

Population

2





This chapter describes demographic patterns and trends across the regions of the European Union (EU): most of the data refers to a snapshot for 2011. There were, on average, 503.0 million inhabitants across the EU-27 during 2011, an increase of 1.2 million (or 0.2%) in relation to the year before. EU-27 population growth has been unbroken since time series began in 1961, but growth has been at a slower pace since the start of the 1980s. The slowdown in population growth is closely linked to the natural change of the population (total births minus total deaths), as many developed world economies experienced a marked reduction in birth rates alongside continually rising levels of life expectancy. Net migration has counter-balanced this development in some areas, and resulted in the overall population continuing to grow in the EU-27.

Demographic changes experienced in the EU will be of considerable importance in the coming decades as demographic models for future population trends suggest that consistently low birth rates and increasing life expectancy will be reflected in an older age structure of the population. This pattern of population ageing, which is increasingly apparent across EU regions, is expected to have profound implications for a wide range of policy areas, with an impact on the school-age population, healthcare, participation in the labour force, social protection, social security issues and government finances among others.

Main statistical findings

Population size and density

The population of the EU-27 broke through the threshold of 500 million inhabitants during 2009, and by the start of 2012 there were 503.7 million people living across the EU Member States. In 2011, the EU-27 population density was estimated at 117 inhabitants per square kilometre (km²).

Map 2.1 shows that NUTS level 3 regions that include a capital city, as well as regions in their immediate vicinity, are among the most densely populated regions in Europe. Paris (France) was by far the most densely populated region (21 464 inhabitants per km² in 2011), with more than twice as many people living on average in each square kilometre when compared with Inner London - West (10 374 inhabitants per km² in 2010) and Inner London - East (9 311 inhabitants per km² in 2010) — ranked as the second and third most densely populated regions. There were seven additional regions at NUTS level 3 which reported population density above 5 000 inhabitants per km²: Hauts-de-Seine, Seine-Saint-Denis and Val-de-Marne (all around Paris, France); Bucuresti (the capital city region of Romania); the Arrondissement de Bruxelles-Capitale/Arrondissement van Brussel-Hoofdstad (the capital city region of Belgium); the Ciudad Autónoma de Melilla

(a Spanish overseas territory); and Portsmouth (the United Kingdom; data for the latter region refer to 2010).

Generally, the capital city region reported the highest level of population density in each EU Member State. This pattern was broken in four countries, namely: Germany (where München, Kreisfreie Stadt had the highest density), Spain (the Ciudad Autónoma de Melilla), Italy (Napoli) and Portugal (Grande Porto).

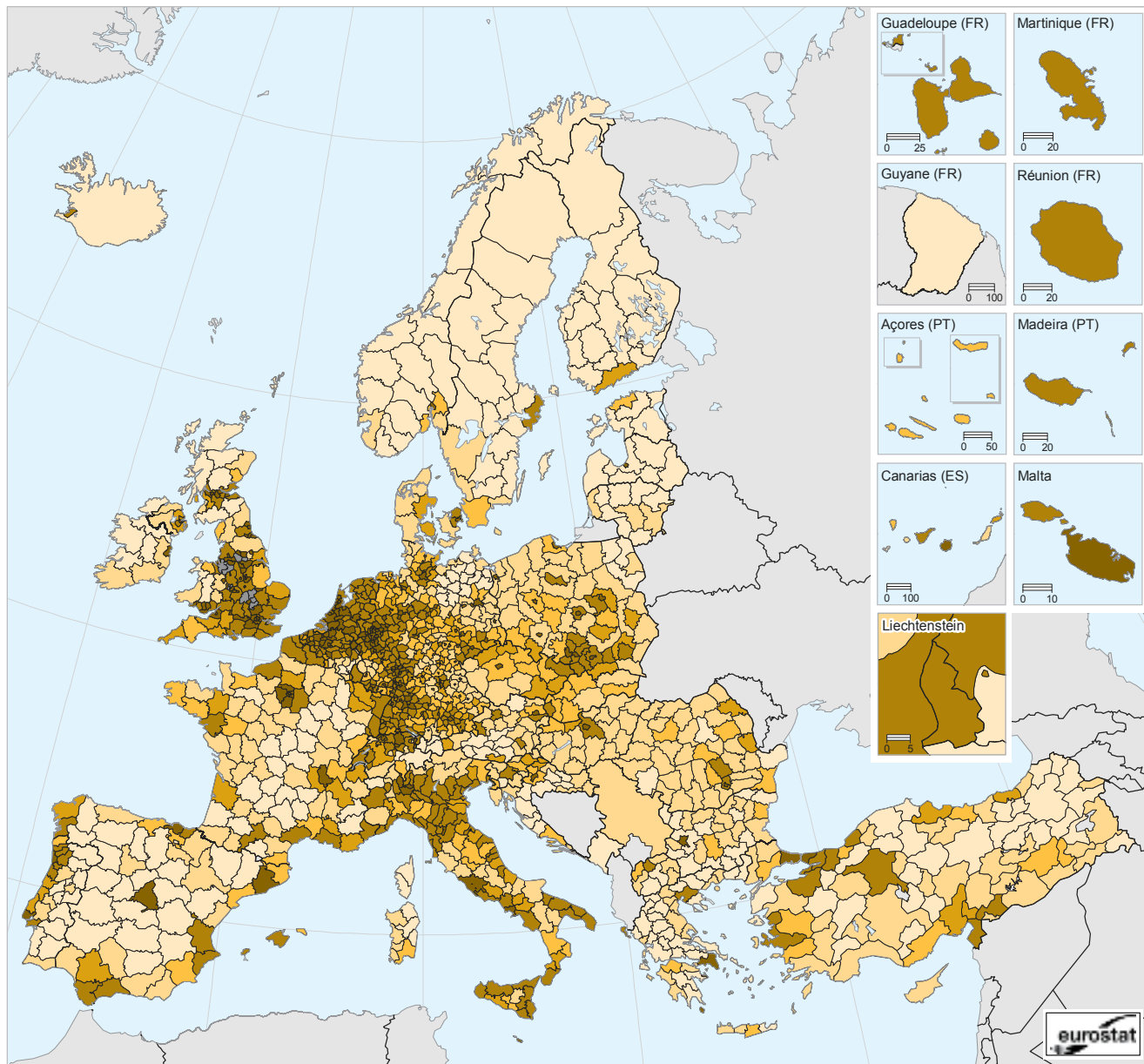
The least densely populated NUTS level 3 regions were generally located around the periphery of the EU in remote environments. There were 11 regions that reported population density below 10.0 inhabitants per km² in 2010 or 2011: three of these regions were in Finland (Lappi; Kainuu; and Pohjois-Karjala), three in Sweden (Norrbottens län; Jämtlands län; and Västerbottens län), three in the north-west of the United Kingdom (Lochaber, Skye and Lochalsh, Arran and Cumbrae, and Argyll and Bute; Caithness and Sutherland, and Ross and Cromarty; Eilean Siar (Western Isles)), one in north-central Spain (Soria), while one was a French overseas region (Guyane). Lappi (the most northerly region of Finland) had the lowest regional population density in the EU-27 (2.0 inhabitants per km² in 2011).

Among the EFTA countries for which data are presented in Map 2.1, the most densely populated region was Basel-Stadt (Switzerland), where the density rose to just over 5 000 inhabitants per km² in 2011, making it the 11th most densely populated region included in the map. There were two other EFTA regions that reported population density above a thousand inhabitants per km², namely Oslo (Norway) and Genève (Switzerland). Seven level 3 regions in Norway reported a population density of less than 10.0 inhabitants per km² in 2011. However, the lowest population density among EFTA regions was recorded by Landsbyggð (the Icelandic countryside outside of Greater Reykjavík), where, on average, there was a single inhabitant for each square kilometre in 2011 — as such, the lowest population density across the whole of Map 2.1.

Within the acceding and candidate countries, the highest population density was recorded in İstanbul (Turkey), with some 2 518 inhabitants per km² (in 2010), while the capital city region of Croatia (Grad Zagreb) was the only other region to record a density in excess of a thousand inhabitants per km² (in 2011). The Turkish capital city region of Ankara had a relatively low population density (192 inhabitants per km²) in 2010, which was only the eighth highest figure across level 3 Turkish regions, while the highest population density in the former Yugoslav Republic of Macedonia was recorded in the capital city region of Skopski (334 inhabitants per km² in 2011). At the other end of the range, the least densely populated region among acceding and candidate countries — and the only region with a population density of less than 10.0 inhabitants per km² — was Ličko-senjska županija (9.0 inhabitants per km² in 2010), a rural, quite mountainous Croatian region to the north of Zadar.

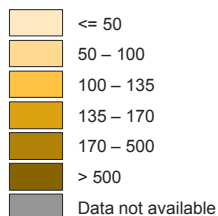


Map 2.1: Population density, by NUTS 3 regions, 2011 ⁽¹⁾
(inhabitants per km²)



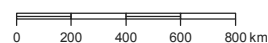
(inhabitants per km²)

EU-27 = 117



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⁽¹⁾ Population density is calculated as the ratio between (annual average) population and the surface (land) area; land area is a region's total area, excluding the area under inland water; Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7), Malta, the United Kingdom, Croatia and Turkey, 2010; Serbia, national level.

Source: Eurostat (online data codes: [demo_r_d3dens](#), [demo_p_jan](#) and [cpc_agmain](#))



Population change

Population change consists of two components: natural change and net migration including statistical adjustment (hereafter simply referred to as net migration — see ‘Data sources and availability’ for more information). Maps 2.2–2.4 present overall population change and its two components with information generally available for 2011 (the difference in population size between 1 January 2012 and 1 January 2011) for NUTS level 3 regions. For comparability, all three of these measures (overall population change and its two components) are presented as crude rates per thousand inhabitants. The maps show the different patterns of overall population change (Map 2.2) that results from positive or negative natural change (Map 2.3) combined with positive or negative net migration (Map 2.4).

Between 1 January 1960 and 1 January 2012, the population of the EU-27 increased by 101.1 million inhabitants, which was a mean annualised growth rate of 4.3 per thousand inhabitants. The upward path of population growth was unbroken over this period, although developments for the two components followed quite different patterns. Natural change peaked in 1964 at 3.6 million (more births than deaths) and thereafter fell at a fairly regular pace such that by 2003 the natural change was almost balanced (there were 106 835 more births than deaths). There was subsequently a slight recovery and by 2011 the natural change of the EU-27's population was an increase of 407 523. In contrast, net migration during the 1960s was relatively balanced in the EU-27: annual figures for that decade show that there were 6 years when a higher number of people left the EU-27 compared with the number arriving. There was a period of relatively low levels of migration within the EU-27 during the final three decades of the last century and in 1992, for the first time since the time series began in 1961, net migration outweighed the natural increase in EU-27 population. This pattern was more pronounced during the period from 2002 to 2007, when net migration was particularly high (accounting for 95.0% of the overall population change in 2003). However, from a relative high in 2007, net migration accounted for lower shares of overall population change during the period 2008 to 2011. The EU-27's population grew by 2.6 per thousand inhabitants in 2011, with the crude rate of net migration at 1.8 per thousand inhabitants and the crude rate of natural increase at 0.8 per thousand inhabitants.

Although the EU-27 population continued to increase in 2011, overall population change was unevenly distributed across the Member States. The total number of inhabitants grew between 1 January 2011 and 1 January 2012 in 19 of the Member States. The highest growth in population numbers (in absolute terms) was recorded in the United Kingdom, where the population grew by 474 000 inhabitants, followed by France (333 000) and Italy (194 000) which were the only other Member States to record population growth in excess of 100 000. The highest crude rates of total population change

were recorded by Cyprus (an increase of 26.2 per thousand inhabitants) and Luxembourg (24.7), while Belgium (8.5), the United Kingdom (7.6) and Sweden (7.1) followed.

In absolute terms, the largest reductions in overall population numbers across the EU Member States between 1 January 2011 and 1 January 2012 were far smaller than the largest increases. The biggest reduction in population was recorded in Romania where the population declined by almost 58 000 inhabitants, while the populations of the Baltic Member States, Bulgaria, Portugal, Hungary and Greece also declined. The largest negative crude rates of total population change were recorded in Latvia (– 16.0 per thousand inhabitants) and Lithuania (– 14.8 per thousand inhabitants), where rates were almost three times as high as in Bulgaria (– 5.7).

Among the NUTS level 3 regions shown in Map 2.2, there was a relatively even split between EU-27 regions reporting an increase in their number of inhabitants (697 regions) in 2011 and those where the population was in decline (576 regions); there were seven regions where population remained unchanged and 14 regions in the United Kingdom for which no data are available. The population was growing at its most rapid pace across most of Belgium, in eastern Ireland, western and southern France, northern Italy, Luxembourg and southern Sweden, as well as in a few regions in Spain, Poland and the United Kingdom, while the crude rate of population growth was also above the EU-27 average in most regions of the Netherlands and in Malta. Rapid population decline was most apparent in central and eastern European regions, for example, in parts of Bulgaria, (eastern) Germany, the Baltic Member States, central Austria, Hungary and Romania, while declining populations were also apparent across inland parts of Greece and Portugal, much of Spain, central and eastern France, southern Italy, eastern Finland and along the west coast of the United Kingdom.

Among the 30 NUTS level 3 regions with the highest crude growth rates for total population, there were nine regions from each of Germany and the United Kingdom. The former recorded the two fastest expanding populations in the regions of Münster, Kreisfreie Stadt (up 41.8 per thousand inhabitants) and Darmstadt, Kreisfreie Stadt (31.7 per thousand inhabitants). The next highest increase in population (in relative terms) was recorded in Ilfov, the area that surrounds the capital city region of Romania (31.5 per thousand inhabitants)

Among the 30 NUTS level 3 regions with the lowest crude growth rates for total population, there were 11 regions from Germany, nine from Lithuania, four each from Bulgaria and Latvia, and one each from Greece and Hungary. The biggest reduction in population (in relative terms) was registered in Šiaulių apskritis and Utenos apskritis, while two further Lithuanian regions (Alytaus apskritis and Tauragės apskritis), as well as Latgale (Latvia) were the only other regions



to report that their respective population declined by at least 20.0 persons per thousand inhabitants in 2011.

Within the non-member countries for which data are presented, there was a higher tendency (than within the EU-27) for population change to be positive in 2011: this was the case in 107 regions compared with 53 regions where the population declined. The population of each EFTA country grew in 2011, with the highest growth — in both absolute and relative terms — being recorded for Norway and Switzerland. The fastest population growth (in relative terms) among EFTA regions was recorded in Oslo (the capital city region of Norway) and in Freiburg (western Switzerland). There were only two EFTA regions where the population declined in 2011: Landsbyggð (Iceland) and Uri (central Switzerland).

Across the acceding and candidate countries there was a more mixed picture, with the populations of Croatia and Serbia declining, in contrast to rapid population growth in Turkey. Despite an overall level of population growth (13.5 per thousand inhabitants) that was only lower than in Cyprus and Luxembourg among the EU Member States, there was a wide variation across Turkish regions, with the crude rate of population growth ranging in 2010 from a low of - 79.6 per thousand inhabitants in Tunceli (in eastern Turkey) to a high of 109.1 per thousand inhabitants in Bilecik (part of the densely populated Marmara region in north-west Turkey).

Map 2.3 shows natural population change (generally for 2011) and has a similar distribution to that observed for Map 2.2. Almost all of the regions that reported negative total population change were also characterised as having negative natural population change. Broad differences can be seen in many regions in south-west France, northern Italy and much of Bavaria (Germany), where there was overall population growth despite negative natural rates of change; there was a similar situation in southern Norway.

Among the 1 280 EU regions (at NUTS level 3), just over one third (467 regions) reported that they had a higher number of births than deaths in 2011, while in 801 regions deaths outnumbered births; there were 12 regions where the number of births and deaths was equal. Positive crude rates of natural change were apparent across the whole of Ireland, as well as in many densely populated (built-up) areas in the Benelux countries, France and the United Kingdom (data for 2010) and most of the Czech Republic and Poland. By contrast, negative rates of natural population change were recorded in every region of Bulgaria, Latvia, Lithuania (except the capital city region of Vilniaus apskritis) and Hungary, as well as most regions in Romania, (eastern) Germany, north-west Spain and inland rural Portugal. The two factors that define natural population change, namely births and deaths, are presented in more detail later in this chapter from the perspective of fertility and life expectancy.

A more detailed analysis indicates that there were 11 NUTS level 3 regions in the EU-27 where the crude rate of

natural population change was above 10 per thousand in 2011. Among these, there were four French regions, two of which are overseas departments (Guyane and Réunion) and two of which are located within the vicinity of Paris (Seine-Saint-Denis and Val-d'Oise); Guyane had the highest crude rate of natural population change among all EU-27 regions (23.4 per thousand inhabitants). The remainder of the regions with high natural population growth included three Irish regions (Mid-East, Dublin and Midland), three regions from the south-east of the United Kingdom (Inner London - East; Luton; and Outer London - West and North West; data for 2010), as well as the Spanish overseas territory of the Ciudad Autónoma de Melilla.

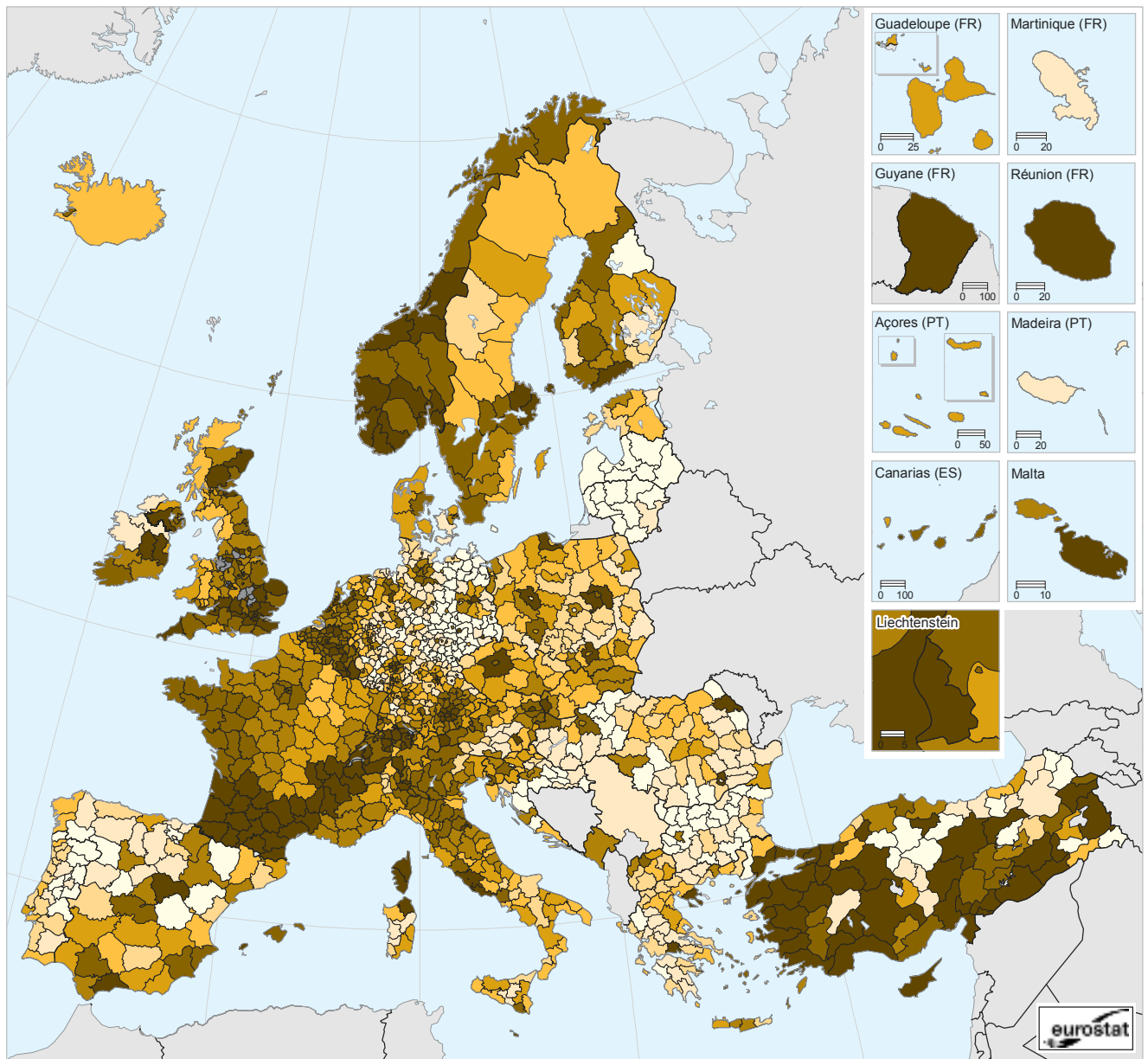
Some 536 NUTS level 3 regions in the EU-27 had a crude rate of natural population change that was almost balanced (within the range of +/- 2.0 per thousand) in 2011. This pattern often results in net migration playing a significant role in determining whether or not a region has overall population growth or decline. Net migration also has the potential to contribute indirectly to future natural population growth as migrants may later have children, given that a relatively high proportion of migrants are relatively young and therefore tend to be of child-bearing age (or below).

Map 2.4 shows the crude rate of net migration in 2011 for NUTS level 3 regions. The map closely resembles Map 2.2, emphasising the close relationship between migratory patterns and overall population change (especially when the rate of natural population change is close to being balanced). There were 775 NUTS level 3 regions in the EU-27 that had positive net migration (more immigrants than emigrants) in 2011. Among these, the highest net influx of migrants was registered in the same three regions that recorded the highest overall population growth, namely Münster, Kreisfreie Stadt and Darmstadt, Kreisfreie Stadt (both Germany), and Ilfov (the area around Bucureşti, Romania), where crude rates of net migration were 40.9, 31.1 and 31.5 per thousand inhabitants respectively. The remaining regions that reported net migration in excess of 10.0 per thousand inhabitants were predominantly urban regions, including the capital city regions of Belgium (Arr. de Bruxelles-Capitale/Arr. van Brussel-Hoofdstad), Germany (Berlin) and Sweden (Stockholms län), and a range of other cities from Germany (including Freiburg im Breisgau, Leipzig, München, Frankfurt am Main and Dresden) and the United Kingdom (including Edinburgh, Nottingham, Sheffield, Tyneside and Greater Manchester South). This pattern was reversed in France, where the regions with the highest crude rates of net migration were generally rural and located in the south of the country (for example Lot, Dordogne, Gers, Corse-du-Sud or Hautes-Pyrénées).

When net migration is negative, then more people have left the region than arrived; this was the case for 485 NUTS level 3 regions in the EU-27 in 2011. These regions were spread across most parts of Germany, Greece, western Austria

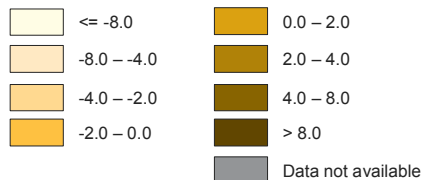


Map 2.2: Population change, by NUTS 3 regions, 2011 ⁽¹⁾
(per thousand inhabitants)



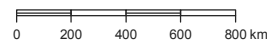
(per thousand inhabitants)

EU-27 = 2.6



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Cartography: Eurostat — GISCO, 05/2013

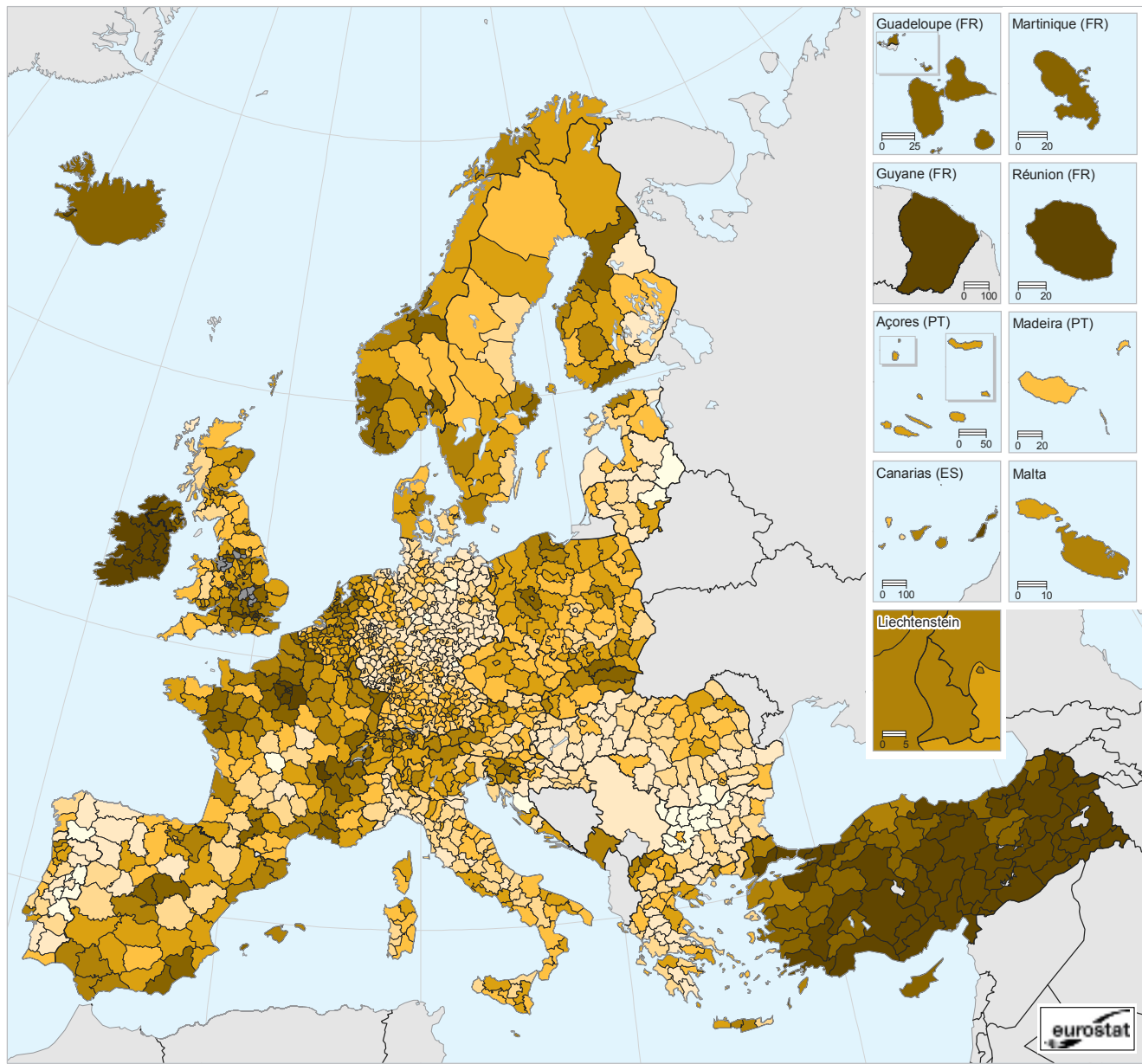


⁽¹⁾ Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7), Malta, the United Kingdom, Croatia and Turkey, 2010; Serbia, national level.

Source: Eurostat (online data codes: [demo_r_gind3](#) and [demo_gind](#))

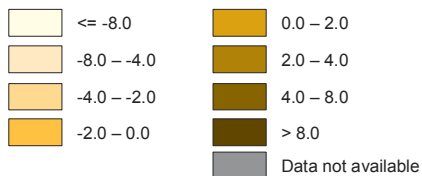


Map 2.3: Natural population change, by NUTS 3 regions, 2011 (1)
(per thousand inhabitants)

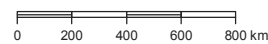


(per thousand inhabitants)

EU-27 = 0.8



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(1) Belgium, Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7), Malta, the United Kingdom and Croatia, 2010; Turkey, 2009; Serbia, national level.
Source: Eurostat (online data codes: [demo_r_gind3](#) and [demo_gind](#))



and much of eastern Europe (particularly Bulgaria, Latvia, Lithuania, Hungary, Poland and Romania), as well as north-eastern France, southern Italy, inland Portugal, pockets of Spain, western Ireland, and eastern and northern Finland. The 11 NUTS level 3 regions with the biggest negative crude rates of net migration (each in excess of -13.0 per thousand inhabitants) featured all 10 of the regions contained within Lithuania. The only other region to report such high net outflows of migrants (relative to their respective number of inhabitants) was Ioannina (in north-west Greece).

When the two components of population change (natural change and net migration) move in the same direction, they combine to produce a larger overall change. This was the case in Luxembourg, Cyprus and Malta, and in most of the regions in the Netherlands, as well as in eastern and southern Spain, north-western and south-eastern France, north-eastern Italy, southern Sweden, and the south-east of the United Kingdom — the majority of the regions in these areas reported positive growth in terms of both natural change and net migration. Conversely, many NUTS level 3 regions in Bulgaria, Germany, Latvia, Lithuania, Hungary and Romania saw both components of population change move in a negative direction.

An analysis across the EU-27 for NUTS level 3 regions that contain capital cities shows that 16 regions reported both components of population change moving in a positive direction — this is likely to be linked to the ‘pull effect’ of capital cities. For 13 out of these 16 regions, net migration accounted for a larger share of population growth, while natural growth was the main determinant of growth in Groot-Amsterdam (the Netherlands), Osrednjeslovenska (Slovenia) and Inner London - West (one of two regions at NUTS level 3 which delineate the capital of the United Kingdom). Negative net migration was more than offset by a higher rate of natural increase in the capital city regions of Dublin (Ireland), Madrid (Spain), Paris (France), Grande Lisboa (Portugal) and Inner London - East (the second of the two NUTS level 3 regions covering the capital of the United Kingdom). In Attiki (Greece), the negative crude rate of net migration was greater in magnitude than the positive rate of natural change, while in Sofia (stolitsa) (Bulgaria) and Budapest (Hungary) the relatively high positive rates of net migration did offset smaller negative rates of natural change. Riga (Latvia) and București (Romania) were the only capital city regions among the EU Member States where both components of population change were moving in a negative direction. In both cases, the crude rate of net migration played a greater role in determining the overall change in population and therefore reinforced the naturally shrinking number of inhabitants in both of these cities.

Almost all of the capital city regions of non-member countries reported an increase in their respective populations, as both components of population change moved in a positive direction. The only exceptions were the Höfuðborgarsvæði region of Iceland (Greater Reykjavík, where an overall increase in

the population was due to positive natural growth, while there was a negative rate of net migration) and Serbia as a whole (for which there is no regional information available), where the negative rate of natural change far outweighed a modest increase in the crude rate of net migration.

Decline in the fertility rate

One major reason for the slowdown in the natural population growth is that women in the EU have fewer children than was previously the case. In developed parts of the world, a total fertility rate of around 2.10 live births per woman is currently considered to be the replacement rate — in other words, the level at which the size of the population would remain stationary in the long-run if there were no inward or outward migration.

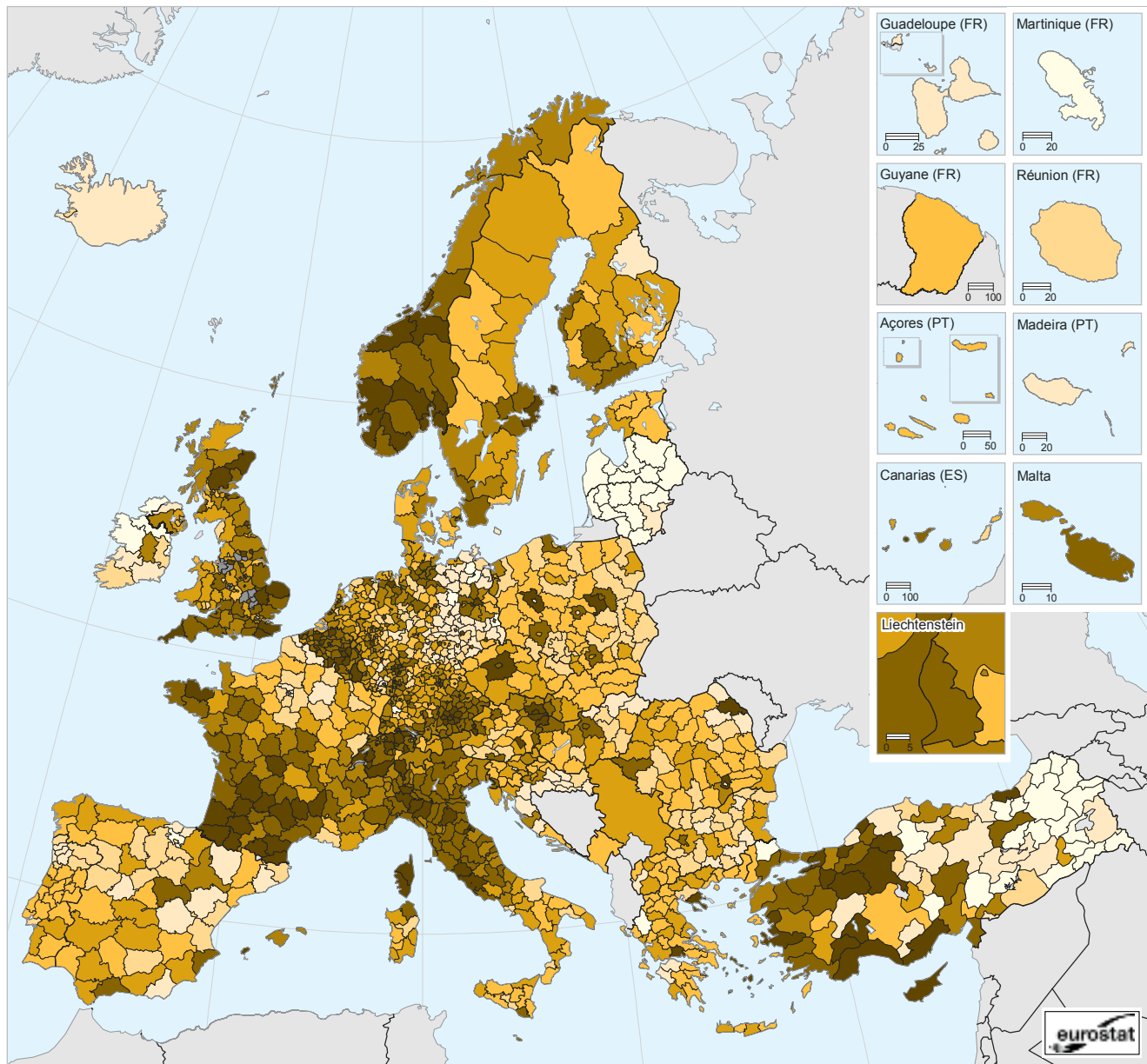
The total fertility rate in the EU-27 was well below replacement levels in recent decades. From a low of 1.46 live births per woman in 2002, the total fertility rate in the EU-27 has subsequently seen a slight recovery in many of the EU Member States, such that the average for the whole of the EU-27 stood at 1.57 in 2011. The highest fertility rates across the Member States were recorded in Ireland (2.05) and France (2.01), followed by the United Kingdom (1.96) and Sweden (1.90) — as such, none of the Member States recorded a fertility rate for the latest reference period that was equal to or above the replacement rate. The total fertility rate for 2011 was lower than 1.50 live births per woman in 14 of the Member States; the lowest rate was recorded in Hungary (an average of 1.23 per woman).

A similar pattern was observed across the EFTA, acceding and candidate countries, as total fertility rates were generally low and none of the countries presented in Map 2.5 recorded a fertility rate for their latest reference period that was equal to or above the replacement rate. Iceland (2.02) was the only EFTA country that displayed a total fertility rate for 2011 above the level of 2.0 live births per woman while among the acceding and candidate countries, Turkey recorded a similar level (2.04 for 2010).

Map 2.5 shows the regional distribution of the total fertility rate for 2011: a distribution that is characterised as being very homogeneous, with regions in the same Member State rarely displaying levels far from the national average.

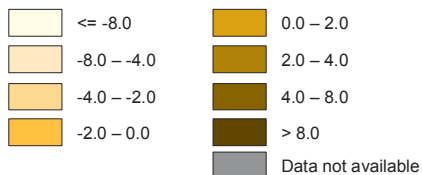
Among the 268 NUTS level 2 regions for which data are available across the EU-27, only eight regions reported a total fertility rate that was above the replacement rate of 2.10 (the darkest shade in the map) — four additional regions had fertility rates that were equal to the replacement rate. The highest fertility rates were recorded in the French overseas regions of Guyane (an average of 3.44 live births per woman), Réunion (2.36) and Guadeloupe (2.26) and the Spanish overseas territory of the Ciudad Autónoma de Melilla (2.71). Three of the four remaining regions that recorded a total fertility rate above the

Map 2.4: Net migration (including statistical adjustment), by NUTS 3 regions, 2011 ⁽¹⁾
(per thousand inhabitants)

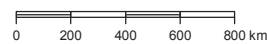


(per thousand inhabitants)

EU-27 = 0.8



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Cartography: Eurostat — GISCO, 05/2013



⁽¹⁾ Belgium, Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7), Malta, the United Kingdom and Croatia, 2010; Turkey, 2009; Serbia, national level.
Source: Eurostat (online data codes: [demo_r_gind3](#) and [demo_gind](#))



replacement rate were located in the United Kingdom (Outer London, Dorset and Somerset, and the West Midlands; all data for 2010), while the fourth was in the north of France (Nord - Pas-de-Calais). There was a similar pattern among the four regions that had fertility rates that were equal to the replacement rate, with two regions from the United Kingdom (Lincolnshire and Kent; data for 2010), one from the north of France (Picardie) and the capital city region of Belgium (Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest; data for 2009).

Of the 38 regions in the EU that had a total fertility rate of 2.00 or above, a high proportion were regions in either the United Kingdom (19 regions) or France (13 regions), while the other regions were the Spanish autonomous cities, the Belgian capital city region, both regions in Ireland and the north of Finland (Pohjois- ja Itä-Suomi).

The lowest fertility rates were generally recorded in the eastern and southern Member States. There were 51 NUTS level 2 regions in the EU that reported a total fertility rate equal to or below 1.30, including: 11 regions in Poland, seven regions each in Germany, (principally north-west) Spain and (southern) Italy, six regions in Romania, five regions in Hungary, three regions in each of Greece and Portugal, and a single region in each of Austria and Slovakia. The lowest fertility rates were recorded in three Spanish regions, namely the island region of the Canarias (an average of 1.04 live births per woman) and two regions in the north-west — the Principado de Asturias (1.05) and Galicia (1.07).

Among the EFTA countries shown in Map 2.5, the highest fertility rates were recorded in the southern Norwegian region of Agder og Rogaland (2.04) and in Iceland (2.02; the whole country is considered as a single region at this level of detail within the NUTS classification). Fertility rates in Switzerland were systematically lower than in the other EFTA regions, with the lowest rate recorded in the southernmost Italian-speaking region of Ticino (1.43).

Across the regions of the acceding and candidate countries, the highest total fertility rates (an average of over 3.0 live births per woman) were recorded in the four eastern Turkish regions of Şanlıurfa, Diyarbakır (3.77; all Turkish data for 2010); Mardin, Batman, Şırnak, Siirt (3.74); Van, Muş, Bitlis, Hakkari (3.63); and Ağrı, Kars, Iğdır, Ardahan (3.40). Three additional Turkish regions reported fertility rates above the replacement rate in 2010. However, the pattern of fertility rates in Turkey was split geographically between east and west, with those regions in the latter generally reporting fertility rates that were within the range of 1.5–1.8 live births per woman. The total fertility rate in Montenegro was 1.65 in 2011, while in the remaining regions and countries rates were below 1.5 live births per woman; the former Yugoslav Republic of Macedonia (1.46), Croatia (1.43 and 1.47 for the two regions for which data are available for 2010) and Serbia (1.36).

Declining infant mortality

Along with the established pattern of a gradual reduction in the average number of children being born per woman, the EU-27 has also recorded an almost continuous reduction in its infant mortality rate over recent decades, due among other issues to: improvements in (access to) healthcare — more information is available in the chapter on regional health statistics; an increase in immunisation against diseases; a reduction in child malnutrition; and general improvements in living standards (improved sanitation, access to clean water, or the ability to keep a home warm). The EU-27 infant mortality rate stood at 3.9 deaths (of children under 1 year of age) per thousand live births in 2011.

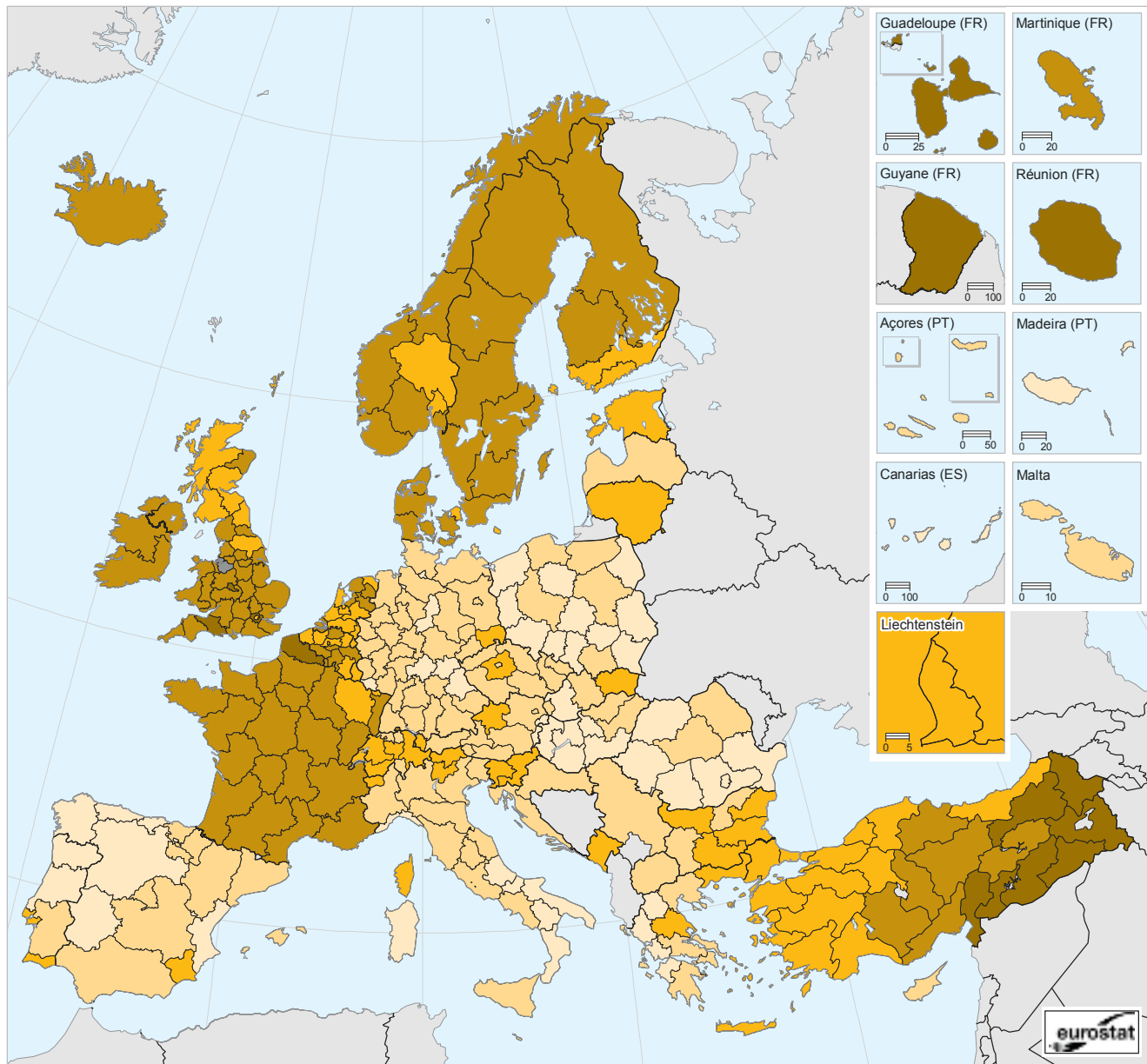
Across the EU Member States, the highest infant mortality rates were registered in Romania and Bulgaria; these two Member States had a combined total of six regions (at NUTS level 2) with infant mortality rates in double figures, peaking at 11.3 deaths per thousand live births in the Sud-Est region of Romania (see Figure 2.1). At the other end of the range, infant mortality fell to zero in the Åland islands (off the south-west coast of Finland) in 2011 — although this rate should be interpreted with some caution, as it is a one-off figure for a single year (Åland recorded an infant mortality rate of 3.5 in 2010). There were 13 NUTS level 2 regions across the EU-27 in 2011 that reported infant mortality rates of less than 2.0 deaths per thousand live births. These were spread across eight different countries and included the capital city regions of Sweden, Slovakia, and the Czech Republic; three Spanish regions (the Ciudad Autónoma de Melilla, the Comunidad Foral de Navarra and Cantabria); two additional Swedish regions (Västsverige and Norra Mellansverige); two regions in Finland (Åland and Etelä-Suomi); and a single region from each of Germany (Leipzig), Austria (Salzburg) and Greece (the island of Kriti).

Life expectancy gaps between men and women

Over the last 50 years, life expectancy at birth has increased by about 10 years on average across the EU, due in a large part to improved socioeconomic and environmental conditions and better medical treatment and care. Maps 2.6 and 2.7 present male and female life expectancy at birth for NUTS level 2 regions for 2011; these maps are directly comparable thanks to the common colour patterns used. The most striking feature when comparing the two maps is the considerably lower level of life expectancy recorded by men (when compared with women) — although there is evidence that this disparity between the sexes has been closing slowly in most EU Member States during the last few decades.

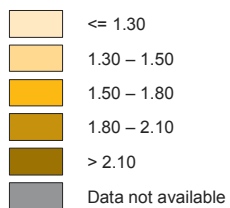


Map 2.5: Total fertility rate, by NUTS 2 regions, 2011 ⁽¹⁾
(number of live births per woman)

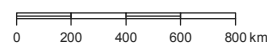


(number of live births per woman)

EU-27 = 1.57



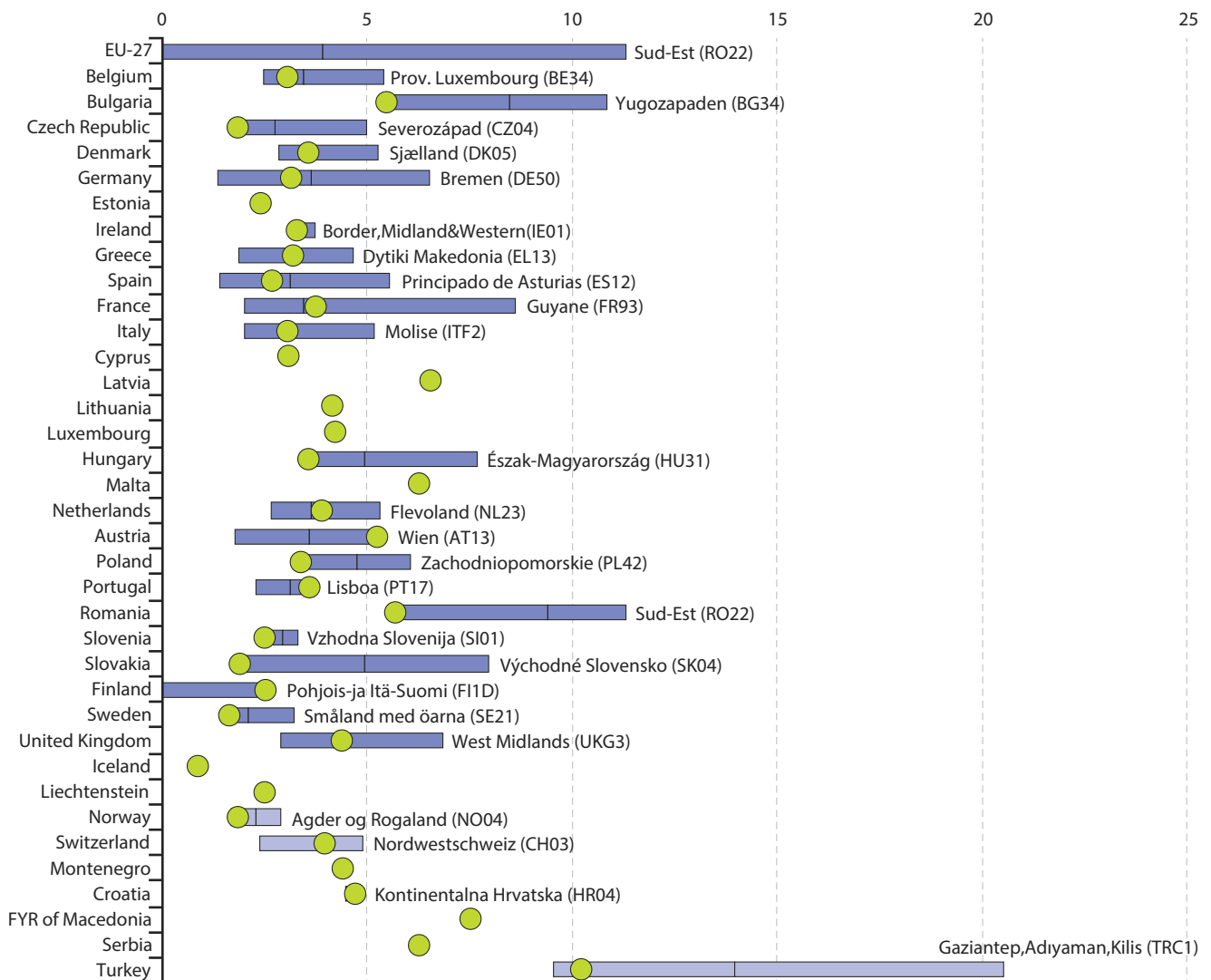
Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 05/2013



⁽¹⁾ The United Kingdom, Croatia and Turkey, 2010; Belgium, 2009; Serbia, national level.
Source: Eurostat (online data codes: [demo_r_frate2](#) and [demo_frate](#))



Figure 2.1: Infant mortality rate, by NUTS 2 regions, 2011 ⁽¹⁾
(per thousand live births)



⁽¹⁾ The figure shows the range of the highest to lowest region for each country; the black vertical line is the average (mean); the green circular marker is the capital city (for those countries where there is no regional breakdown, the national average is used as the value for the capital region); the name of the region with the highest value is also included; Italy, 2010; Belgium and Turkey, 2009.

Source: Eurostat (online data codes: [demo_r_minfind](#) and [demo_minfind](#))

Map 2.6 shows that male life expectancy at birth was 74.0 years or less in 2011 across much of eastern Europe, including all of the NUTS level 2 regions of Bulgaria, Hungary, Romania and the three Baltic Member States (each being a single region at this level of detail). In addition, all but one (the capital city region of Bratislavský kraj) of the regions in Slovakia and all but two (the extreme southerly regions of Podkarpackie and Małopolskie) of the regions in Poland also reported male life expectancy at birth that was 74.0 years or less. There were three other regions that recorded male life expectancy below this level (indicated with the lightest shade used in Map 2.6): two of these were from the Czech Republic (Severozápad and Moravskoslezsko), while the final region

was the Portuguese offshore Região Autónoma dos Açores. Relatively low male life expectancy at birth was also apparent in the acceding and candidate countries, as only the coastal strip and islands of Croatia (the Jadranska Hrvatska region) recorded male life expectancy above 74.0 years (data for 2010), while the lowest life expectancy in 2011 (72.0 years) was recorded for Serbia (no regional information available). None of the EFTA regions reported male life expectancy equal to or below 74.0 years in 2011.

There were 28 NUTS level 2 regions where male life expectancy at birth rose above 80.0 years in 2011; these were spread across seven of the EU Member States. Among the

28 regions, eight stretched from the top to bottom of Italy, while seven were located in the United Kingdom (all, with the exception of North Yorkshire, in the south of England; data for 2010). Four regions were in Spain (all, with the exception of the Comunidad Foral de Navarra, in central Spain — including the capital city region of the Comunidad de Madrid), while there were three regions each in Germany (all in the south-western state of Baden-Württemberg) and France (the capital city region of Île de France, as well as the Midi-Pyrénées and Rhône-Alpes regions which include Toulouse and Lyon). Two of the three remaining regions were located in Sweden (the capital city region of Stockholm and the western region of Västsverige) and the final region was the Ionian islands (that include Corfu), which are principally found off the west coast of Greece (the Ionia Nisia region). The highest male life expectancy at birth in 2011 was registered in the Comunidad Foral de Navarra (81.1 years) closely followed by the Comunidad de Madrid (81.0 years).

Map 2.7 depicts the regional distribution of female life expectancy at birth. The lowest values — where female life expectancy was equal to or below 80.0 years — were (as for men) recorded in eastern Europe. This was particularly the case in Bulgaria, Hungary and Romania, where each NUTS level 2 region recorded female life expectancy below 80.0 years. Female life expectancy was also below 80.0 years in Latvia and Lithuania (both single regions at NUTS level 2), as well as in three of the four Slovak regions (all except the capital city region of Bratislavský kraj), in Łódzkie (Poland) and in North Eastern Scotland (the United Kingdom; data for 2010). The Bulgarian region of Severozapaden recorded the lowest value of female life expectancy at birth, at 76.6 years in 2011, while three other Bulgarian regions followed in the ranking (Severoiztochen, Yugoiztochen and Severen tsentralen).

The highest value for life expectancy at birth among women was recorded in the region that had the second highest life expectancy for men, namely the Comunidad de Madrid (86.7 years in 2011), just ahead of the Île de France, and Rhône-Alpes (both 86.6 years). There were 14 NUTS level 2 regions in the EU with female life expectancy at birth above 80.0 years. These were exclusively located in France (seven regions), Spain (five regions) and Italy (two regions), while the next 14 regions in the ranking of female life expectancy were also from the same three Member States, before Ipeiros (85.4 years), a Greek region that borders Albania.

For the EU-27 as a whole, life expectancy at birth averaged 82.9 years for women and 77.0 years for men in 2010. The biggest gaps in life expectancy at birth between women and men were recorded for the Baltic Member States, where women could expect to live between 11.2 (Lithuania) and 10.1 (Estonia) years longer than men in 2011. The lowest gender differences (between 3.7 and 3.9 years) were recorded in the Netherlands, Cyprus and Sweden; while the difference in Iceland was slightly lower at 3.4 years.

At a regional level, the widest gender differences in life expectancy (of at least 8 years between women and men) were recorded in the Baltic Member States (each considered as a single region at NUTS level 2), followed by 14 of the 16 NUTS level 2 regions in Poland, two regions in north-east Hungary (Észak-Magyarország and Észak-Alföld) and two regions in France (Guadeloupe and Nord - Pas-de-Calais). The lowest gender gap was recorded for the north-eastern Dutch region of Drenthe, where female life expectancy at birth of 82.6 years was 3.1 years higher than the corresponding figure for male life expectancy. Among those regions with the smallest gender gaps (less than 4 years difference between the sexes) there were 16 regions in the United Kingdom, nine in the Netherlands, three in Sweden, two each in Denmark and Greece and one each from Germany and Cyprus (the latter also considered as a single region at NUTS level 2).

Among the non-member countries analysed, Iceland had the smallest gender gap, equal to 3.4 years, while Zurich (Switzerland) was the only other region where the gap between women and men was less than 4 years. The largest differences between the sexes in relation to life expectancy were recorded for the two Croatian regions of Kontinentalna Hrvatska (6.6 years difference) and Jadranska Hrvatska (5.9 years), the neighbouring region of Crna Gora (Montenegro, 5.5 years), Turkey (also 5.5 years; data for 2009) and Serbia (5.3 years); data for the latter two countries are only available at national level.

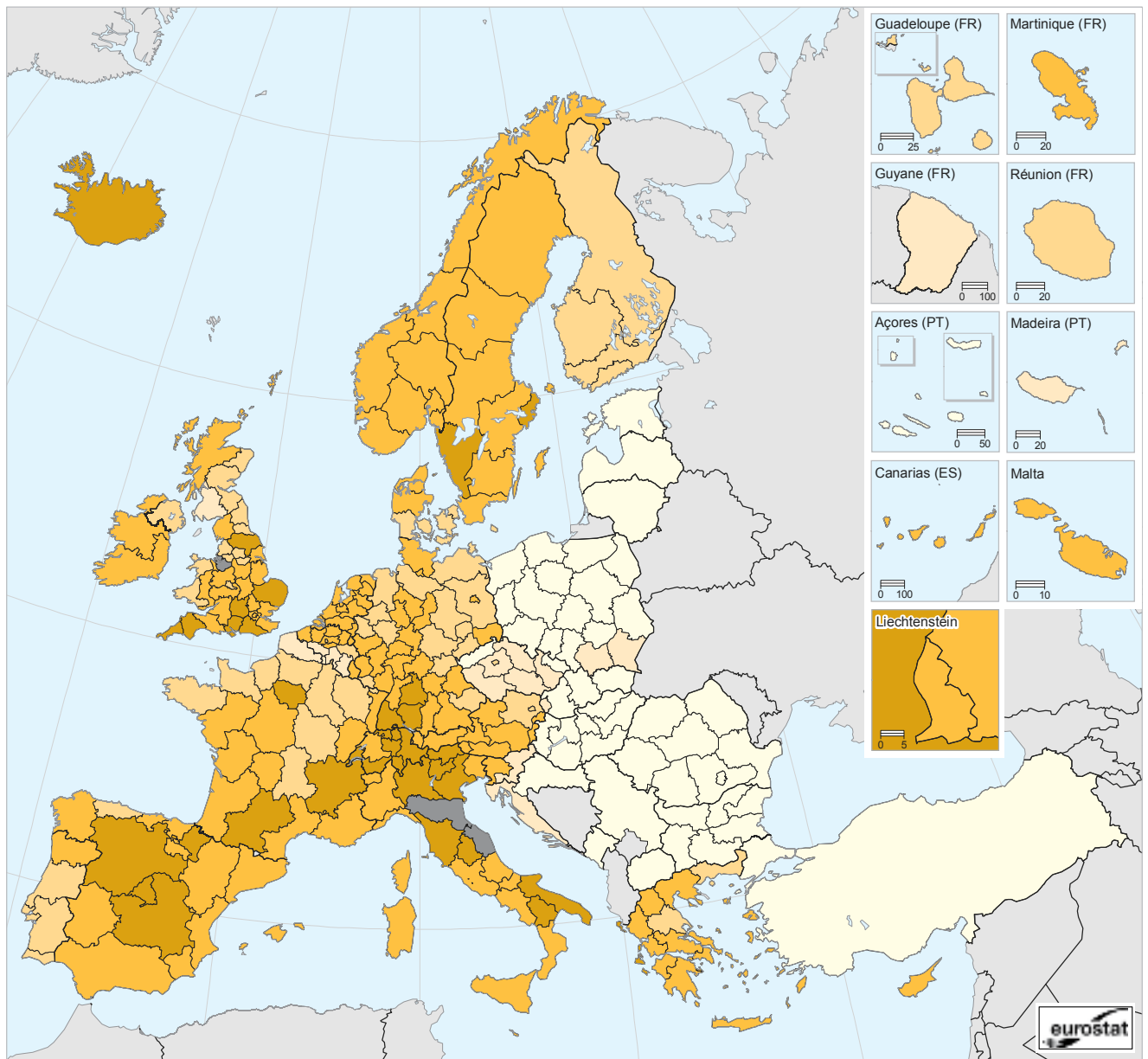
Demographic ageing

The EU-27's population is getting progressively older — as a result of a significant and continuous increase in life expectancy at birth, combined with low fertility rates and the entry into retirement of the post-World War II baby-boom generation. Figure 2.2 presents information on the 10 NUTS level 3 regions in the EU with the highest and lowest shares of elderly persons (aged 65 and above) in their respective populations as of 1 January 2012. Across the whole of the EU-27, those aged 65 and above accounted for 17.8% of the total population, while working-age (15–64) persons accounted for two thirds (66.6%) of the total, leaving some 15.6% of the EU-27 population aged less than 15 years.

In the central, inland Portuguese region of Pinhal Interior Sul, elderly persons accounted for over one third (33.9%) of the total population — the highest share of elderly persons across the EU. As such, each working-age person in Pinhal Interior Sul was 'supporting' 0.6 persons aged 65 or above. The regions with the highest shares of elderly persons were often characterised as being rural, relatively remote and less densely populated, where the low share of working-age persons could be linked to a lack of employment and education opportunities, thereby motivating younger generations to leave in search of work.

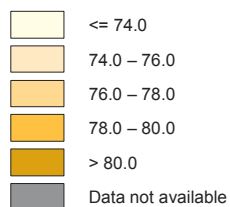


Map 2.6: Life expectancy at birth, males, by NUTS 2 regions, 2011 ⁽¹⁾
(years)



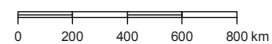
(years)

EU-27 = 77.0



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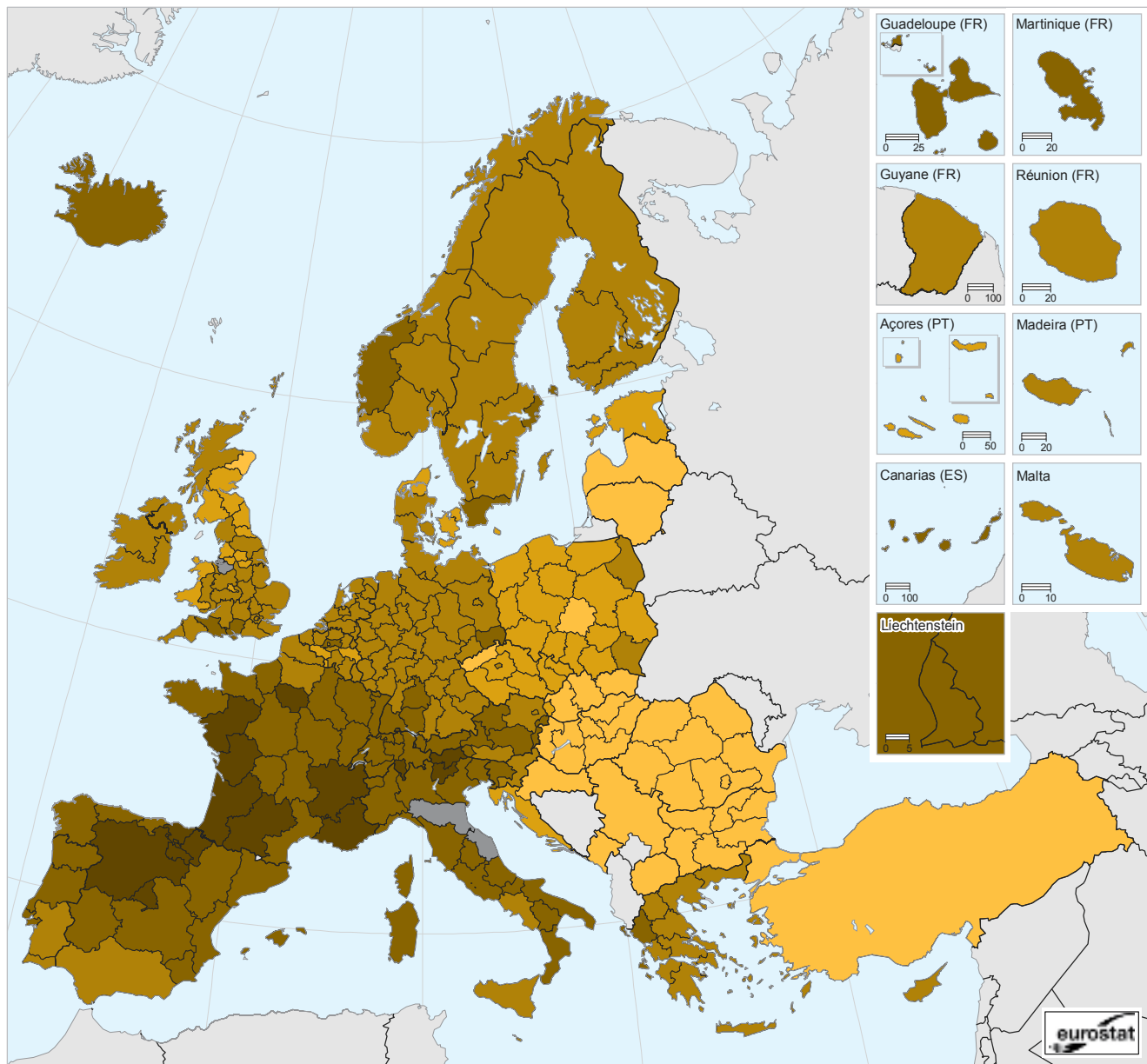
Cartography: Eurostat — GISCO, 05/2013



⁽¹⁾ EU-27, Belgium, Guadeloupe (FR91), Guyane (FR93), Italy, the United Kingdom and Croatia, 2010; Turkey, 2009; Serbia and Turkey, national level.
Source: Eurostat (online data codes: [demo_r_mlifexp](#) and [demo_mlexpec](#))

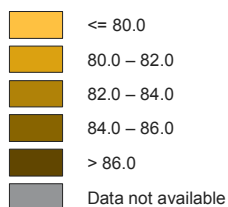


Map 2.7: Life expectancy at birth, females, by NUTS 2 regions, 2011 ⁽¹⁾
(years)

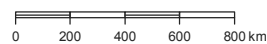


(years)

EU-27 = 82.9



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Cartography: Eurostat — GISCO, 05/2013



⁽¹⁾ EU-27, Belgium, Guadeloupe (FR91), Guyane (FR93), Italy, the United Kingdom and Croatia, 2010; Turkey, 2009; Serbia and Turkey, national level.
Source: Eurostat (online data codes: [demo_r_mlifexp](#) and [demo_mlexpec](#))

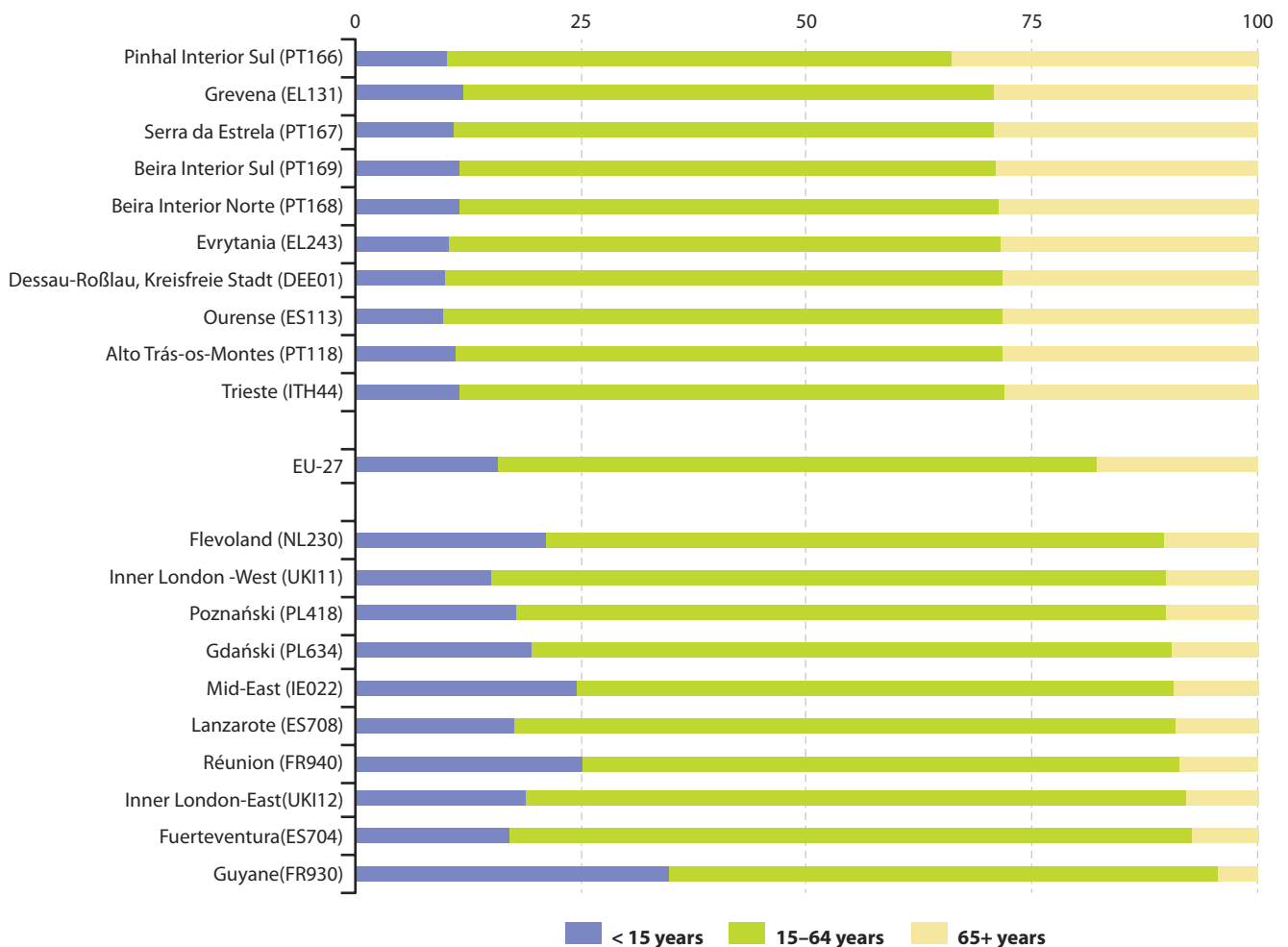


Figure 2.2 also shows those regions with the lowest share of elderly persons. These were often characterised as areas where there was a high proportion of working-age persons: either in major economic centres (London, Poznań or Gdańsk); or in tourist regions (such as Lanzarote or Fuerteventura — both part of the Canary islands, Spain) where high activity rates are linked to an influx of relatively young, economic migrants that display circular migratory patterns (in other words, people who are drawn by the employment opportunities that are available, who work for a few years and then decide to return to their region of origin). There are other regions where the low proportion of elderly persons in the total population reflected relatively high fertility rates, which boosted the relative share of younger persons — this was particularly the case in the French overseas departments of Guyane and Réunion, the Mid-East region of Ireland, and to a lesser degree in Flevoland (the Netherlands).

An alternative means of illustrating this structural change in the EU-27's population is by analysing dependency ratios that are derived by comparing the numbers of dependent persons (the young and/or the old) with the size of the working-age population (irrespective of whether the latter are actually in employment or not). These ratios are designed to provide information relating to the burden that may be placed on those of working age — for example, pressures to support the education of children, healthcare or pensions provisions. As such, rising dependency ratios may be a concern to governments in relation to their public expenditure plans.

The proportion of persons aged less than 15 years was equivalent to 23.4% of the EU-27's working-age population at the start of 2012 — as such there were, on average, just over four working-age adults for each child of less than 15 years. The highest young-age dependency ratios were often recorded

Figure 2.2: Population structure, by broad age groups, by NUTS 3 regions, 1 January 2012 ⁽¹⁾
(% of total population)



⁽¹⁾ Mecklenburg-Vorpommern (DE8), Illes Balears (ES53) and Canarias (ES7), 1 January 2011; Malta, 1 January 2010.
Source: Eurostat (online data code: [demo_r_pjanaggr3](#))

in those regions that reported some of the highest fertility rates, namely regions that were predominantly found in Ireland, France and the United Kingdom. At the other end of the range, the lowest young-age dependency ratios were generally recorded in regions of Germany, Spain, Italy and Poland, where fertility rates remained close to historic lows. Map 2.8 shows the range of young-age dependency ratios calculated for NUTS level 3 regions as of 1 January 2012. Across the EU, the highest ratio was 57.0% for the French overseas department of Guyane, while lows of 13.6% were recorded for the two central German regions of Würzburg, Kreisfreie Stadt and Suhl, Kreisfreie Stadt.

The old-age dependency ratio analyses the relationship between the number of elderly persons (aged 65 and above) and the working-age population (those aged 15–64). The size of the elderly population was equivalent to 26.8% of the working-age population in the EU-27 as of 1 January 2012. Map 2.9 shows there were 106 EU-27 regions that had old-age dependency ratios equal to or below 20%: 43 of these were from Poland, 16 from the United Kingdom, 13 from Romania, eight each from Spain and Slovakia, six each from Ireland and France, two from the Netherlands, and one each from Belgium, Denmark, Cyprus (a single region at NUTS level 3) and Portugal. The lowest old-age dependency ratio was recorded in the French overseas territory of Guyane (7.2%). In contrast, Pinhal Interior Sul was the only NUTS level 3 region in the EU-27 to report an old-age dependency ratio above 50% (in other words, there were less than two persons of working-age ‘supporting’ a person aged 65 or over); its ratio stood at 60.7% on 1 January 2012. There were five other Portuguese regions which featured among the 10 NUTS level 3 regions with the highest old-age dependency ratios across the EU, all of these were located in relatively mountainous, inland regions in the centre or north of the country (often bordering Spain). Two of the four remaining regions with particularly high old-age dependency ratios — between 46.1% and 49.8% — were located in mountainous, inland Greece (Grevena and Evrytania), one was the coastal region of Trieste in north-east Italy and the final region was Dessau-Roßlau, Kreisfreie Stadt (which forms part of the state of Sachsen-Anhalt in eastern Germany).

The pattern of demographic ageing was less evident in many of the EFTA, acceding and candidate country regions. Among the level 3 EFTA regions, the highest old-age dependency ratios (above 30.0%) were recorded in the Swiss regions of Ticino, Basel-Stadt and Basel-Landschaft, as well as the rural Norwegian region of Hedmark. At the other end of the scale, there were just three EFTA regions that reported old-age dependency ratios equal to or below 20.0%; they were Rogaland in western Norway (where much of the Norwegian petroleum industry is located), Oslo (the capital city region of Norway) and Höfuðborgarsvæði (the capital city region of Iceland).

There were three Croatian regions which reported old-age dependency ratios that were above 30.0% (Ličko-senjska županija, Šibensko-kninska županija and Karlovačka županija), with the ratio peaking in the least densely populated of these — Ličko-senjska županija (35.7%). Old-age dependency ratios were generally much lower in Montenegro, the former Yugoslav Republic of Macedonia and, in particular, Turkey (where there were 24 level 3 regions that reported an old-age dependency ratio of less than 10.0%). The lowest old-age dependency ratio in the acceding and candidate countries was recorded in the region of Hakkari in eastern Turkey (4.9% on the 1 January 2011).

Data sources and availability

Eurostat provides a wide range of demographic data: this includes statistics on national and regional populations, as well as data for various demographic events (births, deaths, marriages, divorces, immigration and emigration) which influence the population's size, structure and specific characteristics. Note that the move to the NUTS 2010 classification has resulted, temporarily, in no time series being available for regional demographic statistics.

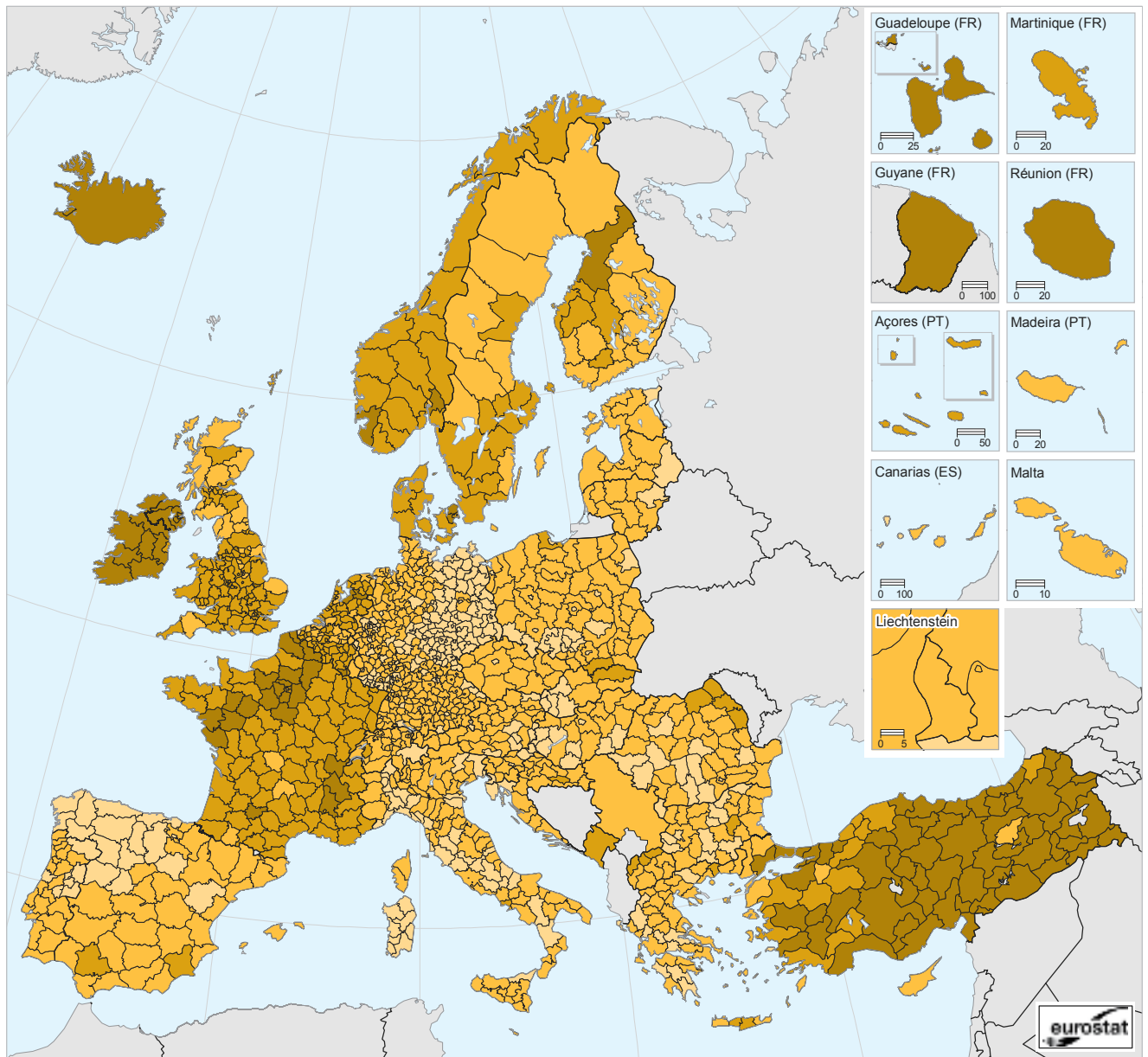
Population density is the ratio of the (annual average) population of a region to the surface (land) area of the region. Land area is the region's total area, excluding the area under inland water.

Population change is the difference in the size of a population between the end and the beginning of a period (for example, for one calendar year). A positive population change is referred to as population growth. A negative population change is referred to as population decline. Population change consists of two components.

- Natural change which is calculated as the difference between the number of live births and the number of deaths. Positive natural change, also known as natural increase, occurs when live births outnumber deaths. Negative natural change, also known as natural decrease, occurs when live births are less numerous than deaths.
- Net migration including statistical adjustment, which is calculated as the difference between the total change in the population and natural change; the statistics on net migration are therefore affected by all the statistical inaccuracies in the two components of this equation, especially population change. In different countries net migration including statistical adjustment may cover, besides the difference between inward and outward migration, other changes observed in the population figures between 1 January for two consecutive years which cannot be attributed to births, deaths, immigration or emigration.

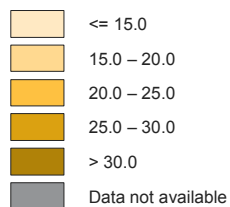


Map 2.8: Young-age dependency ratio, by NUTS 3 regions, 1 January 2012 ⁽¹⁾
(%)



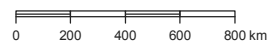
(%)

EU-27 = 23.4



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Cartography: Eurostat — GISCO, 05/2013

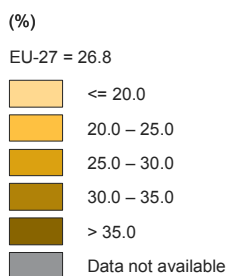
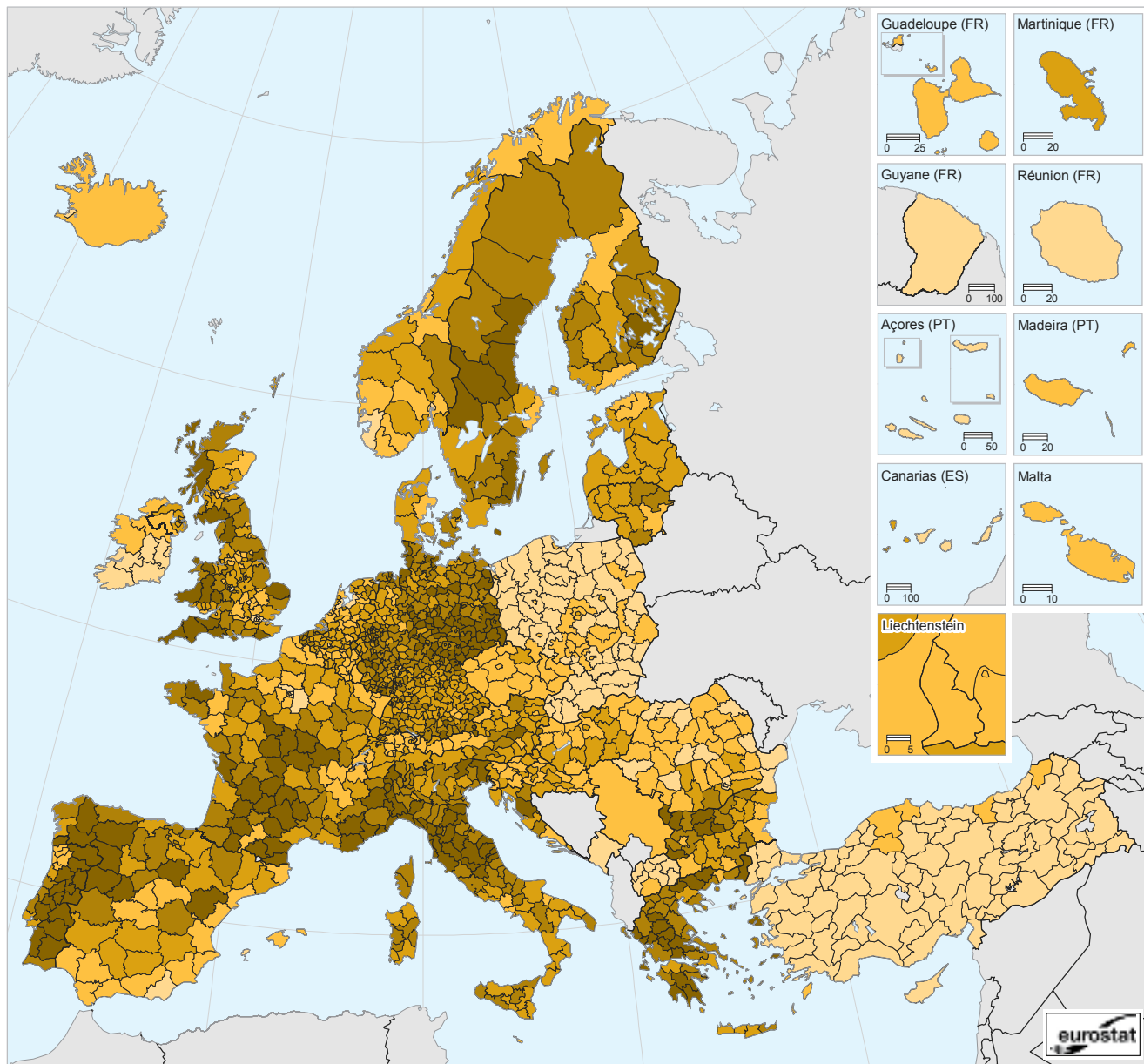


⁽¹⁾ Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7), Croatia and Turkey, 1 January 2011; Malta, 1 January 2010; Serbia, national level.

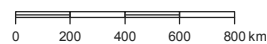
Source: Eurostat (online data codes: [demo_r_pjanagr3](#) and [demo_pjanind](#))



Map 2.9: Old-age dependency ratio, by NUTS 3 regions, 1 January 2012 ⁽¹⁾
(%)



Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 05/2013



⁽¹⁾ Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7), Croatia and Turkey, 1 January 2011; Malta, 1 January 2010; Serbia, national level.
Source: Eurostat (online data codes: [demo_r_pjanaggr3](#) and [demo_pjanind](#))



Crude rates of change are calculated for: total population change; natural population change; and net migration (including statistical adjustment). In all cases the level of change during the year is compared with the average population of the area in question in the same year and the ratio expressed per thousand inhabitants.

The total fertility rate is defined as the average number of children that would be born to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates that have been measured in a given year.

Life expectancy at birth is the mean number of years that a newborn child can expect to live if subjected throughout his or her life to current mortality conditions.

The young-age dependency ratio is the ratio of the number of young persons of an age when they are generally economically inactive (aged under 15 in this publication) to the number of persons of working age (15–64 years old by convention). The old-age dependency ratio is the ratio of the number of elderly persons of an age when they are generally economically inactive (aged 65 and over in this publication) to the number of persons of working age (15–64 years old by convention). When analysing dependency ratios, it is important to note that within the working-age population there are often considerable numbers of people who choose not to work (for example students or those bringing-up a family or caring for other family members), while — especially in times of recession or depression — there are large numbers of people who are unable to find work. Furthermore, a growing proportion of elderly persons continue to work beyond what has traditionally been considered retirement age, while others have made adequate financial provisions for their retirement and therefore could be considered, by some, as ‘independent’.

Context

Statistics on population change and the structure of population are increasingly used to support policymaking and to provide the opportunity to monitor demographic behaviour within political, economic, social and cultural contexts.

Consistently low fertility levels, combined with extended longevity — and the fact that baby-boomers are reaching retirement age — have resulted in the ageing of the EU’s population. The number of people who are of working age is decreasing, while the number of older people is on the rise. The social and economic changes associated with population ageing are likely to have profound implications for the EU, both nationally and regionally. They stretch across a wide range of policy areas, with an impact on the school-age population, healthcare, participation in the labour force, social protection, social security issues and government finances among others.

Not only is the demographic situation uneven across the regions of the EU but also demographic changes are at different stages and developing at different paces: this has an impact not just on regional competitiveness but also on cohesion. The regional population developments are influenced by factors that impact on natural change, such as fertility and death rates as well as migration. Regions across the EU display the full range of population developments from regions declining due to both negative natural population change and emigration to those expanding through a combination of natural population growth and immigration. More generally, there appears to be a pattern of rapid population ageing in many remote and rural areas, while metropolitan areas tend to have a higher proportion of young persons in their populations, which can often be associated to the ‘pull effect’ of increased employment opportunities which attract both internal migrants (from different regions in the same country) and international migrants (from both other Member States and non-member countries).