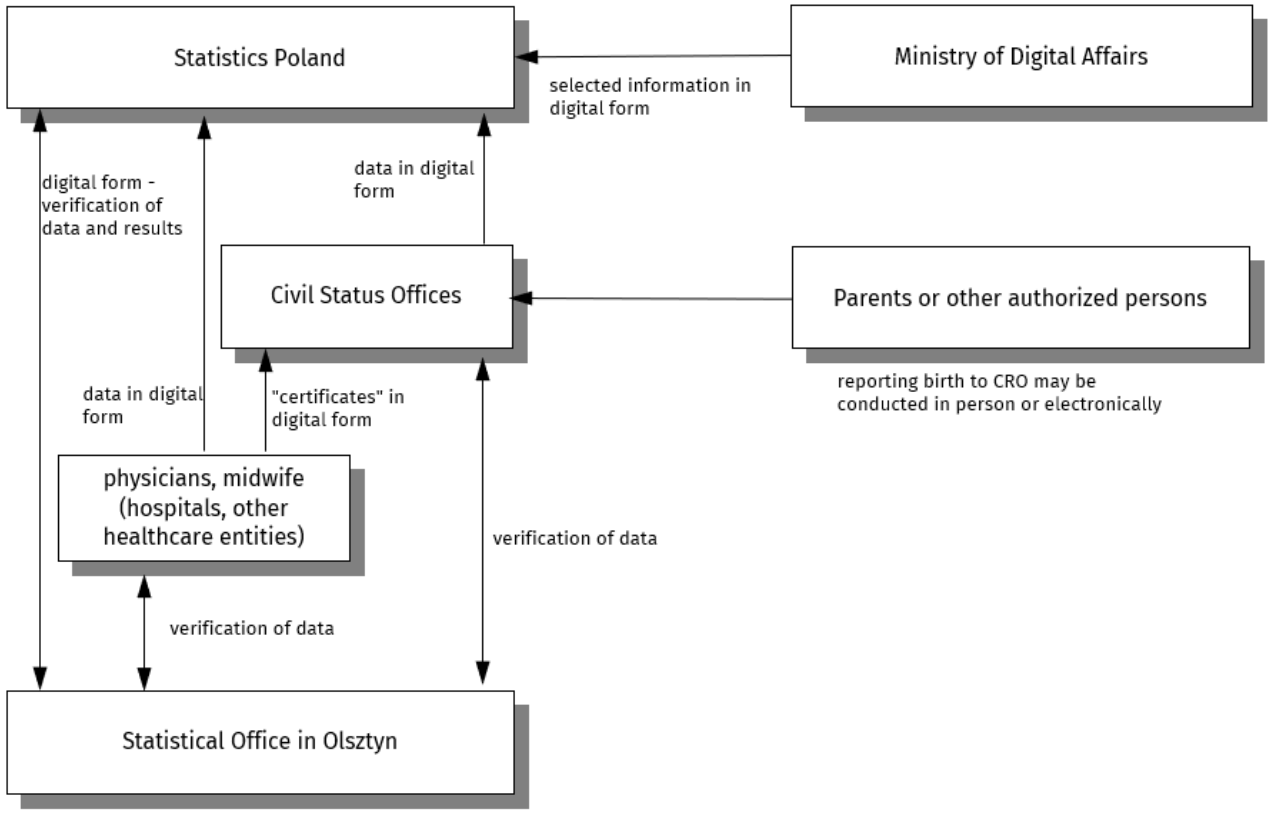
Entities providing medical services submit birth certificates and stillbirth cards to registry office managers in electronic form. These documents form the basis for issuing birth certificates, and the data contained therein is entered into the RSC and the PESEL register. The information collected in the civil registry and the PESEL register is used by public statistics for secondary research, and the reporting units are civil registry offices (USC).

The second source of data on births is the information provided by entities providing medical services. In accordance with the provisions of Article 53, points 2 and 3 of the Civil Registry Act (Journal of Laws 2025, item 594), entities providing medical services collect and process data on births, children and their parents, and then submit them for public statistical purposes.

In addition, for control purposes, Ministry of Digital Affairs (MC) provides monthly sets of birth certificates registered by CRO (MC is responsible for the IT system and software operating in CRO - among others supplying Statistics Poland).

Survey on births and fertility is conducted by the Demographic Surveys Department and Statistical Office in Olsztyn.

Diagram 1. Birth survey organization chart



Source: Own elaboration

Competences of the Demographic Surveys Department, Statistics Poland, include:

–development of assumptions for the IT system,
–analysis and acceptance of tables with data,
–dissemination of data, including preparation of data and analyses for publication,
–cooperation with international organizations in the scope of the survey subject.

Competences of Statistical Office in Olsztyn include:

–development of the IT system,
–development and validation of data,
–dissemination of data, including development of result tables and feeding databases.

1.4. Variables in the survey, terms and rates

1.4.1. Variables

The survey collects the following data:

- ✓ from the civil status register: symbol of birth certificate; country of occurrence; date of preparation of the birth certificate; place of birth; sex of the child; exact time of child birth; number of birth certificate; data of the child's father - (date of birth, place of birth, PESEL no. and country of citizenship); data of the child's mother - (date of birth, place of birth, PESEL no. and country of citizenship); country of citizenship of the child and the symbol of marriage certificate for legitimate births.
- ✓ from PESEL register: date of marriage contracting; 6 first digits of PESEL number of a spouse (for the purpose of validation, whether obtained "date of marriage contracting" applies to both or just one of the child's parents; in the selected cases the collected information serves as supplement of the missing "date of birth of the father"); marital status of the child's mother and father (single, married, widowed, divorced).

- ✓ from the health care information system: PESEL no. of the mother; livability of the birth; information on the child's health condition (length, body weight, points of Apgar scale); information on pregnancy and delivery (duration of pregnancy, type and place of delivery); data on the previous pregnancies and deliveries of the child's mother (number of children delivered by the mother, of which live born, and the date of the previous delivery and livability of the previous birth); place of residence of the child's parents (in case of Poland – voivodship, powiat, gmina; in the case of abroad – country); duration of the parents stay within the territory of the Republic of Poland (permanent, temporary residence - less than 1 year, of which the intended duration of stay; resides temporarily – 1 year or longer); parents' education level (incomplete primary, primary, lower secondary, basic vocational, secondary, post-secondary, higher).

The data are disseminated by the place of residence of the child's mother (they may be developed by CRO/gmina of the birth registration).

1.4.2. Basic terms

Birth - refers to the beginning of life when a newborn leaves the mother's body. The total number of births includes both live births and stillbirths.
In accordance with the definition in place in Poland since 01.07.1994 (definition recommended by the WHO) in medical practice, and in consequence, in statistical reporting, there are two categories of birth: live and still (definitions in place since 1993 - see chapter "1.7. Historical background").

Live birth - is the complete expulsion or extraction of an infant (from maternal body), irrespective of the pregnancy duration who after such separation breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta was attached;

Stillbirth - (fetal death) is the complete expulsion or extraction of a fetal from maternal body, on condition that pregnancy duration reached 22 weeks that after such separation not breaths or not shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles.
For the purposes of national statistics the medical documentation concerning the perinatal period should contain all live born infants and fetuses (stillbirths), who weighted at least 500 grams at the moment of birth and — if the birthweight is unknown - reached 22 weeks of life or reached 25 cm of the body length (crown-heel).

Late stillbirth (Late fetal death) – stillbirth, which occurred in 28 or later week of the duration of pregnancy.

Legitimate (Marital) birth - birth, which occurred during the time of marriage or before the passage of 300 days from its stopping or dissolution, as well as before contracting marriage, on the condition that registration of the child was after or at the moment of registration of the marriage.

Illegitimate (Extramarital) birth - birth which occurred or was registered outside the time of marriage, excluding births which occurred before the passage of 300 days from its stopping or dissolution.

Divisions into legitimate and illegitimate births are made by civil status office in accordance with formal and legal situation.

Birth order of infant - refers to the order a child is born among all infants born by the mother, considering all previous live births and stillbirths.

1.4.3. Rates

Birth rate - relation of live births in the given period (usually a year) to the size of population as at the middle of the period or to the average size of population from the given period.

$$\mathbf{Wu_t} = \frac{\mathbf{U\dot{z}_t}}{\mathbf{\bar{L}_t}} * \mathbf{c}$$

$\mathbf{Wu_t}$ – birth rate in period t,
$\mathbf{U\dot{z}_t}$ – number of live births in period t,

$\bar{\mathbf{L}}_{\mathbf{t}}$ – population as at the middle of the given period or average size of population in period t,
$\mathbf{c}$ – constans (1000).

Rate of late stillbirths (Rate of late fetal deaths) - rate of stillbirths, which occurred in 28 week or later, in the given period (usually a year) to the number of live births in the same period.

$$\mathbf{Wum\dot{z}_t} = \frac{\mathbf{Um_t}}{\mathbf{U\dot{z}_t}} * \mathbf{c}$$

$\mathbf{Wum\dot{z}_t}$ – rate of late stillbirths (rate of late fetal deaths) in period t,
$\mathbf{Um_t}$ – number of stillbirths, which occurred in 28 week of pregnancy or later, in period t,
$\mathbf{U\dot{z}_t}$ – number of live births in period t,
$\mathbf{c}$ – constans (1000).

Fertility rate(s) - intensity of births in different groups of reproduction age of women. They are calculated including the age of 15-49, of which all live children born by girls younger than 15 years are added to the births at the age of 15, while birth by women older than 49 years are added to the births at the age of 49. Fertility rates (general and age-specific) are calculated for periods not shorter than one year.

General fertility rate - rate of live births in the given period to the number of women in reproductive age (15-49 years); it expresses number of children born during the surveyed period per 1000 women (or per 100 women) in reproductive age.

$$\mathbf{Wp\l_t} = \frac{\mathbf{U\dot{z}_t}}{\bar{\mathbf{K}}_{\mathbf{(15-49)t}}} * \mathbf{c}$$

$\mathbf{Wp\l_t}$ – general fertility rate in period t,
$\mathbf{U\dot{z}_t}$ – number of live births in period t,
$\bar{\mathbf{K}}_{\mathbf{(15-49)t}}$ – number of women at the age of 15-49, as at the middle of the given period or average number of women in period t,
$\mathbf{c}$ – constans (100 or 1000).

It is worth noting that the method of calculating the birth rate and total fertility rate makes them dependent on the age structure of the population in the denominator, which is why they should not be used for comparisons over time or between countries. Therefore, partial fertility rates by age are used in fertility analyses.

Age-specific fertility rate - relation of the number of live births in the given period from women in the given age group to the number of women in this age group.

Age-specific rates are calculated for individual generation of women in reproductive age - example of calculation of age-specific fertility rate for the age of 15:

$$\mathbf{Wp\l_{(15)t}} = \frac{\mathbf{U\dot{z}_{(15)t}}}{\mathbf{K_{(15)t}}} * \mathbf{c}$$

$\mathbf{Wp\l_{(15)t}}$ – fertility rate for the age of 15,
$\mathbf{U\dot{z}_{(15)t}}$ – number of live births by women at the age of 15 or younger,
$\mathbf{K_{(15)t}}$ – number of women at the age of 15,
$\mathbf{c}$ – constans (100 or 1000).

It is also possible to apply grouping by 5-year groups of reproductive age of women (15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49).

$$\mathbf{Wp\text{ł}_{(15-19)t}} = \frac{\mathbf{U\dot{z}_{(15-19)t}}}{\mathbf{K_{(15-19)t}}} * \mathbf{c}$$

$\mathbf{Wp\text{ł}_{(15-19)t}}$ – fertility rate for the age of 15 - 19,
$\mathbf{U\dot{z}_{(15-19)t}}$ – number of live births by women at the age of 19 or younger,
$\mathbf{K_{(15-19)t}}$ – number of women at the age of 15 - 19,
$\mathbf{c}$ – constans (100 or 1000).

Measures of population reproduction – rates: total fertility as well as gross and net reproduction are calculated for periods not shorter than one year.

Total fertility rate - means the number of children, which could be borne by an average woman during her whole reproductive period (15 - 49 years) assuming that in specific phases of this period she would give birth with intensity observed in the surveyed year, i.e. at assumption of constant age-specific fertility rates from that period.

$$\mathbf{Wdz} = \frac{\mathbf{k} * \sum_{\mathbf{i=15}}^{\mathbf{49}} \mathbf{Wp\text{ł}_i}}{\mathbf{c}}$$

$\mathbf{Wdz}$ – total fertility rate,
$\mathbf{Wp\text{ł}_i}$ – age-specific fertility rate for the age of 'i',
$\mathbf{k}$ – span of age groups for which age-specific fertility rates were calculated (e.g. single generations, 5-year groups),
$\mathbf{c}$ – constans (100 or 1000).

Gross reproduction rate – presents the number of daughters born on average by a woman, at assumption that the woman in reproductive age (15-49) will give birth with the frequency characterizing all women giving birth during the year, for which the rate is calculated (constant fertility rates).
Gross reproduction rate is the product of total fertility rate and the rate expressing the share of births of girls in the total number of live births.

$$\mathbf{Wrb} = \frac{\mathbf{Udz}}{\mathbf{Uog}} * \mathbf{Wdz}$$

$\mathbf{Wrb}$ – gross reproduction rate,
$\frac{\mathbf{Udz}}{\mathbf{Uog}}$ – the share of live born girls in the total number of live births,
$\mathbf{Wdz}$ – total fertility rate - calculated as a total of age-specific fertility rates for individual generations.

Net reproduction rate - presents the average number of daughters per one woman (with similar assumptions), who would live to reach their mother's age. The probabilities of reaching a given age are determined on the basis of life expectancy tables for a given year/period.

$$\mathbf{Wrn} = \frac{\mathbf{Udz}}{\mathbf{Uog}} * \mathbf{k} * \sum_{\mathbf{i=15}}^{\mathbf{49}} (\mathbf{p\text{ł}_i} * \frac{\mathbf{L_x}}{\mathbf{l_o}})$$

$\mathbf{Wrn}$ – net reproduction rate,
$\frac{\mathbf{Udz}}{\mathbf{Uog}}$ – the share of live born girls to the total number of live births
$\mathbf{k}$ – span of age groups, for which age4-specific rates were calculated (e.g. single generations, 5-year groups),
$\mathbf{p\text{ł}_i}$ – fertility for the subsequent and this generation of reproductive age of women (quotient of the number of live births and the number of women in the given generation),
$\mathbf{L_x}$ – average number of women reaching the age of "x" (by life expectancy tables),
$\mathbf{l_o}$ – 100000.

1.5. Presentation of results

The data on births are available at the level of the gmina of residence (and by urban and rural areas of gminas), which enables presentation of the results for every unit of territorial (administrative) and statistic division of the country.

Deadlines and forms of sharing of data on births:

- ✓ monthly: as an initial information on the total number of live births in the country - (Statistical Bulletin, website of Statistics Poland),
- ✓ semi-annually/annually: data on the total number of live births and undeveloped birth rates by territorial division (i.e. balance table - voivodships, powiats, cities and gminas); Demography database – October (for I half-year) and April of the next year (data for a year);
- ✓ annually – May of the next year - publication tables in the scope of the number and structure of births and correlation of specific categories of birth with characteristics of the child born, demographic, social-economic characteristics of the child's parents, information on delivery - for the country in total and in division by regions, voivodships, sub-regions and powiats - April/May; website of Statistics Poland - Demography database - May/June, international organizations.

Information on births and fertility are presented on the website of Statistics Poland, among others, in Demography database and in the following publications of Statistics Poland:

- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as of 31 December)" - April,
- ✓ "Demographic situation of Poland up to ... " – September,
- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as of 30 June)" - October,
- ✓ "Demographic Yearbook" - November,
- ✓ "Statistical Yearbook of the Republic of Poland" – December,
- ✓ "Statistical Yearbook of Regions" – December,
- ✓ "Concise Statistical Yearbook of Poland" - July.

Other industry yearbooks and Statistics Poland publications, as well as non-statistical studies and domestic and international databases.

Individual needs of users are also being implemented: state and government administration - central and local, scientific/research establishments, universities (academic teachers, students), media and other users. It is possible to disseminate the annual data in the form of individual data or any selected sets with maintenance of statistical confidentiality, in accordance with provisions of the Official Statistics Act.

Selected links to websites containing data on deaths the form of publications and databases:

- ✓ Demographic Yearbook: https://stat.gov.pl/en/topics/statistical-yearbooks/statistical-yearbooks/demographic-yearbook-of-poland-2025,3,19.html
- ✓ Demography database: https://demografia.stat.gov.pl/bazademografia/Tables.aspx
- ✓ Local Data Bank: https://bdl.stat.gov.pl/BDL/dane/podgrup/temat
- ✓ Knowledge Databases: https://dbw.stat.gov.pl/en
- ✓ STRATEG: https://strateg.stat.gov.pl/#/
- ✓ Eurostat database: https://ec.europa.eu/eurostat/data/database

1.6. Survey assessment

The data on births are characterized by 100% completeness of events. It is guaranteed by the order of numbers of birth certificates issued every calendar year individually in each gmina. Completeness of the following basic characteristics should be assessed similarly, i.e.: sex and age of mother. Completeness of other variables is satisfactory - at present, missing information do not exceed on average 5%.

The only exception is the data - collected in 2015-2017 - on stillbirths. Since 2014, the source of the data on both live and stillbirths was one document "Notification of birth". In 2015, the Ministry of Health has introduced two separate "certificates", given that the "Stillbirth certificate" does not contain any

demographic and social data on the child's mother (or the father), nor any medical data (e.g. birthweight of the child, duration of pregnancy), which would enable to separate stillbirths from all fetal deaths registered by the "stillbirth certificate". In relation to the above, in 2015-2017, demographic statistics had used report (with symbol MZ-29) concerning general hospital activities as the source of data on stillbirths. This statement contains, among others, collective information on the number of stillbirths, which occurred in the given hospital, in division by birthweight. Therefore, the data presented by Statistics Poland for this period were limited to the number of stillbirths by voivodships (where the delivery occurred). In turn, the information about the division by urban and rural areas was estimated on the basis of the data from 2014. For those years the missing data include, among others, the information on the age of mothers, their place of residence, civil status, level of education, number of children born, etc. In consequence, the data on perinatal mortality were also severely limited.

Changes which occurred in 2015, within the scope of the system of registration of civil status certificates and template of "birth certificate", also resulted in an increase in the number of undetermined characteristics in the data on live births. Since 2015, the most significant substantive gaps concern marital status of the mother (at present they reach approx. 5.8%) and the date of contracting marriage (in 2015, they reached to more than 60%, now almost 0.2%), thus separation of legitimate (marital) births from illegitimate (extramarital) births consists in their estimation. As compared with the situation in 2015 from before the presented changes, there was also an increase in the undetermined level of education of parents (in the case of mothers - up to 6%, and for fathers up to 14%); there were also few missing data on birthweight. It should be highlighted that until 2014, completeness of different variables on average amounted to 98%.

As a result of Statistics Poland intervention concerning "stillbirth certificate", the Ministry of Health, since 2018 re-changed its template, introducing full scope of data (as for live births). At the same time, both certificates underwent editorial changes concerning 30 years old provisions on the number of children born by the mother. Those changes (unfortunate and very unfavorable from the point of view of conducting any permanent survey) resulted in erroneous interpretation of notations by physicians, which in turn resulted in incorrect entry of information into the "birth certificate". As a consequence, data for 2018 on the child's birth order will have to be estimated.

Following the amendment to the Act on Civil Status Records, effective from 1 January 2024, the method of collecting data on registered live births with regard to the characteristics of the child and its parents has changed. These data are now obtained from the reporting of entities providing medical services. The change in the data custodian has led to an increase in the number of unspecified characteristics, including medical data (gestational age – 4.7% missing values, birth weight – 4.8%, body length – 4.9%), birth order of the child (3.5% missing values), and the mother's level of educational attainment (11%). Due to incomplete information on the mother's place of residence, the data were supplemented using the PESEL register, based on the registered place of residence.

In addition, following amendments to the provisions of the aforementioned Act concerning the scope of data collected by official statistics, since 2024 information on the place of birth and on the moment of fetal death has no longer been collected or compiled.

1.7. Historical background

Information on vital statistics is provided by statistical reporting, which draws from registration of births, marriages and deaths by civil status offices.
Civil status offices were established on 1 January 1946 (Law on civil status certificates. Decree of 25 September 1945, Journal of Laws. Rz. P. No. 48, item 272 of 7 November 1945). Then the provisions were issued, regulating legal grounds for registration of demographic events, which enabled introduction of a unitary system of reporting, among others, in the scope of births.

Initially, the data collected were highly incomplete, which resulted from, among others, organizational difficulties and duality of registration: at parishes and civil status offices. The problem was also discrepancy between the date of birth and the date of registration. Since 1961, in statistical reporting, as births from the reporting years are deemed births registered in the given year (except those registered with a significant delay).

Form of data transfer

Until 1973, CRO transferred data in the form of statistical summary report (paper), containing several basic information on the child and the mother. In 1974, the Ministry of Health introduced and individual document "Notification of Birth" filled in by a physician at childbirth. This document, after issuing birth certificate by CRO was transferred (in paper form) for the purposes of birth statistics (throughout the years, the name and template of the document has been modified).

Since 2009 the data are provided by CRO in the form of a digital record.

Definition of birth

From 1963 to the mid-1994, there were four categories of birth functioning in the medical practice and statistical reporting: live, still, non-viable with signs of life and non-viable without signs of life. The "non-viable" birth category covered infants with birthweight from 601 g to 1000 g, given that if the infant had not survived the first 24 hours since birth, it was categorizes ad "non-viable without signs of life and was not included as a death of an infant, if it survived - it was included into "non-viable with signs of life" category.

In 1994, Poland introduced definitions of an infant birth and death consistent with recommendations of the World Health organization (WHO), i.e. there are two categories: live birth and stillbirth. This means that birth, in the period of 1963-1993, determined as non-viable with signs of life regain its correct category - live birth(also recognized as infant death), while non-viable birth without signs of life was also determined as stillbirth. The WHO definition has also introduced additional criterion of categorizing a statistical event, i.e. duration of pregnancy, and lowered the criterion of birthweight, which until 1993 was at least 601 g.

With introduction of the new definition of birth and death of an infant in Poland, the data on births and deaths for the previous years (1963-1993) were recalculated in accordance with the WHO definition. The recalculation concerned only the data for Poland in total by urban and rural population and sex (absolute values and rates per 1000 of population). Due to substantive and organizational-technical reasons, but also due to negligible impact of the definition change on the values of some rates, the recalculation did not cover the data concerning more detailed divisions and structures, such as, among others, fertility and reproduction rates, births by birth order, age and level of education of the mother or deaths by causes of death.

For the first time, the recalculated data (for all years presented in retrospection) were published in the Demographic Yearbook 1995. It should be highlighted that until 1962, births in Poland had been defined for two categories: live and still.

2. Marriages

Information on marriages is gathered as part of the survey “Marriages. Divorces. Separations” (1.21.02) presented in the Programme of statistical surveys of official statistics, in the section “Demography”. Such formulated topic includes three separate individual surveys.

2.1. Purpose of the Survey

Purpose of the survey is to provide information on marriages, for the purpose of assessment of the current situation concerning creation of families, and demographic forecasting.

Results of the survey are included into balance of marriages and population by marital status. The survey constitutes the basis for conducting specialized questionnaire surveys of married persons - families.

2.2. Subjective and objective scope

Object of the survey are all marriages contracted in accordance with Polish law:

- marriages contracted on the territory of the Republic of Poland (registered in civil status offices). This means that marriage statistics also collects the information on newly contracted marriages of persons temporarily residing in Poland - the data are developed and included in total number of marriages. Marriages in which the spouses' country of residence is abroad are not taken into account.
- marriages contracted abroad This refers to persons temporarily residing abroad who decide whether their marriage should also be registered in Poland (in which case a Polish marriage certificate is issued). For these marriages, only a limited range of characteristics is obtained. The data are not included in the marriage statistics.

Subject of the survey are the data on demographic and social characteristics of persons contracting marriage, as well as the information on the contracted marriage and previous marriages.

Survey methodology is conducted in accordance with the principles resulting from provisions of Polish legislation (see “2.4.2. Basic terms”).

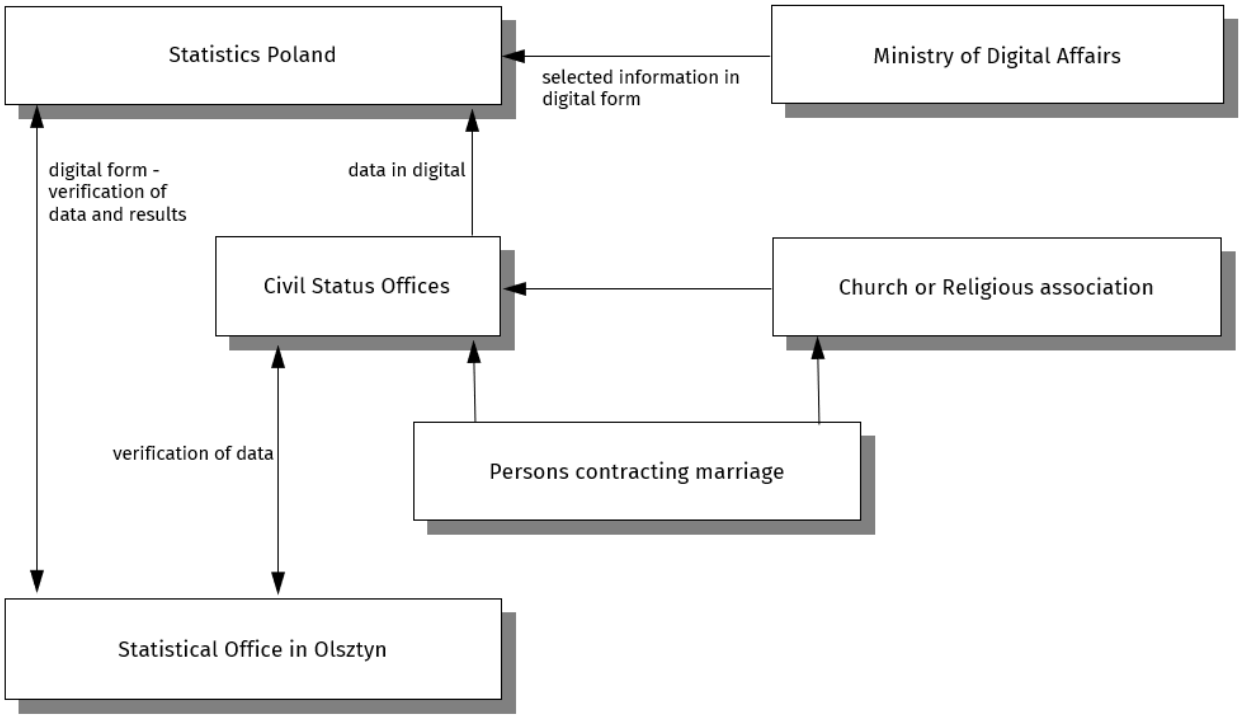
2.3. Survey organization - sources and data collection method

Source of the statistical data are administrative registers i.e., documentation of civil status offices as well as RSC and PESEL register. Pursuant to provisions of Article 76 (8) of the Law on Civil Status Acts, the head of the civil status office provides the data concerning newly contracted marriages, which occurred in Poland for the purposes of official statistics.

The individual data are transferred by CRO on the current basis, digitally in the form of individual records containing information on marriages and characteristics of the bridegrooms and brides. Additionally, for control purposes - the Ministry of Digital Affairs, once per month, transfers the summary of marriage certificates issued in the given calendar month and, once per year, the unit data from PESEL register on PESEL number and the date of dissolution of the previous marriage of the persons (Ministry of Digital Affairs is responsible for the IT system and software functioning in CRO, among others, supplying Statistics Poland).

The survey concerning the marriages being contracted is conducted by Statistics Poland in cooperation with Statistical Office in Olsztyn. Statistics Poland is responsible for development of objectives for the survey and control of data, analysis and publication of the results. SO-Olsztyn is responsible for development of the IT system of the survey, processing and data validation and dissemination of data, including development of data sets and feeding databases.

Diagram 2. Marriage survey organization chart



Source: Own elaboration

2.4. Variables in the Survey - terms and rates

2.4.1. Variables

The survey collects the following data:

- ✓ from the register of civil status office within the scope of demographic and social characteristics of persons contracting marriage, i.e. sex, date of birth, PESEL number, education level (incomplete primary, primary, lower secondary, basic vocational, secondary, post-secondary, higher), marital status (single, widowed, divorced), place of residence (in case of Poland - voivodship, powiat, gmina, locality, in the case of abroad - country), country of citizenship and period of residence within the territory of the Republic of Poland (permanent residence, temporary residence - less than 1 year, of which the intended period of staying; temporary residence - 1 year or longer); place of birth (locality/country); within the scope of information of the marriage: date of contracting marriage, form of contracting marriage (in accordance with the name of the church or religious association), country of the place of contracting marriage, and additional/control information on: the reasons and date of issuing of the marriage certificate, symbol of the marriage certificate;
- ✓ from PESEL register: the date of dissolution of the previous marriage and PESEL number.

Data on marriages presented in territorial division - since 1995 - include all marriages in which, for one of the spouses (man or woman) Poland was the place of permanent residence prior to contracting the marriage. The voivodship being the place of residence of the husband was assumed as the criterion of territorial division into voivodships (powiats, urban and rural areas), or, if the husband resided abroad, the voivodship of residence of the wife. Information on the newly contracted marriages, for which both spouses resided permanently abroad before contracting their marriage are collected and disseminated, but those marriages are not included into the total number of marriages.

Until 1994, the place of residence of the husband before contracting marriage was the criterion for development of data in territorial division (except for the period of 1978-1989, for which the place of joint residence after contracting marriage was assumed as the criterion for territorial division). The marriages for which the husband resided abroad were not included into presentation of the data in territorial division.

2.4.2. Basic terms

Marriage - union between two persons of opposite sex, implying certain mutual rights and obligations, determined in legal and customary provisions. Marital status (formal-legal) of those persons is married.

In Poland, legal regulations stipulated in this scope are included in the Law on Civil Status Acts of 28 November 2014 (Journal of Laws. 2025, item 594). The data on marriages refer to marriages contracted according to lawful rules at the civil status offices. Additionally, the rules of family law are regulated by the Act of 25 II 1964 - the Family and Guardianship Code (Dz. U. of 1964, No. 9, item 59 with later amendments). Since 1999 — according to the Act from July 24, 1998 — the Family and Tutelary Code, the Civil Procedure Code, the Law on Civil Status Acts, the Act on Relation of the State to the Catholic Church in the Republic of Poland and the other selected acts (Journal of Laws No. 117 item 757) — in the local civil status offices in Poland are registered all marriages including those based on the internal law of the churches or the religious associations. Marriages contracted on the basis of canonic law subordinate the civil Polish laws and result in the same civil and law consequences as marriages contracted in the local civil status offices.

Marital status – the legal status of a person determined on the basis of relevant civil status records, determined for population at the age of 15 and more.

Marital status (formal - legal) - classification:

- ✓ single - persons who have not and are not in any legal marriage, never married persons,
- ✓ married - persons who contracted marriage in the form envisages by law and their marriage was not dissolved; it should be explained that marital status of spouses with adjudicated separation is still married,
- ✓ widowed - persons, whose legal marriage was terminated due to death of a spouse and who has not contracted another marriage,
- ✓ divorced- persons whose marriage was dissolved in court and who has not contracted another marriage.

Until 2011 in Population Censuses also determined as de facto marital status, on the basis of a voluntary statement of persons, resulting from their subjective opinion (concerning, among others, being married or in an informal relationship), at the same time there are collected information on legal status of persons.

In the Census in 1988, rather than formal - legal marital status, there was registered only civil status resulting from statement of persons (described as de facto marital status).

De facto marital status (determined in censuses until 2011) - classification:

- ✓ single - persons, who have not contracted marriage and at the time of the census have not been in an informal (cohabitation) relationship with another person,
- ✓ married - persons who have legally contracted marriage and are actually married. Those persons declared being married, regardless of whether the spouses were living together (in one dwelling) or separately (e.g. absence was caused by education, work or lack of common dwelling). Legally married persons, who - by the decision of one or both spouses - are not living in a marriage union, but termination of their marriage was not sanctioned by court (adjudication of a divorce or separation) were not included into married persons, and their actual civil status was determined in accordance with declaration of the respondent as separation or being in an informal relationship with another person.
- ✓ cohabitants (partners) - informal relationships inhabiting the same household. Regardless of legal civil status of persons in cohabitation,
- ✓ widowed - persons whose legal marriage was terminated due to death of the spouse and at the time of the Census were not in an informal relationship with another person,
- ✓ divorced - persons whose marriage was dissolved by court and at the time of the census were not in an informal relationship with another person,

- ✓ separated. This category concerns persons, who at the time of the Census:
  - were in legal separation and at the same time were not in an informal relationship with another person;
  - were legally married, but were not in a marriage union, and were not in an informal relationship with another person.

Existing marriages:

- in Censuses - number of marriages corresponding to the number of men, who determined their marital status (legal) as married in the Census;
- in the periods between Censuses - result of balance of marriages, which is based on the results of the Census.

Balance of marriages - made annually using component analysis method and counted with taking into account in a given year: the number of marriages: contracted/newly contracted (+); terminated due to divorce (–); terminated due to death of a spouse (–) internal and international net migration of married person (+/–).

First marriage - first marriage - only concerns persons, whose civil status at the time of contracting marriage was determined as single.
The first marriage is also applied with assumption of the civil status criterion of a single only for one of the persons contracting marriage.

2.4.3. Rates

Marriage rate - relation of the number of marriages in the considered period to the size of population in the middle of this period or to the average size of population in this period.
Marriage rates (similarly to other rates concerning vital statistics) for different periods (month, quarter, half-year, three quarters, etc.) are calculated per annum, i.e. the surveyed events registered during the given year are adequately increased to annual values, e.g. for the rate calculated for: a month - the number of events is multiplied by 12; quarter - by 4; half-year - by 2; three quarters - by 4/3.

$$\mathbf{W_{mt}} = \frac{\mathbf{M_t} * \mathbf{k_t}}{\bar{\mathbf{L}}} * \mathbf{c}$$

$\mathbf{W_{mt}}$ – marriage rate in period t,
$\mathbf{M_t}$ – number of marriages in period t,
$\mathbf{k_t}$ – variable assuming the values depending on the period for which the rate is calculated,
$\bar{\mathbf{L}}$ – population size as at the middle of the given period t or average size of population in period t,
$\mathbf{c}$ – constans (1000 - most frequently or 10000 or 100000).

2.5. Presentation of results

The data on marriages are available at the level of the gmina of residence (and by urban and rural areas of gminas), which enables presentation of the results for every unit of territorial (administrative) and statistic division of the country.

Deadlines and forms of sharing of data on marriages:

- ✓ monthly - as an initial information on the total number of newly contracted marriages in the country - website of Statistics Poland (Statistical Bulletin);
- ✓ semi-annually/annually – the data on the total number of contracted marriages and raw marriage rates by territorial division (so-called balance table), and on the website of Statistics Poland (Demography database) – October (data for the first six months) and in April of the following year (annual data);
- ✓ annually - May of the following year - in the form of tables published in the scope of the number and structure of marriages and by demographic and socio-economical characteristics of persons contracting new marriage (first marriages and remarriages), marriage rates - at Statistics Poland website (Demography database).

Information on marriages is presented on the website of Statistics Poland, among others, in Demography database and in the following publications:

- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as od 31 December)" - April,
- ✓ "Demographic situation of Poland up to ... " – September,
- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as of 30 June)" - October,
- ✓ "Demographic Yearbook" - November,
- ✓ "Concise Statistical Yearbook of Poland" – July,
- ✓ "Statistical Yearbook of the Republic of Poland" – December,
- ✓ "Statistical Yearbook of Regions" – December.

Other industry yearbooks and Statistics Poland publications, as well as non-statistical studies and domestic and international databases.

Realization of the user needs: state and government administration - central and local, scientific/research establishments, universities (academic teachers, students), media and other individual users (natural persons and institutions). It is possible to disseminate the annual data in the form of individual data or any selected data with maintenance of statistical confidentiality in accordance with provisions of the Official Statistics Act.

Selected links to websites containing data on deaths the form of publications and databases:

- ✓ Demographic Yearbook: https://stat.gov.pl/en/topics/statistical-yearbooks/statistical-yearbooks/demographic-yearbook-of-poland-2025,3,19.html
- ✓ Demography database: https://demografia.stat.gov.pl/bazademografia/Tables.aspx
- ✓ Local Data Bank: https://bdl.stat.gov.pl/BDL/dane/podgrup/temat
- ✓ Knowledge Databases: https://dbw.stat.gov.pl/en
- ✓ Eurostat database: https://ec.europa.eu/eurostat/data/database

2.6. Survey assessment

Data on the number of contracted marriages are characterized by 100% completeness, similar to the characteristics of persons contracting marriage - missing data in the case of certain variables to not exceed now 1%. Completeness of variables has significantly improved following introduction of the digital form of data transfer but CRO in 2009.

Slightly lower completeness is observed since 2015 for the variable "year of termination of the previous marriage" (4.4% of missing data in 2024). The reason of it is the change in 2015 in the data source of the information about the previous marriage; the data are provided directly from PESEL register, which seems to be incomplete in this aspect.

2.7. Historical background

Statistics Poland began collecting data on vital statistics in 1946, when civil status offices were established (from 1 January 1946) and the provisions regulating data collection in the relevant area were issued. This enabled introduction of a unitary reporting system on, among others, newly contracted marriages - CRO became reporting units.

On this basis Statistics Poland commenced collection of data on the number of registered marriages in 1946 and 1947. The gathered material was highly incomplete. This resulted from organizational difficulties of two post-war years, duality of registration: in parishes and civil status offices and difficulties with people adaptation to the changed conditions of registration.

Before 1946, in the large part of Poland the registration was conducted by parishes. After 1945, part of population - especially in rural areas - still believed that religious rites was enough to fulfil the obligation of marriage registration.

If the first post-war years there was a significant discrepancy between the date of getting married (contracted, practically, as religious rite) and the date of registering it at civil status office. This discrepancy

was quickly decreasing and around 1954 was negligible. Finally, this manner was regulated by the Act of 1958 (Journal of Laws. PRL, no. 72 of 10.12.1958, item 358) forbidding conducting religious rites of marriage before registering this fact at civil status office.

Within the scope of marriages, public statistics received: in the period of 1946-1948 - summary statement for powiats/gminas; in the period of 1949-1973 - collective lists gathering the selected data on every newly contracted marriage; since 1974 an individual statistical form "Statistical certificate of marriage contraction" was introduced, containing information of a unit fact and on the spouses.

Since 2009 the data are provided by CRO in the digital form.

3. Divorces

Information on divorces is gathered as part of the survey “Marriages. Divorces. Separations” (1.21.02). presented in the Programme of statistical surveys of official statistics , in the section “Demography”. Such formulated topic includes three separate individual surveys.

3.1. Purpose of the survey

Purpose of the survey is to provide information on the number and structure of divorces. The data are used for assessment of the situation in the scope of conditions of families and their dissolution. The information collected is included into population balance by civil status and balance of marriages.
Additionally, the survey constitutes the basis for conducting specialized questionnaire surveys on persons, whose marriage was terminated.

3.2. Subjective and objective scope

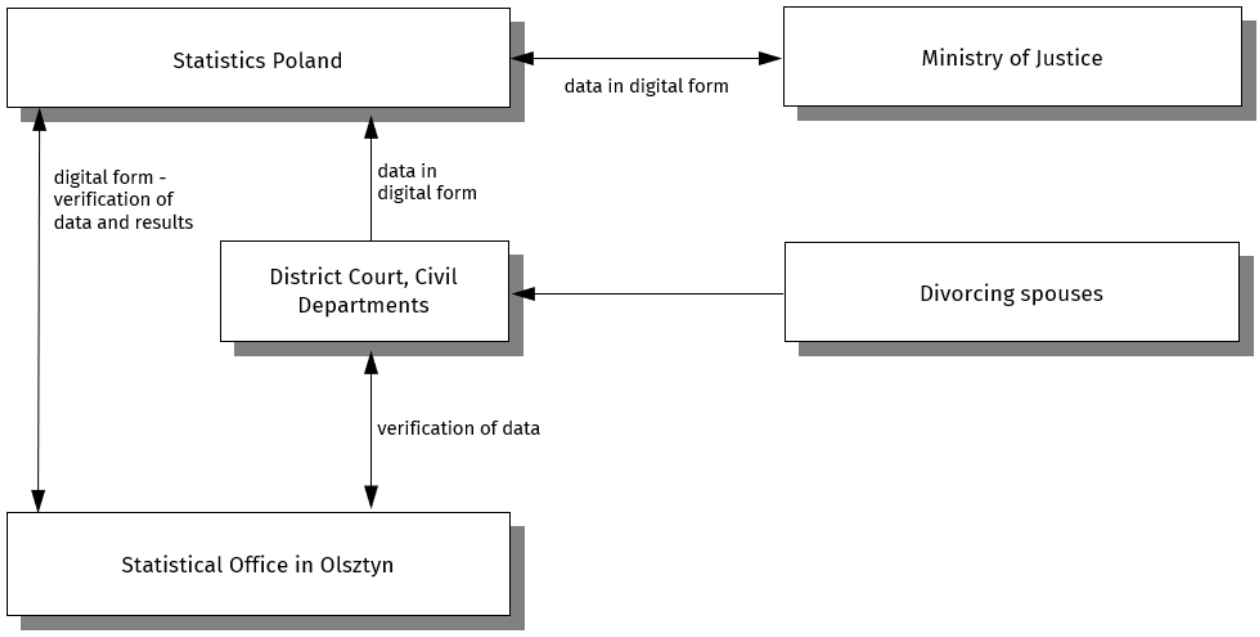
Object of the survey are legally valid divorces, i.e. marriages which were terminated by divorce in Polish court.
Subject of the survey are the data on demographic and social characteristics of persons who are divorcing, as well as the information on the marriage, minor children and divorce.

Survey methodology is conducted in accordance with the principles resulting from Polish law (see 3.4.2. Basic terms).

3.3. Survey organization - sources and data collection method

Source of the data on divorces is the information system of the Ministry of Justice, i.e. reporting of courts. Until 2008, information on divorce was collected on a statistical form “Statistical certificate concerning legally valid decision on divorce” (D-R1). Since 2009, the data are sent electronically by courts every quarter in the form of individual records (cases).

Diagram 3. Divorce survey organization chart



Source: Own elaboration

The survey is conducted by Statistics Poland in cooperation with Statistical Office in Olsztyn. The scope of the collected data is agreed with the Minister of Justice and takes into consideration its information needs concerning operation of courts.

Statistics Poland is responsible for development of objectives for the survey, assumptions for control and analysis of the data and publication of results, while SO-Olsztyn for development of the IT system of the survey, processing and validation of data and dissemination of data, including development of data sets and feeding databases. The Ministry of Justice supervises the work of courts in the scope of data transferring to official statistics.

3.4. Variables in the Survey - terms and rates

3.4.1. Variables

The survey collects the following information:

- ✓ in the scope of demographic and social characteristics of persons divorcing: sex, date of birth, PESEL number, status on the labor market (working: employees in public sector, employees in private sector, self-employed worker in agriculture, self-employed worker outside agriculture; unemployed; economically inactive: retirement pension, disability pension, other non-earned source; maintained person) and level of education (higher, secondary, basic vocational, lower secondary, primary, incomplete primary), place of residence at the moment of filling petition (in case of Poland - voivodship, powiat, gmina, locality; in case of abroad - country) country of citizenship;
- ✓ in the scope of information on marriage and divorce: dates: of issuance of the divorce adjudication, of final decision, filling petition and contracting marriage; the person filling petition for divorce; type of petition (for divorce, for separation); guilt of spouses (husband, wife, both persons, without guilt); reasons for dissolution of marriage determined in confirmation (infidelity, alcohol abuse, objectionable relation towards family, housing problems, financial misunderstandings, discrepancy of characters, sexual deficiency, long absence, philosophy of life, drugs, gambling and others); information on adjudicated separation - data of adjudication;
- ✓ concerning minor children: number of children and their dates of birth; decision on children care granted (to mother, father, both of them, separately to mother and father, to orphanage, foster family) additional information - who filled the application for the decision on granting children care and whether the parents presented the agreement on the manner of the children care and maintaining contacts with the child; amount of alimonies;
- ✓ on spouses living together in one dwelling: adjudication on the dwelling (regulation of the premise usage, eviction of wife/husband, division of the dwelling, granting the dwelling to one of the spouses, division of common assets in relation to the premises covered by marital estate, no adjudication of the dwelling);
- ✓ within the scope of additional/control information: divorce case reference number along with the symbol of court seat, symbol of marriage certificate and territorial symbol of CRO, which issued the certificate.

Data on divorces are developed by place of residence of the persons filling the petitions for divorce or by the seat of the district court adjudicating divorce.

Until 1998, territorial division have not included divorces from petition of persons (one or both of them) residing abroad. Since 1999, the voivodship of residence of the person filing the petition for the divorce was assumed as the criterion for division into voivodships (powiat, urban and rural areas) or - in the case of the petition filled by a person residing abroad - the divorce was allocated to the voivodship being the place of residence of the spouse. Territorial division does not include cases, when both spouses resided abroad at the time of filing the petition for the divorce.

3.4.2. Basic terms

Divorce - termination of marriage by court of competent jurisdiction in the form stipulated by law. Marital status (legal) of former spouses is divorced.

The institution of divorces in Poland is regulated by the Marriage Law introduced on January 1, 1946 on the basis of the Act from September 25, 1945 — (Journal of Laws 1945 No. 48 item 270) and the act of the Act from February 25, 1964 — the Family and Tutelary Code (Journal of Laws 1964 No. 9 item 59 with later amendments).

Minor children – children of divorcing spouses, who at the time of adjudication of the divorce were younger than 18 years old (at the age of 0-17).

3.4.3. Rates

Divorce rate may be calculated in two ways – as a rate of the number of divorces adjudicated in the given period (usually a year) to the number of:

- ✓ **population** in the middle of the period or an average size of population or calculated in relation to the size of population aged 20 and more - which increases the possibility for comparisons.

  Divorce rates (similarly to other rates concerning vital statistics) for different periods (month, quarter, half-year, three quarters, etc.) are calculated per annum, i.e. the surveyed events registered during the given year are adequately increased to annual values, e.g. for the rate calculated for: a month - the number of events is multiplied by 12; quarter - by 4; half-year - by 2; three quarters - by 4/3.

$$\mathbf{W_{rt}} = \frac{\mathbf{R_t} * \mathbf{k_t}}{\bar{\mathbf{L}}} * \mathbf{c}$$

$\mathbf{W_{rt}}$ – divorce rate in period t,
$\mathbf{R_t}$ – number of divorces in period t,
$\mathbf{k_t}$ – variable assuming the values depending on the period for which the rate is calculated,
$\bar{\mathbf{L}}$ – population size as at the middle of the given period t or average size of population in period t,
$\mathbf{c}$ – constans (1000 - most frequently or 10000 or 100 thousand).

- ✓ **newly contracted marriages** in the given period (usually a year):

$$\mathbf{W_{rmt}} = \frac{\mathbf{R_t}}{\mathbf{M}} * \mathbf{c}$$

$\mathbf{W_{rmt}}$ – divorce rate in relation to marriages contracted in period t,
$\mathbf{R_t}$ – number of divorces in period t,
$\mathbf{M}$ – number of marriages contracted in period t,
$\mathbf{c}$ – constans (1000).

3.5. Presentation of results

The data on adjudicated divorces are available at the level of the gmina of residence (and by urban and rural areas of gminas), which enables presentation of the results for every unit of territorial (administrative) and statistic division of the country. Due to maintenance od statistical confidentiality the data are disseminated to the level of powiats.

Deadlines and forms of sharing of data on divorces:

- ✓ quarterly – data on the total number of adjudicated divorces in Poland and raw divorce rates the Statistics Poland website (Statistical Bulletin – general data);
- ✓ annually - May of the following year - in the form of tables published in the scope of the number of structure of divorces by demographic and socio-economical characteristics of persons divorcing, divorce rates - at Statistics Poland website (Demography database).

Information on divorces is presented on the website of Statistics Poland, among others, in Demography database and in the following publications:

- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as of 31 December)" - April,
- ✓ "Demographic situation of Poland up to ... " – September,
- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as of 30 June)" - October,
- ✓ "Demographic Yearbook" - November,

- ✓ “Concise Statistical Yearbook of Poland” – July,
- ✓ “Statistical Yearbook of the Republic of Poland” – December,
- ✓ “Statistical Yearbook of Regions” – December.

Additionally it is possible to disseminate annual data in the form of individual data with maintenance of statistical confidentiality - in accordance with provisions of the Official Statistics Act as realization of the user needs: state and government administration - central and local, scientific/research establishments, universities (academic teachers, students), the media and other individual users (natural persons and institutions).

Selected links to websites containing data on deaths the form of publications and databases:

- ✓ Demographic Yearbook: https://stat.gov.pl/en/topics/statistical-yearbooks/statistical-yearbooks/demographic-yearbook-of-poland-2025,3,19.html
- ✓ Demography database: https://demografia.stat.gov.pl/bazademografia/Tables.aspx
- ✓ Local Data Bank: https://bdl.stat.gov.pl/BDL/dane/podgrup/temat
- ✓ Knowledge Databases: https://dbw.stat.gov.pl/en
- ✓ Eurostat database: https://ec.europa.eu/eurostat/data/database

3.6. Survey assessment

The data on divorcing persons are provided by district courts in a reliable manner, and they are provided complete for the majority of characteristics.
The data in digital form received since 2009 - due to close cooperation with the Ministry of Justice - are characterized by higher completeness than in the previous years. The share of missing data for different characteristics was reduced by half. In the case of the feature “status on the labor market” before introduction of the electronic form it had the highest percentage of undetermined/unknown cases reaching 6%, at present it is 2%. Another significant share of missing information concerned variable “education level” - it amounted to 3%, at present almost 2%.

3.7. Historical background

The Marriage Law (Decree from 25 September 1945, Journal of Laws No. 48 item 270) introduced in 1946 lead to a complete secularization of marriage and introduced the institution of divorces in Poland. In accordance with this Law, marriage could be legally contracted only in civil status office and terminated by a divorce in the case of a permanent dissolution of the marital union. In the first period of validity of the new marriage law, formal termination covered large number of marriages which were dissolved due to a long-term separation caused by war.
At present the provisions valid in this scope are presented by the Family and Tutelary Code, which came into force in 1965 (Act from 25 February 1964; Journal of Laws No. 9, item 59).

Within the scope of divorces, statistics received: in the period of 1946-1948 - summary statement for powiats/gminas; in the period of 1949-1973 - collective lists containing individual events with the selected characteristics. Since 1974, individual statistical forms were introduced, and since 2009, the data are provided electronically in the form of individual records.

4. Separations

Information on separations is gathered as part of the survey “Marriages. Divorces. Separations” (1.21.02) presented in the Programme of statistical surveys of official statistics, in the section “Demography”. Such formulated topic includes three separate individual surveys.

4.1. Purpose of the Survey

Purpose of the survey is to provide information on separations, for the purpose of assessment of the current situation concerning condition of families and their dissolution.

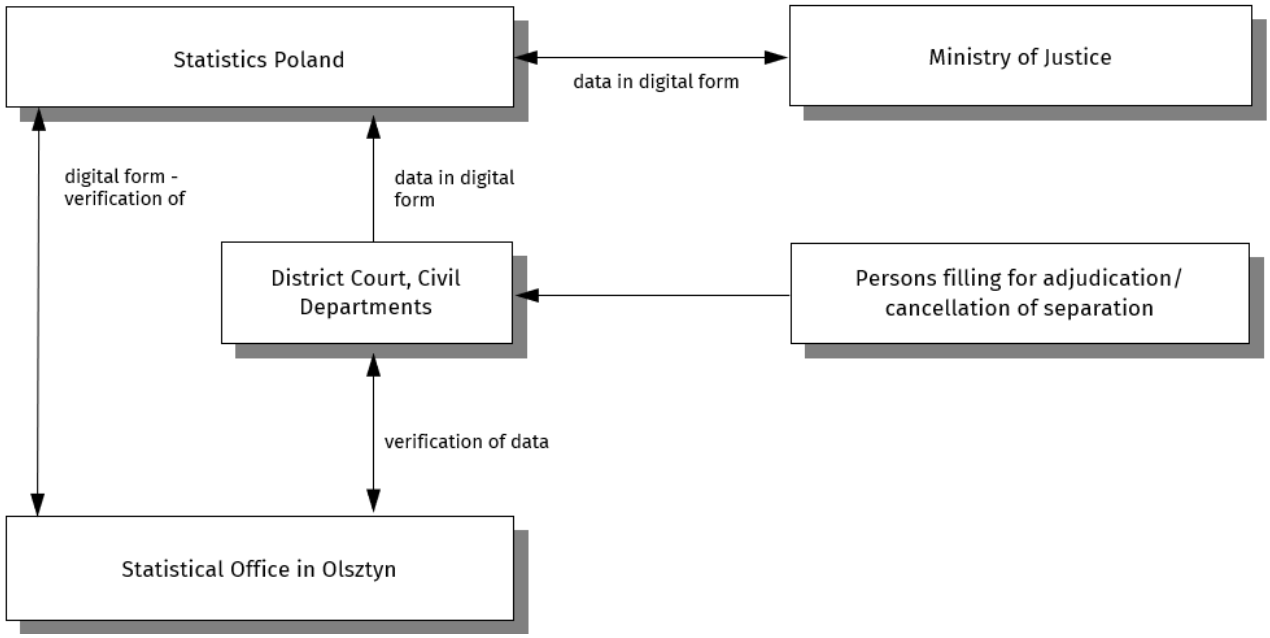
4.2. Subjective and objective scope

Object of the survey are separations adjudicated and cancelled by court in Poland. Subject of the survey are data on demographic and social characteristics of persons for whom court adjudicated or cancelled separation, as well as the information on marriage, minor children and separation itself. Survey methodology is conducted in accordance with the principles resulting from Polish law (see 4.4.2. Basic terms).

4.3. Survey organization - sources and data collection method

Source of the data on separations is the information system of the Ministry of Justice, i.e. reporting of courts. Until 2008, information on separation was collected on a statistical form Statistical certificate concerning legally valid decision on separation/cancellation of separation” (D-S1). Since 2009 the data are provided quarterly by courts in the digital form. The transfer covers individual data on adjudicated or cancelled separations and characteristics of persons involved.

Diagram 4. Separations survey organization chart



Source: Own elaboration

The survey is conducted by Statistics Poland in cooperation with Statistical Office in Olsztyn. The scope of the collected data is agreed with the Minister of Justice and takes into consideration its information needs concerning courts operation.

Statistics Poland is responsible for development of objectives for the survey, analysis of the data and publication of results, while SO-Olsztyn for development of the IT system of the survey, processing and validation of data and dissemination of data, including development of data sets and feeding databases. The Ministry of Justice exercises supervises the work of courts in the scope of data transferring to official statistics.

4.4. Variables in the survey - terms and rates

4.4.1. Variables

The survey collects the following information:

- ✓ in the scope of demographic and social characteristics of spouses: Sex, date of birth, PESEL number, status on the labor market (working: employees in public sector, employees in private sector, self-employed worker in agriculture, self-employed worker outside agriculture; unemployed; economically inactive: retirement pension, disability pension, other non-earned source; maintained person) and level of education (higher, secondary, basic vocational, lower secondary, primary, incomplete primary), place of residence at the moment of filling petition (in case of Poland - voivodship, powiat, gmina, locality; in case of abroad - country) country of citizenship;
- ✓ in the scope of information on marriage and separation: dates: of issuance of the separation adjudication, cancellation of separation, filling petition and contracting marriage; the person filling petition for separation; guilt of spouses (husband, wife, both persons, without guilt); reasons why the marriage has broken down determined in confirmation (infidelity, alcohol abuse, objectionable relation towards family, housing problems, financial misunderstandings, discrepancy of characters, sexual deficiency, long absence, philosophy of life, drugs, gambling and others);
- ✓ concerning minor children: number of children and their dates of birth; decision on children care granted (to mother, father, both of them, separately to mother and father, to orphanage, foster family) additional information who filled the application for the decision on granting children care and whether the parents presented the agreement on the manner of the children care and maintaining contacts with the child; amount of alimonies;
- ✓ on spouses living together in one dwelling: adjudication on the dwelling (regulation of the premise usage, eviction of wife/husband, division of the dwelling, granting the dwelling to one of the spouses, division of common assets in relation to the premises covered by marital estate, no adjudication of the dwelling);
- ✓ within the scope of additional/control information: divorce case reference number along with the symbol of court seat, symbol of marriage certificate and territorial symbol of CRO, which issued the certificate.

Data on separations are developed by the seat of the district court or the place of residence of the persons filling the petition, and in case of unanimous petition of both - by the place of residence of the husband. The voivodship of residence of the person filing the petition for separation was assumed as the criterion for division into voivodships (powiats, urban and rural areas) or - in the case of the petition filled by a person residing abroad - the separation was allocated to the voivodship being the place of residence of the spouse. Territorial division does not include cases, when both spouses resided abroad at the time of filing the petition.

4.4.2. Basic terms

Legal separation – repeal of marital union without the right to contract new marriage by any of the spouses. Marital status (legal) of a person in relation to the marriage with adjudicated separation remains unchanged, namely married.

Separation is adjudicated by court of competent jurisdiction in the form envisaged by law. Contrary to a divorce, separation does not mean final termination of marriage; with unanimous petition of both spouses court adjudicated cancellation of separation.

Minor children – children of divorcing spouses, who at the time of adjudication of the divorce were younger than 18 years old (at the age of 0-17).

4.4.3. Rates

Separation rate - rate of the number of adjudicated separations in the given period (usually a year) to the size of population in the middle of the period or average size of population or calculated in relation to the size of population aged 20 and more - which increases the possibility for comparisons.
Separation rates (similar to other rates concerning vital statistics) for different periods (months, quarter, half-year, three quarters, etc.) are calculated per annum, i.e. the surveyed events registered during the given period are adequately increased to annual values, e.g. for the rate calculated for the period of: a month - the number of events is multiplied by 12; quarter - by 4; half-year - by 2; three quarters - by 4/3.

$$W_{st} = \frac{S_t * k_t}{\bar{L}} * c$$

W_{st} – separation rate in period t,
S_t – number of separations in period t,
k_t – variable assuming the values depending on the period for which the rate is calculated,
$\bar{L}$ – population size as at the middle of the given period t or average size of population in period t,
c – constans (1000 - most frequently or 10000 or 100 thousand).

4.5. Presentation of results

The data on adjudicated/cancelled separations are available at the level of the gmina of residence (and by urban and rural areas of gminas), which enables presentation of the results for every unit of territorial (administrative) and statistic division of the country. Due to small population of the set (approx. 0.5 thousand per year) and maintenance of statistical confidentiality, the data are disseminated in more aggregated form.

Deadlines and forms of sharing of data on separations:

- ✓ quarterly – data on the total number of adjudicated separations and undeveloped divorce rates the Statistics Poland website (Statistical Bulletin);
- ✓ annually - May of the following year - in the form of tables published in the scope of the number of structure of separations and by demographic and socio-economical characteristics of separated persons - at Statistics Poland website (Demography database).

Information on separations is presented on the website of Statistics Poland, among others, in Demography database and in the following publications:

- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as of 31 December)" - April,
- ✓ "Demographic situation of Poland up to ... " – September,
- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as of 30 June)" - October,
- ✓ "Demographic Yearbook" - November,
- ✓ "Concise Statistical Yearbook of Poland" – July,
- ✓ "Statistical Yearbook of the Republic of Poland" – December.

Additionally it is possible to disseminate annual data in the form of individual data with maintenance of statistical confidentiality - in accordance with provisions of the Official Statistics Act as realization of the user needs: state and government administration - central and local, scientific/research establishments, universities (academic teachers, students), the media and other individual users (natural persons and institutions).

Selected links to websites containing data on deaths the form of publications and databases:

- ✓ Demographic Yearbook: https://stat.gov.pl/en/topics/statistical-yearbooks/statistical-yearbooks/demographic-yearbook-of-poland-2025,3,19.html
- ✓ Demography database: https://demografia.stat.gov.pl/bazademografia/Tables.aspx
- ✓ Local Data Bank: https://bdl.stat.gov.pl/BDL/dane/podgrup/temat
- ✓ Knowledge Databases: https://dbw.stat.gov.pl/en

4.6. Survey assessment

The data on persons separated are currently provided by district courts in a reliable manner, and they are provided complete for the majority of characteristics.

Similar to the data on divorces - since 2009 - information on separations are provided to Statistics Poland in digital form. Close cooperation with the Ministry of Justice results in the fact that completeness of the data is high quality. The percentage of missing information for “education level” has been about 4% for many years.

4.7. Historical background

Separations as a legal decision were introduced in Poland in December 1999 on the basis of the Act from April 21, 1999 — amendment of the Acts: the Family and Tutelary Code, the Civil Code, the Civil Procedure Code and certain other acts (Journal of Laws 1999 No. 52 item 532).
The data are provided since 1999 - initially on individual statistical forms and since 2009 - digitally in the form of individual records.

5. Deaths

Information on deaths is gathered as part of the survey “Deaths. Mortality. Life expectancy” (1.21.09) presented in the Programme of statistical surveys of official statistics, in the section “Demography”. Such formulated topic includes: individual survey, i.e. deaths and the secondary survey - mortality and life expectancy, for which the main element are detailed data on deaths. Methodology of the individual survey is presented below.

5.1. Purpose of the survey

Purpose of the survey is to provide information on deaths, which enable observation of demographic processes in the scope of mortality and life expectancy. Structure and intensity of deaths (of which infant deaths) influences (in longer periods) socio-economic development of the country, directly or indirectly resulting from: development in medicine, healthcare system operation, improvement of the sanitary-epidemiological and ecological condition, life safety hygiene and labor conditions, as well as public awareness on health prevention.

A very important element of the survey are causes of death, which constitute the basis, among other, for assessment of health condition of the population, development of epidemiological analyses or construction of prevention programs and health needs mapping. They are also the source for medical institutes and physicians and scientists for conducting own scientific research, analytical studies and implementing research projects.

Deaths, as one of the basic elements of vital statistics of population are included - in between censuses - into balances of population by sex, age and civil status providing the basis for conducting in-depth analyses concerning population development conditions.

The results of the death survey are used to determine the annual probability of death in life tables and also form the basis for the development of population projection.

5.2. Subjective and objective scope

Object of the survey is death of a person. This survey covers:

- deaths, which occurred within the territory of the Republic of Poland. This means that deaths statistics also collects the information on deceased persons who temporarily resided in Poland - the data are developed and included in the total number of deaths. Deaths in which the deceased's country of residence is abroad are not included.
- deaths of persons staying temporarily abroad, in the case of which this fact was registered in Poland (the entitled person will then receive a Polish death certificate). In the case of those deaths the scope of the characteristics collected is limited; the data are not included in the deaths statistics.

Subject of the survey are the data on demographic and social characteristics of deceased persons, medical data and death circumstances.

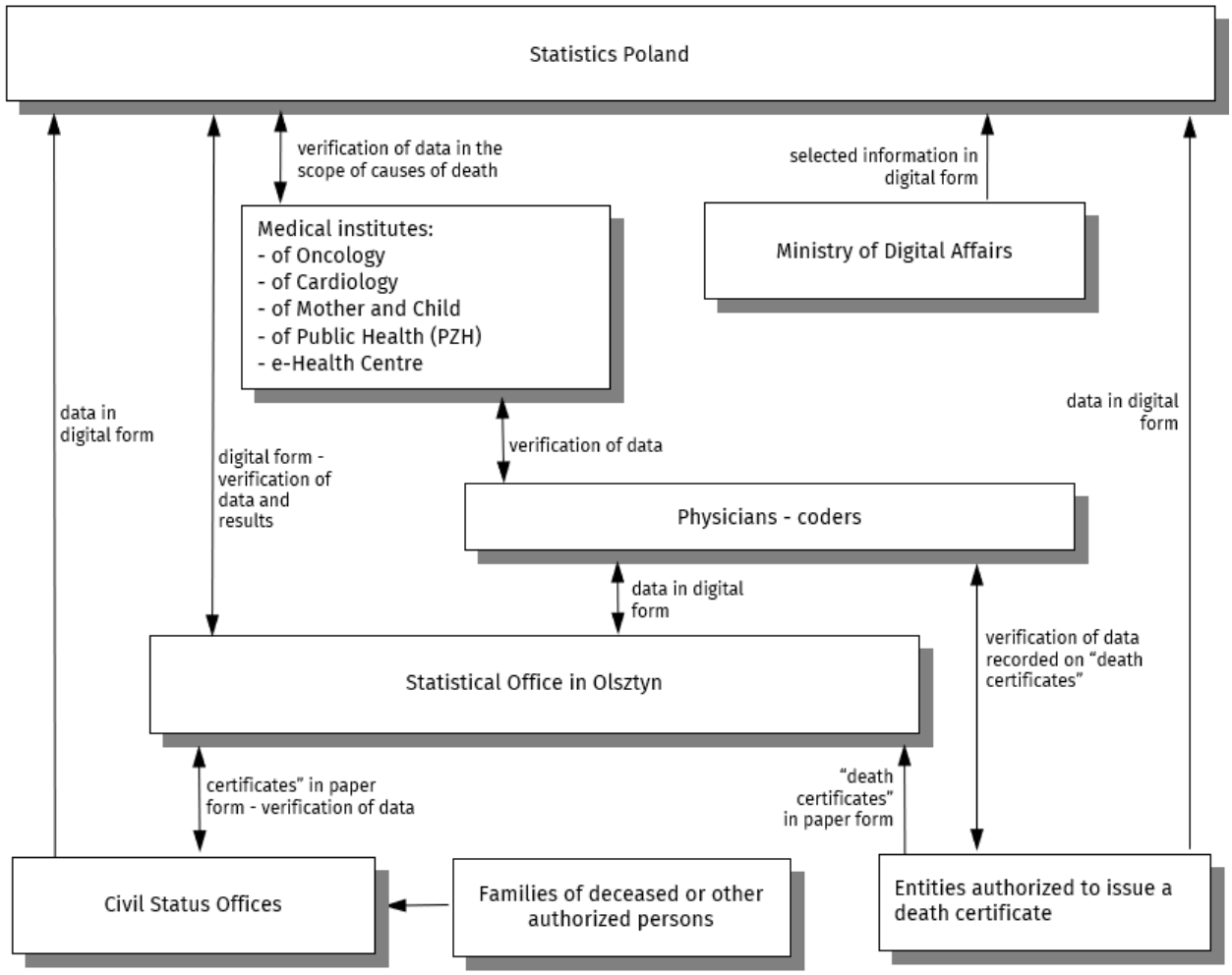
5.3. Survey organization - sources and data collection method

Source of the statistical data on deaths are administrative systems and registers, i.e., register of civil status (RSC) PESEL register and information systems of the Ministry of Health.

The main source of information on deaths (of which infant deaths) is the document basic for civil status act, constituting the basis for issuance of death certificate, i.e. “death certificate” (Journal of Laws 2023, item 2734) and documentation of civil status offices and information from the health care information system. Pursuant to Article 94(3) of the Civil Registry Act (Journal of Laws 2025, item 594), data from the death certificate of a child under one year of age are obtained by the head of the civil registry office and sent to the public statistics services. In accordance with the provisions of Article 11(3e) of the Act on Cemeteries and Burial of the Deceased (Journal of Laws 1959 No. 11 item 62), entities authorized to determine death and its cause process and transmit, for the purposes of public statistics, the data contained in the death certificate in the section intended for public statistics.

Information obtained based on information from Death Certificate and collected in the register of civil status, PESEL register and information systems of the Ministry of Health are secondarily used by official statistics in its surveys, Civil status offices and entities authorized to issue a death certificate are reporting units. Information of deceased person and on the death are successively transferred by CRO to Statistics Poland in an ongoing manner, in digital form. Additionally, due to the original narrative description of the causes of death (course of illness) prepared by the certifying physician, a paper document is also provided (a photocopy of Part I of the death certificate and the original of Part III). A second source of data on deaths consists of information transmitted directly to official statistics services by entities authorised to issue death certificates. In addition, for control purposes, Ministry of Digital Affairs provides monthly sets of death certificates issued by CRO (MC is responsible for the IT system and software operating in CRO - among others supplying Statistics Poland).

Diagram 5. Deaths survey organization chart



Source: Own elaboration

Survey on deaths and mortality is conducted by Statistics Poland and Statistical Office in Olsztyn. Statistical services are responsible for course of the survey, i.e. SO-Olsztyn develops the IT system, processes data and deals with their validation and dissemination, including development of sets and feeding databases. In turn, Statistics Poland is responsible for development of objectives for the survey, assumptions for validation, data analysis and publication of results.

In statistical department, both registration process and development of the data is conducted in two stages:

I stage of development - without causes of death

During this phase of the survey all information are registered (except for causes of death) and subjected to completeness control - formal and span as well as logical control. Data obtain at this stage are included in the balance of size and structure of the population (by sex and age to gmina level). In addition, stage I constitutes

the basis for annual data studies on deceased persons in different aspects (by sex, age, marital status, education level and place of residence of deceased persons and the place and circumstances of death).

Annual data on deaths not linked with causes of death are available - in March (in the basis scope: sex, gmina of residence) and in May of the next year (complete data).

II stage - development of causes of death

This phase of development results in determination of the initial cause of death. This process is computerized, although coding is based upon original records on death certifications made by physicians who state death. Paper documents provided by CRO (to SO-Olsztyn) are scanned and sent to physicians-coders in an appropriately developed program. In the dedicated application physician coder reads the description of the cause of death from the image and, following an analysis, enters the code of the initial cause in the relevant box of the electronic form. The coding process assumes direct contact with the physician who stated death for consultations as well as the possibility to review personal medical files.
Starting with data for 2021, Statistics Poland began coding all causes of death recorded on the death certificate, i.e. the underlying, secondary, and immediate causes. Statistics Poland continues to compile and publish data on causes of death according to the underlying cause of death. Information on all causes is not published on the Statistics Poland website; however, after the annual datasets are closed, such data may be made available to research institutions upon individual request.

Codes of causes of death are allocated in accordance with the International Statistical Classification of Diseases and Related Health Problems - 10th Revision (ICD-10), which is valid in Poland since 1997 in terms of determining causes of death (in terms of morbidity - since 1996). ICD-10 contains approx. 12 thousand codes – Poland applies approx. 3 thousand codes of causes of death. Coder function is currently performed by several physicians sworn in terms of the obligation to adhere to statistical confidentiality.

In the further process of development coded causes of death are subjected to control, among other, with a program for validation of causes of death in relation to sex and age of deceased persons. The subsequent step of development of information on causes of death is verification of the data performed by the scientific medical institutes (National Institute of Oncology, of Mother and Child, National Institute of Cardiology and the National Institute of Public Health - PZH). Then the cases indicated for verification by the institutes are subjected to re-verification (by physician-coders) through reviewing of a specific death certification and consultation with the physician stating death, as well as on the basis of medical files.

Results of the development of the data on deaths by cause are available in fourth of quarter at the end of the next year.

5.4. Variables in the Survey - terms and rates

5.4.1. Variables

The survey collects the following information:

- ✓ from the civil status register: country of occurrence; citizenship; place of birth (locality/country), place of death (locality); date of birth of the child's mother and year of contracting marriage of the child's parents - if the marriage was contracted), PESEL number of widowed, reasons for and date of issued death certificate, symbol of the death certificate; marital status, PESEL; type of death certificate; sex; date of birth.
- ✓ from PESEL register: PESEL; place of permanent residence (last) – TERYT of the voivodship, powiat and gmina; SIMC code, date of permanent residence; place of residence for temporary stay (last) – TERYT of the voivodship, powiat and gmina; start date of the temporary stay registration period, end date of the intended temporary stay registration period; date of contracting marriage.
- ✓ from the health care information system: taking into account the autopsy results in the description of the cause of death; PESEL; points of Apgar scale; the child's birth order; multiple births; duration of pregnancy; cause of death; length; child's body length at birth, child's body weight at birth; conducting an autopsy or other post-mortem examination, person confirming the cause of death, death due to an infectious disease, period of stay in Poland, place of residence of the deceased, education level, type of death certificate, place of death.

Data on deaths are developed by place of residence of the deceased person, i.e. by gmina, and due to the specific nature of the subject, by CRO/gmina of registration of death (place of the event).

5.4.2. Basic terms

Death - permanent and irreversible cessation of functions of the essential for life organs (regardless of the period after live birth) and in consequence the cessation of functions of the whole organism.

Infant death - death of a child under 1 year of age.

Newborn infant death -death of a child under 4 weeks of age (0-27 days).

Mortality - the number of deaths in a given population over a specified period of time. It is a demographic and epidemiological measure, usually expressed as a mortality rate per 1000 or 100 000 population.

Newborn infant mortality (neonatal mortality) deaths of children under 4 weeks of age (0-27 days). Divided into:

1) early newborn infant deaths i.e. occurring within the first 7 days of life (0-6 days) (early neonatal mortality),
2) late newborn infant deaths i.e. occurring after passage of 7 days of life but before passage of 28 completed days of life.

Perinatal mortality - all stillbirths (fetal deaths) and infant deaths (deceased in the first week of life), whose birthweight amounted to at least 500 g or (if the birthweight is unknown) born after an appropriate duration of pregnancy (22 weeks) or reaching appropriate length of the body (25 cm crown-heel).
The above definition is recommended by the World Health Organization (WHO) for national purposes. For the purposes of international comparisons it is recommended to apply only "standard perinatal statistics" , i.e. including stillborn infants and early neonatal deaths, which at birth weighted at least 1000 g or - if the birthweight is unknown - born after 28 weeks of duration of pregnancy or reaching at least 35 cm of body length.

Over-mortality - intensification of mortality of a group of persons showing mortality significantly higher than another group or groups.

Over-mortality rate is a relative measure expresses in percentage as a relation - e.g. male death rate to female death rate.

Cause of death - disease, disease conditions, developmental malformation, injury or poisoning, which caused or contributed to death and circumstance of accident or rape, which resulted in those injuries.

Medical practice distinguishes three stages, i.e. cause of death:

1. initial, is the disease or a condition, which was at the beginning of the morbid process which caused the death; it may be also the injury or the poisoning, as well as circumstances of an accident or rape (the so-called external cause) which caused the death.
2. secondary, which is a disease or injury or circumstances of an accident which resulted from the initial cause of death,
3. direct, which is a disease becoming the final cause of death as a result of a disease, injury or poisoning or circumstances of an accident being the initial and secondary cause of death. Statistical development of the data on deaths by causes assumes initial cause of death.

Mortality by causes – quotient of the number of deceased due to the given cause to size of the population in the middle of the period or to the average size of the population.

Fatality - quotient of the number of deaths caused by the given disease to the number of persons suffering from this disease.
The term of 'fatality' is rarely used in demography, it quotation here is caused by frequent use instead of the term of 'mortality'. Interchangeable use of those terms is erroneous.

5.4.3. Rates

Death rate (mortality) - the rate of the number of deaths in the surveyed period (on the surveyed area, e.g. urban/rural areas or gmina) to size of the population in the middle of the period or to the average size of the population during this period (on the surveyed area).

Death rates (similarly to other rates concerning vital statistics) for different periods (month, quarter, half-year, three quarters, etc.) are calculated per annum, i.e. the surveyed events registered during the given year are adequately increased to annual values, e.g. for the rate calculated for: a month - the number of events is multiplied by 12; quarter - by 4; half-year - by 2; three quarters - by 4/3.

$$\mathbf{Wz_t} = \frac{\mathbf{Z_t}}{\bar{\mathbf{L}}_\mathbf{t}} * \mathbf{c}$$

$\mathbf{Wz_t}$ – death rate in period t,
$\mathbf{Z_t}$ – death number in period t,
$\bar{\mathbf{L}}_\mathbf{t}$ – population size as at the middle of the given period t or average size of population in period t,
$\mathbf{c}$ – constans (1000 frequently or 10000 or 100000).

Specific death rates – mortality counted, e.g. for:

age of the population - number of deaths of persons at the given age in relation to the average size of population at this age:

$$\mathbf{Wzc_t} = \frac{\mathbf{Z_{xt}}}{\bar{\mathbf{L}}_\mathbf{xt}} * \mathbf{c}$$

$\mathbf{Wzc_t}$ – age-specific death rate in period t,
$\mathbf{Z_{xt}}$ – number of deaths at the given age x and in period t,
$\bar{\mathbf{L}}_\mathbf{xt}$ – population size at the given age x as at the middle of period t or average size of population in period t,
c – constans (1000 frequently or 10000 or 100000).

causes of death – number of persons deceases due to the given cause (groups of causes) in relation to the average size of the population:

$$\mathbf{Wzcp_t} = \frac{\mathbf{Zp_t}}{\bar{\mathbf{L}}_\mathbf{t}} * \mathbf{c}$$

$\mathbf{Wzcp_t}$ – specific death rate due to the given cause in the given period t,
$\mathbf{Zp_t}$ – number of deaths due to the given cause in the given period t,
$\bar{\mathbf{L}}_\mathbf{t}$ – population size as at the middle of the given period t or average size of population in period t,
$\mathbf{c}$ – constans (1000 frequently or 10000 or 100000).

Infant mortality rate – rate/quotient of the number of infant deaths in the surveyed period to the number of live births in this period**.**

$$\mathbf{Wzn_t} = \frac{\mathbf{Zn_t}}{\mathbf{U\dot{z}_t}} * \mathbf{c}$$

$\mathbf{Wzn_t}$ – infant mortality rate in the given period t
$\mathbf{Zn_t}$ – number of infant deaths in the given period t
$\mathbf{U\dot{z}_t}$ – number of live births in the given period t
$\mathbf{c}$ – constans (1000 frequently or 10000 or 100000).

Perinatal mortality rate – rate/quotient of the number of stillbirths and infant deaths at the age of 0-6 days to the number of live and stillbirths in this period.

$$\mathbf{Wuo_t} = \frac{\mathbf{Zn(0-6)_t} + \mathbf{Um_t}}{\mathbf{Uog_t}} * \mathbf{c}$$

$\mathbf{Wuo_t}$ – perinatal mortality rate in the given period
$\mathbf{Zn(0-6)_t}$ – number of infant deaths at the age of 0-6 days in the surveyed period
$\mathbf{Um_t}$ – number of stillbirths in the surveyed period
$\mathbf{Uog_t}$ – number of births in total (live and still) in the surveyed period
$\mathbf{c}$ – constans (1000 frequently or 10000 or 100000).

5.5. Presentation of results

The data on deaths are available at the level of the gmina of residence (and by urban and rural areas of gminas), which enables presentation of the results for every unit of territorial (administrative) and statistic division of the country.

Deadlines and forms of sharing of data on deaths:

- ✓ monthly - as an initial information on the total number of deaths (of which infant deaths) - website of Statistics Poland (Statistical Bulletin);
- ✓ semi-annually/annually – data of the total number of deaths, of which infant deaths and raw death rates by territorial division (voivodships, powiats and gminas) in the so-called balance table at Statistics Poland website (Demography database) – October (for the first half-year) and in April of the next year (for the whole year);
- ✓ annually:
  - May - in the form of publication tables in the scope of the data without causes of death i.e. the number and structure of deceased persons by demographic and socio-economic characteristics; information on the place and circumstances of death, national data by regions, voivodships, sub-regions and powiats also at Statistics Poland website (Demography database);
  - October - in the form of publication tables in the scope of the data with causes of death i.e. the number and structure of deceased persons by demographic and socio-economic characteristics; information on the place and circumstances of death in relation with causes of death – national data and by voivodships as well as the selected data for regions, voivodships, sub-regions and powiats, also at Statistics Poland website (Demography database).

Additionally it is possible to disseminate annual data in the form of individual data with maintenance of statistical confidentiality - in accordance with provisions of the Official Statistics Act as realization of the user needs: state and government administration - central and local, scientific/research establishments, universities (academic teachers, students), the media and other individual users (natural persons and institutions).

Information on deaths and mortality are presented at Statistics Poland website, among other, in Demography database and in the following publications:

- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as of 31 December)" - April,
- ✓ "Demographic situation of Poland up to ... " – September,
- ✓ "Population. Size and structure and vital statistics in Poland by territorial division (as of 30 June)" - October,
- ✓ "Demographic Yearbook" - November,
- ✓ "Statistical Yearbook of the Republic of Poland" – December,
- ✓ "Concise Statistical Yearbook of Poland" – July.

Other industry yearbooks and Statistics Poland publications as well as non-statistical studies and national and international databases.

Selected links to websites containing data on deaths the form of publications and databases:

- ✓ Demographic Yearbook: https://stat.gov.pl/en/topics/statistical-yearbooks/statistical-yearbooks/demographic-yearbook-of-poland-2025,3,19.html
- ✓ Demography database: https://demografia.stat.gov.pl/bazademografia/Tables.aspx
- ✓ Local Data Bank: https://bdl.stat.gov.pl/BDL/dane/podgrup/temat
- ✓ Knowledge Databases: https://dbw.stat.gov.pl/en
- ✓ STRATEG: https://strateg.stat.gov.pl/#/
- ✓ Eurostat database: https://ec.europa.eu/eurostat/data/database

5.6. Survey assessment

Data on deaths collected by Statistics Poland are characterized by 100% completeness of event registration. Similarly to completeness of the basic data on deceased persons, i.e. characteristics such as sex or, age. The completeness of most variables is satisfactory, missing information currently does not exceed 5%.

Following the amendment to the Act on Civil Status Records effective from 1 January 2024, the method of obtaining data on registered deaths has changed with regard to selected characteristics, including the deceased person's place of residence, level of education, and place of death. These data are now derived from reporting by entities providing medical services. The change in the data custodian led to an increase in the number of cases with unspecified characteristics. Due to incomplete information on the place of residence of the deceased, the data were supplemented using the PESEL register, based on the registered place of residence. Missing information on the deceased person's level of education was estimated using the results of the 2021 Population and Housing Census.

Perinatal mortality

In the period of 2015-2017, the presented scope of data on perinatal mortality has been significantly limited. This was caused by the changes introduced in 2015 in the registration system of civil status acts, firstly the change in the "stillbirth certificate" template. Limitation of the characteristics on the "certificate" made it impossible to distinguish stillbirths among all fetal deaths registered through the new "certificate" template. Data on stillbirths were estimated (for more, see item 1.6). Since 2018 there is new template of "stillbirth certificate" again containing complete scope of variables.

Causes of death

As it was mentioned before, Poland has 100% completeness of deaths registration, also majority of the variables collected as part of the survey should be assessed as of very good quality, they are complete in subjective and objective scope. For many years, the exception and at the same time a problem have been quality and reliability of data on causes of death.

The World Health Organization has for many years, been excluding Poland from comparative analyses concerning mortality by causes. The reason for exclusion of a country is at least 25% share of deaths with imprecise and useless determination/description of death causes (*garbage codes* - the term adopted by the WHO).

The WHO has announced the list of diseases and medical terms (included in the ICD 10 Classification), which at no circumstances should be used for indication the initial causes of death or even entered into "death certificates". The list includes, among other: 'cardiac arrest' (it is necessary to indicate the disease which caused the arrest), 'heart failure' (what caused it?), old age, etc. In 2016, in Poland there was almost 30% of stating *garbage codes*. Along with Poland the analysis excluded, among other, the data from Argentina, Azerbaijan, Bulgaria, Greece, Guatemala or Qatar.

In recent years, the quality of data on causes of death has been gradually improving, with a decreasing share of non-informative (garbage) codes. In 2024, the proportion of garbage codes amounted to 18.1%. Detailed information in this area is published annually on the Statistics Poland website under Thematic Areas – Causes of Death Statistics.

As presented before, the information on causes of death collected and widely disseminated by Statistics Poland are based on the descriptions of causes of death drawn up by physicians (on "death certificates"). Thus reliable and rigorous filling of "death certificate" forms should be treated as an indispensable practice increasing substantive value of the data on causes of death. Appropriate and precise descriptions of death causes determine the quality and usefulness of the data for determining correctness of the applied treatment methods or verification of hypotheses raised in scientific works. It is also recommended by Eurostat in one of 40 recommendations concerning drawing up "death certificates", indicating the need for constant training of healthcare employees participating in the process of describing of death causes: "There should be developed basic training in the scope of certifying deaths for medical students and provided constant professional development of physicians in this scope"[2].

In Poland, low quality of the information on causes of death results from incorrect presentation by the certifying physicians, of the process and the causes which lead to death. The basic problem is omission of chronological description of cause chain/diseases responsible for death of the patient or its incorrect presentation and in the consequence incorrect or imprecise indication of the initial cause of death. As it was mentioned before, in 2016 there was almost 30% of the cases of garbage codes, which means that for more than 113 thousand deaths the cause was described incorrectly. Currently, there are nearly 74 thousand such cases.

The following terms entered into "death certificates" (as the only description - often repeated three times): 'cardiac arrest', 'respiratory arrest', as well as 'cardiac and respiratory arrest', 'heart failure' or 'multiple organ

failure', 'old age' (even for persons around 70 years of age), or finally 'natural death' and 'unknown cause' are imprecise and completely useless. In consequence they became „garbage codes", the majority of which may be interpreted as „ the patient died because of death".

It is worth highlighting that Statistics Poland, as part of the works on improvement of the quality of data on causes of death, developed a range of training materials (among other, the manual for describing causes of death) usable for qualified physicians and for medical students. The materials were presented to the Ministry of Health for further works (e.g. including this topic into the programme of medical studies). Direct involvement of the MZ in promotion of correct description of causes of death (series of events/diseases, which preceded death of a person) among physicians (also future physicians) stating death would significantly improve quality of the data.
However, at present, the situation has not changed, Statistics Poland is still exercising substantive and financial control over examination of causes of death and takes responsibility for its quality.

Some prospects for addressing this issue are offered by the planned implementation of the electronic death certificate (eKZ), which could significantly improve the registration of data on causes of death and enhance their quality. The introduction of an electronic form of the death certificate and the direct acquisition of all medical information from healthcare providers (hospitals and physicians) in a digital format would markedly streamline this process. This, in turn, would enable the implementation of software supporting automation (automatic coding), thereby improving the accuracy of cause-of-death determination and reducing the share of so-called "garbage codes". The digitisation and automation of the cause-of-death coding process would also contribute to eliminating the phenomenon of regional variation in the certification of causes of death. Differences observed between voivodships are attributable primarily to insufficient training of medical personnel in this area, as well as to the application of differing coding practices by coders.

Survey organization:

Certain problems may also be indicated in organization of the survey, more precisely transferring to Statistics Poland medical data on deaths (of which the description of causes of death). As can be seen from the current organization presented earlier, this is done in the vast majority of cases through the Civil Registry Office.

For a dozen years, Statistics Poland has conducted works on simplification and shortening of the way for data transferring through introduction of digital "death certificate" and obtaining medical information directly from healthcare units (hospitals, physicians) omitting CRO and, above all, the paper version of the death certificate. Implementation of the electronic death certificate should cause organizational changes consisting in separation of routes for transferring the medical information on the death and deceased person to Statistics Poland (directly from healthcare units) from administrative data (from CRO).

The amendments to the Act on Cemeteries and Burial of the Deceased (Journal of Laws 2024.576, Article 11), introduced on 1 January 2024, changed the scope and manner of reporting deaths. The death certificate now consists of three parts, intended for: registering the death at the Registry Office, for cemetery administration and for public statistics.

Civil registry offices continue to transmit statistical data on civil registration in electronic form, while the data specified in Part III of the death certificate, including the cause of death, should be transmitted directly by medical entities. According to the new regulations, entities authorised to issue death certificates send and process data on the characteristics of the deceased contained in Part III of the death certificate to public statistics services in paper or electronic form. Unfortunately, due to the failure of many medical entities to adapt to the new organisation of the survey, the Registry Office transmits to public statistics, in addition to administrative data in electronic form, a copy of Part I of the death certificate (intended for registering the death) and, if available, the original Part III of the death certificate (intended for public statistics) in paper form.

To facilitate the electronic transmission of the required data for official statistics by healthcare providers, Statistics Poland has developed an IT tool enabling the entry and submission of medical data on deaths via a web-based form, as well as allowing the upload of data files in XML format to the application.

Currently, only approximately one quarter of data on causes of death is transmitted to official statistics directly from healthcare providers in electronic form. The remaining information is supplied by Civil Registry Offices in the form of paper scans of Part III of the death certificate. It should also be noted that Civil Registry

Offices do not hold a complete set of death certificates with respect to Part III; consequently, in 2024, information on causes of death was missing for 967 cases.

The full implementation of electronic data transmission capabilities, including descriptions of causes of death, will not only significantly shorten the time it takes to process mortality data, but will also enable the use of automatic coding of causes of death instead of the current manual coding performed by coders.

Automatic coding of causes of death

In the majority of countries worldwide, the process of coding of causes of death is conducted manually, i.e. codes of causes of death are determined by qualified physicians - coders. For the purpose of improving this process, some countries has developed and implemented software for its automation. Example is Swedish system MIKADO (used since 1990), French STYX (used in France and in the Walloon Region, Belgium, since 2000) and American MMDS (*The Mortality Medical Data Software*) also currently used by a few countries.

In Poland, works on a program for automatic coding of death causes are conducted by Statistical Office in Olsztyn since 2011. It is an adaptation of the IRIS system developed by Sweden and France for the needs of other countries in cooperation with representatives of Germany, Hungary and Italy - cooperation of statisticians, IT specialists and physicians.
SO-Olsztyn had conducted all adaptation works, i.e. designing of appropriate structure of the database for the needs of processing of “death certificates” with the IRIS software, development of decision tables and implementation of algorithms, preparation of relevant standards for data input, and first of all, development of a dictionary. The basic and most time consuming adaptation activity was development of the domestic dictionary constituting the basis for appropriate selection of the cause. This task - in case of every country implementing IRIS - is the stage of works most difficult to perform. Works on the dictionary should be treated as a continuous activity.

The developed software was tested under pilot survey. It should be highlighted that it is a very labor-intensive process, since it requires manual entering causes of death and characteristics of deceased persons for approx. 400 thousand cases from “death certificates” to a computer. Materials and information on the course and results of works allow make it possible to assess that there has been made a significant progress in adaptation of the IRIS application for Polish conditions. Nevertheless, results of the pilot survey compared with the initial material, i.e. manual coding, provided lower percentage of coherence than the average effectiveness of IRIS (85%) understood as ability to code the data entered for processing.
At present, is hard to provide clear assessment of correctness and quality of coding with the use of IRIS application, since both the shape and values of the applied dictionaries require in-depth verification (and ongoing actualization) conducted by medical bodies of the MZ.

Therefore development of the IRIS application and its adaptation for Polish conditions may be currently deemed finished. Of course, there is the need for further tests and inclusion of the resulting solutions into the program, which involves implementation of the digital “death certificate”. In accordance with declarations of the Ministry of Health, introduction of the electronic transfer of data on medical events is envisaged for 2023.

It is necessary to underline that the IRIS system - from the assumption, it is a program supporting manual coding, thus its implementation does not eliminate manual coding, and the results will undergo verification by specialized physicians-coders and medical institutes - similar as in the present situation.

Missing data on causes of death in the period of 1996-2000

In the period 1996—2000 in the deaths statistics there was lack of information about causes of deaths. This was caused by strike of physicians at the end of 1996, one of the forms of which was non-issuance of “death certificates” or - in the case of issuing the document - lack of entered cause of death (or application of “natural death” entry). This situation caused deep breakdown of the previously observed trends in mortality by causes in the period of 1997-1998. In addition, strike of physicians coincided with introduction in 1997 substantive changes in the form of 10th Revision of the ICD (instead of previously applicable 9th Revision). therefore it cannot be determined to what extend the trends breakdown was caused by continuation of favorable changes, which were observed since 1996, and to what degree it resulted from the substantive changes and strike of physicians.
In 1996, the cause of death was not determined for 1.6 thousand cases (0.4% of all deaths); in 1997 lack of causes of death concerned approx. 80.5 thousand cases (21.2% of the total number), of which 422 deceases

infants; in 1998 - approx. 75.4 thousand deceased persons (20.1%), of which 279 infants; in 199 - 8.7 thousand deaths 02.2%) and in 2000 - 1.7 thousand (0.5% of the total number of deaths). Lack of causes of death appeared again in 2001-2002, but their share did not exceed 0.1%.
It should be highlighted that death statistics by sex, age and other demographic characteristics of deceased persons for the period of 1996-2000 is complete.

In subsequent years, gaps in data on causes of death were recorded in 2015 – 480 cases, and in 2024 – 967 cases. The inability of public statistics to determine the cause of death was due to the failure of the relevant civil registry offices to provide death certificates containing descriptions of the causes. This fact deprived Statistics Poland of its only source of information in this regard, making it impossible to determine the cause of death. In the tables containing data on deaths by cause, these cases were marked with a special code 'ZZZ'.

5.7. Historical background

Statistics Poland began collecting data on vital statistics in 1946, when civil status offices were established (from 1 January 1946) and the unitary system of reporting, among other, on deaths. CRO became reporting units.

1946-1947

The material collected in 1946 and 1947 proved to be incomplete. This resulted from organizational difficulties of two post-war years, duality of registration: in parishes and civil status offices and difficulties with people adaptation to the changed conditions of registration. Before 1946, in the large part of Poland the registration was conducted by parishes. After 1945, part of population - especially in rural areas - still believed that religious rites was enough to fulfil the obligation of death registration.

Nevertheless, due to the existing provisions (among other, the fact that a place at a cemetery could be obtained only on the basis of a "death certificate"), registration of deaths by the end of 1940s could be deemed complete.
At that time statistics received collective information on the scope of the total number of deaths (including infants).

1948-1962

In 1948 entered into force individual reporting of civil status offices concerning registered deaths. Legal grounds for this were Regulation of the Prime Minister from 28 October 1947 on vital statistics of population (Dz. U. R. P no. 68, item 422). In the light of the new provisions, CRO were obligated to provide powiat general administration authorities (voivodes and starosts) with quarterly statistical statements with individual list of deaths registered in civil status books. The statements were prepared on collective statistical forms in accordance with the instruction determined by the President of Statistics Poland. Powiat authorities controlled completeness and accuracy of the data included in the individual statements, developed lists and transferred to Statistics Poland them along with the individual statements.

Since 1963

Since 1963, by virtue of the Instruction of the Minister of Health and Social Assistance from 28 December 1962 on the principles of entering causes of death into "death certificates", the data on deaths are collected in the form of an individual document ("death certificate").

Currently, the source of information on deaths - apart from the "death certificate" drawn up by the physician stating death and determining its causes - is the documentation of civil status offices, and - since 2015- PESEL register in terms of the additional characteristics of deceased persons. Since 2024, information on deaths is additionally provided by entities authorized to issue death certificates.

Infant deaths

In 1963, four categories of birth were introduced into Polish medical practice and statistical reporting: live, still, non-viable with signs of life and non-viable without signs of life. The non-viable birth category covered infants with birthweight from 601 g to 1000 g, given that if the infant had not survived the first 24 hours since birth, it was categorizes ad non-viable without signs of life and was not classified as a death of an infant.

The definitions were abolished in 1994 (re-establishing definitions of birth and death of a newborn infant compliant with the recommendations of the World Health Organization), i.e. there are two categories: live

birth and stillbirth. This means that birth, in the period of 1963-1993, determined as non-viable with signs of life regain its correct category - live birth (also recognized as infant death), while non-viable birth without signs of life was also determined as stillbirth. Value of infant death rates (infant mortality) increased significantly, e.g. in case of 1993, the rate calculated in accordance with the WHO definition amounted to 16.1‰, and in case of the previous definition in amounted to 13.3‰.
With introduction of the new definition of birth and death of an infant in Poland, the data on births and deaths (of which deaths of infants) for the previous years (1963-1993) were recalculated in accordance with the WHO definition. For the first time, the recalculated data (for all years presented in retrospection) were published in the Demographic Yearbook 1995. (For more see item 1.7 'Definition of birth').

International Classification of Diseases, Injuries and Causes of Deaths

Classification for coding of diseases and causes of death was introduced in Poland by the Ministry of Health by the end of 1950. Initially, in the period of 1951-1958, the basis for coding was the "Terminology of diseases and causes of death". Starting from 1959 the WHO-recommended International Classification of Diseases, Injuries and Causes of Deaths was introduced i.e. its following versions were applicable for the subsequent years: in the period of 1959-1969 – 7th Revision of the ICD; in the period of 1970-1979 – 8th revisions; in the period of 1980-1996 - 9th revision; since 1997 – is in place 10th Revision of the ICD entitled the International Statistical Classification of Diseases and Related Health Problems.

Verification of the codes of diseases and causes of death included into the Classification is an ongoing process - the WHO introduces periodical (every 1-2 years) actualization of the scope of the currently valid revision (at present ICD 10th).

In connection with the outbreak of the COVID-19 pandemic in 2020, the World Health Organization (WHO) introduced new (emergency) codes into the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10), enabling the coding of deaths caused by COVID-19—codes U07.1 and U07.2. At the turn of 2020 and 2021, WHO added five further codes related to COVID-19 (U08–U12), of which only code U10 (multisystem inflammatory syndrome associated with COVID-19) is intended for use in coding causes of death. The remaining codes should not be applied for mortality statistics.

Statistics Poland prepared for the collection of data on deaths due to coronavirus. Coding guidelines developed by the National Institute of Public Health – National Institute of Hygiene (NIPH–NIH), in cooperation with official statistics, were provided to coders, and the technical capability to assign the new code was ensured within the coding system. Consequently, a new category appeared in the data on deaths by cause for 2020—a code from Chapter XXII, Codes for special purposes, i.e. COVID-19.

On 1 January 2022, the eleventh revision of the International Classification of Diseases and Related Health Problems (ICD-11), adopted by WHO Member States in May 2019, entered into force. Poland, like other countries, committed itself to its implementation and use. WHO estimates that, for countries such as Poland that apply the tenth revision, the transition to the new ICD revision will take approximately four to five years.

Since 2024, Statistics Poland has been actively involved in work on the implementation of the new revision of the International Classification of Diseases and Related Health Problems (ICD-11), in the area of causes-of-death statistics and the improvement of IT tools supporting the use of ICD-11 by its future users, both within healthcare systems and within Statistics Poland. The work carried out in cooperation with the Ministry of Health aims to prepare and implement a project covering the development of the Polish version of ICD-11, the Polish versions of WHO IT tools facilitating the use of this classification, and the delivery of training related to tools based on the new revision of the classification.

6. Balances of population status and structure

Data from the scope of size and structure of the population are developed as part of the survey entitled "Population size and structure balance by demographic characteristics" (1.21.07) presented in the Programme of statistical surveys of official statistics in the section "Demography". This survey is bases on results of the current individual surveys on vital statistics and migration.

6.1. Purpose of the survey

Purpose of the survey is to obtain data on the size of population and its basic structures (by sex, age, territorial distribution), and to obtain information on changes in this area due to the need of observation of the growth rates and directions of development of the selected groups of population in relation with the changes in system of education, on labor market or the growing number of older people requiring support the growing number of older people requiring support.

The data on the size and structure of Poland's population presenting the state at the specific moment, in spatial distribution, are basic statistical information, which a range of other information on social and economic life refers to, e.g.: revenues, consumption, production, effects of housing, infrastructure, medical services, quality of level, etc.

6.2. Subjective and objective scope

Object of the survey are inhabitants of Poland, i.e. population living in Poland and population residing in Poland (residents).

The study concerns:

- population residing by sex, and age in administrative division of Poland: voivodships, powiats and gminas (with distinction of urban and rural areas in urban-rural gminas) and by statistical division NUTS (macro-regions, regions and sub-regions),
- residents; structure by sex and age in administrative division of Poland: voivodships, powiats and gminas (with distinction of urban and rural areas in urban-rural gminas) and by statistical division NUTS (macro-regions, regions and sub-regions),

The data are calculated twice a year: by the situation in the middle (30 June) and at the end (31 December) of every year.

6.3. Survey organization - sources and data collection method

Estimations of population are a secondary survey with the use of the balance (component) method. Balance method is applied for development of data on size and structure of the population in the periods between censuses. It assumes adoption of the results of the last census as the initial basis, and then including the data on vital statistics (births and deaths) and migrations (for permanent and temporary residence) in the given period.

At the same time, there are developed **two balances of population** - for two categories of residence i.e. by the national and international definition of residence. The difference between the definitions concerns the criteria in the scope of temporary migrations in each of the balances (for more see items 6.4.2-3 "Balance of population").

Balance chart:

1. The basis-initial base for the balance are results of the Population and Housing Censuses in terms of the size and structure of the population/residents in every gmina (the last census took place in 2021; note - each subsequent census verifies/corrects size of the population).
   It should be highlighted that - in accordance with census methodology - allocation of a persona to a certain gmina is based on his/her declaration concerning the place of residence (permanent or temporary - lasting at least 3 months or - in case of residents - a least 1 year). Census does not verify formalities related with registration. Thus, the declaration concerning the place of residence of a person made during census, not necessarily has to be reflected in gminas documentation.

In case of foreigners residing in Poland, the size of population includes only persons registered for permanent residence in Poland; in case of residents - also persons registered for temporary residence (for at least 1 year). (For more see Methodological report migration of population).

2. Assuming the size of population/number of residents from the census as a starting point for a gmina (in division by sex and individual age groups) balance for the subsequent years is drawn up by component method in accordance with the following chart:

size of population/number of residents (by sex and individual age groups) at the beginning of the period (year, half-year) in the gmina

+ live births (by sex of infants)

– deaths (by sex and age of deceased)

+ registrations for permanent residence from other gminas and from abroad (by sex and age of persons)

– deregistrations from permanent residence for other gminas and for abroad (by sex and age of persons)

+ registrations for temporary residence longer than 3 months from other gminas (by sex and age of persons) – in case of population in accordance with the national definition of residence, or
registrations for temporary residence for at least 1 year from other gminas and from abroad (by sex and age of persons) – *in case of usual residents*

– deregistrations for temporary residence longer than 3 months to other gminas (by sex and age of persons) – *in case of population in accordance with national definition of residence,* or
deregistrations for temporary residence for at least 1 year from other gminas and for abroad (by sex and age of persons) – *in case of usual residents*

+/– movements of population due to formal administrative changes reflected in the Council of Ministers' regulation on establishing the boundaries of certain municipalities and towns and granting certain localities town status (by sex)

= size of population at the end of the period (year, half-year) in the gmina.

All the data on vital statistics and migrations included into the balance concern legally documented events and originate from administrative registers, and in particular:

- for Statistics Poland, the source of the data on births and deaths is the documentation of civil status offices. Among the events registered by CRO, balances only include those which occurred within the territory of Poland.
  Completeness of the data is guaranteed by number of civil status acts (“birth and death certificates”). In the population balance, a child born is added to the size of population of the gmina of residence of the mother - indicated on the “birth certificate”, while deceased person in deduced from the size of population of the gmina of residence indicated in the “death certificate”.
- Information on internal and international migrations for permanent residence (re-registrations within the country as well as immigration and emigration), as well as on temporary migrations (data on persons registered in Poland for temporary residence for a period exceeding 3 months — both permanent residents of Poland and permanent residents of other countries — and data on persons absent due to departure abroad for temporary residence for a period exceeding 6 months), is received by Statistics Poland from the PESEL register, maintained by the Ministry of Digital Affairs and supplied by local registration offices of individual gminas.

Persons who performed de-registration from permanent residence in Poland due to departure abroad are not included in the population balance. The balance also does not include undocumented and illegal migrations.

On the sources in more details - see items 1.3 and 5.3 (in the scope of births and deaths) and Methodological report migration of population.

6.4. Variables of the survey, main terms and rates

6.4.1 Variables

The basic variables included into population balance constitute its compounds, i.e. sets of individual records from different surveys containing the following characteristics:

- live births: sex of the newborn infant and territorial reference of the gmina of residence of the child's mother,
- death: sex of the deceased person, age and territorial reference of the gmina of residence,
- registration for permanent residence from other gmina (internal migration): sex and age of the person and territorial references of the gmina of the current/new and the previous residence,
- immigration - registration for permanent residence from abroad (international migration): sex and age of the person and territorial reference of the gmina of residence,
- emigration - de-registration due to leaving the country for permanent residence abroad (international migration): sex and age of the person and territorial reference of the gmina of previous residence,
- registration for temporary residence from other gmina (internal migration): sex and age of the person, territorial references of the gmina of current (temporary) and previous residence and the declared period of residence (in months: in case of population balance in accordance with the national definition of residence - longer than 3 months; in case of residents - at least 1 year),
- registration for temporary residence from abroad (international migration): sex and age of the person, territorial reference of the gmina of current (temporary) residence and the declared period of residence (in months - longer than 1 year, only applies to the balance of residents),
- notification of temporary departure abroad (international migration): sex and age of the person, territorial reference of the gmina of residence and the declared period of absence (in months - longer than 1 year, only applies to the balance of residents).

See item 6.4.2-3 the term of 'population balance'.

6.4.2-3. Basic terms and rates

The text below presents the terms and rates concerning population most frequently presented in statistical studies. They were ordered by subject (non-alphabetical order), which enables logical presentation of the issue.

Population size

Number of persons (in total and by specific characteristics) inhabiting the specific territory at the given time. Usually, population size is applied:

- as at the end of every year, i.e. on 31 December,
- as at the middle of the year, i.e. on 30 June.

Average population size in the surveyed period is the arithmetical average from the population size at the beginning and the end of the surveyed period (in practice, population size from the end of the previous period is assumed as the population size at the beginning of the period).

Population estimates

Determination of population of units with specific characteristics in the surveyed population, determination of intensity of the specified demographic events, size of population in specific age groups, etc. - on the basis of the justified premises of the upwards trend, knowledge of an analogical structure in similar population, etc.

Balance of population

Method of estimating the size and structure of the population by sex and age for a gmina (basis administrative unit of Poland) in the periods between censuses.

Balance method for development of the data on the size and structure of the population assumes adoption of the results of the previous population census as the initial base, and then including the data on vital statistics (births and deaths) and migrations (for permanent and temporary residence) in the given period.

Balance of population is developed for two categories of residence - in accordance with the **domestic** and **international** definition of residence. The difference concerns the criteria in terms of temporary migrations

included into each of the balances - in accordance with:

1) **the national** definition of residence - population of the given gmina includes persons residing (staying) therefore the period of at least 3 months. This means that the size of population of the given gmina includes:
   – permanent residents (persons registered there) excluding those inhabitants, who left for at least 3 months to another gmina within Poland,
   – persons who came from another place in Poland for the period of 3 months.
   Population of the gmina does not include immigrants temporarily residing in Poland, while permanent residents of Poland temporarily residing abroad (regardless of the period of absence) are included in the population size of the given gmina;
2) **the international** definition of residence - **residents** (residing population) is the category of residence of population developed for the purposes of international statistics in accordance with Regulation of the European Parliament and the Council (EU) no. 1260/2013 from 20.11.2013, on the European demographic statistics.
   Residents of the gmina include all persons residing or intending to reside in the unit for at least 1 year. This means that, the number of residents of the gmina includes:
   – permanent inhabitants (persons registered there or residing permanently without registration), except for those inhabitants, who left for a period of at least 12 months to another place in Poland or abroad,
   – persons who came from another place in Poland or from abroad (immigrants without permanent residence card) for the period of at least 12 months.
   Balance of residents is drawn up starting from the data for 2009.

Balance of population/residents is drawn up for the smallest unit of territorial division, i.e. for every gmina (in case of urban-rural gminas with differentiation into urban and rural areas), the data on population for powiats, voivodships and Poland in total are obtained by appropriate summing of the values for gminas.

Population registered for temporary residence longer than three months

The total number of persons (in total or by specific characteristics) registered for temporary residence longer than 3 months in the given administrative unit (e.g. gmina, voivodship) who permanently reside in another unit in Poland.

Population in urban areas

Number of persons (in total or by specific characteristics) residing in localities with official town rights (city status) i.e. in urban municipalities and in cities within urban–rural municipalities.

Urban rate - share (%) of urban population in the total size of population.

$$\mathbf{Wurb} = \frac{\mathbf{Lm}}{\mathbf{L}} * \mathbf{100}$$

Wurb – urban rate
Lm – size of urban population
L – size of the population in total

Population in rural areas

Number of persons (in total or by specific characteristics) residing in localities without official town rights namely without city status (rural municipalities and rural areas within urban–rural municipalities).

Population in urban-rural gminas

Number of persons (in total or by specific characteristics) residing at the given time in the units of territorial division comprised of:
– urban area - maintaining official municipal rights (city status),
– rural areas - belonging to the same urban–rural municipality.

Balance of population by marital status

Method of estimation of the size and structure of the population by marital status in the periods between censuses. The basis for the estimation are results of the last population census in terms of the number of persons with marital status of single, married, divorces and widowed by sex, age for Poland in total as well as in division into urban and rural population. The estimation concerns the population at the age of 15 and more, in the subsequent years taking into consideration positive and negative elements of the balance resulting from: supply of population with new generations of 15-years old persons, mortality in different age and marital status groups as well as net migrations of the surveyed groups of the population, moreover, changes in marital status causes by contracting marriage, divorce or death of a spouse.

Vital statistics of population

Events of births and deaths, as well as marriages and divorces (and separations), resulting in changes in the size and structure of the population by sex, age and marital status.

Natural increase of population

The difference between the number of live births and the number of deaths in the given period.

Natural increase rate

Relative measurement of natural increase is expressed as the rate of the difference between the number of live births and the number of deaths to the size of the population in the middle of the surveyed period or to the average size of the population in the given period expressed in ‰ (i.e. per 1000 of the population).
Natural increase rates (similarly to rates concerning other events of vital statistics) for different periods (month, quarter, half-year, three quarters, etc.) are calculated per annum, i.e. the surveyed demographic events registered during the given year are adequately increased to annual values, e.g. for the rate calculated for: - a month - the number of events is multiplied by 12; quarter - by 4; half-year - by 2; three quarters - by 4/3.

$$\mathbf{Wpn_t} = \frac{\mathbf{U_t} - \mathbf{Z_t}}{\bar{\mathbf{L}}} * \mathbf{c}$$

$\mathbf{Wpn_t}$ – natural increase rate for period t,
$\mathbf{U_t}$ – number of births in period t,
$\mathbf{Z_t}$ – number of deaths in period t,
$\bar{\mathbf{L}}$ – population size as at the middle of the given period t or average size of population in period t,
$\mathbf{c}$ – constans (1000 – frequently or 10000 or 10 thousand).

Actual increase of the population

The difference between size of the population at the end and at the beginning of the period (e.g. a year). The difference is comprised of:

– for Poland - natural increase and net international migrations for permanent residence (in case of the national definition of the population). For usual residents, it additionally includes net temporary migrations lasting at least 12 months;
– in case of territorial division (gminas, powiats, voivodships) and in division into urban and rural areas (town/village), natural increase is additionally comprised of net/balance of internal migration (for permanent and temporary residence) and balance of the population movement resulting from administrative changes (usually granting town rights to previously rural areas).

If the values are negative it is actual/annual decrease.

Growth rate of population

Change in population between the beginning and end of of the surveyed period.
Expressed in % and decreased by 100 quotient of the size of population from the end of the previous surveyed period to the size of population at the beginning of this period.

$$\mathbf{Wpl} = \frac{\mathbf{L_t}}{\mathbf{L_{t-1}}} * \mathbf{100} - \mathbf{100}$$

$\mathbf{Wpl}$ – growth rate of population,

L_t – size of the population at the end of the surveyed period,
L_{t-1} – size of the population at the beginning of the surveyed period.

Population density

Measurement of population density in the specific territory - usually expressed in persons per 1 km^2 (also in persons per 1 ha at very large density, e.g. in agglomerations).

In order to increase accuracy of the rate's value expressed per 1 km^2 it is recommended to use in calculation the area in hectares and the result of division by the size of the population multiply by 100 (100 hectares = 1km^2).

$$G = \frac{L}{O_{ha}} * 100 \quad \text{or} \quad G = \frac{L}{O_{km2}}$$

G – population density,
L – size of the population inhabiting the given area,
O_{ha} – area in hectares,
O_{km2} – area in km^2.

Balance of administrative changes

Means an increase or decrease in the size of the population in a given administrative unit (gmina), caused by formal changes in the administrative borders of a given territorial unit, as reflected in the Council of Ministers' regulation on establishing the borders of certain gminas and towns and granting certain localities town status.

Structure of population

Number of units with specific characteristics and their share in the surveyed population (e.g. by sex, age, marital status and territorial division, etc.).

Population by sex

Division of population into men and women. Structure of the population by sex may be analyzed using the measures:

1) **Percentage of men (women)** in the total population:

$$Wm = \frac{Lm}{L} * 100 \qquad Wk = \frac{Lk}{L} * 100$$

Wm /Wk – percentage of men/women in the total population
Lm / Lk – number of men/number of women
L – total population

2) **Feminization rate (sex ratio)** - determines mutual relations between the number of women and men i.e. the number of women per 100 men.

$$Wf = \frac{Lk}{Lm} * 100$$

Wf – feminization rate,
Lk – number of women,
Lm – number of men.

3) **Masculinization rate (sex ratio)** - determines mutual relations between the number of men and women i.e. the number of men per 100 women

$$Wm = \frac{Lm}{Lk} * 100$$

Wm – masculinization rate,
Lm – number of men,
Lk – number of women.

Age

Basic demographic characteristics usually understood as the period from birth to the time of observation, measured in the years completed. In statistical practice, the data on age are presented in finished years, i.e. the age, which s person reached in his/her last (proceeding the moment of observation/survey) birthday.

Data on the age of the population from the census used as the population base in the balance method are measured in completed years.

The population balance compiled in accordance with the national definition is based on the year of birth – thus, data on the population by age for the first half of the year are estimated. The estimations are based on the assumption that by 30 June, half of the population of a given age group had reached that age (had already celebrated their birthday), while the other half had not yet reached that age (had not celebrated their birthday). Such persons are included in the lower age group.

The population balance, compiled in accordance with the international definition of residence (residents), is based on the month and year of birth, thus the data on the population by age for the first half of the year are compiled for completed years according to the month of birth.

Pyramid of population

Graphic presentation of the population structure by age (usually also by sex or the nature of the place of residence - urban, rural areas at the given time).

Average age

Average age of the specific population calculated with **arithmetic average**. Arithmetic average of age is a parameter calculated by multiplying age by the size of the population at the age; the "middle" of every generation is assumed for the calculations, i.e. 0.5 is assumed as 0 years, as 1 year 1.5, as 2 years 2.5 respectively, etc. Then the total of products is divided by the total size of the population.

If arithmetic average is calculated from 5-year age groups, then calculations assume the "middle" of the 5-year age group, i.e. for the group 0-4 years 2.5 is assumed, for 5-9 years 7.5 for 10-14 12.5, respectively, etc.

$$\acute{S}\mathbf{r}_{\mathbf{art}} = \frac{\sum(\mathbf{R_w} + \mathbf{0,5}) * \mathbf{L_{rw}}}{\mathbf{L}}$$

$\acute{S}\mathbf{r}_{\mathbf{art}}$ – arithmetic aver,
$\mathbf{R_w}$ – age group,
$\mathbf{L_{rw}}$ – size of the population of the given age generation (Σ (Rw + 0,5)* Lrw) – total of products,
$\mathbf{L}$ – total population.

Median age

Indicates median age of persons in the given population (e.g. inhabiting the specific territory). Value of the median determines the exact age, which half of population already exceeded and second half — did not reach yet. Median age may be calculated for the population in total, separately for men and women, in division into urban and rural areas, voivodships, etc.

$$\mathbf{M_e} = \mathbf{X_m} + \frac{\mathbf{h_m}}{\mathbf{L_m}} * (\mathbf{N_m} - \sum_{\mathbf{m}}^{\mathbf{m-1}} \mathbf{L_{sk}})$$

$\mathbf{M_e}$ – median age,
$\mathbf{X_m}$ – lower limit of the median interval,
$\mathbf{h_m}$ – span of the median interval (here = 1),
$\mathbf{N_m}$ – half of the number of all facts (here half of the population),
$\mathbf{L_m}$ – population of the median interval,
$\sum_{\mathbf{m}}^{\mathbf{m-1}} \mathbf{L_{sk}}$ – total of the quantity in the cumulated series preceding the population of the median interval.

Medial interval: first generation, where the cumulated quantities for the previous generations exceed half of the population quantity (are at least equal).

Median age for 5-year age groups is calculated analogically, given that parameter h (span of the median interval) assumes the value 5.

Biological age groups
Three basic biological age groups, for which borders (in years) are contractual. In practice of statistical surveys the most frequently used grouping is as follows:

- 0-14 years – children,
- 15-64 years – adult population
- 65 and more – people at old age.

Children
Population at the age of 0-14 years.

Adults
Population at the age of 15 and more. In Poland, according to law, an adult person is a person who reached the age of 18.

Persons at old age
Population at the age of 65 and more (recommendation of the UN and Eurostat) or 60 and more (recommendation of the WHO).

Process of population ageing

The process of an increase in the share of the population at old age in the total population.
Ageing of the given population is evidences by the decreasing number and share of children (0-14 years) in the total population and an increase in the number and percentage of old persons (65 years and more).

Reproductive age of women
The age, when a woman is (biologically) able to born a child.
In demographic practice, the age of 15-49 is assumed as the reproductive age for the temperate climate zone where Poland is located. When calculating fertility (and total fertility) rates, children born by mothers younger than 15 years old are included into the age of 15, and those born from mothers at the age of 50 and more to the age of 49.

Economic age groups
Three contractually determined basic age groups classifying ability to work: pre-working age, working age and post-working age.
Poland assumed: underage persons (0-17 years old) as comprising the first group, while the lower limit of the third group corresponds to the age of retirement in Poland, i.e. for women 60 years, for men 65 years.
There are also applied other groupings of the economic age, e.g. 0-14 years, 15-74 years and 75 and more years e.g. in the international LFS (BAEL) survey, and by the UN and the WHO.

Pre-working age - the age when the population has not yet reached the ability to work, i.e. age group of 0 - 17 years.

Working age - the age with working ability, i.e. for men, 18-64 years age group, for women 18-59 years.

Mobility age - age group at production age including the population at the age of 18-44.

Non-mobility age - production age group including the population at the age of: men - 45-64, women - 45-59.

Post-working age - the age at which persons usually end their professional work, i.e. for men - 65 years and more, for women - 60 years and more.

Non-working age- non-working age is comprised of pre-working age, when the population has not yet reached the ability to work, i.e. age group of 0 - 17 years and post-working age, when persons usually end their professional work, i.e. for men - 65 years and more, for women - 60 years and more.

Demographic dependency ratio

General - rate of the number of persons at non-working age (i.e. at pre-working and post -working age) to the size of population at working age, i.e. the number of persons at non-working age per 100 persons at working age.
The age of 0-17 (pre-working age) and 60 years and more for women and 65 years and more for men (post-working age) is assumed as non-working age; 18-59/64 years is working age (18-59 years - for women and 18-64 years - for men).

$$W_{od} = \frac{L_{przedprod} + L_{poprod}}{L_{prod}} * 100$$

W_{od} – (general) age dependency rate,
$L_{przedprod}$ – population size at pre-working age,
L_{poprod} – population size at post-working age,
L_{prod} – population size at working age.

Age-specific – two age-specific rates are distinguished, informing about the number of persons: (1) at the pre-working age per 100 persons at working age and (2) at post-working age per 100 persons at working age. For analysis of the phenomenon, rather than the value of the general age dependency rate, **the most important is the relation between age-specific dependency rates**.

$$W_{odcz} = \frac{L_{przedprod}}{L_{prod}} * 100 \qquad W_{odcz} = \frac{L_{poprod}}{L_{prod}} * 100$$

Age dependency rates may also be calculated on the basis of biological age groups, i.e. as a rate of the number of children (0-14 years) and old persons (65 and more) to the number of persons at the age of 15-64.

Old age ratio
Relation of the number of persons at old age (65 and more) to the size of the population in total.

$$W_{st} = \frac{L_{65+}}{L} * 100$$

W_{st} – ageing rate/index,
L_{65+} – population aged 65 and more,
L – total population.

Double ageing of population
Increase in the share of persons aged 80/85 and more in the population aged 65 and more.

Old age index
Relation between the number grandparents and grandchildren, i.e. the number of persons aged 65 and more to the number of persons at the age of 0-14.

$$I_{st} = \frac{L_{65+}}{L_{0-14}}$$

I_{st} – ageing rate/index,
L_{65+} – population aged 65 and more,
L_{0-14}– population aged 0-14.

Potential support ratio
Number of persons aged 15-64 per 100 persons aged 65 and more. It presents the number of persons hypothetically staying on the labor market per 1 person (100 persons) outside labor market (reversal of the age-specific dependency rate with old persons).

$$W_{pw} = \frac{L_{15-64}}{L_{65+}} * 100$$

W_{pw} – potential support rate,
L_{15-64} – population aged 15-64,
L_{65+} – population aged 65 and more.

Parent support ratio

Number of persons aged 85 and more per 100 persons aged 50-64.

$$\mathbf{W_{wsp}} = \frac{\mathbf{L_{85+}}}{\mathbf{L_{50-64}}} * \mathbf{100}$$

$\mathbf{W_{wsp}}$ – parent support ratio,
$\mathbf{L_{85+}}$ – population aged 85 and more,
$\mathbf{L_{50-64}}$ – population aged 50-64.

Demographic dynamics rate

Rate of the number of live births in the given period (usually 1 year) to the number of deaths in this period (the number of births per 1 death).

$$\mathbf{Wd_t} = \frac{\mathbf{U_t}}{\mathbf{Z_t}}$$

$\mathbf{Wd_t}$ – demographic dynamics rate,
$\mathbf{U_t}$ – number of live births in period t,
$\mathbf{Z_t}$ – number of deaths in period t.

6.5. Presentation of results

The data on population and residents are developed twice a year, i.e.: by the situation in the middle (30.06) and at the end (31.12) of every year in terms of:

- sex and age - age of the population in completed years by individual generations, i.e. from 0 to 100 and more - for annual data and 0-85+ - for the semi-annual data, as well as by other groupings - among other, the so-called functional, biological and economic age groups,
- territorial division, i.e. for each municipality (broken down into urban and rural populations) – taking into account administrative changes reflected in the Regulation of the Council of Ministers on establishing the boundaries of certain municipalities and towns and granting town status to certain localities, resulting in changes in the population of specific administrative units,
- statistical division (NUTS).

Deadlines and forms of sharing of data on:

- monthly: as preliminary information on the total population of the country – (Statistical Bulletin, Statistics Poland website);
- population: April of the given year - in terms of the data as at the end of the previous year and September - in terms of the data as at the middle of the given year;
- residents: June of the given year - in terms of the data as at the end of the previous year and October - in terms of the data as at the middle of the given year.

Information on the size and structure of the population are presented at Statistics Poland website, among other, in Demography database and in the following publications:

- ✓ "Population. Size and structure and vital statistics in Poland by territorial division" (as of 31 December) - April,
- ✓ "Demographic situation of Poland up to … " – September,
- ✓ "Population. Size and structure in Poland by territorial division (as of 30 June) - October,
- ✓ "Demographic Yearbook" - November,
- ✓ "Concise Statistical Yearbook of Poland" - July,
- ✓ "Statistical Yearbook of the Republic of Poland" – December,
- ✓ "Statistical Yearbook of Regions" – December.

Other industry yearbooks and Statistics Poland publications as well as other than statistical studies and domestic and international databases.

Selected links to websites containing data on deaths the form of publications and databases:

- ✓ Demographic Yearbook: https://stat.gov.pl/en/topics/statistical-yearbooks/statistical-yearbooks/demographic-yearbook-of-poland-2025,3,19.html
- ✓ Demography database: https://demografia.stat.gov.pl/bazademografia/Tables.aspx
- ✓ Local Data Bank: https://bdl.stat.gov.pl/BDL/dane/podgrup/temat
- ✓ Knowledge Databases: https://dbw.stat.gov.pl/en
- ✓ STRATEG: https://strateg.stat.gov.pl/#/
- ✓ Eurostat database: https://ec.europa.eu/eurostat/data/database

6.6. Survey assessment

Data on the size and structure of the population are the basis demographic information and starting point for a range of other information on social and economic life. They enable observation of the rate and directions of demographic, as well as social and economic growth of the country or the selected groups of population. Thus, conducting of this survey is indispensable and the presented balance method for determining the size and structure of the population is fully justifiable.

However, the current balances of population are the survey implemented on the basis of the results of other surveys. Therefore, the quality of obtained results depends on the quality of components of the balance, which are live births, deaths and migrations. Source of all those components are administrative registers, given that data on births and death should be assessed as good quality, they are complete in terms of quality and range. However, in case of migrations, completeness of the evidence registers in terms of the number of facts should be deemed unsatisfactory, as they do not reflect the actual size of the phenomenon. The reason is the lack of reporting to gmina offices of the fact of a change in the place of residence (permanent or temporary) by migrating persons (both, in the country - between gminas, and to/from other countries). More on migration surveys and quality of the data can be found in the Methodological report migration of population.

The results of the population balance also depend on the results of the national population and housing censuses, which, according to the assumptions of the balance method, form the basis for the population balance. The census methodology is based, among other things, on assigning a person to a given municipality according to their declaration of residence (permanent or temporary – lasting at least 3 months or, in the case of residents, at least 1 year). The census does not verify the formalities related to registration – therefore, the declaration made in the census regarding a person's place of residence does not have to be linked to their registration, which has a significant impact on the quality of the population balance survey results.

In connection with the planned entry into force of the Regulation of the European Parliament and of the Council (EU) on European statistics on population and housing, amending Regulation (EC) No 862/2007 and repealing Regulations (EC) No 763/2008 and (EU) No 1260/2013, further development of the population survey methodology is planned in order to adapt it to the requirements of the new regulation.

6.7. Historical background

For many years, the data on the size and distribution of the population were developed using two methods. Initially the information were estimated – during the years when current reporting on vital statistics and migration was implemented in the form of collective statements (by offices of territorial and administrative units, i.e. depending on the period - gmina, powiat voivodship offices, bureau of national councils, etc.). In a large part those were aggregated data. Therefore, the data could be developed in less detailed systems (e.g. 5 or 10 year age groups, national or voivodship level - depending on a source).

Along with the possibility to obtain individual data on births, deaths and migrations - the data are developed with balance method.

1. **Estimations** of population have been developed since the beginning of 1970s . Their basis was:
   a) for the period of 1946-1949 - the data from the Summary Population Census in 1946, corrected on the basis of the results of the National Census from 1950,
   b) for the period of 1950-1959 - the data from the National Census from 1950 and the data of current reporting,

c) for the period of 1960-1966 – the data from the National Census from 1960 and the data of current reporting,
d) for 1967 - results of the survey on structure of the population by sex and age from 31 December 1967,
e) for the years 1968 and 1969 - results of the survey on structure of the population by sex and age from 31 December 1967 and the data of current reporting,
f) for the period of 1989-1999 - results of the National Population and Housing Census from 20 May 2002. In 2006, the data on the size and structure of the population for the period of 1989-1999 were changed as compared to the previously published (balance on the basis of the 1988 census). Data for those years were re-estimated (decreased) taking into consideration the results of the NC 2002. The recalculation also included demographic rates. The estimation made was aimed at correcting the occurring difference (approx. 392 thousand persons) between the size of the population resulting from the balance conducted on the basis of the NC from 1988 and the results of the NC from 2002.

Over-estimation concerned mainly the national data by sex and age and by the population inhabiting urban and rural areas; the data for further administrative division (voivodships, powiats and gminas) remained unchanged, i.e. the balance based on the NC 1988 was retained.

It should be noted that during the post-war years, the data on vital statistics and migration provided for public statistics were not entirely complete. Thus, also the data on the size of the population for the period of 1946-1948 should be deemed as approximated (although they were corrected by the 1950 Census). Nevertheless, taking into consideration the reality and conditions of the first post-war years, the statistical data developed by Statistics Poland then were based on the best available data and the most reliable estimation methods.

2. **Balance of population** developed on the basis of the current individual data on vital statistics and migration at assuming the starting point (basis of the balance):
a) for the period of 1970-1977 - results of the National Census from 8 December 1970,
b) for the period of 1978-1987 - results of the National Census from 7 December 1978,
c) for 1988 - results of the National Census from 7 December 1988,
d) for the period of 1999-2009, i.e. from the situation on 31 December 1999 - results of the National Population and Housing Census from 20 May 2002,
e) from 2010 - results of the National Population and Housing Census from 31 May 2011.
Balance of population for 2010 was developed and presented in two versions - on the basis of the results of the 2002 NC, and then on the basis of the 2011 NC. Correction of the data on the size and structure of the population for 2010 took place in 2012 and since then the corrected balance is treated as the valid one; recalculation of the data concerned all administrative and territorial units. The difference between the size of population of Poland for 2010 balanced on the 2002 NC and on the 2011 NC amounted to approx. +330 thousand.
f) from 2020 – results of the 2021 National Census of Population and Housing of 31 March 2021.
As in the case of the previous census, the data for 2020 and 2021 were compiled and presented in two versions – initially based on the results of the 2011 census, and then updated based on the results of the 2021 census. The correction of data for 2020–2021 took place in 2022, and since then the corrected balance has been treated as valid; the recalculation of data concerned all administrative and territorial units. The difference between the population of Poland according to the national definition for 2020, balanced on the 2011 NSP and the 2021 NSP, was approximately -176,000.

In the period of 1983-2009 was conducted balance of the population registered for permanent residence. The data were used only for calculation of demographic rates - due to the fact that the data on vital statistics and migrations were then collected and developed by permanent place of residence of persons, who were concerned by the given event. Since 2010 the current balance of population/residents is the reference for determination of intensity of every demographic event and the basis for calculation of other population rates.

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