

# Population and population change statistics

Statistics Explained

*Data extracted: 6 July 2023*

*Planned article update: 11 July 2024*

**" On 1 January 2023, the population of the EU was estimated at 448.4 million inhabitants, 2 792 000 more than the previous year. "**

**" The population increased in 2022 in 20 EU countries while it decreased in seven. "**

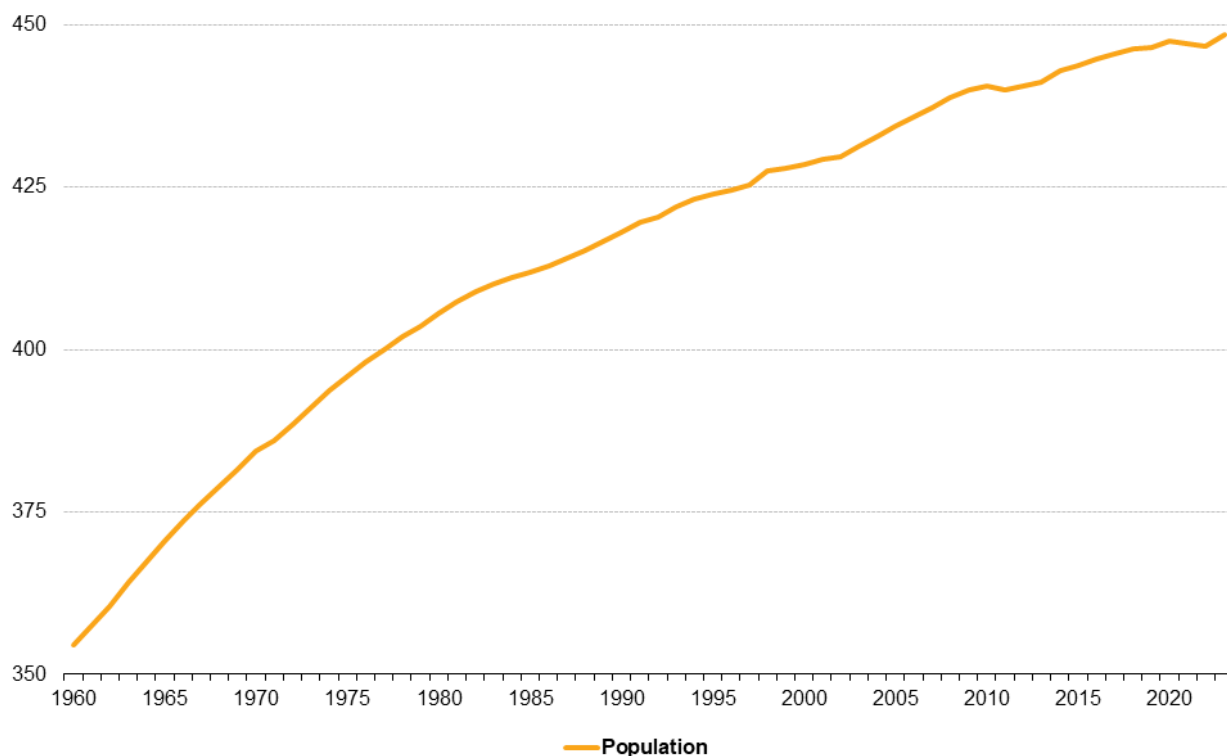
This article gives an overview of the development of the [European Union \(EU\)](#) population, detailing the two components of [population change](#) : [natural population change](#) and [net migration](#) plus statistical adjustment. More information on net migration is provided in an article on [migration and migrant population statistics](#) . While population figures for 1 January 2023 take into account the 2021 [population census](#) results, population figures referring to 1 January 2022 and earlier years may not have been revised. This break in series may affect particularly the demographic statistics for the year 2022.

## EU population shows a strong increase in 2022

After a first interruption of population growth in 2020 and 2021 due to the impact of the Covid-19 pandemic, the population of the [European Union at 27 countries](#) increased again in 2022, from 446.7 million on 1 January 2022 to 448.4 million on 1 January 2023. The negative natural change (more deaths than births) was outnumbered by the positive net migration. The observed population growth can be largely attributed to the increased migratory movements post-COVID-19 and to the mass influx of displaced persons from Ukraine who received temporary protection status in EU Member States, as a consequence of the Russian invasion in February 2022.

Over a longer period, the population of the EU grew from 354.5 million in 1960 to 448.4 million on 1 January 2023, an increase of 93.9 million people (see Figure 1). The rate of population growth has slowed down gradually in recent decades: for example, the EU population increased, on average, by about 0.8 million persons per year during the period 2005–2022, compared with an average increase of around 3.0 million persons per year during the 1960s.

## Population, EU, 1960-2023 (at 1 January, million persons)



Note: Excluding French overseas departments up to and including 1997. Breaks in series: 1991, 1998, 2000-01, 2008, 2010-12, 2014, 2015, 2017, 2019, 2021-2023.

Source: Eurostat (online data code: demo\_gind)

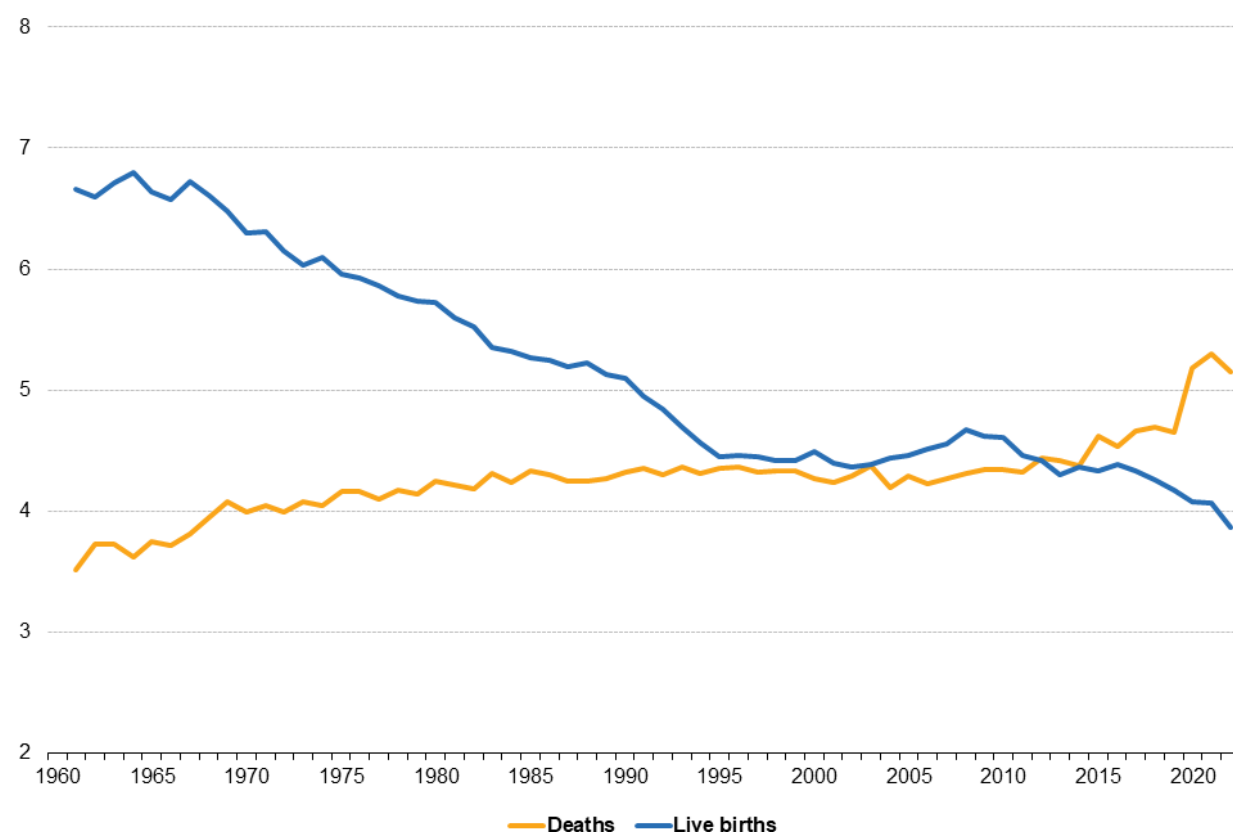
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**Figure 1: Population, EU, 1960-2023 (at 1 January, million persons) Source: Eurostat (demo\_gind)**

The natural change of the EU population was positive – although decreasing – until 2011, and then negative since 2012, with more deaths than births recorded in the EU (Figure 2). The total change after 2011 (positive until 2019, with 7.5 million more inhabitants between January 2012 and January 2020) is therefore due to net migration (and statistical adjustment). While in 2020 and in 2021 the (positive) net migration no longer compensated for the negative natural change in the EU, in 2022 the trend was reversed and, as a consequence, the EU total population has been increasing.

## Births and deaths, EU, 1961-2022

(million)



Note: 1960: not available. Excluding French overseas departments up to and including 1997.

Source: Eurostat (online data code: demo\_gind)

eurostat 

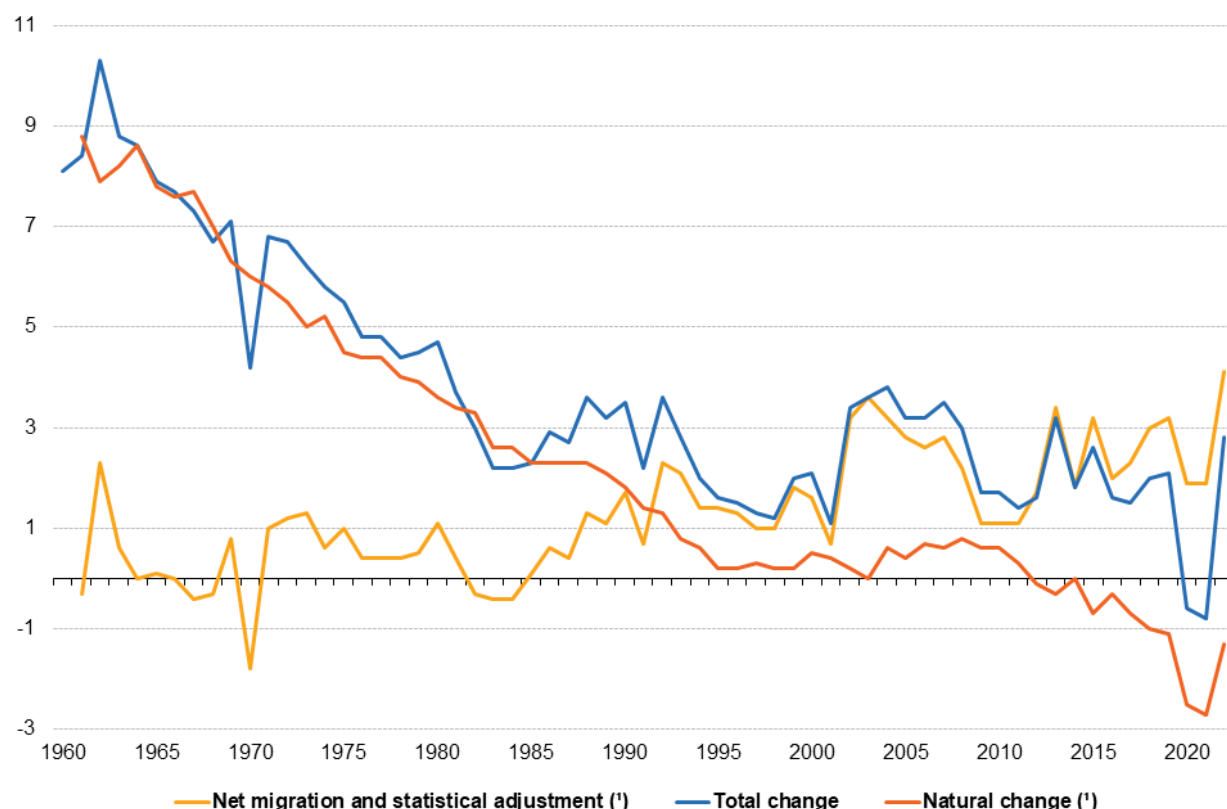
**Figure 2: Births and deaths, EU, 1961-2022 (million) Source: Eurostat (demo\_gind)**

In 2022, **deaths** continued to outnumber **live births** in the EU, resulting in the aforementioned negative natural change in the population. The total increase which was recorded in 2022 for the EU population was exclusively due to (positive) net migration (and statistical adjustment), while the number of deaths (5.15 million) outnumbered those of live births (3.86 million). In short, the natural change of the EU population (-1.3 million persons) was lower than the net migration and statistical adjustment (+2.9 million), resulting in an increase in population of almost 1.7 million. Net migration increased in absolute value from +1.1 million in 2021 to +2.9 million in 2022.

Net migration in the EU increased considerably from the mid-1980s onwards and was the main determinant of population growth since the 1990s (see Figure 3). The number of live births decreased progressively between 1960 and 1995, while the number of deaths slowly increased. The gap between live births and deaths in the EU narrowed considerably from 1961 onwards, and the natural change of the population became negative in 2012, when the number of deaths surpassed the number of births. The number of deaths is expected to further increase because of the ageing population, and assuming that fertility rates remain at a relatively low level, the negative natural change (more deaths than births) could thus well continue. Should this be the case, the EU's overall population decline or growth in the future is likely to depend largely on the contribution made by net migration.

## Population change by component (annual crude rates), EU, 1960-2022

(per 1 000 persons)



Note: Excluding French overseas departments up to and including 1997. Breaks in series: 1991, 1998, 2000-01, 2008, 2010-12, 2014, 2015, 2017, 2019, 2021 and 2022.

2022: Eurostat estimate

(') 1960: not available.

Source: Eurostat (online data code: demo\_gind)

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**Figure 3: Population change by component (annual crude rates), EU, 1960-2022 (per 1 000 persons) Source: Eurostat (demo\_gind)**

## Population change at national level

The population of individual EU Member States on 1 January 2023 ranged from 0.5 million in Malta to 84.4 million in Germany (see Table 1). Germany, France and Italy together comprised almost half (47 %) of the total EU population on 1 January 2023.

## Demographic balance, 2022

(thousands)

	Population, 1 January 2022	Live births	Deaths	Natural change (¹)	Net migration and statistical adjustment (²)	Total change between 1 January 2022 and 2023	Population, 1 January 2023
<b>EU (³)</b>	446,735.3	3,885.6	5,148.6	-1,263.0	4,054.7	2,791.7	448,387.9
<b>Belgium (³)</b>	11,617.6	114.1	116.4	-2.3	138.7	136.4	11,754.0
<b>Bulgaria (⁴)</b>	6,838.9	56.6	118.8	-62.2	27.4	-34.8	6,447.7
<b>Czechia</b>	10,516.7	101.3	120.2	-18.9	329.7	310.8	10,827.5
<b>Denmark</b>	5,873.4	58.4	59.4	-1.0	60.2	59.2	5,932.7
<b>Germany</b>	83,237.1	738.9	1,066.3	-327.5	1,449.2	1,121.7	84,358.8
<b>Estonia</b>	1,331.8	11.6	17.3	-5.7	39.8	34.1	1,365.9
<b>Ireland</b>	5,060.0	57.6	35.1	22.5	111.8	134.3	5,194.3
<b>Greece (³)(⁵)</b>	10,459.8	75.9	140.0	-64.1	-1.7	-65.7	10,394.1
<b>Spain (³)(⁴)</b>	47,432.9	329.9	462.7	-132.8	695.7	562.9	48,059.8
<b>France (³)</b>	67,871.9	723.6	667.2	56.4	142.4	198.8	68,070.7
<b>Croatia</b>	3,862.3	33.9	57.0	-23.1	11.7	-11.4	3,850.9
<b>Italy (³)(⁴)</b>	59,030.1	392.6	713.5	-320.9	141.5	-179.4	58,850.7
<b>Cyprus (³)</b>	904.7	10.2	7.3	2.9	13.1	16.0	920.7
<b>Latvia</b>	1,875.8	16.0	30.7	-14.8	22.0	7.3	1,883.0
<b>Lithuania</b>	2,806.0	22.1	42.9	-20.8	72.1	51.3	2,857.3
<b>Luxembourg</b>	645.4	6.5	4.4	2.0	13.4	15.4	660.8
<b>Hungary (⁴)</b>	9,689.0	89.7	136.8	-47.2	36.6	-10.5	9,597.1
<b>Malta (⁴)</b>	521.0	4.3	4.2	0.1	21.8	21.9	542.1
<b>Netherlands</b>	17,590.7	167.5	170.1	-2.6	223.2	220.6	17,811.3
<b>Austria</b>	8,978.9	82.6	93.3	-10.7	136.5	125.8	9,104.8
<b>Poland (⁴)</b>	37,654.2	305.1	448.4	-143.3	7.3	-136.0	36,753.7
<b>Portugal</b>	10,352.0	83.7	124.3	-40.6	156.0	115.3	10,467.4
<b>Romania (³)</b>	19,042.5	183.6	272.0	-88.4	97.5	9.1	19,051.6
<b>Slovenia</b>	2,107.2	17.6	22.5	-4.9	14.5	9.6	2,116.8
<b>Slovakia</b>	5,434.7	52.7	59.6	-6.9	1.0	-5.9	5,428.8
<b>Finland</b>	5,548.2	45.0	63.2	-18.3	34.0	15.7	5,564.0
<b>Sweden (³)</b>	10,452.3	104.7	94.7	10.0	59.2	69.2	10,521.6
<b>Iceland</b>	376.2	4.4	2.7	1.7	9.8	11.5	387.8
<b>Liechtenstein</b>	39.3	0.4	0.3	0.1	0.3	0.4	39.7
<b>Norway</b>	5,425.3	51.5	45.8	5.7	58.0	63.7	5,489.0
<b>Switzerland</b>	8,738.8	82.4	74.4	7.9	66.0	73.9	8,812.7
<b>Bosnia and Herzegovina</b>	:	:	:	:	:	:	:
<b>Montenegro</b>	617.7	7.0	7.1	0.0	-0.9	-1.0	616.7
<b>North Macedonia (⁴)</b>	1,837.1	18.1	22.5	-4.4	-2.8	-7.2	1,830.0
<b>Albania</b>	2,793.6	24.7	24.0	0.7	-32.5	-31.8	2,761.8
<b>Serbia</b>	6,797.1	62.7	109.2	-46.5	-86.2	-132.7	6,664.4
<b>Turkey</b>	84,680.3	1,035.8	504.8	531.0	68.3	599.3	85,279.6
<b>Ukraine</b>	:	:	:	:	:	:	:
<b>Georgia</b>	:	:	:	:	:	:	3,736.4
<b>Kosovo (⁴)</b>	:	:	:	:	:	:	:
<b>Moldova</b>	:	:	:	:	:	:	2,512.8

(:) not available

(¹) Live births minus deaths.

(²) Total change minus natural change.

(³) Provisional for 2023.

(⁴) Break in series in 2023. The components of the demographic balance are estimated by Eurostat using two consistent population figures.

(⁵) Estimate.

(\*) Break in series in 2022.

(\*) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence

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Source: Eurostat (online data code: demo\_gind)

**Table 1: Demographic balance, 2022 (thousands) Source: Eurostat (demo\_gind)**

While the population of the EU as a whole slightly increased during 2022 (1.7 per 1 000 persons), the change was not evenly distributed across the EU Member States: 20 Member States observed an increase in their respective populations, while the population fell in 7 Member States. Malta (41.2 per 1000 persons), Czechia (29.1) and Ireland (26.2) recorded the highest population growth rates in 2022, while Greece (-6.3), Bulgaria (-5.4) and Poland (-3.7) recorded the highest decreases (see Table 2). However, results should be taken as provisional, as statistics for the year 2022 may be affected by unrevised population figures at the beginning of the year following the 2021 population census.

## Crude rates of population change, 2020-22

(per 1 000 persons)

	Total change			Natural change			Net migration and statistical adjustment (1)		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
EU	-0.6	-0.4	6.2	-2.5	-2.8	-2.8	1.9	2.4	9.1
Belgium	2.8	6.6	11.7	-1.1	0.5	-0.2	3.9	6.1	11.9
Bulgaria (*)	-5.0	-11.3	-5.4	-9.5	-13.1	-9.6	4.4	1.8	4.2
Czechia	0.7	2.1	29.1	-1.8	-2.7	-1.8	2.5	4.8	30.9
Denmark	3.0	5.7	10.0	1.1	1.1	-0.2	1.9	4.6	10.2
Germany	-0.1	1.0	13.4	-2.6	-2.7	-3.9	2.4	3.7	17.3
Estonia	0.8	1.3	25.3	-2.0	-4.0	-4.2	2.8	5.3	29.5
Ireland	8.4	10.7	26.2	4.7	5.0	4.4	3.7	5.6	21.8
Greece	-3.7	-7.0	-6.3	-4.3	-5.5	-6.1	0.6	-1.6	-0.2
Spain (2)	1.4	0.7	11.8	-3.2	-2.4	-2.8	4.6	3.1	14.6
France (3)	2.5	2.7	2.9	1.0	1.2	0.8	1.5	1.5	2.1
Croatia	-5.4	-39.7	-3.0	-5.2	-6.6	-6.0	-0.2	-33.1	3.0
Italy	-6.8	-4.3	-3.0	-5.6	-5.2	-5.4	-1.2	1.0	2.4
Cyprus	9.0	9.7	17.5	3.9	3.4	3.2	5.0	6.3	14.4
Latvia	-7.6	-9.3	3.9	-5.9	-9.1	-7.9	-1.7	-0.2	11.7
Lithuania	0.6	3.7	18.1	-6.6	-8.7	-7.4	7.2	12.4	25.5
Luxembourg	13.7	16.7	23.6	2.9	3.4	3.1	10.7	13.2	20.5
Hungary (4)	-4.0	-4.3	-1.1	-4.9	-6.4	-4.9	0.9	2.1	3.8
Malta (5)	3.0	9.4	41.2	0.6	0.4	0.1	2.3	8.9	41.0
Netherlands	3.9	6.6	12.5	0.0	0.5	-0.1	3.9	6.1	12.6
Austria	3.5	5.2	13.9	-0.9	-0.7	-1.2	4.4	5.8	15.1
Poland (6)	-3.1	-4.9	-3.7	-3.2	-5.0	-3.9	0.1	0.1	0.2
Portugal (4)	0.2	5.2	11.1	-3.8	-4.4	-3.9	4.0	9.6	15.0
Romania (5)	-6.6	-8.6	0.5	-5.2	-8.2	-4.6	-1.4	-0.4	5.1
Slovenia	6.2	-0.9	4.6	-2.5	-2.0	-2.3	8.7	1.2	6.9
Slovakia	0.3	-4.6	-1.1	-0.4	-3.1	-1.3	0.8	-1.5	0.2
Finland	1.5	2.6	2.8	-1.6	-1.5	-3.3	3.2	4.1	6.1
Sweden	5.0	7.0	6.6	1.4	2.1	1.0	3.5	4.9	5.6
Iceland	12.7	20.0	30.1	6.0	6.8	4.4	6.7	13.2	25.7
Liechtenstein	7.9	6.5	9.4	0.9	2.7	2.2	7.0	3.8	7.2
Norway	4.4	6.3	11.7	2.3	2.6	1.0	2.1	3.7	10.6
Switzerland	7.4	7.6	8.4	1.1	2.1	0.9	6.3	5.5	7.5
Bosnia and Herzegovina	:	:	:	:	:	:	:	:	:
Montenegro	-1.8	-4.9	-1.6	-0.3	-3.4	-0.1	-1.5	-1.5	-1.5
North Macedonia	-3.6	-118.9	-3.9	-3.2	-5.1	-2.4	-0.4	-113.8	-1.5
Albania	-5.7	-12.9	-11.5	0.2	-1.2	0.2	-5.9	-11.7	-11.7
Serbia	-8.	-10.9	-19.7	-8.	-10.9	-6.9	0.	0.	-12.8
Turkey	5.5	12.7	7.1	:	:	6.2	4.9	:	0.8
Ukraine	:	:	:	:	:	:	:	:	:
Georgia	:	:	12.9	:	:	-1.8	:	:	14.7
Kosovo (*)	:	:	:	:	:	:	:	:	:
Moldova	:	:	-35.6	:	:	-3.6	:	:	-32.0

(:) not available

(1) The statistical adjustment corresponds to all changes in the population that cannot be classified as births, deaths, immigration and emigration.

(2) Break in series in 2021.

(3) Provisional in 2022.

(4) Break in series in 2022.

(5) Estimate in 2022.

(6) Break in series in 2023. The components of the demographic balance are estimated by Eurostat using two consistent population figures.

(\*) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence

eurostat 

Source: Eurostat (online data code: demo\_gind)

**Table 2: Crude rates of population change, 2020-22 (per 1 000 persons) Source: Eurostat (demo\_gind)**

Analysing the two components of population change in the national data, eight types of population change can be identified, distinguishing growth or decline and the relative weights of natural change and net migration — see Table 3 for the full typology. During 2022, the six EU countries (Ireland, Cyprus, Luxembourg, Sweden, France and Malta) showed a positive natural increase of population. A total of 21 EU Member States had negative rates of natural change, with deaths outnumbering births the most in Bulgaria (-9.6 per 1 000 persons), followed by Latvia (-7.9) and Lithuania (-7.4). In relative terms, a total of 26 EU Member States had positive rates of net migration (and statistical adjustment): Malta (41.0 per 1 000 persons), Czechia (30.9) and Estonia (29.5) had the highest crude rates of net migration in 2022, while Greece (-0.2 per 1 000 persons) was the only Member States recording a negative crude net migration rate.

## Contribution of natural change and net migration (and statistical adjustment) to population change, 2022

Demographic drivers	EU Member States, EFTA countries and enlargement countries
<b>Growth due:</b>	
only to natural change	-
more to natural change	Turkey
more to positive net migration (and adjustment)	Belgium, Ireland, France, Cyprus, Luxembourg, Malta <sup>(*)</sup> , Sweden
only to positive net migration (and adjustment)	Czechia, Denmark, Germany, Estonia, Spain <sup>(*)</sup> , Latvia, Lithuania, Netherlands, Austria, Portugal <sup>(*)</sup> , Romania, Slovenia, Finland, Iceland, Liechtenstein, Norway, Switzerland
<b>Decline due:</b>	
only to natural change	Bulgaria <sup>(*)</sup> , Greece, Italy, Hungary <sup>(*)</sup> , Poland <sup>(*)</sup> , Slovakia
more to natural change	Greece, North Macedonia
more to negative net migration (and adjustment)	Albania, Montenegro, Serbia, Moldova
only to negative net migration (and adjustment)	-

(<sup>1</sup>) Population on 1.1.2022 is based on the provisional results of the Census 2021.

(<sup>2</sup>) Net migration (and adjustment) not available.

(<sup>3</sup>) Break in series in 2023. The components of the demographic balance are estimated by Eurostat using two consistent population figure:



Source: Eurostat (online data code: demo\_gind)

**Table 3: Contribution of natural change and net migration (and statistical adjustment) to population change, 2022 Source: Eurostat (demo\_gind)**

Among the 20 EU Member States where the population increased in 2022, six countries (Ireland, France, Cyprus, Luxembourg, Malta and Sweden) recorded both a natural increase and positive net migration contributing to their population growth. In 14 Member States (Belgium, Czechia, Denmark, Germany, Estonia, Spain, Latvia, Lithuania, Netherlands, Austria, Portugal, Romania, Slovenia and Finland), the positive net migration was the driver of population growth, as natural population change was negative.

Of the 7 EU Member States that reported a reduction in the level of population during 2022, only Greece recorded a decline in the population due to negative natural change and negative net migration. For the other six countries (Bulgaria, Croatia, Italy, Hungary, Poland and Slovakia) the effect of positive net migration was not sufficient to compensate for the negative natural change.

## Source data for tables and graphs

[Population and population change statistics: tables and figures](#)

## Data sources

The demographic balance provides an overview of annual demographic developments in the EU Member States; statistics on population change are available in absolute figures and as crude rates. The “crude rate of population growth” is the ratio of total population growth during the year to the average population of the area in question that year. The value is expressed per 1 000 persons (see [Population glossary](#)). Population change — or population growth — in a given year is the difference between the population size on 1 January of the given year and the corresponding level from 1 January of the previous year. It consists of two components: natural change and net migration plus statistical adjustment. “Natural population change” is the difference between the number of live births and the number of deaths. If natural change is positive, then it is often referred to as a natural increase. “Net migration” is the difference between the number of immigrants and the number of emigrants. In the context of the annual demographic balance, Eurostat produces net migration figures by taking the difference between total population change and natural change; therefore, this concept is referred to as “net migration plus statistical adjustment”.

Eurostat collects demographic data from the National Statistical Institutes (NSIs) of the EU Member States and also from almost all non-EU Member States in Europe, including EFTA countries, candidate countries and potential candidates. The population figures transmitted by the countries can either be based on data from the most recent



census adjusted by the components of population change (live births, deaths, immigration and emigration) produced since the last census, or based on population registers. The estimates of population produced using the demographic components since the last census should then be revised once the census results become available, to revise and rebase the population statistics series for the previous decade. In line with Regulation (EC) No 763/2008 and related implementing acts, Member States and EFTA countries implemented their population and housing censuses in 2021-2022. Countries may decide to carry out post-census revisions of demography and international migration statistics for the last intercensal period (2012-2021) depending on the census results.

## Context

Statistics on population change and the structure of population are increasingly used to support policymaking and to enable the monitoring of demographic behaviour within political, economic, social and cultural contexts. In particular, this concerns demographic developments that focus on a likely reduction in the relative importance of the working-age population and a corresponding increase in the number of older persons. These statistics may be used to support a range of different analyses, including studies relating to population ageing and its effects on the sustainability of public finance and welfare, the evaluation of fertility as a background for family policies, or the economic and social impact of demographic change.

The EU has been going through a period of demographic and societal change. The outbreak of the Covid-19 pandemic is expected to leave a lasting impact on the way we live and work together. The outbreak came at a time when Europe had already gone through a period of profound demographic and societal change. More information on the work of the European Commission 2019-2024 to tackle the impact of demographic change in Europe can be found in the European Commission's [dedicated pages](#).

Statistics on Demography of Europe is presented in [Eurostat's interactive publication](#).

## Other articles

- [Fertility statistics](#)
- [Migration and migrant population statistics](#)
- [Mortality and life expectancy statistics](#)
- [Population structure and ageing](#)
- [Population statistics at regional level](#)
- [Population projections in the EU](#)
- [Population and housing census 2021 – overview](#)

## Main tables

- [Population \(t\\_demo\\_pop\)](#)

## Database

- [Population](#), see:

Population (demo\_pop)

Regional data (demopreg)



## Dedicated section

- [Population and Demography overview](#)

## Publications

- [All publications on demography, population stock and balance](#)
- [Demography of Europe](#)
- [Ageing Europe](#)
- [Demography report](#)

## Methodology

- [Population change - Demographic balance and crude rates at national level](#) (ESMS metadata file — demo\_gind\_esms)
- [Fertility](#) (ESMS metadata file — demo\_fer\_esms)
- [Mortality](#) (ESMS metadata file — demo\_mor\_esms)
- [Population](#) (ESMS metadata file — demo\_pop\_esms)

## External links

- [The impact of demographic change - in a changing environment](#)
- [The 2021 Ageing Report](#)