

Territories and demographic change

Regional patterns and policy approaches

Testori, G., Franklin, R., Saraceno, P. P., Pertoldi, M.,
Perea Milla Fernandez, D., Stut, M. and Dijkstra, L.

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Contact information

Name: Giulia Testori

Email: giulia.TESTORI@ec.europa.eu

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Authors

- Giulia Testori, European Commission, JRC, Seville, Spain.
- Rachel Franklin, Center for Geographic Analysis, Harvard University, United States of America.
- Pier Paolo Saraceno, European Commission, JRC, Seville, Spain.
- Martina Pertoldi, external expert.
- Daniel Perea Milla Fernandez⁽¹⁾, European Commission, JRC, Ispra, Italy.
- Martijn Stut⁽²⁾, European Commission, JRC, Ispra, Italy.
- Lewis Dijkstra, European Commission, JRC, Ispra, Italy.

Chapter contributors

- **Chapter 1:** Giulia Testori and Rachel Franklin.
- **Chapter 2:** Lewis Dijkstra, Daniel Perea Milla Fernandez and Martijn Stut.
- **Chapter 3:** Rachel Franklin and Giulia Testori.
- **Chapter 4:** Rachel Franklin and Giulia Testori.
- **Chapter 5:** Giulia Testori and Rachel Franklin.
- **Chapter 6:** Pier Paolo Saraceno, Martina Pertoldi and Giulia Testori.
- **Chapter 7:** Giulia Testori.

⁽¹⁾ JRC intern.

⁽²⁾ JRC intern.

2. Different shades of demographic change: the uneven nature of population loss in Europe

Population decline has become a key concern within the EU as more and more Member States and regions are starting to shrink. This is not a new phenomenon: quite a few regions have experienced periods of population decline since the 1960. Existing narratives explain population decline through a focus on rural and remote regions. However, this dynamic does not hold for all rural regions. The process of population decline is influenced by natural change (NC) and net migration (NM), with positive NM often compensating for negative NC. Therefore, this chapter explores the current and, through projections, potential future state of population decline across the EU, with a careful consideration of the interaction of immigration, emigration, population ageing and fertility in shaping population dynamics, and the current population projections and their implications for the EU in the coming decade. This chapter employs data from Eurostat and the Annual Regional Database of the European Commission's Directorate-General for Regional and Urban Policy (ARDECO) to illustrate existing population dynamics across the EU.

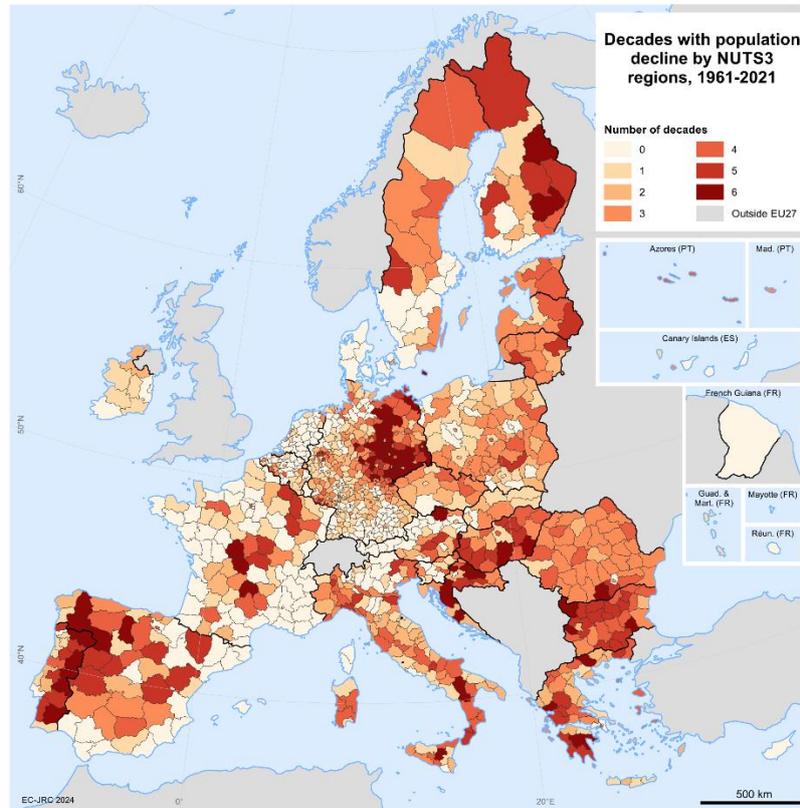
Overall, the population of the EU has steadily increased since 1960. On 1 January 2024, the total population of the EU was estimated to be 449 million. Despite this general growth, population change is projected to become negative in the coming decade. Population growth has also not been uniform across the EU. While some Member States and regions have experienced steady growth, many have experienced periods of population decline since 1960.

2.1. Long-lasting population decline

Many NUTS (nomenclature of territorial units for statistics) 3 regions experienced population decline for at least one decade between 1961 and 2021 (Figure 1). Some regions experienced declines for multiple decades (red) or even all six decades (dark red). A minority of regions did not have any population decline (light red). NUTS 3 regions in eastern Member States experienced more decades with population declines than regions in north-western Europe, as most regions of Bulgaria, Estonia, Croatia, Latvia, Lithuania, Hungary, Poland and Romania experienced at least three or four decades of decline since 1961. In contrast, most regions in north-western Member States such as Belgium, Denmark, Ireland, France and the Netherlands experienced one decade of population decline or no decades of decline. Continued population decline is prevalent in many regions of southern Member States and in some more remote regions in the Nordic Member States. Germany illustrates the eastern-western dichotomy of population decline in Europe very clearly, as most regions in former East Germany had more decades with decline than regions in western Germany. The process of population decline has been present across Europe for many decades, and it has been driven by time-specific historical events, policies or structural shocks, such as the dissolution of the Soviet Union or the COVID-19 pandemic, and by wider economic processes such as industrialisation, deindustrialisation and the rise of the knowledge economy. More specifically, these historical events

and processes produce differential and fluctuating patterns of population decline across the EU by altering the drivers of migration and fertility at the national and regional scales.

Figure 1. Number of decades with population decline by NUTS 3 region, 1961–2021

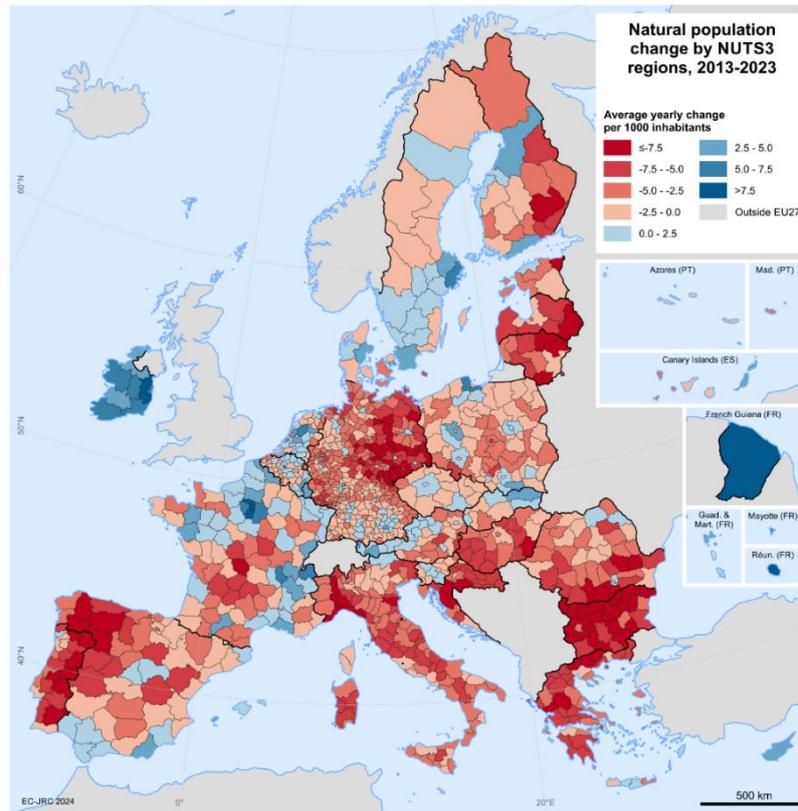


Source: Authors' calculation based on the 2021 population grid and the historical Local Administrative Unit (LAU) population data from 1961 to 2011 (<https://ec.europa.eu/eurostat/web/nuts/local-administrative-units>).

Natural population change (births minus deaths) in the EU was negative between 2013 and 2023. As a result, most EU regions also had negative natural population changes during that period. NC was very negative (dark red in Figure 2) in most regions of the southern and eastern Member States. NC is projected to become more negative in the coming decades due to the ageing population, which reduces the share of women of childbearing age, and persistent low fertility rates.

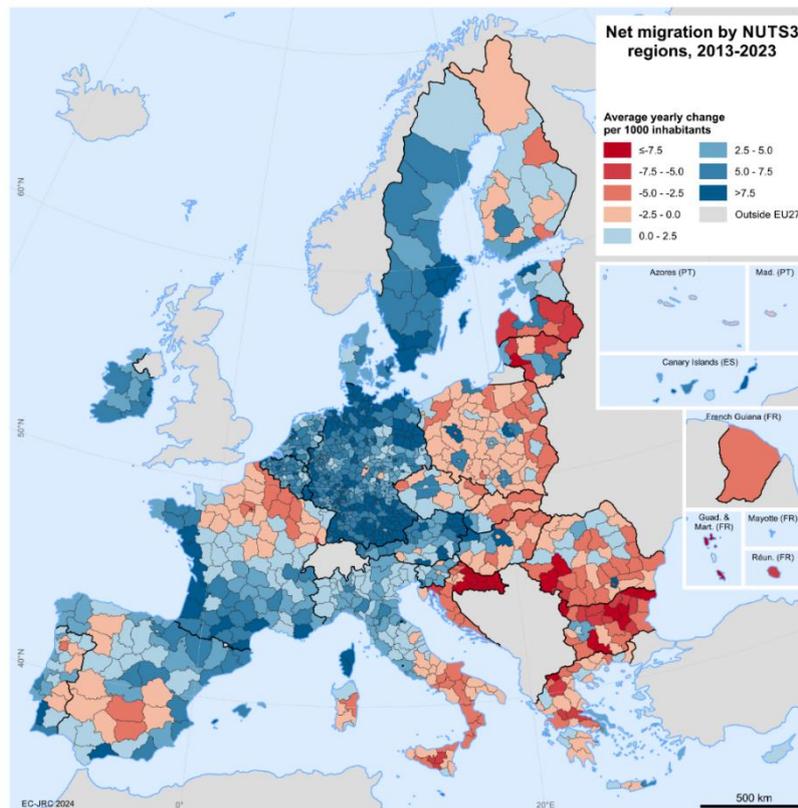
NM is the difference between people moving in and people moving out of a region. This includes people moving from another region in the same country, from another Member State and from outside the EU. As a result, positive NM can occur purely through movements within a country or within the EU. Positive NM can compensate for negative NC, as seen in many regions in north-western Member States (Figure 2 and Figure 3). In eastern Member States, however, NM is typically negative, further exacerbating natural decline.

Figure 2. Natural change by NUTS3 region, 2013–2023



Source: JRC ARDECO.

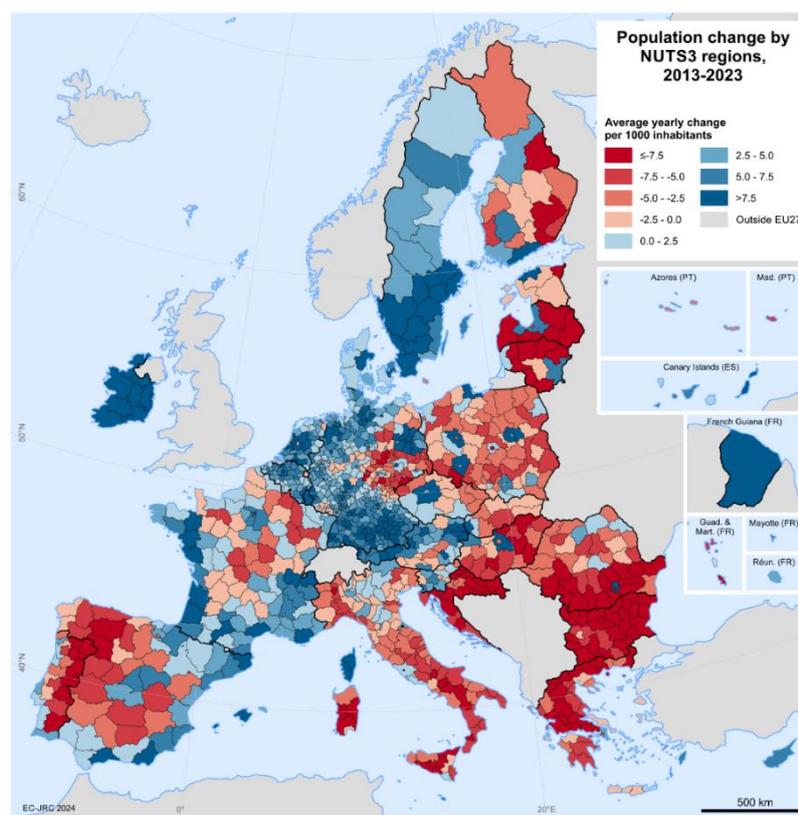
Figure 3. Net migration by NUTS3 region, 2013–2023



Source: JRC ARDECO.

Migration follows different patterns depending on age group. Young adults tend to move to an urban region to get a higher education, meet new people and find their first job. Many of the EU's NUTS 3 regions containing large urban and metropolitan areas (e.g. Madrid, Barcelona, Dublin, Paris, Berlin and Stockholm) experience very positive NM and, consequently, positive TC. Instead, as estimated by Ghio et al. (2022) and Aurambout et al. (2021), middle-aged adults tend to move to the suburbs or smaller cities in intermediate regions, especially when they have small children, since houses are larger and cheaper than in the big cities in urban regions. For example, this suburbanisation can be seen clearly in the regions surrounding the larger Polish cities. Adults aged 65+ tend to move to rural regions, as they no longer need to travel to work and they appreciate the amenities offered by the countryside and the lower housing costs. As a result, rural regions in the EU, on average, have a positive NM rate⁽⁸⁾.

Figure 4. Population change by NUTS3 regions, 2013–2023.



Source: JRC ARDECO.

Overall, migration from outside the EU is the only reason that the EU's population has not yet started shrinking. For most EU regions, the population grows only if NM is positive, as natural population growth tends to be negative (Table 1). Predominantly urban regions are the exception, with positive but very low NC (0.3 per 1 000 inhabitants per year); they also have the highest NM rate (3.8 per 1 000 inhabitants per year). In contrast, NM is positive for rural regions only when they are close to cities; it is negligible in remote rural regions. As a result, immigrants tend to make up a higher share of the total population in predominantly urban regions than in intermediate or rural regions (Table 2). Unsurprisingly, remote rural regions have the highest share of their total population born in the same Member State, with a relatively small immigrant population when compared with other typologies. In each regional typology, the share of residents born outside

⁽⁸⁾ The specific ARDECO dataset on NM is available here: <https://territorial.ec.europa.eu/ardeco/viewer/SNMTN>.

the EU is larger than the share of those born in another Member State, despite free movement within the EU being guaranteed and migration from outside being difficult and limited.

Table 1. Average yearly change per 1 000 inhabitants by regional typology, 2013–2023

Average yearly change (per 1000 inhabitants), 2013–2023	Total population change	Natural change	Net migration
Predominantly urban	4.1	0.3	3.8
Intermediate	0.9	-1.8	2.7
Predominantly rural, close to a city	-1.3	-2.5	1.2
Predominantly rural, remote	-4.1	-4.1	0.0
EU27	1.6	-1.2	2.8

Source: JRC ARDECO.

Table 2. Country of birth for the 2021 EU population by regional typology

Share of 2021 population in %	Born in the same country	Born in another EU Member State	Born outside the EU	Total
Predominantly urban	83.0	5.0	12.0	100
Intermediate	88.2	4.3	7.5	100
Predominantly rural, close to a city	90.5	4.0	5.5	100
Predominantly rural, remote	91.4	3.1	5.5	100
EU27	86.6	4.5	8.9	100

Source: Authors' elaboration of the Eurostat population grid.

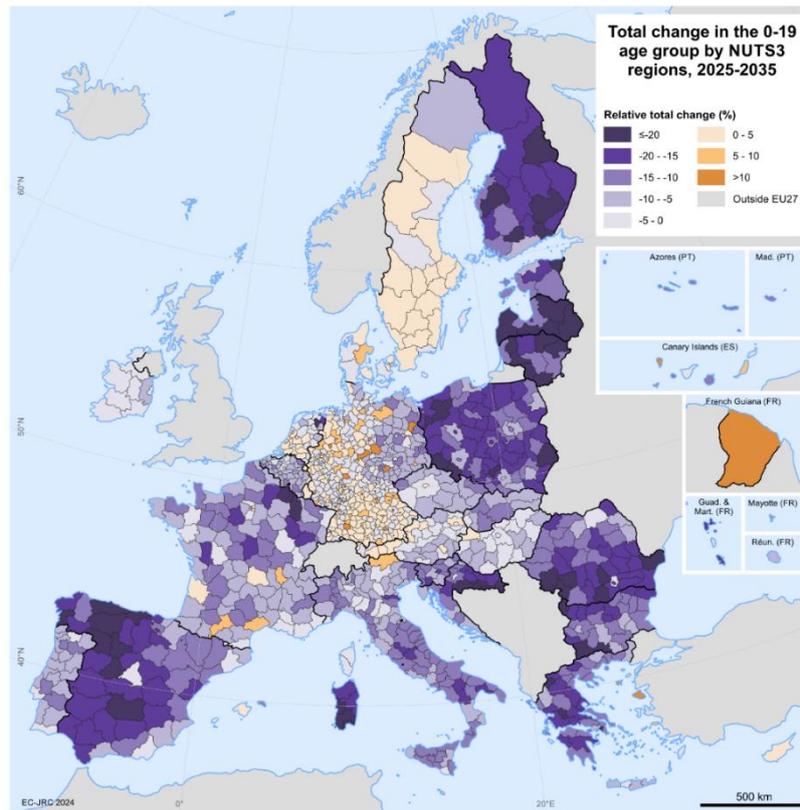
2.2. Population projections highlighting further ageing

Population projections are important, as they help show the change in the structure of EU populations assuming that current trends in fertility, mortality and migration are maintained. First, populations of young people across the EU are projected to decrease in proportion to the size of the total population for most Member States (Figure 5). The only exceptions seem to be Denmark, Germany and Sweden, where most NUTS 3 regions are projected to experience a small increase in the proportion of young people. This projection is a direct result of low fertility rates across the EU in recent decades, with the fertility rates of the previous and current cohorts of women of reproductive age being below the replacement level across the EU. The fertility rate across all Member States in 2023 was 1.38 (live births per woman), far below the replacement-level fertility rate of 2.1 that is necessary to maintain the population size, assuming the absence of migration (Eurostat, 2024c). Furthermore, a proportional decrease in the proportion of young people in selected regions may be driven by existing patterns of movement within the EU. Adult individuals immigrating to countries such as Denmark, Germany and Sweden from other Member States may be relocating with their young dependants. Hence, current patterns of fertility and migration will influence future cohorts of young people across the EU.

Second, projections based on a strong assumption of convergence show a proportional decrease in the share of the population aged 20–64 for most NUTS 3 regions of the EU (Figure 6). Consecutive decades of shrinkage in the proportion of young people in most Member States (due to low fertility rates) will result in fewer individuals entering the working-age group over time. In other words, the

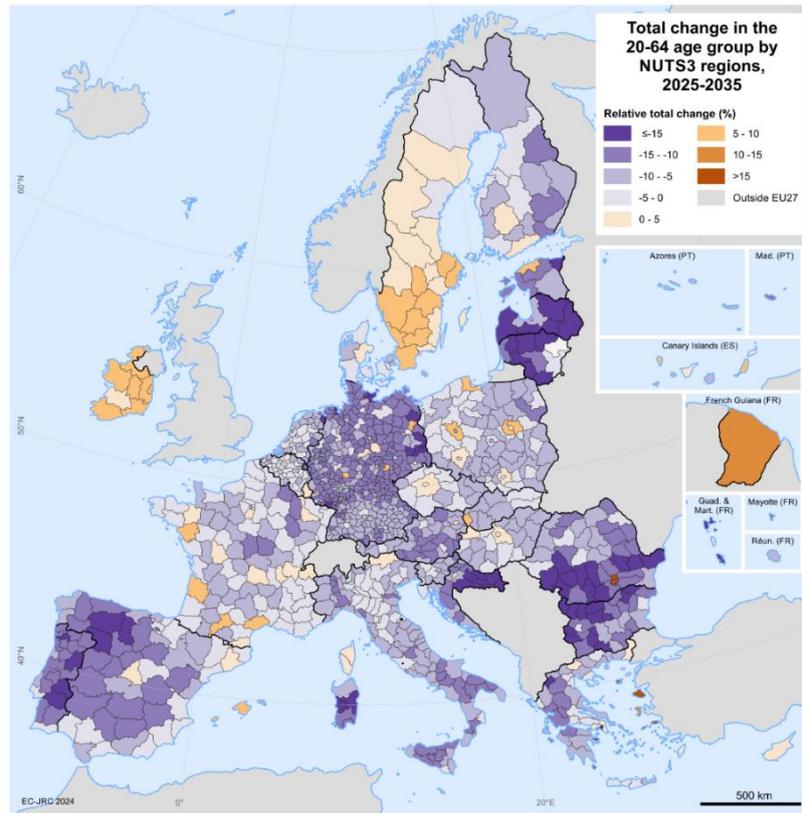
momentum of the current population of the EU will reinforce the shrinkage of the working-age group in the coming decades. This dynamic is especially relevant to Member States and regions that have negative NM rates. Additionally, given improvements in life expectancy, the share of the population aged 65+ will continue to grow in the coming decades. Projections show that the 65+ age group will expand in almost every NUTS 3 region of the EU (Figure 7). This is especially true in Belgium, Denmark, Germany, Ireland, Spain, Italy, the Netherlands and Austria, where a 20 % increase in the proportion of the population aged 65+ is projected in most NUTS 3 regions.

Figure 5. Projected Total change in the 0–19 age group by NUTS3 region, 2025–2035



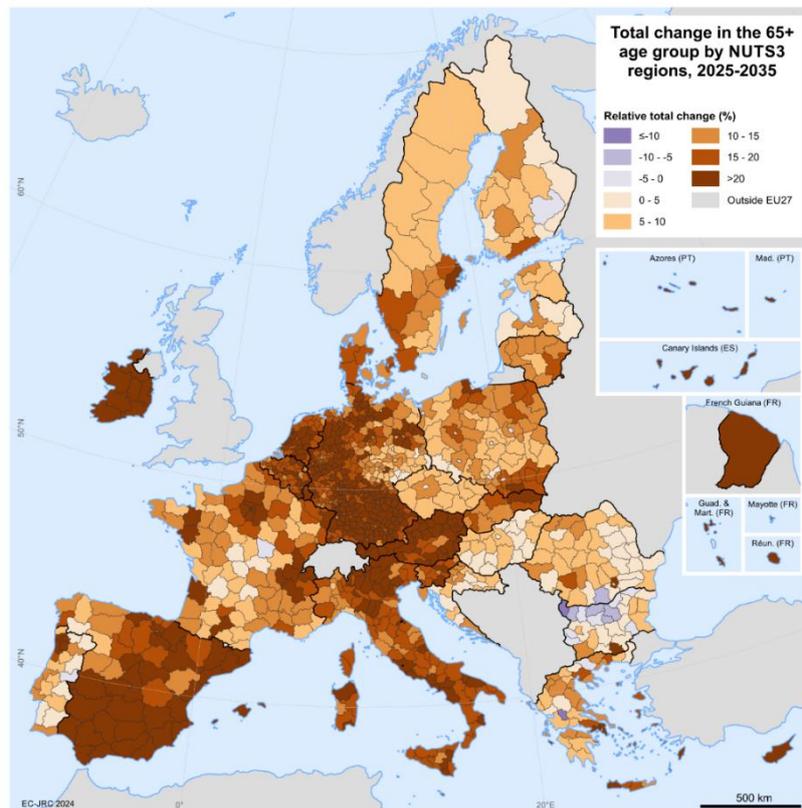
Source: Authors' calculations based on Eurostat regional population projections (EUROPOP2019).

Figure 6. Projected Total change in the 20–64 age group by NUTS3 region, 2025–2035



Source: Authors' calculations based on Eurostat regional population projections (EUROPOP2019).

Figure 7. Projected Total change in the 65+ age group by NUTS3 region, 2025–2035



Source: Authors' calculations based on Eurostat regional population projections (EUROPOP2019).

Overall, population projections show clear changes in the age structure of EU populations for all regional typologies (Table 3). The 0–19 and 20–64 age groups are projected to decrease in size for all typologies, especially rural regions (close to cities and remote). This reduction is smallest in urban regions, but the increase in the size of the 65+ age group in urban areas is projected to exceed the EU average. In rural regions, it is expected that older age groups will continue to drive total population growth through urban-to-rural migration. Hence, the 65+ age group is projected to grow in size despite shrinking younger age groups. The population projections presented here are a continuation of past and current patterns of population change across the EU and are a result of low fertility rates and population ageing for most Member States.

Table 3. Total population change projections by age group and regional typology, 2025–2035

Total change 2025-2035, in %	Age groups			TOTAL
	0-19	20-64	65+	
Predominantly urban	-3.8	-2.8	19.8	1.7
Intermediate	-6.8	-5.5	16.1	-0.8
Predominantly rural, close to a city	-9.6	-7.2	13.5	-2.8
Predominantly rural, remote	-11.0	-7.9	9.8	-4.0
EU27	-6.2	-4.8	16.7	-0.3

Source: Based on Eurostat's regional population projection EUROPOP19. It relies on the baseline scenario, which includes a strong assumption of convergence.

2.3. Conclusions

Projected population patterns are a result of current key statistics and migration patterns across the EU. In essence, increasing life expectancy and low fertility rates will result in populations ageing without a natural replacement among incoming cohorts. Current trends suggest that the EU population will plateau and start to slowly decline. While this could be labelled as alarming, many regions of the EU have already experienced population decline for multiple decades since 1960, and the structure of the EU population has experienced extensive changes and shocks throughout the past few decades. Existing narratives on demographic change could rethink how rural regions are portrayed, as not all rural regions are shrinking. Demographic change is not uniform in direction or magnitude across the EU. Although rural regions, on average, have experienced positive NM, some have experienced net outflows. In most rural regions, populations have been shrinking, but in some rural regions closer to cities they have grown. As seen above, this is because adults aged 65+ tend to move to rural regions, as they no longer need to travel to work and they appreciate the amenities offered by the countryside and the lower housing costs. Instead of concentrating on demographic change within one region, the policy focus should be on the dependencies created between regions through migration patterns. As migration within the EU inevitably leads to increases in the sending regions and reductions in the receiving regions. In this sense, existing flows of migration result in regions becoming interconnected and interdependent. Hence, policies and interventions could take into account the broader macro-regional context when considering migration dynamics. The population projections highlight the significant upcoming changes in age structure, with growing populations among older age groups and shrinking populations among younger ones.

As will be seen in the following chapters, different regions may require different approaches. Moreover, as many policies have a direct or indirect impact on population dynamics, whether through economic development, housing, healthcare or education, such policies may want to take into account not only demographic trends, but also whether a region is predominantly urban, intermediate or predominantly rural.