

Population change - Demographic balance and crude rates at national level (demo_gind)

Reference Metadata in Euro SDMX Metadata Structure (ESMS)
Compiling agency: Eurostat, the statistical office of the European Union

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1. Contact Top	
1.1. Contact organisation	Eurostat, the statistical office of the European Union
1.2. Contact organisation unit	F2: Population
1.5. Contact mail address	2920 Luxembourg LUXEMBOURG

2. Metadata update Top	
2.1. Metadata last certified	07/08/2023
2.2. Metadata last posted	07/08/2023
2.3. Metadata last update	07/08/2023

3. Statistical presentation Top	
3.1. Data description	
<p>These summary metadata refer to the first results on the main demographic developments in the year of reference. Member States send to Eurostat the first results on the main demographic developments in the year of reference (T), containing the total population figure on 31 December of year T (further published by Eurostat as Population on 1 January of year T+1), total births and total deaths during year T. This data collection is defined under Regulation 1260/2013 on European demographic statistics. Countries may also transmit to Eurostat, on voluntary basis, provisional data on total immigration, emigration and net migration during the year (T).</p> <p>Eurostat's data collection on the above figures is called DEMOBAL and it is carried out in June of each year. Eurostat publishes these first demographic estimates in July of each year in the online database, in the table Population change - Demographic balance and crude rates (demo_gind).</p> <p>These first demographic estimates may either be confirmed or updated by Eurostat's demographic data collection taking place in December each year (called Unidemo), whereby countries submit detailed breakdowns (e.g. by age and sex) of their yearly</p>	

population data, including data on migration, both at national and at regional level. The online table [Population change - Demographic balance and crude rates \(demo_gind\)](#) will be accordingly updated. This table includes the latest updates on total population, births and deaths reported by the countries, while the detailed breakdowns by various characteristics included in the rest of the tables of the Eurostat database (Demography domain and Migration, for example the Population by citizenship and by country of birth table) may be transmitted to Eurostat at a subsequent date.

The online table [Population change - Demographic balance and crude rates \(demo_gind\)](#) contains time series going back to 1960; data before 2013 were collected by Eurostat from the national statistical offices on voluntary basis.

The individual metadata files reported by the countries are attached to this metadata file.

3.2. Classification system

Not applicable.

3.3. Coverage - sector

Not applicable.

3.4. Statistical concepts and definitions

Population on 1 January

Eurostat aims at collecting from the EU Member States data on population on 1 January. The recommended definition is the 'usually resident population' and represents the number of inhabitants of a given area on 1 January of the year in question (or, in some cases, on 31st December of the previous year). The population transmitted by the countries can also be either based on data from the most recent census adjusted by the components of population change produced since the last census, either based on population registers. (More detailed information is available in the national metadata files.)

Usual residence means the place where a person normally spends the daily period of rest, regardless of temporary absences for purposes of recreation, holidays, visits to friends and relatives, business, medical treatment or religious pilgrimage. The following persons alone are considered to be usual residents of the geographical area in question:

- those who have lived in their place of usual residence for a continuous period of at least 12 months before the reference time; or
- those who arrived in their place of usual residence during the 12 months before the reference time with the intention of staying there for at least one year.

Average population

The average population is calculated as the arithmetic mean of the population on 1st January of two consecutive years. The average population is further used in the calculation of demographic indicators, like the crude rates per 1000 persons.

Population change

The difference between the size of the population at the end and the beginning of the period. Specifically, it is the difference in population size on 1 January of two consecutive years. A positive population change is also referred to as population growth. A negative population change is also referred to as population decline.

The population change consists of two components: natural change and net migration.

Natural change of population

The difference between the number of live births and the number of deaths during the year. A positive natural change, also known as natural increase, occurs when live births outnumber deaths. A negative natural change, also named as natural decrease, occurs when live births are less numerous than deaths.

Net migration plus statistical adjustment

Net migration is the difference between the number of immigrants and the number of emigrants. In the context of the annual demographic balance however, Eurostat produces net migration figures by taking the difference between total population change and natural change; this concept is referred to as net migration plus statistical adjustment. The statistics on 'net migration plus statistical adjustment' are therefore affected by all the statistical inaccuracies in the two components of this equation, especially population change. From one country to another 'net migration plus statistical adjustment' may cover, besides the difference between inward and outward migration, other changes observed in the population figures between 1 January in two consecutive years which cannot be attributed to births, deaths, immigration and emigration.

Population turnover

The total magnitude of changes in membership experienced by a population. It shows the 'gross' effect of the population components, by adding up gains (births and immigration) and losses (deaths and emigration) in a population, as compared to the population change which shows their 'net' effect. The population turnover consists of two components: natural turnover and migration turnover plus statistical adjustment.

Natural turnover

The sum of births and deaths numbers.

Migration turnover plus statistical adjustment

The sum of immigration, emigration numbers and the statistical adjustment reported in the population.

Crude rates

A crude rate is calculated as the ratio of the number of events to the average population of the respective area in a given year. For easier presentation, it is multiplied by 1000; the result is therefore expressed per 1000 persons (of the average population).

The table below presents a **summary with the reported reference populations** based on which statistics on population, births and deaths are transmitted by the national statistical institutes to Eurostat. Several countries place themselves in two categories, with justification in the national metadata files.

	Usually Resident Population ¹	Legal Residence Population ²	Registered Residence Population ³	Other
Population	AL, BE, BG, CY, DE, EE, EL, ES, FI, FR, GE, HR, HU, IE, IT, LT, LV, ME, MK, MT, PL, PT, RO, SI, SK, RS, UK	AD, CH, LI, FI, TR	AD, AT, CZ, DE, DK, ES, IS, LU, NL, NO, SE, TR	-
Live births	AL, BE, BG, CY, DE, EE, EL, ES, FI, FR, GE, HR, HU, IE, IT, LT, LV, ME, MK, MT, PL, PT, RO, SI, SK, RS, UK ^[4]	AD, CH, LI, FI, TR	AD, AT, CZ, DE, DK, ES, IS, LU, NL, NO, SE	-
Deaths	AL, BE, BG, CY, DE, EE, EL, ES, FI, FR, GE, HR, HU, IE, IT, LT, LV, ME, MK, MT, PL, PT, RO, SI, SK, RS, UK ^[5]	AD, CH, LI, FI, TR	AD, AT, CZ, DE, DK, ES, IS, LU, NL, NO, SE	-

¹'Usually Resident Population' as stated in Article 2 of Regulation 1260/2013.

² 'Legal Residence Population' is composed of those persons who are entitled to be settled in the country at the reference date, either by holding the national citizenship or by other authorization issued by national authorities.

³ 'Registered Residence Population' is composed of those persons who are listed on one or more registers owned by national authorities at the reference date. Each registered person shall be counted only once.

4 only events occurring in the country 5 only events occurring in the country
3.5. Statistical unit
The statistical unit used is "person" as indicated in the online database or deductible from the title of tables or of the indicator.
3.6. Statistical population
Statistical population is total population as defined in 3.4. Statistical concepts and definitions .
3.7. Reference area
The population statistics are disseminated by single country, by region and by aggregates of countries, as follows: a) The Member States of the European Union and their regional structure as defined in the Nomenclature of territorial units for statistics b) The EU candidate countries and their agreed Statistical Regions following the same rules as the Nomenclature of territorial units for statistics c) The EU potential candidate countries and their agreed Statistical Regions following the same rules as the Nomenclature of territorial units for statistics d) The EFTA countries and their agreed Statistical Regions following the same rules as the Nomenclature of territorial units for statistics e) Other countries: Andorra, Armenia, Azerbaijan, Belarus, Monaco, Russian Federation, San Marino and United Kingdom. f) The geographical aggregates European Union and Euro Area, on which the dissemination covers at least the current and the previous version of their composition, the European Economic Area (EEA) and the European Free Trade Association (EFTA). For details on geographical changes over time see the notes by country under 15.2 Comparability over time . National refers to the territory of a Member State within the meaning of Regulation (EC) No 1059/2003 applicable at the reference time. Regional refers to NUTS level 1 , NUTS level 2 or NUTS level 3 as defined in the Regulation (EC) No 1059/2003 and available according to the classification in force at the reference time; where this term is used in connection with countries that are not members of the European Union, "regional" means the Statistical Regions at level 1, 2 or 3, as agreed between those countries and the Commission (Eurostat), at the reference time. Statistics from the UK are available only until the withdrawal of the country from the EU.
3.8. Coverage - Time
The available time series collected and published in Eurostat database varies with the population breakdowns, with the longest time series starting in 1960 for national data and 1990 for regional data, and continuing to the latest available reference year. The completeness of the time series of the demography and migration statistics collected on voluntary basis before the entering into force of the regulations listed in " 6.1 Institutional mandate – legal acts and other agreements " and of the statistics which continue to be supplied to Eurostat on voluntary basis today depends on the availability of data transmitted by the national statistical institutes.
3.9. Base period
Not applicable.

4. Unit of measure Top
Population, births and deaths figures are disseminated in integer numbers. A crude rate is calculated as the ration of the number of events to the average population of the respective area in a given year. For easier presentation, it is multiplied by 1000: the result is therefore expressed per 1000 persons (of the average population).

5. Reference Period Top
Data referring to population on 31 December of the reference year are transmitted by the EU Member States to Eurostat under the Regulation (EU) No 1260/2013 on European demographic statistics. The data are conventionally published by Eurostat as 1 January of the following year (reference year + 1). The reference period for vital events data is the calendar year in which the events occurred. The reference period for migration flow data is the calendar year in which the migration occurred.

6. Institutional Mandate Top
6.1. Institutional Mandate - legal acts and other agreements Regulation (EU) No 1260/2013 of the European Parliament and of the Council on European demographic statistics. Commission Implementing Regulation (EU) No 205/2014 of Regulation (EU) No 1260/2013 .
6.2. Institutional Mandate - data sharing
Not applicable.

7. Confidentiality Top
7.1. Confidentiality - policy Regulation (EC) No 223/2009 on European statistics (recital 24 and Article 20(4)) of 11 March 2009 (OJ L 87, p. 164), stipulates the need to establish common principles and guidelines ensuring the confidentiality of data used for the production of European statistics and the access to those confidential data with due account for technical developments and the requirements of users in a democratic society.
7.2. Confidentiality - data treatment
Not applicable.

8. Release policy Top
8.1. Release calendar
First demographic estimates (of year T) are released in July of the following year (T+1). Regular updates of the Eurostat database are done in-between releases, as National Statistical Institutes transmit revisions of their data.

Note:

The most updated data on total population on 1 January may be found in the table "Demographic balance and crude rates (demo_gind)" of the online database. This table includes the latest updates (or revised data) on total population, births and deaths reported by the countries, while the detailed breakdowns by various characteristics included in the rest of the tables of the domain may be transmitted to Eurostat at a subsequent date.

A few situations may lead to different figures on population on 1 January displayed in different population tables at a given moment in time:

- The timing of the transmission / retransmission in case of revision to Eurostat of the population data for various breakdown.
- The succession of the annual demography data collections described above, which collect and update the total population and the breakdowns of population figures by various characteristics at different moment during the calendar year.
- The calendar of the national statistical offices for producing and releasing population broken down by characteristics which fall under the voluntary data collection, respectively the timings when data are transmitted to Eurostat.

8.2. Release calendar access

Not available.

8.3. Release policy - user access

In line with the Community legal framework and the [European Statistics Code of Practice](#) Eurostat disseminates European statistics on Eurostat's website (see item 10 - 'Accessibility and clarity') respecting professional independence and in an objective, professional and transparent manner in which all users are treated equitably. The detailed arrangements are governed by the [Eurostat protocol on impartial access to Eurostat data for users](#).

9. Frequency of dissemination

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Population statistics are revised on a continuous base according to the most recent data released and transmitted to Eurostat by the National Statistical Institutes. The geographical aggregates and the demographic indicators are accordingly revised.

Dissemination is made in line with the **8.1 Release calendar** and with **17.1 Data revision-policy**.

10. Accessibility and clarity

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10.1. Dissemination format - News release

News releases on-line.

10.2. Dissemination format - Publications

[Statistics Explained articles on Eurostat website](#)
[Regional Yearbook](#)
[Domain specific publications](#)

10.3. Dissemination format - online database

[Eurostat's Data Navigation Tree](#)
[Eurostat's data on Demography, population stock and balance](#)

Please note that the label for Germany in the GEO code list changed from the beginning of July 2023 in Eurostat dissemination tables.

The new label is now: 'Germany'. Previously, it was 'Germany (until 1990 former territory of the FRG)'.

10.4. Dissemination format - microdata access

Not applicable.

10.5. Dissemination format - other

Not applicable.

10.6. Documentation on methodology

["Demographic statistics: A review of definitions and methods of collection in 44 European countries"](#), Eurostat, 2015 edition.
For methodology documentation of each National Statistical Institute, please see the attached national metadata files.

10.7. Quality management - documentation

Not available.

11. Quality management**11.1. Quality assurance**

Summary information on quality assurance by country, based on the country metadata files sent by the national statistical institutes:

BE	All the statistical validation process is oriented towards the assurance of quality (internal coherence controls, cross-checks when av
BG	Quality of data is assured through procedures for data validation, editing, coding and verifying. The procedures are performe prescribed rules.
CZ	The system of checks for inconsistent data was developed. The coverage of sent statistical notifications is monitored.
DK	The register on population statistics is based on daily updates from the Danish Population Register. All occurrences on the resident internal and external migration, births, deaths, marriages and divorces are registered in the Population Register. Statistics Denmark after a reference date before producing the population data, in order to ensure the updates from delayed registrations.
DE	All data included in intercensal population updates were previously subject to a variety of measures to assure the quality of the data production process. Data received are subject to continuous plausibility checks. The data included in intercensal population updates: data. If a data provider detects errors in its data, it corrects them and sends the corrected data to the responsible statistical intercensal population update can be corrected.
EE	To assure the quality of processes and products, Statistics Estonia applies the EFQM Excellence Model, EU Statistics Code of Practice Quality Assurance Framework (QAF). Statistics Estonia is also guided by the requirements provided for in § 7. „Principles and producing official statistics“ of the Official Statistics Act.

IE	<p>The principle source of the migration estimates (which in turn feed into progress population quarterly estimates, using the most base year, is the Labour Force Survey (LFS).</p> <p>The survey interviewers receive continuous training and the data returns undergo quality and validation checks</p> <p>The inter Census population estimates are subject to revision following the publication of the Census of population, the Cens conducted every 5 years. The next Census of population is scheduled for April 2021 but was postponed until April 2022 due Preliminary results from the Census were published in June 2022. The detailed results needed to revise the inter Census populatio available in Q2 2023.</p>
EL	<p>The Vital statistics data come from administrative sources (Registry Offices of the Municipalities) and the error rate is very low. C are being performed. Migration data are estimated and potentials errors cannot be counted.</p>
ES	<p>Quality assurance framework for the INE statistics is based on the ESSCoP, the European Statistics Code of Practice, made b ESSCoP is made up of 15 principles, gathered in three areas: Institutional Environment, Processes and Products. Each principle some indicators which make possible to measure it. In order to evaluate quality, EUROSTAT provides different tools: the indicators self-assessment based on the DESAP model, peer review, user satisfaction surveys and other proceedings for evaluation.</p>
FR	<p>Population: see in English: https://www.insee.fr/en/information/2517226 a French https://www.insee.fr/fr/metadonnees/source/s1321#documentation</p> <p>Births: Quality checks are done about double counts, exhaustivity (for instance by comparing with social security data), consistency. Deaths: Quality checks are done about double counts, exhaustivity, inconsistencies, errors... INSEE compares the death certifica order to check the exhaustiveness of the bulletins received. INSEE tries then to recover missing bulletins 7 bis from municipalities.</p>
HR	<p>"Implementation of Total Quality Management in Croatian Bureau of Statistics" (CBS, Zagreb, 2015) and "Handbook for Cal Indicators" (CBS, Zagreb, 2015) available on the website of the Croatian Bureau of Statistics: https://dzs.gov.hr/highlighted-themes/quality/quality-management-system/684</p>
IT	<p>Population change and stock data are checked before being uploaded into the database and disseminated to the public. The established to ensure the data consistency and the comparability along times of indicators.</p>
CY	<p>The quality of statistics in CYSTAT is managed in the framework of the European Statistics Code of Practice which sets the stande producing and disseminating European Statistics as well as the ESS Quality Assurance Framework (QAF). CYSTAT endorses the of the European Statistical System. In addition, CYSTAT is guided by the requirements provided for in Article 12 of the Statistics La as well as Article 12 of Regulation (EC) No 223/2009 on European statistics, which sets out the quality criteria to be applied in production and dissemination of European statistics.</p> <p>Related links:</p> <ul style="list-style-type: none"> • European Statistics Code of Practice: https://ec.europa.eu/eurostat/documents/4031688/8971242/KS-02-18-142-EN-1adf-46c8-afc3-58ce177a0646 • ESS Quality Assurance Framework (QAF): http://ec.europa.eu/eurostat/documents/64157/4392716/ESS-QAF-V1-2017-01-10-01.pdf • Quality Declaration of the European System: http://ec.europa.eu/eurostat/documents/4031688/8188985/KS0217428ENN_corr.pdf/116f7c85-cd3e-4bff-b695-4a • Statistics Law No. 25(I) of 2021: https://www.cystat.gov.cy/en/StaticPage?id=1074 • Regulation (EC) No 223/2009 on European statistics (consolidated text): http://eur-lex.europa.eu/legal-con-ur=CeLEX:02009R0223-20150608&qid=1504858409240&from=EN
LV	<p>CSB of Latvia had developed a methodology to evaluate usual resident population. Reason - Latvia has Population Register, how the 2011 Census results the difference between number of population in the Population Register and according to the Census resul 7 % - the level of non-registered migration is very high.</p> <p>New method is based on Population Register and data from other administrative data sources (all data sources include personal ID used to merge data). The aim of the method is to estimate the status of actual place of residence at the beginning of the year registered in the Population Register. Logistic regression model has been developed.</p> <p>To evaluate quality of estimation, individual data from household surveys, Microcensus (2015) and External Migration Survey (2017- Population and key demographic indicators Oficiālās statistikas portāls)</p>
LT	<p>Quality of statistical information and its production process is ensured by the provisions of the European Statistics Code of Practic Assurance Framework.</p> <p>In 2007, a quality management system, conforming to the requirements of the international quality management system stand introduced at Statistics Lithuania. The main trends in activity of Statistics Lithuania aimed at quality management and continuous institution are established in the Quality Policy.</p> <p>Monitoring of the quality indicators of statistical processes and their results and self-evaluation of statistical survey managers is reg order to identify areas which need improvement and to promptly eliminate shortcomings.</p> <p>More information on assurance of quality of statistical information and its preparation is published in the Quality Management secti Lithuania website.</p>
LU	<p>As STATEC receives individual forms for birth and death directly from the different municipalities where the events occur great qual We also compare our figures with those of Population Register (for deaths).</p>
HU	<p>Statistics are prepared in line with the principles of the European Statistical Code of Practice. The Hungarian Statistical Office has Quality policy. For the statistical production process Quality principles were prepared in line with the EUROSTAT requirements and As for product quality Eurostat Quality reports are filled in for certain statistics as well as the calculation of quality indicators. A doc filled in annually for all subject-matter statistics covering main methodological information.</p>
MT	<p>Many efforts are made by NSO in order to ensure the production of demographic statistics at high quality standards. Measures th during the analysis stage include:</p> <ul style="list-style-type: none"> - thorough checks on the administrative registers used for the compilation of vital events; - thorough checks on the administrative data used for the compilation of migration flows; - checks for double counting; - validation and cross-checking of results with auxiliary sources and past year's data, including census results.
NL	Not available.
AT	See metadata information under Point 10
PL	Sets of data on population do not include duplicated and inconsistent records. Correctness of data on births, deaths, and migratic Civil Status Offices and registration offices. Additionally, it is controlled by Statistics Poland.
PT	Not available.

	<p>Live-births and deaths were produced according to the Article 2 (e) of Regulation (EU) 1260/2013. Statistical adjustment also includes records of births and deaths occurred abroad and in the country prior to the moment and late in the civil status offices.</p> <p>The indicators on international migration were produced using processed data from administrative sources, data received from statistical institutes of Spain and Italy, the Eurostat database on the population and international migration as well as the results of a model based on small-area estimation techniques with a view to assessing the size of international migration.</p> <p>The usually resident population of Romania on 1 January 2022 was calculated based on the population with usual residence in Romania at the moment of the 2021 Population and Housing Census (1 December 2021), to which the following elements were added:</p> <p>the natural increase of the population from 1 December 2021 to 31 December 2021 (the number of live births minus the number of deaths);</p> <ul style="list-style-type: none"> - the balance of the international migratory movement from 1 December 2021 to 31 December 2021, determined as the difference between the number of immigrants (Romanian citizens, foreign citizens or persons without citizenship who established their usual residence in Romania) and the number of emigrants (Romanian citizens who established their usual residence abroad); - the balance of the internal migratory movement with change of legal residence from 1 December 2021 to 31 December 2021, determined as the difference between the number of persons who arrived in a county and the number of persons who left it; <p>RO The starting point for usual resident population on 1 January 2023 was the usually resident population of Romania on 1 January 2022. The following elements were added:</p> <ul style="list-style-type: none"> - the natural increase of the population in 2022 (the number of live births minus the number of deceased persons); - the balance of the international migratory movement in 2022 determined as the difference between the number of immigrants (Romanian citizens, foreign citizens or persons without citizenship who established their usual residence in Romania) and the number of emigrants (Romanian citizens who established their usual residence abroad); - the balance of the internal migratory movement with change of legal residence in 2022, determined as the difference between the number of persons who arrived in a county and the number of persons who left it. - The balance of the internal migratory movement with the establishment of the usual residence. <p>In computing data for usual population on 1 January 2023 we applied also the guidelines on the inclusion of refugees benefit from temporary protection in the EU in the usually resident population.</p> <p>Thus, we took into account both criteria for estimating usual residents:</p> <p>a) those who have lived in their place of usual residence for a continuous period of at least 12 months before the reference time</p> <p>b) those who arrived in their place of usual residence during the 12 months before the reference time with the intention of staying there for at least one year.</p> <p>Regarding the persons from Ukraine granted temporary protection, criterion b) was considered.</p>
SI	Data prepared in accordance with European Statistics Code of Practice. More: http://www.stat.si/StatWeb/en/FundamentalPrinciple
SK	<p>Statistics is produced in accordance with relevant EU legislation, in line with the principles of the European Statistical Code of Practice. The SO SR holds certificates in the areas:</p> <ul style="list-style-type: none"> • quality management system • information security management system <p>The system of checks for consistency and completeness of data has been developed.</p> <p>Demographic outputs of data processing from the monthly population survey covering the total population of the Slovak Republic, therefore, it is not necessary to calculate population estimates or estimates of individual demographic characteristics.</p>
FI	<p>The Digital and Population Data Service Agency has charged Statistics Finland with the task of conducting a sample survey on correct information. Around 11,000 people are asked whether their address in the Population Information System is correct. In the most recent survey the address was correct for 98.9 per cent of the respondents.</p> <p>Population development is produced from two statistical systems: population structure and population change systems. These are governed by two different organisations namely the Digital and Population Data Service Agency and National Statistical Office. The difference between population number at the beginning and at the end of the year must be the same as the population increase in the population change system or that it is very small. From 1990 to 2021 population has increased from around 5 million to 5,5 million and the population increase has changed approximately annually from -1 600 to +1 500. The result is very good.</p>
SE	An annual quality assessment is carried out together with external quality experts. The results from the assessment provide information on quality improvements.
UK	<p>Quality and Methodology Information report for population estimates at: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates</p> <p>Quality and Methodology Information report for births in England and Wales at: http://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/qmis/birthsqmi</p> <p>Quality and Methodology Information report for deaths in England and Wales at: http://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/qmis/mortalitystatisticsinenglandandwales</p> <p>Quality documentation for births, deaths, marriages and divorces in Scotland published at: http://www.nrscotland.gov.uk/data/statistics/statistics-by-theme/vital-events/general-background-information/quality-of-national-records-of-scotland-nrs-data-on-vital-events</p> <p>Quality and Methodology Information document for international migration at: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/methodologies/longterminternational</p>
IS	Not available.
LI	In addition to the automatic checks of the data, the publication is controlled by a second person according to the 4-eyes principle.
NO	<p>In addition to the controls done by the National Register, Statistics Norway performs checks for statistical purposes.</p> <p>Some errors made during the collecting and processing of the data are unavoidable and include coding, revision and data processing errors. Extensive efforts have been made to minimize these errors, and we regard these types of errors to be relatively insignificant.</p> <p>The quality of the basic data from the National Population Register is generally very good for statistical purposes. Two drawbacks are late or missing notifications and registration of emigration.</p>
CH	The quality assurance measures are documented in the detailed concepts of the different statistics.
ME	Bearing in mind that as a data source using data from administrative register, the basic issue in ensuring quality compliance is data coverage. Statistical office during preparation of Agreement with Ministry of Interior addressed the special attention to these issues.

MK	The commitment of the SSO to ensuring quality of products and services is described in the Law on State Statistics, the Statistical Office (http://www.stat.gov.mk/ZaNas_en.aspx?id=6) and the Quality Policy of the State (http://www.stat.gov.mk/pdf/Politika_za_kvalitet_en.pdf), as well as in the continuous efforts for harmonisation with the European Practice. The main aspects and procedures for quality management in the phases and sub-phases of the Statistical Business Process as the good practices for ensuring quality are documented in the internal document called "Guide for ensuring quality of statistics and output metadata, as well as relevant quality indicators for certain sub-processes are described in the document "Guide for surv
AL	INSTAT is committed to ensure the highest quality with respect to the compilation of statistical information. In accordance with INSTAT use statistical methods and processes in compliance with internationally recognized scientific principles and standard analyses of the statistics with a view to quality improvements and ensure that statistics are as up-to-date. In performing its tasks it principles of quality management from the European Statistics Code of Practice. INSTAT declares that it takes into account the impartiality, quality of processes and products, user orientation, employee orientation, effectiveness of statistical processes, reduced respondents. Quality controls and validation of data are actions carried out throughout the process. The staff is involved in different calculation, such as the data collection, data control, data input and other necessary control are all well trained. This helps the enterprises and their responsibilities and keep an updated collaboration.
RS	Data is validated before publishing in SORS.
TR	TurkStat Quality Assurance Framework is available at website of the TurkStat. https://www.tuik.gov.tr/Kurumsal/Tuik_Kalite_Guvence_Cercevesi_Belgesi Institutional Quality Reports are also available at the metadata section of the related press release https://data.tuik.gov.tr/Kategori/GetKategori?p=nufus-ve-demografi-109&dil=2
GE	To assure the quality of processes and products, Geostat applies EU Statistics Code of Practice and UN Fundamental Principles and the ESS Quality Assurance Framework (QAF). Geostat is also guided by the requirements provided for in article 4. "Basic principles of official statistics" of the Law on Official Statistics
AD	The quality assurance framework for Department of Statistics statistics is based on the ESSCoP, the EUROSTAT European Code of Practice. The ESSCoP consists of 16 principles, grouped into three areas: Institutional Environment, Process and Product Quality. Each principle is associated with a series of indicators that allow its size. Different tools provided by EUROSTAT are used for quality assessment: the aforementioned indicators, self-assessment inspired by the DESAP model, Peer Review, user satisfaction surveys and assessment procedures.

11.2. Quality management - assessment

Art. 11 of [Regulation \(EU\) No 1260/2013](#) states that the Commission shall submit reports on its implementation, to the European Parliament as follows:

- first report by 31 December 2018, see [Report on the implementation of Regulation \(EU\) No 1260/2013 on European demographic statistics](#)
- second report by 31 December 2023

These reports are to evaluate quality of data transmitted by Member States and EFTA countries and data collection methods used and, if necessary, be accompanied by proposals designed for future improvement of legal framework for population and vital events statistics under this Regulation.

12. Relevance [Top](#)

12.1. Relevance - User Needs

Population statistics are widely used for planning actions, monitoring and evaluating programmes in a number of policy areas in the social and economic fields, such as:

- Analysis of population ageing and its effects on sustainability and welfare;
- Evaluation of fertility as a background for family policies;
- Evaluation of the economic impact of demographic change;
- Calculation of 'per capita' indicators;
- Key input for the EU decision-making process, as population defines the weight of each Member State in the Qualified Majority Voting of the Council of the EU.

12.2. Relevance - User Satisfaction

No user satisfaction surveys are carried out.

12.3. Completeness

Statistical data completeness depends on the availability of raw data transmitted by the National Statistical Institutes.

13. Accuracy [Top](#)

13.1. Accuracy - overall

Eurostat collects data from the National Statistical Institutes. Information on data accuracy by country is available in the country metadata files. Please see the summary table below.

Reasons for any unreliability of the data on:					
	Population	Births	Deaths	Immigrants	Emigrants
BE	Possible small underestimation due to delay in the registration - remaining small over or under estimation of the number of asylum seekers - illegal population not taken in consideration.	see 'population'	see 'population'	see 'population'	see 'population'
BG	No reasons for any unreliability of the data.	No reasons for any unreliability of the data.	No reasons for any unreliability of the data.	No reasons for any unreliability of the data.	No reasons for any unreliability of the data.
CZ	See columns live births, deaths, immigrants, emigrants.	Live births of the parent with Czech citizenship having	Deaths of Czech citizens having a registered	Voluntary registration of	Late deregistration of some emigrants and not carrying out

Reasons for any unreliability of the data on:					
	Population	Births	Deaths	Immigrants	Emigrants
		registered residence in the CR taking place abroad are registered if the parent(s) of the child requires registration in the CR.	residence in the CR taking place abroad are registered if the bereaved require registration in the CR.	persons from EU countries	deregistration of persons with Czech citizenship in some cases.
DK	no unreliability	no unreliability	no unreliability	no unreliability	no unreliability
DE	Population data are generally reliable. See immigrants and emigrants for main source of error	Not available.	Not available.	Incorrect information on last place of residence To ensure quality, data is collected after the population register checked whether the last residence was in Germany	Emigrants not deregistering Administrativ deregistrations are taken into account
EE	Not available	Not available	Not available	Late or non-registration	Late or non-deregistration
IE	The population and migration estimates are subject to revision following the publication of the Census of population. Ireland conducts a Census every 5 years and the most recent was conducted in April 2016. Following the publication of Census 2016 the 2016 population estimate required an upward adjustment of 65900.	Births must be registered within 3 months.	Deaths must be registered within 3 months but there may be delays if a coroner is involved.	Please see note below on Population and Migration Estimates.	Please see note below on Population and Migration Estimates.
EL	Estimation of immigrants and emigrants difficulties have potential effects on the results.			Since there are no reliable administrative sources immigration is estimated taking into account GDP annual change and immigration of the year before. Documentation is available. According to the definition, a part of the refugees who have stayed in the country is included.	Similar to immigration, there are not administrative sources for emigration and therefore the total is estimated by a mathematical formula. Documentation is available. Refugees who have left the country are included in the emigration figure.
ES	Population is compiled in the Continuous population statistics, based on the information provided by the administrative data of the Municipal Register and by other statistics already compiled, such as the population censuses and the statistics relating to births and deaths, and therefore, the accuracy of its results depends on the accuracy of the information sources used.	Delays in the delivery of the information from some Civil Registers and lack of information in some variables from the register bulletin. This produces a non-response rate of approximately 0,1% This non-response is treated through information from the Ministry of Justice	Delays in the delivery of the information from some Civil Registers and lack of information in some variables from the register bulletin. This produces a non-response rate of approximately 0,1% This non-response is treated through information from the Ministry of Justice	Errors from the register that are treated through control and cleaning procedures. Errors from lack of completeness in variables that are treated through imputation procedures. Lack of information from lag in registers are treated through estimation procedures.	Errors from the register that are treated through control and cleaning procedures. Errors from lack of completeness in variables that are treated through imputation procedures. Lack of information from lag in are treated through estimation procedures.
FR	Not applicable	Not applicable	Not applicable		
HR	There are no particular reasons for any unreliability of the data on population except the under-coverage in net migration.	There are no particular reasons for any unreliability of the data on live births.	There are no particular reasons for any unreliability of the data on deaths.	Return immigration of nationals is not covered when emigration is not reported.	Emigration of nationals is not covered if they do not report their departure abroad.
IT	None.	None.	None.	None.	None.
CY	Since births and deaths are registered events which are almost 100% covered, any divergence	Not applicable	Not applicable	There is the possibility of coverage error as	There is the possibility of coverage error as well as the under-

Reasons for any unreliability of the data on:					
	Population	Births	Deaths	Immigrants	Emigrants
	between the estimated population and the actual population (in the mid-Census period) might be the result of the errors on the estimates of immigrants and emigrants. Such errors are explained in point 13.3 below..			well as the under-representation of the full population of immigrants in the sample.	representation of the full population of emigrants in the sample.
LV	data are reliable	data are reliable	data are reliable	data are reliable	data are reliable
LT	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
LU	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
HU	There may be differences between the population estimates and the population count of the next census, due to differing methods of data collection.	Live births data are fully comprehensive and reliable. The proportion of unknown data of mothers is low (except for their occupation). This share among fathers is higher, especially in case of extramarital live births. On live births abroad only basic data are available.	Data related to deaths in Hungary are fully comprehensive and accurate. Deaths of persons with address in Hungary occurred abroad are also registered, but in a less detailed manner.	Immigration data of foreign and national citizens is comprehensive and reliable, containing all persons legally entering and residing in the country. Return migration of nationals might be underestimated due to the lack of registration.	Data of national emigrants might be underestimated due to the lack of deregistration.
MT	Possible sources of errors: - under-reporting in administrative registers mainly due to late registrations - over-coverage due to possible inconsistencies with the usual residence definition; - double counting of persons enlisted in more than one register; - inaccuracies in the mathematical models used in order to estimate migration components not available in the registers.	Possible sources of errors: - under-reporting in administrative registers mainly due to late registrations; - over-coverage due to possible inconsistencies with the usual residence definition; - double counting of persons enlisted in more than one register.	Possible sources of errors: - under-reporting in administrative registers mainly due to late registrations; - over-coverage due to possible inconsistencies with the usual residence definition; - double counting of persons enlisted in more than one register.	Possible sources of errors: - under-reporting in administrative registers mainly due to late registrations; - over-coverage due to possible inconsistencies with the usual residence definition; - double counting of persons enlisted in more than one register; - inaccuracies in the mathematical models used in order to estimate migration components not available in the registers.	Possible sources of errors: - under-reporting in administrative registers mainly due to late registrations; - over-coverage due to possible inconsistencies with the usual residence definition; - double counting of persons enlisted in more than one register - inaccuracies in the mathematical models used in order to estimate migration components not available in the registers.
NL	In a limited number of cases the data received by Statistics Netherlands are incomplete. In such cases the missing data are estimated.	Not available.	Not available.	Not available.	Not available.
AT	Non-registered population not included. Inclusion of nationals and EU-citizens not having de-registered when emigrating abroad. However, this group is partially covered by calculations for the annual population figure for federal tax sharing. If analysis of different registers show that people are no other register than the population register, these are identified as potential nominal members. The share of these having been identified as actually not being present at the last census, is assumed to have migrated abroad and thus excluded from the population. Inclusion of nationals and EU-citizens not having de-registered when emigrating abroad. However,			Non-registered immigrants not included.	Missing de-registrations. However, these are partially covered by administrative checks of people with expired residence permits (third country nationals only). In addition, calculations for the annual population figure for federal tax sharing also identify nominal members, which are assumed to have migrated abroad and thus counted as additional emigrations.

Reasons for any unreliability of the data on:					
	Population	Births	Deaths	Immigrants	Emigrants
	this group is partially covered by calculations for the annual population figure for federal tax sharing. If analysis of different registers show that people are no other register than the population register, these are identified as potential nominal members. The share of these having been identified as actually not being present at the last census, is assumed to have migrated abroad and thus excluded from the population.				
PL	Reliable data	Reliable data	Reliable data	Reliable data according to the administrative sources	Reliable data according to the administrative sources
PT	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
RO	Possible slightly over/under coverage estimation, due to lack of strong sources for exact figures on emigration and immigration (especially for the returns and EU member states) needed to compute resident population.	Possible slightly under coverage estimation, due to tardive registration.	Possible slightly under coverage estimation, due to tardive registration.	Possible slightly over/under coverage estimation, due to lack of strong sources for exact figures on immigration (especially for the returns and EU member states)	Possible slightly over/under coverage estimation, due to lack of strong sources for exact figures on emigration. We used "mirror statistics" to estimate emigration figures.
SI	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
SK	See columns live births, deaths, immigrants, emigrants	No reason	No reason	Some persons fail to register with competent bodies upon their arrival to the country (EU citizens, because of the freedom of movement, including return migration of SR citizens)	Some persons fail to deregister from competent bodies before leaving for the permanent residence abroad.
FI	According to residence act of municipality 1994, persons moving abroad for at least 12 months should inform local register office of their move but they do not always do this. Asylum seekers are excluded, refugees are included.	Asylum seekers are excluded, refugees are included.	Asylum seekers are excluded, refugees are included.	Persons staying illegally in the country. Asylum seekers are excluded, refugees are included.	According to residence act of municipality 1994, persons moving abroad for at least 12 months should inform register office of their move but they do not always do this. Asylum seekers are excluded, refugees are included.
SE	There are no particular reasons for unreliability of the data on population.	There are no particular reasons for unreliability of the data on live births.	There are no particular reasons for unreliability of the data on deaths.	There are no particular reasons for unreliability of the data on immigrants.	There are no particular reasons for unreliability of the data on emigrants.
UK	Quality and Methodology Information is published on the ONS website at: Population estimates Uncertainty estimates provide users with further information about the quality of the mid-2002 to mid-2015 population estimates: Measures of statistical uncertainty summary .	Quality and Methodology Information for England and Wales published at: Births QMI Quality documentation for Scotland published at: Quality of National Records of Scotland (NRS) Data on Vital Events	Quality and Methodology document for England and Wales published at: Mortality statistics in England and Wales QMI Quality documentation for Scotland published at: Quality of National Records of Scotland (NRS) Data on Vital Events	Quality and Methodology Information report for long-term international migration estimates published at: Long term international migration QMI	Quality and Methodology Information report for long-term international migration estimates published at: Long term international migration QMI
IS	There are three sources of errors for figures in the National Register of	Delayed birth reports were for a	Information on the number of deaths	Late registration of change of	Late registration of change of residence is

Reasons for any unreliability of the data on:					
	Population	Births	Deaths	Immigrants	Emigrants
	<p>Persons on 31 December: late notifications of change of residence, late death certificates, and late birth reports. In a survey of delayed reports over the past five years it emerged that the greatest uncertainty was caused by late notifications of change of residence, due to which an average of 80 persons are under- or overestimated in the National Register of Persons on 31 December. Late death certificates cause the number of persons to be overestimated by around 10 persons in the National Register of Persons on 31 December, while late birth reports cause the number of persons to be underestimated by one individual about every two years.</p>	<p>short period the main cause of errors in birth figures. In a review of delays to birth reports over the last five years it emerged that no birth report was missing.</p>	<p>published in the tables of Statistics Iceland is accurate; it can be considered certain that information on all deaths reaches Statistics Iceland.</p>	<p>residence is the main cause of errors in migration figures. Migration is calculated for each month and thus a final figure is available for each month on its own; the figures for that month are not changed at any point after that. If a change of residence is registered a month or more late it is added to the month during which it was received. When considering all moves over the past five years (from 1996-2000) only around 55% of registrations were received within a month of moving. After two months 96% of all registrations had been received by Statistics Iceland and within six months 98% had been received. Errors in published migration data appear due to delays in registration of change of residence.</p>	<p>the main cause of errors in migration figures. Migration is calculated for each month and thus a final figure is available for each month on its own; the figures for that month are not changed at any point after that. If a change of residence is registered a month or more late it is added to the month during which it was received. When considering all moves over the past five years (from 1996-2000) only around 55% of registrations were received within a month of moving. After two months 96% of all registrations had been received by Statistics Iceland and within six months 98% had been received. Errors in published migration data appear due to delays in registration of change of residence.</p>
NO	<p>Some errors made during the collecting and processing of the data are unavoidable and include coding, revision and data processing errors etc. Extensive efforts have been made to minimize these errors, and we regard these types of errors to be relatively insignificant.</p> <p>Dropout errors will be found to the extent there are persons staying in Norway not being registered as residents according to the regulations. We refer to point 4.1. Definitions of the main concepts and variables.</p> <p>The quality of the basic data from the National Population Register is generally very good for statistical purposes. One minus is nevertheless residence registration - in part because too many are registered as residents, but also because certain groups are registered as having another domicile than where they actually live. This is particularly true because according to the rules unmarried students are listed as residing with their parent(s).</p>	<p>The quality of the birth reports is generally very good and there is very little delay in the reporting process.</p>	<p>The quality of the death reports is generally very good and there is very little delay in the reporting process.</p>	<p>Few reasons for unreliability.</p>	<p>Missing or delayed emigration notifications make the statistics less reliable in the short run. In the long run all emigrants will be discovered and registers as such. Emigration to a Nordic country is caught by the country of immigration and reported to Norway.</p>
CH	<p>The source for data on vital events, migration and population stock data are population registers and civil status registers. They cover the</p>	<p>Not available.</p>	<p>Not available.</p>	<p>Not available.</p>	<p>Not available.</p>

Reasons for any unreliability of the data on:					
	Population	Births	Deaths	Immigrants	Emigrants
	whole population, with the possible exception of parts of the roofless, vagrant and nomad population.				
ME	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
MK	Data accuracy is ensured by working on decreasing sampling and/or non-sampling errors, as well as with additional data comparisons and analysis before dissemination.	See population.	See population.	See population.	See population.
AL	Measuring migration	Births taking place abroad, but not usual resident abroad.	Deaths taking place abroad but not usual resident abroad.	Based on LFS and last population projection data.	Based on LFS and last population projection data.
RS	Due to lack of data on international migration, which should certainly be included in calculation of annual population estimates, it may be supposed that population estimates are not completely reliable data. But, the experience shows that population estimates from the intercensus period follows the trend of population.	Since the data on birth expressed in two surveys SORS (first results and data on birth), which means that each case is recorded in the survey First results and then processed in the framework of survey on birth, it is considered that the information on the final number of live births for the reference year is reliable and accurate.	Since the data on death expressed in two surveys SORS (first results and data on death), which means that each case is recorded in the survey First results and then processed in the framework of survey on death, it is considered that the information on the final number of deaths for the reference year is reliable and accurate.	Not available.	Not available.
TR	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
GE	Number of population is based on the 2014 General Population Census data and vital statistical data from PSDA and Migration data from MIA.	Improvement in data quality was greatly facilitated by the introduction of the online registration system. Additional controls and validations were added to the system, for example, mothers' age (15-49 years).	Improvement in data quality was greatly facilitated by the introduction of the online registration system.	Administrative sources	Administrative sources
AD	Information of administrative origin, for which all the records are processed. Population estimates are the result of contrasting various records, from which the entire population is covered. The creation of the statistical population register must guarantee integrity between all the sources defined in it, and resolve possible coverage errors.				
13.2. Sampling error					
Not applicable.					
13.3. Non-sampling error					
Not applicable.					

14. Timeliness and punctuality

[Top](#)

14.1. Timeliness

For timeliness of data release see **8.1 Release calendar**.

14.2. Punctuality

Not applicable.

15. Coherence and comparability

[Top](#)

15.1. Comparability - geographical

<p>The recommended definition of the 'population' for the statistics on population reported under Article 3 of the Regulation 1260/2013 and under Article 3 of the Regulation 862/2007 is the 'usually resident population' meaning all the persons having their usual residence in a Member State at the reference time. Where the circumstances described above cannot be established, 'usual residence' can be taken to mean the place of legal or registered residence.</p>
<p>15.2. Comparability - over time</p> <p>Comparability over time could be disturbed by breaks in data series. The breaks in population series due to methodological, data processing changes or revisions in population counts reported by the countries are documented in Eurostat's database with the flag b (break in series).</p> <p>The population data for the year 2021 and after take into account the results of the latest population census (held in 2021-2022). The time series of populations between the previous census (held in 2011) and 2021 will be revised by end of 2023 by some of the countries, taking into account Eurostat's recommendation (for more information about data revision per country, see also 17. Data revision).</p> <p>Over time there have been methodological and geographical changes for certain countries, see the notes below:</p> <ul style="list-style-type: none"> • FX stands for Metropolitan France, including Corsica, excluding the overseas departments (DOM). • FR stands for the whole France, including the overseas departments (DOM). Data on Saint Barthelemy are excluded starting with 1.1.2012. Data on Mayotte are included starting with the statistics on vital events for the reference year 2014 and with the statistics on population on 1.1.2014. • The European geographical aggregates (EU, EA and EEA) include FX until 1997 and FR from 1998 on. This change is indicated by a flag b (break in series) in the EU statistics for 1998. • The time series for Germany (DE_TOT) refer to the Federal Republic within its frontiers after 3 October 1990. • Starting with 1.1.1975, data for Cyprus (CY) refer to the government-controlled area. • Up to 1.1.2000, population data for Malta (MT) refer to the Maltese population only while, starting with 2001, figures include also foreign residents. This is indicated by a flag b (break in series) in the figures for 2001. • Starting with 1.1.2010, the statistics on the permanent resident population of Switzerland (CH) includes all persons in the asylum process who have been residing in Switzerland since 12 months or more. The change appears in Eurostat population figures starting with population reported for 1.1.2011. • Starting with 1.1.2010, Poland (PL) revised the methodology used to estimate the usually resident population. This is indicated by a flag b (break in series) in the figures for 2010. • Starting with 1.1.2011, Belgium (BE) population figures at national level refer to all registered persons including asylum seekers. • Starting with 1.1.2012, the reported Estonian (EE) population includes the migration component, whereas this was not included before. • Data for Georgia refer to the government-controlled area. • Data for Moldova refer to the government-controlled area. • Data for Ukraine exclude the illegally annexed Autonomous Republic of Crimea and the City of Sevastopol.
<p>15.3. Coherence - cross domain</p> <p>The population figures transmitted by the national statistical offices to Eurostat in the framework of Demography domain may differ from those available in other domains such as National Accounts, Labour Force Survey or in the survey on Income and Living Conditions. The difference is given by the population coverage (see metadata specific to each domain).</p>
<p>15.4. Coherence - internal</p> <p>See 8.1. Release calendar.</p>
<p>16. Cost and Burden Top</p> <p>Not relevant.</p>
<p>17. Data revision Top</p> <p>17.1. Data revision - policy</p> <p>To further specify the general Eurostat revision policy, the following revision policy has been established for demographic and migration statistics (as available in Commission Implementing Regulation (EU) No 205/2014, art 5):</p> <ol style="list-style-type: none"> 1. Member States shall inform the Eurostat of any planned revision of the data already supplied no later than one week before the release of the revised data in the Member State concerned. 2. Member States shall provide any revised data to the Eurostat no later than one week after the release of these data. 3. Member States shall ensure that any revised data provided to the Eurostat is consistent with the whole set of data already provided. <p>For more information please see also in the Eurostat dedicated section on demography, population stocks and balance.</p> <p>The policy of Eurostat is to make updates as soon as data is received and at any time during the year.</p>
<p>17.2. Data revision - practice</p> <p>Population statistics are revised on a continuous base according to the most recent data released and transmitted to Eurostat by the National Statistical Institutes. The geographical aggregates and the demographic indicators are accordingly revised.</p> <p>The status of the data is indicated by using flags (flag p = provisional data; flag e = estimated; flag b = break in time series; flag f = forecast).</p> <p>The revision practice effectively corresponds to the revision policy of the domain listed under sub-concept 17.1 (data revision – policy).</p> <p>All reported errors (once validated) result in corrections of the disseminated data.</p> <p>Reported errors are corrected in the disseminated data as soon as the correct data have been validated.</p> <p>Data may be published even if they are missing for certain countries or flagged as provisional or estimated for certain countries. They are replaced with final data once transmitted and validated. European aggregates and demographic indicators are updated for consistency with new country data.</p> <p>Whenever new data are provided and validated, the already disseminated data are updated and European aggregates and demographic indicators are accordingly revised.</p> <p>Data are usually revised for the last period. Countries however may choose the length of the revisions depending on the need.</p> <p>In principle, aggregates and components are revised at the same time or soon after a data revision is received by Eurostat.</p> <p>There are no routine revisions aiming at adjusting monthly time series of live births and deaths to have temporal consistency with the yearly series.</p> <p>For most of the countries data are considered final with the first sending, except in case of errors discovered after transmitting data to Eurostat and in case of post-census revisions.</p>

Revisions are published continuously as soon as received by Eurostat.
 Routine revisions are documented and monitored internally and communicated in the metadata files available in dissemination.
 The impact of major revisions is analysed in working documents produced for experts' meetings held with representatives of National Statistical Institutes.
 Time series breaks caused by major revisions are not flagged, to provide break-free data, back-calculation is applied.
 Major revisions are pre-announced and documented in the metadata files available in dissemination.
 The impacts of major revisions are communicated in working documents produced for experts meetings held with representatives of National Statistical Institutes.

18. Statistical processing [Top](#)

18.1. Source data

Demographic data are collected by Eurostat from the National Statistical Institutes.
 For a summary of the national sources of data please see the countries' individual metadata files or the summary table in annex.

18.2. Frequency of data collection

Data are collected annually.

18.3. Data collection

The annual demography data collections are carried out by Eurostat from the National Statistical Institutes in order to collect detailed updated data.

18.4. Data validation

Controls are carried out on raw data transmitted by the NSIs to check if the total of a variable is consistent with the breakdown by different variables. Consistencies between different breakdowns of the same variable are verified by cross validations.

Based on the detailed collected data, Eurostat is computing a series of demographic statistics. The regular calculated demographic indicators are further submitted to several validations concerning the most updated annual value but also the available time series. These validations include checking on the plausibility of the most updated annual value and on two consecutive annual values. Mathematical verifications using standard deviation and weighted average are applied, for example for breakdowns of the life expectancy by educational attainment.

For more information on data validation see: <http://ec.europa.eu/eurostat/data/data-validation>

18.5. Data compilation

Based on the national detailed figures on population and other demographic events transmitted by the National Statistical Institutes, Eurostat derives/calculates demographic variables and geographical aggregates by applying common calculation method.

Geographical aggregation

For population data expressed in number, the geographical aggregation is done by arithmetical sum, when there are no missing values among the components of the respective geographical aggregate. Otherwise, they are not calculated.

18.6. Adjustment

Eurostat collects its data from the National Statistical Institutes. The following adjustments are used by each country. For more information information please see the countries' individual metadata files.

BE	The Belgian population register 'suffers' from a limited number of shortcoming mainly late registrations. This results in a statistical adjustment of several of thousand persons - however on a population totalling more than 11000000 persons. There is scientifically agreement in Belgium that this is an acceptable bias.
BG	Estimates (based on NSI sample survey on trips of Bulgarians abroad and visitors to Bulgaria) are done in production of breakdowns of emigrants by destination countries. Since 2015, estimates and assumptions on volume of emigrants are done to improve figures produced both for emigration and population number.
CZ	Only population figures from a year in which a population census was held are recalculated following census results.
DK	There is a statistical adjustment of the population due to two things; first, annulments of deaths, immigrations and emigrations, and second, missing and recovered people.
DE	Not applicable.
EE	By using new methodology - residency index. See 3.4.2. Population in the Estonian metadata file.
IE	Population and Migration Estimates are subject to revisions once the definitive results from the census is available.
EL	No adjustments.
ES	No dajustment has been done.
FR	Due to an improvement in the questionnaire, population data in 2016 (and after) are not comparable to previous population data. An adjustment has been introduced to allow time comparison. Adjustment is provisionally estimated at national level to : -65330 in 2015 ; -82982 in 2016 ; -100000 in 2017 ; -101000 in 2018 ; -101000 in 2019. Adjustment is provisionally estimated at national level to : -65330 in 2015 ; -82982 in 2016 ; -100000 in 2017 ; -101000 in 2018 ; -101000 in 2019. Differences in the field for France : Data published by INSEE do not take into account data of Saint-Martin and Saint-Barthelemy islands, which are not included in Guadeloupe any more since 2007. All data before 2013 (2012 and before) submitted to Eurostat contains France metropolitan, four French overseas departments (Martinique, Guadeloupe, French Guiana and Reunion) including Saint Martin and and Saint Barthelemy in Guadeloupe. All data after 2012 (2013 and after) submitted to Eurostat contains France metropolitan, four French overseas departments (Martinique, Guadeloupe, French Guiana and Reunion) including Saint Martin in Guadeloupe. Statistics of population include Mayotte since 31 December 2013. As the population on 31 December 2012 does not include this island, an other adjustment is therefore needed. The adjustment in 2013 is equal to the population on Mayotte estimated on 31 December 2012.
HR	Census data are collected and processed in line with the Conference of European Statisticians Recommendations for the 2010 Censuses of Population and Housing as well as with the regulations (EC) No 763/2008 and 1201/2009 of the European Parliament and the Council. Data on live births and deaths are collected and processed in line with the Regulation (EU) No 1260/2013 of the European Parliament and of the Council on European demographic statistics.

	Data on migration are collected and processed in line with the UN Recommendations on Statistics of International Migration and the Regulation (EC) No 862/2007 of the European Parliament and of the Council of 11 July 2007 on Community statistics on migration and international protection.
IT	In 2022 the statistical adjustments amount to a net value of -87331 units. It is due to registration and deregistration different from births, deaths, immigrations and emigrations.
CY	Not applicable
LV	In the Population Register (prev. Population Register) there are data also on short time immigrants - those migrants are excluded from the population database. International definitions are used also at national level.
LT	Not applicable.
LU	Other reasons statistical adjustments (registration and deregistration due to reasons different from births, deaths, immigrations and emigrations).
HU	The reason for the statistical adjustment is that population and vital statistics data are compiled from several separate data sources (i.e. civil registrars, health institutions, HCSO statistical data collection on vital events, Population register, National Directorate-General for Aliens Policing, National Health Insurance Fund), which are not fully harmonized.
MT	Not applicable.
NL	Not available.
AT	Details provided in national documentation.
PL	Not applicable.
PT	Not applicable.
RO	Live births and deaths are reviewed in December of the year following the reference year and they are released as definitive (final) data. Emigration and immigration are estimated based on "mirror statistics" and adjusted based on the trends of LFS.
SI	Not applicable.
SK	-
FI	Population correction (immigration/emigration): Population correction is the difference of total change and population increase. Corrections are mainly adjustments made later to errors occurring in handling of notices of removal. Statistical adjustments are mainly missing notifications on emigration. We would like to enhance that population structure system and population change system are independent and separate systems. In general, the move has taken place a very long time ago, in which case changing the information by a notice of removal would not make sense, or the person is known to have moved at some point but no information has been obtained on the target domicile. In material sent to Eurostat age is modified to mean age at the end of the year.
SE	The statistical adjustment refers to vital events that happened during previous years. The events were not registered in time to be included in the annual population figure for the previous year. However, no previous figures are adjusted.
UK	No statistical adjustment is carried out to adjust population definitions to standard definitions. However, the method of calculating 1 January populations from the mid-year populations calculated as standard means that components of change (migration and natural change), which are supplied on a true calendar year basis, do not correspond precisely with the change in population estimates.
IS	No adjustments are made. Deviations between natural increase and net immigration and the population growth are not adjusted in the statistics.
LI	No adjustments necessary.
NO	Deviations between natural increase and net immigration and the population growth are not adjusted in the statistics. Deviations are due to lack of incoming messages on births, deaths and migrations. The deviation in the population accounts is due to belated reports, annulments, corrections etc.]
CH	Data are not adjusted.
ME	Not applicable.
MK	Data adjustment is not performed.
AL	Adjustments are done for the number of emigration and immigration data collected through LFS survey for which the age structure was corrected considering the last population projection data.
RS	Not applicable.
TR	Not applicable.
GE	Not available.
AD	The data published in the website does not present any statistical adjustment, however, press releases do.

19. Comment[Top](#)

Not available.

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