



Luxembourg, 25 October 2022

TECHNICAL NOTE

Subject: Short-term update of EUROPOP 2019 population projections

1. INTRODUCTION

EUROPOP2019 are the population projections for the European Union (EU), euro area (EA), EU Member States and EFTA countries published by Eurostat on 30 April 2020. These projections are published by sex and age. They cover the period 2019-2100 and represent 'what-if' scenarios of partial convergence in fertility, mortality and migration developments among the concerned countries¹.

Data users, specifically the Commission's Directorate General of Economic and Financial Affairs (DG ECFIN), asked Eurostat to update the population projections annually. This will be carried out with limited updates of the long-term population projections in the years between their release; hence, incorporating the latest demographic and migration dynamics. The updates should cover at least the 10 years ahead, and include the total population and the working age population (15-74 years old).

This technical note presents the methodology of the first short-term update of the long-term population projections EUROPOP2019, covering the period 2022-2032. It also includes a comparison between the updated projections and the original EUROPOP2019.

2. PRESENTATION OF THE SHORT-TERM UPDATE

EUROPOP2019 consists of the following datasets² with results at European and national levels:

- Population on 1st January by age, sex and type of projection [proj_19np];
- Assumptions for fertility rates by age and type of projection [proj_19naasfr];
- Assumptions for probability of dying by age, sex and type of projection [proj_19naasmr];

¹ See the description of EUROPOP2019 methodology applied in Eurostat's technical note of 30 April 2020, https://ec.europa.eu/eurostat/cache/metadatas/Annexes/proj_esms_an1.pdf

² <https://ec.europa.eu/eurostat/web/population-demography/population-projections/database>

- Assumptions for net migration by age, sex and type of projection [proj_19nanmig];
- Projected life expectancy by age (in completed years), sex and type of projection [proj_19nalexp];
- Demographic balances and indicators by type of projection [proj_19ndbi].

EUROPOP2019 continues to be the reference population projections until the end of March 2023, when it is planned that the EUROPOP2023 exercise brings new long-term projections.

EUROPOP2019 was published on 30 April 2020, i.e. a little over a month after the World Health Organisation declared a pandemic due to COVID-19 on 11 March 2020. At that point, the pandemic had just started to unfold in Europe³. There was no relevant official demographic statistics yet and anticipating any COVID-19 impact on the projected demographic dynamics was nearly impossible or would have been highly speculative.

Official European statistics on demography and migration are currently available for reference years 2020-2021. It is therefore possible to reflect these data in the population estimates as well as population projections.

While EUROPOP2019 remain the main set of reference for population projections, Eurostat is publishing an additional **dataset called ‘Short-term update of the projected population (2022-2032)’** [proj_stp22]. This new dataset includes updates of baseline projections for the total population, population in the age group 15 to 74 years (considered as the population in the working-age group), and its share in the total population. In addition, two sensitivity tests are carried out – high and very high number of refugees – by introducing in the baseline projections a shock due to the mass-influx of refugees fleeing the war in Ukraine, and who have received temporary protection in the EU⁴ countries.

It is important to stress that the short-term update **does not** replace the original EUROPOP2019. The update **fits the purpose** of the EU economic forecast – the total population and the population aged 15 to 74 years – based on the most recent data as available on Eurostat website by 16 September 2022, and bridges the updated time series to the EUROPOP2019 trend over the years 2022-2032.

In principle, population projections do not advance any assumptions on shocks that will have demographic impacts, given the unknown type of shock, its timing, magnitude, place of occurrence and how the countries would be impacted. As explained above, this was the case with the COVID-19 pandemic during the EUROPOP2019 release in April 2020. The publication of the current update is affected by another large-scale event with major demographic consequences that is the Russian military aggression on Ukraine, which started on 24 February 2022. Contrary to the situation with data in 2020 regarding COVID-19, some official European statistics are available on the Eurostat website and can be taken into account.

Following the latest discussions with the members of the informal Commission Expert Group on Population Projections, Eurostat considered two scenarios reflecting the situation of Ukraine. Therefore, two sensitivity tests, assuming high and very high influx of refugees from

³ For details see Eurostat’s Statistics Explained articles on [Weekly deaths](#) and [Excess mortality](#)

⁴ https://home-affairs.ec.europa.eu/policies/migration-and-asylum/common-european-asylum-system/temporary-protection_en#:~:text=Temporary%20protection%20is%20an%20exceptional,to%20their%20country%20of%20origin.

Ukraine who benefit from temporary protection in the EU, have been prepared for publication together with the short-term update.

In summary, the short-term update:

- Provides updated EUROPOP2019 projections for the total population and the working age population (15-74 years) for the EU, EA, EU Member States, EFTA and EFTA countries;
- Provides shares of the working age population in the total population;
- Covers the period 2022-2032;
- Is based on the latest available official statistics;
- Additionally provides two sensitivity tests for high and very high influx of refugees from Ukraine.

3. INPUT DATA

3.1. STATISTICS USED

The input data used for STP2022⁵ (the short-term up-to-date population projection, 2022 base-population) is based on the official data transmitted by the countries to Eurostat in the frame of demography, migration and international protection data collections, for the reference years from 2011 to 2022. These data were downloaded in August 2022.

Table 1 below summarises the input data and the corresponding tables available on Eurostat website.

Table 1. Eurobase tables used as input data

| Input data | Eurobase table ⁶ | Remarks |
|-------------------------------|-------------------------------------|--|
| Population | demo_pjan | Observed population data up to 1 January 2021 |
| Deaths | demo_magec and demo_mager | 2020 data included in the table demo_magec are used for the estimation of deaths by single age in the year 2021. |
| Weekly deaths 2021 data | demo_r_mwk_05 | Used to estimate data on deaths by single age for the year 2021. |
| Demographic balance (DEMOBAL) | demo_gind | Latest data included in the time series 2011-2022. |
| Live births | demo_fager, demo_fagec or demo_gind | As only totals are used, the data source can be any of the three tables. However, the latest revised data are first published in the demo_gind table, thus, priority is given to the data included in this |

⁵ STP2022 – short-term up-to-date population projections using the latest figure for population as of 31 December 2021 and published as 1 January 2022 in the online table demo_gind.

⁶ Eurostat website - <https://ec.europa.eu/eurostat/web/main/data/database>

| Input data | Eurobase table ⁶ | Remarks |
|---|--|---|
| | | table. |
| Immigration | migr_imm8 | The input data used correspond to the age definition 'age reached during the year'. When data according to this definition are not available, they are estimated using data corresponding to the age definition 'age in completed years'. |
| Emigration | migr_emi2 | The input data used correspond to the age definition 'age reached during the year'. When data according to this definition are not available, they are estimated using data corresponding to the age definition 'age in completed years'. |
| Decisions granting temporary protection by citizenship, age and sex | migr_asytpfm (monthly data) or migr_asydcfstq (quarterly data) | Monthly or quarterly data depending on their availability. |
| Population projections | proj_19np | Totals and data by single age aggregated to obtain the population in the age group 15 to 74 years. |

3.2. COUNTRY-SPECIFIC PARTICULARITIES

The usual approach for producing population projections is to apply the same methodology to all countries. This requires availability of input data according to harmonised definitions, in a form of complete time series, and disaggregated in the same manner. For some countries, the availability of input data was limited and that required the use of appropriate estimation and data pre-processing methods. The details are summarised in the Table 2 below.

Table 2. Country-specific particularities

| Country | Remarks |
|-----------|--|
| BE | <i>immigration and emigration data</i> – 2011 and 2012 data by age reached during the year were estimated based on 2011 and 2012 data available by age in completed years. <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| BG | <i>immigration and emigration data</i> – 2011 data not available for any age definition. 2012 data by age reached during the year were estimated based on 2012 data available by age in completed years. <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| CZ | <i>population data</i> – 2021 and 2022 total population data are post-2021 census data (online table demo_gind). 2021 population data by single age was estimated based on pre-2021 census population data. <i>decisions on temporary protection</i> – quarterly data available for 2022Q1 and 2022Q2 |
| DK | <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| DE | <i>weekly deaths data</i> – 2021 data available from age group 40-44 until age 90 years or more; missing data were estimated based on 2020 data included in the table demo_magec. <i>decisions on temporary protection</i> – quarterly data available for 2022Q1 and 2022Q2 |
| EE | <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| IE | <i>weekly deaths data</i> – 2021 data are available only for totals; the number of deaths by single age for the year 2021 was estimated based on 2020 data included in the table |

| Country | Remarks |
|----------------|--|
| | <p>online demo_magec.</p> <p><i>immigration and emigration data</i> – 2011 to 2020 data by age reached during the year were estimated based on 2011 to 2020 data available by age in completed years.</p> <p><i>decisions on temporary protection</i> – monthly data available from M03 to M07 with data available only as totals (no data disaggregation by age group and sex); similarly, no data disaggregation by age group and sex is available in the table with quarterly data.</p> |
| EL | <p><i>immigration and emigration data</i> – 2011 to 2020 data by age reached during the year were estimated based on 2011 to 2020 data available by age in completed years.</p> <p><i>Decisions on temporary protection</i> – monthly data available from M03 to M08</p> |
| ES | <i>decisions on temporary protection</i> – monthly data available from M03 to M08 |
| FR | <i>decisions on temporary protection</i> – monthly data available from M03 to M07, with data available only as totals by sex (no data disaggregation by age group); similarly, no data by age group are available in the table with quarterly data. |
| HR | <p><i>population data</i> for the year 2022 are post-2021 census data.</p> <p><i>Immigration and emigration data</i> – 2011 and 2012 data by age reached during the year were estimated based on 2011 and 2012 data available by age in completed years.</p> <p><i>Decisions on temporary protection</i> – monthly data available from M03 to M07</p> |
| IT | <p>The 2019 baseline population used in EUROPOP2019 was largely revised in the context of annual Permanent Population Census carried by ISTAT.</p> <p><i>Decisions on temporary protection</i> – monthly data available from M03 to M07</p> |
| CY | <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| LV | <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| LT | <p><i>immigration and emigration data</i> – 2011 and 2012 data by age reached during the year were estimated based on 2011 and 2012 data available by age in completed years</p> <p><i>decisions on temporary protection</i> – monthly data available from M03 to M08</p> |
| LU | <p><i>immigration and emigration data</i> – 2011 and 2012 data by age reached during the year were estimated based on 2011 and 2012 data available by age in completed years</p> <p><i>decisions on temporary protection</i> – monthly data available from M03 to M07</p> |
| HU | <i>decisions on temporary protection</i> – monthly data available from M03 to M07, with data available only as totals by sex (no data disaggregation by age group); similarly, no data by age group are available in the table with quarterly data. |
| MT | <p><i>immigration and emigration data</i> – 2011 to 2020 data by age reached during the year were estimated based on 2011 to 2020 data available by age in completed years.</p> <p><i>Decisions on temporary protection</i> – monthly data available from M03 to M07</p> |
| NL | <i>Decisions on temporary protection</i> – quarterly data available for 2022Q1 and 2022Q2; figures for unknown sex were redistributed proportionally between males and females |
| AT | <p><i>immigration and emigration data</i> – 2011 to 2020 data by age reached during the year were estimated based on 2011 to 2020 data available by age in completed years.</p> <p><i>decisions on temporary protection</i> – quarterly data 2022Q1 and 2022Q2, and monthly data available for M07</p> |
| PL | <i>decisions on temporary protection</i> – monthly data available from M03 to M08 |
| PT | <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| RO | <p><i>immigration and emigration data</i> – 2011 to 2020 data by age reached during the year were estimated based on 2011 to 2020 data available by age in completed years.</p> <p><i>decisions on temporary protection</i> – monthly data available from M03 to M07</p> |

| Country | Remarks |
|---------|---|
| SI | <i>immigration and emigration data</i> – 2011 to 2020 data by age reached during the year were estimated based on 2011 to 2020 data available by age in completed years. <i>decisions on temporary protection</i> – monthly data available from M03 to M08 |
| SK | <i>immigration and emigration data</i> – 2011 and 2012 data by age reached during the year were estimated based on 2011 and 2012 data available by age in completed years. <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| FI | <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| SE | <i>decisions on temporary protection</i> – monthly data available from M03 to M08 |
| IS | <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |
| LI | <i>decisions on temporary protection</i> – monthly data available from M03 to M08 |
| NO | <i>decisions on temporary protection</i> – monthly data available from M03 to M08 |
| CH | <i>decisions on temporary protection</i> – monthly data available from M03 to M07 |

4. METHOD

Given the requested scope (total population and working age population) and the time horizon of the update (10 years), Eurostat designed a methodology for this purpose. This methodology was then discussed during the meetings of the Expert Group on Population Projections. Consequently, the method was further refined in order to produce and publish plausible results.

Baseline scenario

The updated EUROPOP2019 (P_{T+t}^u) was constructed from cumulative sums of weighted averages of annual population changes of two series: the original EUROPOP2019 (P_T^l), and a new short-term population projection computed from the latest available data (P_T^s) over a period of 10 years. By changing the weighting factor, the updated EUROPOP2019 projection starts by following the new short-term population projection figures, and then gradually converging to the long-term trend of the original EUROPOP2019 projection.

The updated projections P_{T+t}^u are computed in the following way:

$$P_{T+t}^u = \begin{cases} P_T^s, & t = 0 \\ P_{T+t-1}^u + \delta_{T+t}^l k_t + \delta_{T+t}^s (1 - k_t), & t \in [1, 2, \dots, 10] \end{cases}, \quad (1)$$

where

δ_{T+t}^l is the annual change of the EUROPOP2019 projected population, $P_{T+t}^l - P_{T+t-1}^l$

δ_{T+t}^s is the annual change of the new short-term projected population, $P_{T+t}^s - P_{T+t-1}^s$

k is the weighting factor which increases linearly from 0.0 to 1.0 over the entire short-term update period (from T to $T + 10$).

For the starting year $T = 2022$, $t = 0$, $\delta_T^l = \delta_T^s = 0$.

The short-term projected population (P_{T+t}^s) is a function of past observed figures for respectively births, deaths and net migration $B_{T+t}^s = f(B_T, B_{T-1}, B_{T-2}, \dots)$, $D_{T+t}^s =$

$f(D_T, D_{T-1}, D_{T-2}, \dots)$, and $N_{T+t}^S = f(N_T, N_{T-1}, N_{T-2}, \dots)$, where the demographic balance in each projected year satisfies the formula: $P_{T+t}^S = B_{T+t}^S - D_{T+t}^S + N_{T+t}^S, \forall t \in [1, 2, \dots, 10]$.

Data for the starting year reflect the latest statistics that the countries transmitted to Eurostat by the end of June 2022, under the annual DEMOBAL⁷ data collection for the reference year 2021. This data collection includes mandatory totals for population, live births and deaths, and voluntary data on migration flows. The voluntary data were not transmitted by all the countries. Furthermore, some countries provided data on migration flows according to national definitions, which may result in large discrepancies compared with the annual harmonised data on migration flows transmitted in the context of the annual mandatory POPSTAT/UNIDEMO⁸ data collections. For these reasons, only the mandatory part of the DEMOBAL data collection was used as input for the update.

The necessary data by single age for deaths and net migration for the reference year 2021 were estimated as summarized below:

- Data on deaths by single age were estimated from the 2021 data by 5-year age group transmitted in the “Weekly deaths⁹” special data collection, further data disaggregated by single age using the age structure as in the year 2020, and then calibrated to match the figure transmitted in the latest DEMOBAL data collection. This produced data for 2021 with an age structure close to the first pandemic year (2020).
- Net migration including statistical adjustment by single age was estimated based on 2019 and 2020 migration flows, and then calibrated to the 2021 net migration including statistical adjustment that was computed based on the latest DEMOBAL data collection, as follows:
 - Immigration and emigration flows by single age were estimated as averages of the 2019 and 2020 data. This reduced the impact of the severe drop in the migration flows caused by the restrictions on travelling abroad due to the COVID-19 pandemic.
 - Net migration (based on flows) was subsequently computed for the year 2021.
 - The statistical adjustment component was estimated from the net migration computed as a residual from the demographic balance for 2021.

Additional calculations were required for the net migration computed from migration flows (for 2011-2020), and for the net migration including statistical adjustment (for 2021) in order to take into account the statistical adjustments. This was to ensure a consistent approach over the whole period 2011-2021. The additional calculations involved winsorisation of

⁷ DEMOBAL data collection aims at collecting the first results on the main demographic developments in the previous year at national level, according to Article 3 of the [Commission Regulation \(EU\) No 1260/2013](#) of the European Parliament and of the Council on European demographic statistics, and Article 4 of the [Commission Implementing Regulation \(EU\) No 205/2014](#)

⁸ POPSTAT/UNIDEMO (POPulation Statistics/UNified DEMOgraphic) is the main data collection that aims at collecting data on vital events, dual events, migration flows, usually resident population and acquisitions of citizenship, reflecting the statistics specified under Article 3 of Regulation (EC) No 1260/2013 and [Regulation \(EC\) No 862/2007](#). Migration flows data shall reflect the concept of ‘usual residence’ with a time criteria of at least 12-months.

⁹ [Weekly deaths - special data collection](#) was set by Eurostat, in April 2020, following the declaration of the Covid-19 pandemic. This data collection aimed to provide quickly statistics that show the changing situation of the total number of weekly deaths from early 2020 onwards.

immigration data (for 2011-2018) to eliminate spurious outliers, computation of net migration by single age based on migration flows, estimation of annual statistical adjustment, estimation of age structure of migrants, computation of average annual statistical adjustment by single age, calculation of adjusted migration components, and computation of net migration by single age based on adjusted components, for each year over the period 2011-2021.

For 2031 the total values for deaths, live births and net migration including statistical adjustment were computed as the sum of average of the last three years of observed values multiplied by the average annual change rates over the time period 2011-2021. Additionally, for deaths and net migration including statistical adjustment the age structure by single age was produced by averaging the last three years of observed data.

The short-term projected population P_{T+t}^S was computed by single age, and then aggregated to obtain the total projected population and the working age population (15-74). Afterwards the aggregated values were used to produce the updated EUROPOP2019 figures in accordance with the method and formulas provided at the beginning of this chapter.

Sensitivity tests

Mass influx of refugees from Ukraine to the EU was one of the first consequences of the Russian military invasion in Ukraine on 24 March 2022. As this is a new demographic phenomenon, not yet included in the available annual statistics, with a potentially high impact and involving very high level of uncertainty, Eurostat proposed two sensitivity tests for the baseline scenario – assuming high and very high influx of refugees from Ukraine.

The temporary protection¹⁰ status was used to determine the number of immigrants arriving from Ukraine to the EU and EFTA countries. The temporary protection status is granted for one year and can be extended up to three years. The number of decisions on granting the temporary protection status was considered to sufficiently well reflect the number of refugees that have the right to stay for a duration close to or at least 12 months in the country where the status was granted. This duration is similar to the 12-months criteria used in the annual EU migration data collections. Consequently, the data on decisions granting temporary protection were used for estimating the number of refugees for the purpose of the sensitivity tests¹¹.

The two sensitivity tests were built on the following assumptions:

- High number of refugees sensitivity test – assumes that the influx of refugees occurs during 2022 only, and is followed by annual returns at a constant rate such that at the end of 2031 the remaining number of refugees is 10% of the total influx in 2022;
- Very high number of refugees sensitivity test – assumes that the influx of refugees occurs during 2022 and 2023, and is followed by annual returns at a constant rate such that at the end of 2031 the remaining number of refugees is 15% of the cumulated influx in 2022 and 2023.

The overall number of refugees was included in the net migration component of the short-term population projections (see equation (1)), thus before the convergence to the long-term

¹⁰ [Council Directive 2001/55/EC](#) of 20 July 2001 defines the [temporary protection](#) as an exceptional measure to provide immediate and temporary protection in the event of a mass influx or imminent mass influx of displaced persons from non-EU countries who are unable to return to their country of origin. For more information on please visit the dedicated webpage of [DG HOME](#) (DG Migration and Home Affairs).

¹¹ The term ‘the number of decisions granting temporary protection’ is therefore considered a synonym of ‘refugees’.

trend of the EUROPOP2019 was performed. Consequently, the projected number of remaining refugees at the end of 2031 appears considerably higher than the initial assumptions.

The specific input data used are the temporary protection decisions during the year 2022 and the population of Ukraine on 1 January 2022 and 2021.

The assumptions on the number of refugees from Ukraine arriving in each country in 2022 and 2023 were built based on monthly data on decisions granting temporary protection available from the Eurostat website, or on quarterly data when monthly data were not available.

The latest data on temporary protection decisions, disaggregated by broad age groups and sex, were extracted from the Eurostat database on 16 September 2022. For most countries, the data covered the period from March to July/August 2022 (refer to Table 2 for details). Estimates for the remaining period until the end of 2022 were assumed to be 30% of the total sum of the decisions granting temporary protection for the covered months. The overall number of temporary protection decisions for the year 2022 was computed as a sum between the disseminated and estimated decisions, disaggregated by sex and age groups. For the year 2023, it was assumed that the number of refugees is 75% of the total number of refugees in 2022.

These ‘annual data’ on the number of refugees by age groups were then disaggregated by single age, using the 2022 total population of Ukraine. This estimation by single age and sex was based on the age structure of the population of Ukraine on 1 January 2021.

5. CHANGES COMPARED TO THE ORIGINAL PROJECTIONS

The updated projections are available in dataset **Short-term update of the projected population (2022-2032) [proj_stp22]** from the Eurostat website¹².

The Annex presents the comparison between the updated projections and EUROPOP2019 population projections, for the total population and population in the age group 15-74 years (working age population), for the period 2019-2032. The figures represent the percentage change between the updated and the long-term projections.

It can be observed that the changes are more significant for countries that have implemented their 2021 population censuses, published results from them and where necessary revised their figures. Visible changes can also be seen in countries that have been more severely impacted by the COVID-19 pandemic, particularly in terms of mortality and migration.

¹² <https://ec.europa.eu/eurostat/data/database>

Comparison between the updated baseline and EUROPOP2019 (updated baseline as percentage change of EUROPOP2019)

• **Total population**

| GEO/TIME | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| EU27_2020 | -0.1% | -0.1% | -0.2% | -0.4% | -0.5% | -0.6% | -0.6% | -0.6% | -0.6% | -0.5% | -0.5% | -0.5% | -0.5% | -0.5% |
| EA19 | -0.1% | -0.1% | -0.3% | -0.4% | -0.4% | -0.4% | -0.4% | -0.4% | -0.4% | -0.3% | -0.3% | -0.3% | -0.3% | -0.3% |
| BE | 0.0% | 0.1% | 0.1% | 0.4% | 0.8% | 1.1% | 1.3% | 1.6% | 1.7% | 1.9% | 2.0% | 2.0% | 2.0% | 2.0% |
| BG | 0.0% | 0.0% | 0.3% | -0.1% | -0.4% | -0.7% | -0.9% | -1.1% | -1.3% | -1.4% | -1.5% | -1.6% | -1.6% | -1.7% |
| CZ | 0.0% | 0.0% | -0.3% | -2.2% | -2.2% | -2.1% | -2.0% | -1.9% | -1.7% | -1.6% | -1.5% | -1.5% | -1.4% | -1.4% |
| DK | 0.0% | 0.2% | 0.3% | 0.6% | 0.9% | 1.1% | 1.2% | 1.3% | 1.3% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% |
| DE | 0.0% | 0.0% | -0.1% | -0.1% | -0.1% | -0.1% | 0.0% | 0.0% | 0.1% | 0.1% | 0.1% | 0.2% | 0.2% | 0.2% |
| EE | 0.0% | -0.1% | 0.0% | 0.2% | 0.5% | 0.8% | 1.1% | 1.3% | 1.6% | 1.8% | 2.0% | 2.1% | 2.2% | 2.2% |
| IE | 0.0% | 0.0% | -0.6% | -0.8% | -0.9% | -1.0% | -1.0% | -0.9% | -0.8% | -0.8% | -0.7% | -0.7% | -0.6% | -0.6% |
| EL | 0.0% | 0.2% | 0.1% | -0.3% | -0.5% | -0.7% | -0.8% | -0.9% | -1.0% | -1.0% | -1.0% | -1.0% | -1.0% | -1.0% |
| ES | 0.0% | 0.0% | -0.5% | -0.9% | -1.2% | -1.3% | -1.3% | -1.2% | -1.2% | -1.1% | -1.1% | -1.0% | -1.0% | -1.0% |
| FR | 0.2% | 0.2% | 0.4% | 0.4% | 0.5% | 0.5% | 0.5% | 0.5% | 0.6% | 0.6% | 0.6% | 0.6% | 0.6% | 0.6% |
| HR | 0.0% | 0.0% | 0.1% | -3.2% | -5.9% | -8.2% | -9.9% | -11.3% | -12.3% | -13.0% | -13.4% | -13.6% | -13.8% | -13.9% |
| IT | -0.9% | -1.1% | -1.6% | -2.0% | -2.3% | -2.6% | -2.8% | -3.0% | -3.1% | -3.2% | -3.3% | -3.4% | -3.4% | -3.4% |
| CY | 0.0% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% |
| LV | 0.0% | 0.0% | 0.0% | -0.1% | -0.1% | 0.1% | 0.3% | 0.5% | 0.6% | 0.7% | 0.8% | 0.8% | 0.9% | 0.9% |
| LT | 0.0% | 0.0% | 0.2% | 1.0% | 1.4% | 2.0% | 2.6% | 3.2% | 3.6% | 4.0% | 4.3% | 4.5% | 4.6% | 4.7% |
| LU | 0.0% | 0.0% | 0.3% | 0.8% | 1.3% | 1.7% | 2.0% | 2.4% | 2.7% | 3.0% | 3.2% | 3.3% | 3.4% | 3.4% |
| HU | 0.0% | 0.0% | -0.3% | -0.6% | -0.8% | -1.0% | -1.2% | -1.3% | -1.4% | -1.5% | -1.5% | -1.6% | -1.6% | -1.6% |
| MT | 0.0% | 1.5% | -0.7% | -1.9% | -2.6% | -2.9% | -2.9% | -2.8% | -2.6% | -2.4% | -2.1% | -1.9% | -1.8% | -1.8% |

| GEO/TIME | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| NL | 0.0% | 0.0% | -0.1% | 0.1% | 0.4% | 0.6% | 0.8% | 1.0% | 1.2% | 1.3% | 1.4% | 1.5% | 1.6% | 1.6% |
| AT | 0.0% | 0.0% | 0.1% | 0.3% | 0.6% | 0.7% | 0.8% | 0.9% | 1.0% | 1.1% | 1.1% | 1.1% | 1.2% | 1.2% |
| PL | 0.0% | 0.0% | -0.1% | -0.4% | -0.7% | -0.9% | -1.0% | -1.0% | -1.1% | -1.1% | -1.1% | -1.1% | -1.1% | -1.1% |
| PT | 0.0% | 0.0% | 0.1% | 0.7% | 1.3% | 1.7% | 2.2% | 2.5% | 2.8% | 3.0% | 3.2% | 3.2% | 3.3% | 3.3% |
| RO | 0.0% | 0.2% | 0.4% | 0.3% | 0.3% | 0.2% | 0.3% | 0.2% | 0.2% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% |
| SI | 0.0% | 0.0% | 0.2% | -0.2% | -0.3% | -0.4% | -0.2% | -0.1% | 0.0% | 0.2% | 0.3% | 0.4% | 0.5% | 0.5% |
| SK | 0.0% | 0.0% | -0.1% | -0.6% | -1.0% | -1.3% | -1.5% | -1.7% | -1.8% | -1.8% | -1.9% | -1.9% | -1.9% | -1.9% |
| FI | 0.0% | 0.0% | 0.0% | 0.2% | 0.4% | 0.6% | 0.7% | 0.9% | 1.0% | 1.1% | 1.2% | 1.2% | 1.2% | 1.2% |
| SE | 0.0% | 0.0% | -0.3% | -0.5% | -0.6% | -0.6% | -0.6% | -0.6% | -0.6% | -0.5% | -0.5% | -0.5% | -0.4% | -0.4% |
| EFTA | 0.0% | 0.2% | 0.2% | 0.4% | 0.5% | 0.5% | 0.5% | 0.5% | 0.6% | 0.6% | 0.6% | 0.6% | 0.6% | 0.6% |
| IS | 0.0% | -0.2% | -1.0% | -0.8% | -0.5% | 0.0% | 0.5% | 1.1% | 1.5% | 1.8% | 2.1% | 2.3% | 2.4% | 2.3% |
| LI | 0.0% | 0.3% | 0.4% | 0.3% | 0.3% | 0.4% | 0.4% | 0.5% | 0.6% | 0.6% | 0.7% | 0.8% | 0.8% | 0.8% |
| NO | 0.0% | 0.0% | -0.3% | -0.4% | -0.5% | -0.6% | -0.7% | -0.7% | -0.8% | -0.8% | -0.9% | -0.9% | -0.9% | -0.9% |
| CH | 0.0% | 0.3% | 0.6% | 0.9% | 1.1% | 1.2% | 1.3% | 1.3% | 1.4% | 1.4% | 1.5% | 1.5% | 1.5% | 1.5% |

Comparison between the short-term updated baseline and EUROPOP2019 population projections

(updated baseline expressed as percentage change of EUROPOP2019)

- Working age population (aged 15 to 74 years)

| GEO/TIME | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|------------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| EU27_2020 | -0.1% | -0.1% | -0.2% | -0.3% | -0.4% | -0.4% | -0.4% | -0.4% | -0.4% | -0.4% | -0.4% | -0.4% | -0.4% | -0.4% |
| EA19 | -0.1% | -0.1% | -0.2% | -0.3% | -0.3% | -0.3% | -0.3% | -0.2% | -0.2% | -0.2% | -0.1% | -0.1% | -0.1% | -0.1% |
| BE | 0.0% | 0.1% | 0.2% | 0.5% | 0.9% | 1.2% | 1.4% | 1.7% | 1.9% | 2.0% | 2.1% | 2.2% | 2.2% | 2.2% |
| BG | 0.0% | 0.0% | 0.5% | 0.4% | 0.3% | 0.2% | 0.1% | 0.1% | 0.0% | 0.0% | -0.1% | -0.1% | -0.1% | -0.1% |
| CZ | 0.0% | 0.1% | -0.1% | -2.1% | -2.0% | -1.9% | -1.8% | -1.7% | -1.6% | -1.5% | -1.5% | -1.4% | -1.4% | -1.4% |
| DK | 0.0% | 0.3% | 0.5% | 0.9% | 1.2% | 1.4% | 1.5% | 1.6% | 1.7% | 1.7% | 1.7% | 1.7% | 1.7% | 1.7% |
| DE | 0.0% | 0.1% | -0.1% | -0.1% | -0.1% | -0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| EE | 0.0% | -0.1% | -0.1% | 0.2% | 0.5% | 0.8% | 1.1% | 1.4% | 1.7% | 1.9% | 2.1% | 2.2% | 2.3% | 2.3% |
| IE | 0.0% | -0.1% | -0.6% | -0.8% | -1.0% | -1.0% | -1.0% | -0.9% | -0.8% | -0.7% | -0.7% | -0.6% | -0.6% | -0.6% |
| EL | 0.0% | 0.2% | 0.1% | -0.3% | -0.6% | -0.8% | -0.9% | -1.0% | -1.1% | -1.2% | -1.2% | -1.2% | -1.2% | -1.2% |
| ES | 0.0% | 0.1% | -0.3% | -0.7% | -0.9% | -1.0% | -0.9% | -0.9% | -0.8% | -0.7% | -0.6% | -0.5% | -0.5% | -0.5% |
| FR | 0.2% | 0.2% | 0.6% | 0.7% | 0.8% | 0.8% | 0.8% | 0.8% | 0.9% | 0.9% | 0.9% | 0.9% | 0.9% | 0.9% |
| HR | 0.0% | 0.1% | 0.2% | -3.5% | -6.5% | -9.0% | -11.0% | -12.5% | -13.7% | -14.5% | -15.1% | -15.4% | -15.7% | -15.8% |
| IT | -0.9% | -1.1% | -1.8% | -2.1% | -2.3% | -2.6% | -2.8% | -3.0% | -3.1% | -3.2% | -3.3% | -3.3% | -3.4% | -3.4% |
| CY | 0.0% | 0.1% | 0.2% | 0.3% | 0.3% | 0.4% | 0.4% | 0.5% | 0.6% | 0.6% | 0.6% | 0.6% | 0.7% | 0.6% |
| LV | 0.0% | 0.0% | 0.0% | 0.1% | 0.3% | 0.6% | 1.0% | 1.2% | 1.3% | 1.5% | 1.6% | 1.7% | 1.7% | 1.7% |
| LT | 0.0% | 0.1% | 0.5% | 2.3% | 3.2% | 4.2% | 5.2% | 6.1% | 6.7% | 7.3% | 7.7% | 8.0% | 8.2% | 8.3% |
| LU | 0.0% | 0.0% | 0.2% | 0.6% | 1.1% | 1.4% | 1.7% | 2.1% | 2.4% | 2.7% | 2.9% | 3.1% | 3.2% | 3.1% |
| HU | 0.0% | 0.0% | -0.2% | -0.5% | -0.7% | -0.9% | -1.0% | -1.2% | -1.3% | -1.3% | -1.4% | -1.5% | -1.5% | -1.5% |
| MT | 0.0% | 2.0% | -0.3% | -1.4% | -2.1% | -2.4% | -2.3% | -2.1% | -1.8% | -1.5% | -1.3% | -1.1% | -1.0% | -1.0% |
| NL | 0.0% | 0.1% | 0.1% | 0.4% | 0.7% | 1.0% | 1.3% | 1.5% | 1.8% | 1.9% | 2.1% | 2.1% | 2.2% | 2.2% |

| GEO/TIME | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AT | 0.0% | 0.0% | 0.2% | 0.6% | 0.8% | 1.0% | 1.2% | 1.3% | 1.4% | 1.4% | 1.5% | 1.5% | 1.5% | 1.5% |
| PL | 0.0% | 0.0% | -0.2% | -0.5% | -0.7% | -0.9% | -1.1% | -1.2% | -1.3% | -1.4% | -1.5% | -1.5% | -1.5% | -1.6% |
| PT | 0.0% | 0.0% | 0.2% | 1.0% | 1.7% | 2.4% | 3.0% | 3.4% | 3.8% | 4.1% | 4.2% | 4.4% | 4.4% | 4.5% |
| RO | 0.0% | 0.2% | 0.1% | 0.2% | 0.3% | 0.4% | 0.4% | 0.5% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% |
| SI | 0.0% | 0.1% | 0.4% | -0.1% | -0.4% | -0.5% | -0.5% | -0.4% | -0.3% | -0.2% | -0.1% | -0.1% | 0.0% | 0.0% |
| SK | 0.0% | 0.0% | -0.1% | -0.6% | -1.0% | -1.4% | -1.6% | -1.8% | -2.0% | -2.1% | -2.2% | -2.2% | -2.3% | -2.3% |
| FI | 0.0% | 0.0% | 0.0% | 0.1% | 0.2% | 0.3% | 0.4% | 0.5% | 0.6% | 0.6% | 0.6% | 0.6% | 0.6% | 0.6% |
| SE | 0.0% | 0.1% | -0.2% | -0.4% | -0.5% | -0.5% | -0.5% | -0.5% | -0.5% | -0.5% | -0.5% | -0.5% | -0.5% | -0.5% |
| EFTA | 0.0% | 0.2% | 0.3% | 0.5% | 0.5% | 0.6% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% |
| IS | 0.0% | -0.2% | -1.2% | -1.1% | -0.8% | -0.3% | 0.3% | 0.9% | 1.4% | 1.8% | 2.2% | 2.4% | 2.5% | 2.5% |
| LI | 0.0% | 0.2% | 0.5% | 0.4% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% |
| NO | 0.0% | 0.0% | -0.2% | -0.3% | -0.4% | -0.5% | -0.6% | -0.7% | -0.8% | -0.8% | -0.9% | -0.9% | -0.9% | -0.9% |
| CH | 0.0% | 0.3% | 0.8% | 1.0% | 1.2% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% |