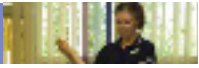


# Health

3





This chapter presents recent statistics on health for the regions of the European Union (EU). It addresses some of the most common causes of death, notably cancer and diseases of the circulatory and respiratory systems. It also provides regional information concerning healthcare services through an analysis of the number of hospital beds and healthcare professionals (physicians).

Health is an issue of paramount importance. Determining the health status of an entire population is not an easy task and there is no single measure to do so. Nevertheless, a picture can be built up using indicators such as average life expectancy, morbidity and mortality measures (including the infant mortality rate, which may be associated with education and economic development) — more information on life expectancy and infant mortality is provided in the chapter on regional population statistics. Other indicators that may be used include the prevalence of preventable diseases and information on the availability of a variety of healthcare services. Eurostat compiles and publishes these statistics for EU regions, the Member States, as well as the EU-27 as a whole; in addition, a subset of this information is available for EFTA, acceding and candidate countries.

## Main statistical findings

### Causes of death

Statistics relating to causes of death provide information about diseases (and other eventualities, such as suicide or transport accidents) that lead directly to death; this information can be used to help plan health services. Many factors determine mortality patterns — intrinsic ones, such as age and sex, as well as extrinsic ones, such as environmental or social factors and living and working conditions — while individual factors, such as lifestyle, smoking, diet, alcohol consumption, driving behaviour or sexual behaviour, may also play a role. As a general rule, life expectancy is higher among women than men for all age groups.

Provisional figures indicate that 4.85 million persons died in the EU-27 in 2010; this was almost identical (0.4% higher) to the total number of deaths recorded a decade before. The highest number of deaths in the EU-27 in 2010 resulted from diseases of the circulatory system (1.90 million deaths equivalent to 39.1% of the total). There were 1.26 million deaths caused by cancer (malignant neoplasms), which equated to just over one quarter (25.9%) of the total, while the third most prevalent cause of death was diseases of the respiratory system (372 thousand deaths or 7.7% of the total).

These pathologies generally affect the population at advanced ages — for example, over 80% of the deaths in the EU-27 in 2010 resulting from diseases of the circulatory

system occurred among people aged 70 years and above. By contrast, a higher proportion of relatively young persons died from cancer: more than one third (37.0%) of the total number of deaths from malignant neoplasms were recorded among those aged 40–69.

The number of deaths in the EU-27 from diseases of the circulatory system was reduced by 9.9% between 2000 and 2010 and as a result the relative share of these diseases in the total number of deaths fell by 4.5 percentage points from 43.6% of the total in 2000. There was also a reduction in the number of deaths from diseases of the respiratory system between 2000 and 2010 (down 5.9%). By contrast, the number of deaths caused by cancer rose by 6.9% between 2000 and 2010. While their relative weight in the overall number of deaths was quite small, the largest increase in deaths between 2000 and 2010 were recorded for diseases of the nervous system and the sense organs and for mental and behavioural disorders. The biggest reduction in deaths was recorded for transport accidents, down by 42.4% between 2000 and 2010, when transport accidents accounted for 0.7% of all deaths in the EU-27.

### Diseases of the circulatory system

Diseases of the circulatory system include cerebrovascular diseases, ischaemic heart diseases and other heart diseases. Diet is thought to play an important role in determining the death rates from diseases of the circulatory system, which tend to be higher in regions where people consume a large amount of saturated fats, dairy products and red meat. The average standardised death rate from diseases of the circulatory system between 2008 and 2010 was 216.8 per 100 000 inhabitants, the rate for men (265.8) was just over 50% higher than that recorded for women (175.6) — reflecting higher mortality rates among men than women for most pathologies.

Among the EU Member States, the highest standardised death rates from diseases of the circulatory system were often recorded in those Member States that joined the EU in 2004 or 2007 (other than the Mediterranean island of Malta); this was particularly true with respect to regions in Bulgaria and Romania, as each of these countries accounted for 6 of the 12 regions with the highest standardised death rates from diseases of the circulatory system during the period 2008–10; see Map 3.1. The highest death rates were recorded in the three Bulgarian regions of Severozapaden (690.4 per 100 000 inhabitants during the period 2008–10), Yugoiztochen (665.3) and Severen tsentralen (634.5) — the first two of these regions reported death rates which were more than three times as high as the EU-27 average. Outside of those Member States that joined the EU in 2004 or 2007, the highest standardised deaths rates from diseases of the circulatory system were recorded for: the Greek region of Anatoliki Makedonia, Thraki (290.1); the Portuguese Região

Autónoma dos Açores (284.3) and the eastern German region of Sachsen-Anhalt (275.3). Relatively high standardised death rates from diseases of the circulatory system were also recorded in the candidate countries of the former Yugoslav Republic of Macedonia (564.3) and Croatia (387.4) — no regional breakdown available.

At the other end of the range, the lowest death rates from diseases of the circulatory system were, with the exception of the capital city region of Belgium (Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest), systematically recorded across France and Spain, as 32 regions in these two countries were located at the bottom of the ranking. A range of studies suggest that there may be beneficial effects from moderate red wine consumption (particularly with meals) and a Mediterranean diet (particularly olive oil), and that these two factors could (at least in part) explain the lower death rates observed in southern Europe and France. Another factor that may explain (to some degree) regional patterns of death rates is the speed with which hospital treatment can be made available to somebody suffering a heart attack or a stroke. For example, the lowest death rates from diseases of the circulatory system in France and Spain were registered in the two regions containing the capital cities (Île de France and Comunidad de Madrid); both these regions have a high level of population density, and patients in need of medical assistance could expect to travel relatively short distances to receive the necessary attention. The lowest standardised death rates from diseases of the circulatory system during the period 2008–10 were recorded in the three French regions of Île de France (97.0 per 100 000 inhabitants), Provence-Alpes-Côte d'Azur (107.4, which contains Marseille) and Rhône-Alpes (108.6, which contains Lyon), followed by Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (109.7) and the Comunidad de Madrid (111.4).

Standardised death rates from diseases of the circulatory system were higher for men than for women in all but two of the regions of the EU-27 in 2008–10: the exceptions were the two Greek regions of Anatoliki Makedonia, Thraki and Ionia Nisia, where standardised death rates were only marginally higher for women. The Baltic Member States and the eastern Bulgarian region of Yugoiztochen recorded the largest differences between standardised death rates for men and women, while there were generally wide disparities between the sexes in many of the other Member States that joined the EU in 2004 or 2007, as well as in eastern Germany and the north-west of England (United Kingdom). On the other hand, there was a relatively low difference between male and female death rates from diseases of the circulatory system in all Greek regions, as well as in selected regions of Spain, France, Portugal, Romania and southern Italy; this pattern was also repeated in Switzerland.

The three Bulgarian regions with the highest overall standardised death rates from diseases of the circulatory system were also the three EU-27 regions with the highest

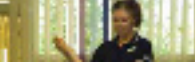
male standardised death rates — Severozapaden (838.8 per 100 000 male inhabitants), Yugoiztochen (822.7) and Severen tsentralen (771.4); they were followed by the three remaining regions in Bulgaria, Latvia, Lithuania and the north-eastern Hungarian region of Észak-Magyarország. At the other end of the range, the regions with the lowest male death rates from diseases of the circulatory system were the capital city regions of France and Spain: Île de France (127.3 per 100 000 male inhabitants) and the Comunidad de Madrid (135.6). There were also low male standardised death rates from diseases of the circulatory system in the Région lémanique and Ticino in the south of Switzerland.

The pattern for women was similar (although rates were at a lower level). The three Bulgarian regions of Severozapaden (567.9 per 100 000 female inhabitants), Yugoiztochen (538.8) and Severen tsentralen (524.8) all recorded high female standardised death rates from diseases of the circulatory system during the period 2008–10; however, the highest female death rates were recorded in the Romanian regions of Sud-Vest Oltenia (601.1), Vest (584.9), Nord-Vest (584.8) and Sud - Muntenia (568.7). The remaining seven NUTS level 2 Bulgarian and Romanian regions were the only other regions within the EU-27 to report female standardised death rates above 400 per 100 000 inhabitants. The lowest death rates from diseases of the circulatory system for women were recorded in the French regions of Île de France (74.4 per 100 000 female inhabitants), Provence-Alpes-Côte d'Azur (80.9) and Rhône-Alpes (84.4). A total of 19 of the 26 NUTS level 2 regions in France recorded female standardised death rates from diseases of the circulatory system that were below 100 deaths per 100 000 inhabitants; they were joined by four Spanish regions and the capital city region of Belgium.

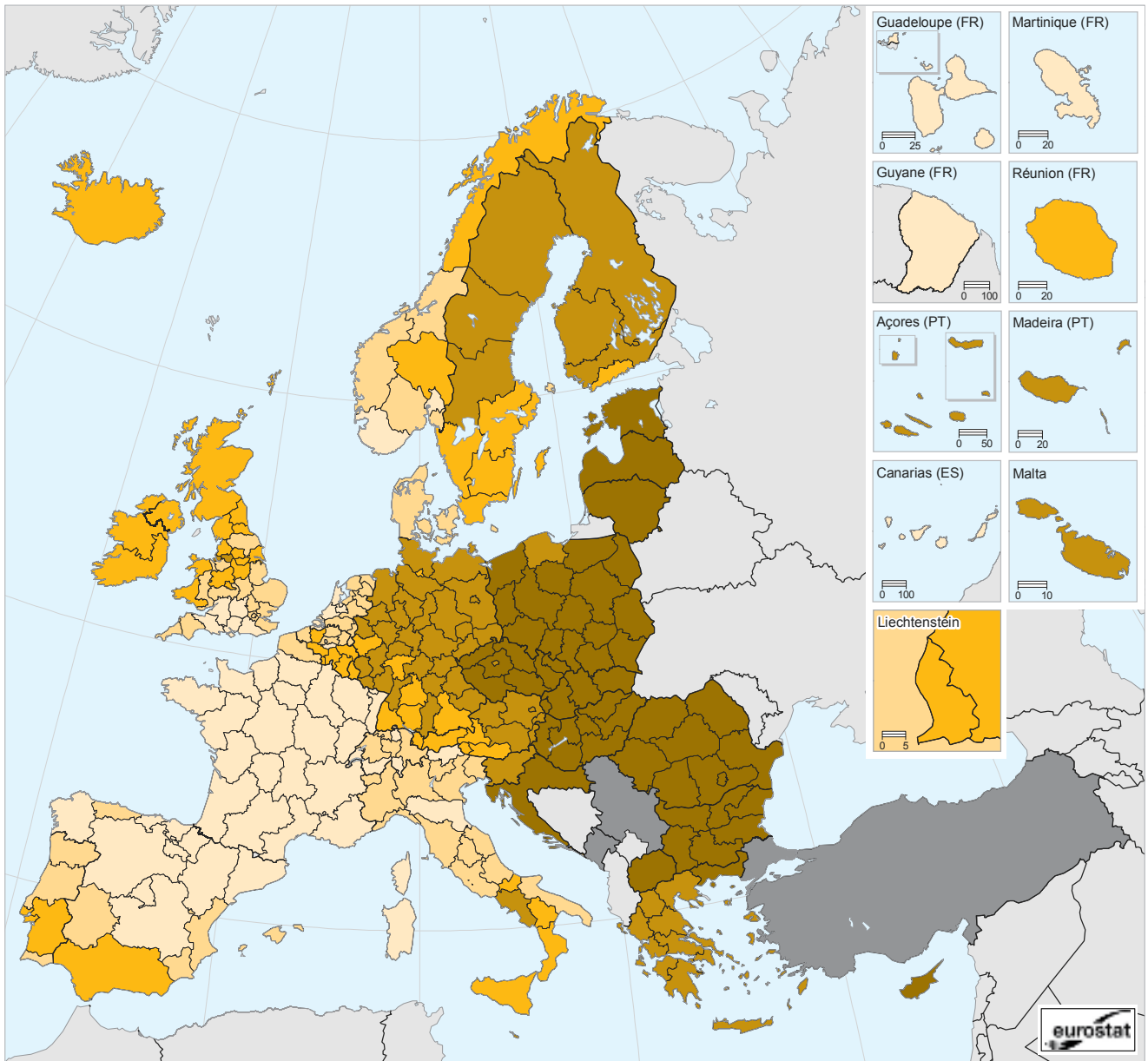
Figure 3.1 presents the five NUTS level 2 regions that recorded the largest reductions in standardised death rates for diseases of the circulatory system between 2002 and 2010 (data are averaged for the latest 3-year period available). The largest reductions in death rates per 100 000 inhabitants were generally reported for regions with some of the highest death rates, notably in Romania, which recorded the three largest reductions in the Nord-Vest, Vest and Centru regions. Among the five regions shown in Figure 3.1, the single largest reduction (in percentage terms between 2000–02 and 2008–10) was recorded for the Portuguese Região Autónoma dos Açores (down almost one third, by 32.9%), while the remaining four regions saw their respective death rates decline by 20–25%.

## Diseases of the respiratory system

Respiratory diseases include infectious acute respiratory diseases (such as influenza and pneumonia) and chronic lower respiratory diseases (such as asthma). Diseases of the respiratory system mainly affected older people, as almost 9 out of 10 deaths from these diseases occurred among those aged

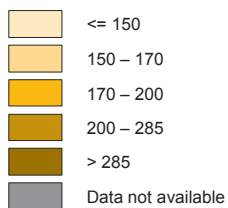


**Map 3.1:** Deaths from diseases of the circulatory system, by NUTS 2 regions, 2008–10 <sup>(1)</sup>  
(standardised death rate per 100 000 inhabitants)



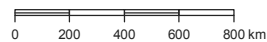
(standardised death rate per 100 000 inhabitants)

EU-27 = 216.8



Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat

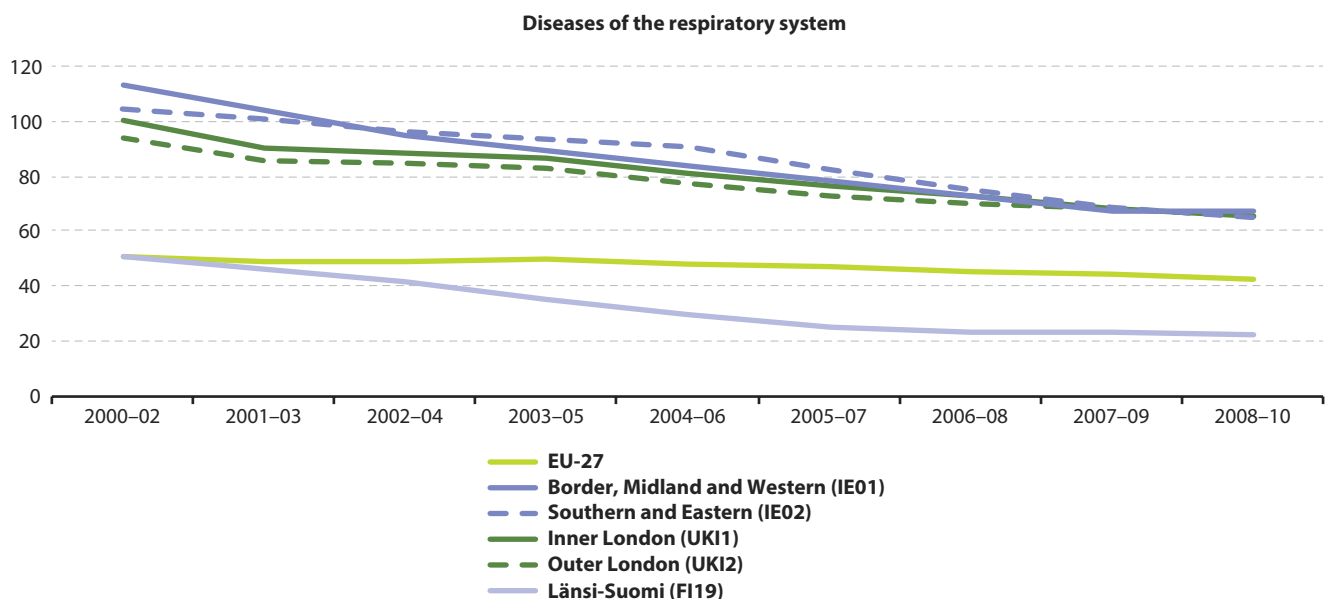
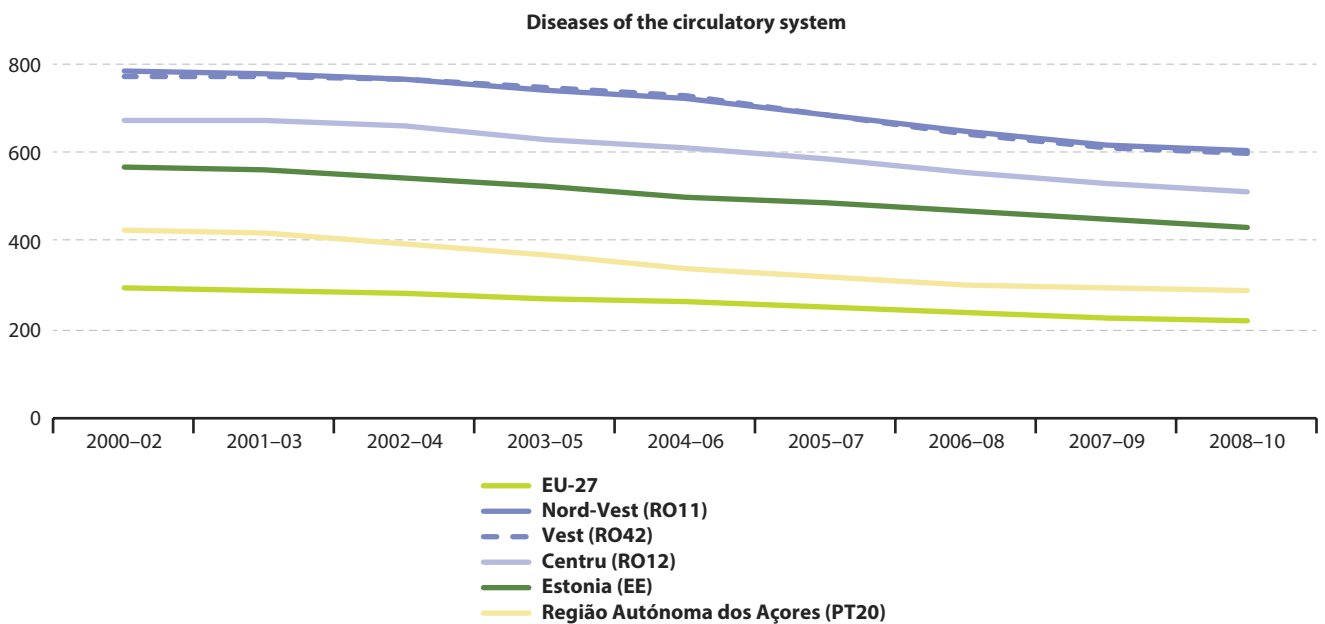
Cartography: Eurostat — GISCO, 05/2013



<sup>(1)</sup> EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (IT13), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.

Source: Eurostat (online data code: [hlth\\_cd\\_ysdr1](#))

**Figure 3.1:** Deaths from diseases of the circulatory system and the respiratory system, selected NUTS 2 regions, 2000–10 <sup>(1)</sup>  
(standardised death rate per 100 000 inhabitants, 3-year average)

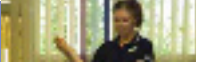


<sup>(1)</sup> Based on the five regions with the largest reductions in death rates (subject to data availability); EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.

Source: Eurostat (online data code: [hlth\\_cd\\_ysdr1](#))

65 and above. Chronic lower respiratory diseases (42.2% of all deaths from respiratory diseases) and pneumonia (31.9%) were responsible for the highest proportion of deaths from respiratory diseases in the EU-27 in 2010.

Map 3.2 shows the standardised death rate for diseases of the respiratory system across Europe; the average for the EU-27 was 43.0 deaths per 100 000 inhabitants during the period 2008–10, with the rate for men (60.8) almost double that recorded for women (31.3). Some of the highest standardised



death rates from diseases of the respiratory system were recorded in a number of regions across the United Kingdom, Denmark (data only available at the national level), Ireland, Portugal and Belgium (2007–09). By far the highest death rates from diseases of the respiratory system were reported in the Portuguese island region of Madeira (147.7 deaths per 100 000 inhabitants), while another Portuguese island region, the Açores (96.0), together with Merseyside (98.6) and Greater Manchester (90.1) in the United Kingdom recorded the next highest death rates. Of the 20 NUTS level 2 regions in the EU-27 that recorded at least 70 deaths per 100 000 inhabitants from diseases of the respiratory system in 2008–10, there were 15 from the centre and north of the United Kingdom, two from Portugal, the overseas region of the Ciudad Autónoma de Ceuta (Spain), the northern Polish region of Warmińsko-Mazurskie and the western Belgian region of Province/Provincie Hainaut. Relatively high death rates from diseases of the respiratory system may be linked to a range of factors, including: historical working conditions (especially for men, as many of these regions used to be characterised by having their local economies based on coal mining, iron and steel and other heavy industries) and differences in public health campaigns (for example, the proportion of elderly persons who are vaccinated against influenza).

At the other end of the scale, the regions with the lowest death rates from respiratory diseases included three French island regions (Guadeloupe, Martinique and Corse), other predominantly rural areas of France, a number of regions in the north-east of the EU — across Estonia, Latvia and Finland — as well as several regions in Germany, Austria and central or northern Italy. The lowest standardised death rate was recorded in Guadeloupe (France) at 21.0 deaths per 100 000 inhabitants in 2008–10.

On the basis of a comparison of NUTS level 2 regions, the widest differences in death rates between the sexes were often recorded in those regions that recorded the highest death rates: namely the Portuguese Região Autónoma da Madeira and Região Autónoma dos Açores, the Spanish overseas regions of the Ciudad Autónoma de Ceuta and the Ciudad Autónoma de Melilla, as well as the Polish region of Warmińsko-Mazurskie and the Belgian region of Province/Provincie Hainaut. Standardised death rates for men were more than four times as high as those for women in both Lithuania (4.3 times as high for men) and Estonia (4.1 times), while they diverged by almost as much in Latvia (3.9 times). The difference in death rates was much lower in most Greek and Swedish regions, as well as in the French overseas regions. In the Greek capital city region of Attiki there was only a small difference between standardised male and female death rates for diseases of the respiratory system (59.2 deaths per 100 000 male inhabitants and 56.5 deaths per 100 000 female inhabitants). A similar pattern was observed in Iceland, as the standardised female death rate was 41.4 deaths per 100 000 female inhabitants in 2007–09, compared with

a ratio of 42.2 for men; relatively small differences were also apparent across the seven level 2 Swiss regions.

Figure 3.1 presents the five NUTS level 2 regions across the EU-27 that recorded the largest reductions in their standardised death rates for diseases of the respiratory system between 2000–02 and 2008–10. The largest reductions were reported for both of the NUTS level 2 regions that cover Ireland, while sizeable reductions were also reported for Inner and Outer London (the United Kingdom) and Länsi-Suomi (Finland). The standardised death rate from diseases of the respiratory system in Länsi-Suomi fell by as much as 56.6% overall from 2000–02 to 2008–10, lowering its death rate to the fourth lowest (at the NUTS level 2) within the EU by 2008–10.

### Cancer (malignant neoplasms)

There are many different types of cancer (malignant neoplasms) including those of the larynx, trachea, bronchus, lung, colon, breast or prostate, as well as lymphoid or haematopoietic cancers. The standardised death rate from cancer was 169.3 per 100 000 inhabitants between 2008 and 2010, with the rate for men (222.6) just over 70% higher than that for women (129.8).

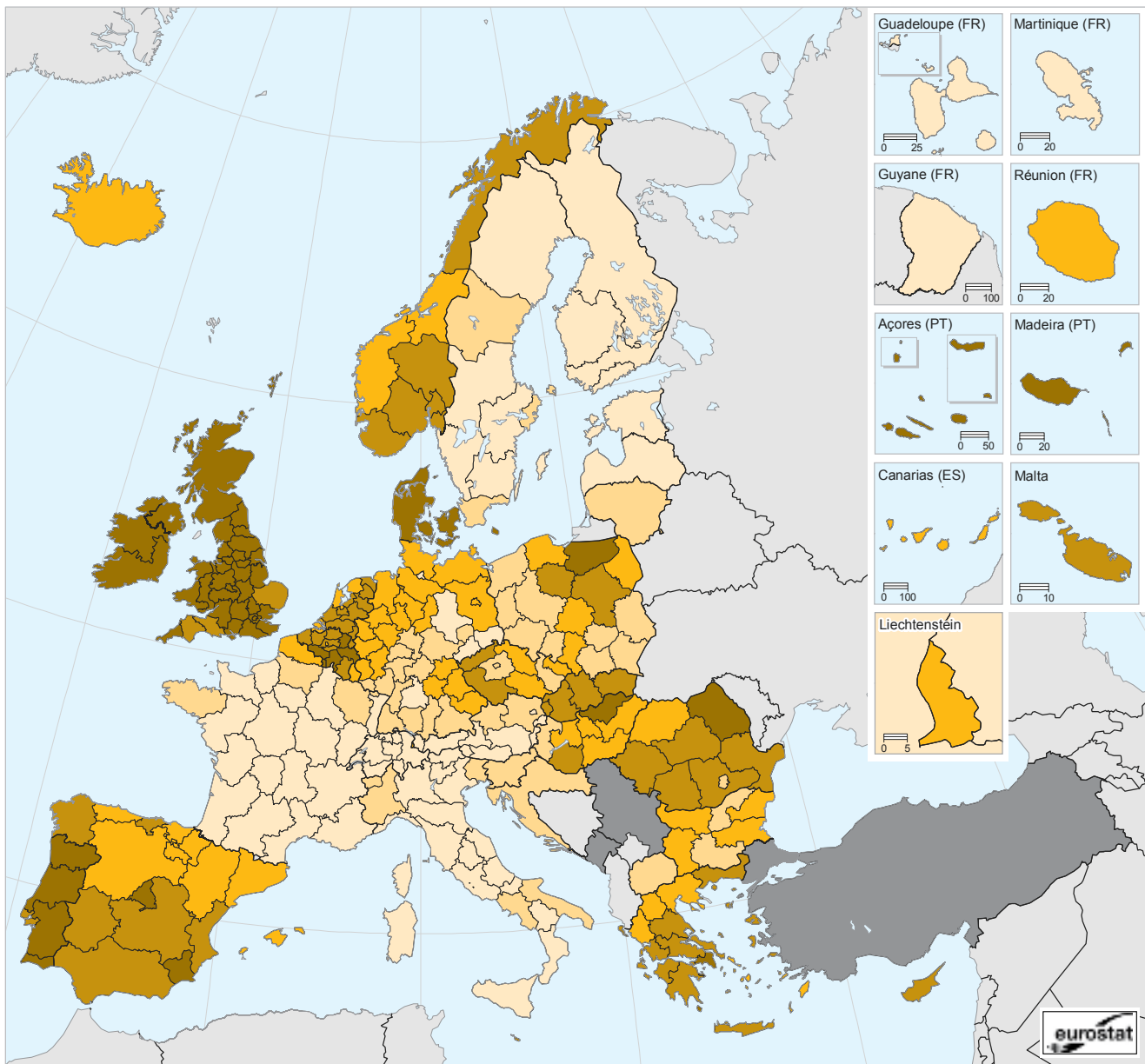
Among the regions of the EU-27, standardised death rates from malignant neoplasms were highest in the seven Hungarian NUTS level 2 regions, peaking in Észak-Alföld (253.6 deaths per 100 000 inhabitants). There were 18 other regions across the EU that reported in excess of 200 deaths from cancer per 100 000 inhabitants during the period 2008–10: these were predominantly in Poland (nine regions) and the Czech Republic (four regions), while there was also one region from each of France (Nord - Pas-de-Calais), Portugal (Região Autónoma dos Açores), Romania (the capital city region of Bucuresti - Ilfov), Slovakia (Západné Slovensko) and the United Kingdom (Merseyside).

The lowest regional death rates from cancer during the period 2008–10 were generally recorded in the French overseas regions, southern Europe, a cluster of regions in southern Germany and in Austria, as well as most of the regions in Finland and Sweden; low death rates from cancer were also recorded throughout Switzerland. However, the lowest standardised death rate from malignant neoplasms was recorded for the capital city region of Belgium (Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest, 114.8 deaths per 100 000 inhabitants for 2007–09).

An analysis by sex for the period 2008–10 shows that standardised death rates from malignant neoplasms for men ranged from 371.5 per 100 000 male inhabitants in Észak-Alföld down to 146.9 in the Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest. For women the range was narrower, peaking at 189.4 per 100 000 female inhabitants in Merseyside (the United Kingdom) and falling to a low of 82.8 in the Spanish overseas region of the Ciudad Autónoma de Melilla.

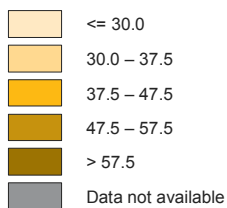


**Map 3.2:** Deaths from diseases of the respiratory system, by NUTS 2 regions, 2008–10 <sup>(1)</sup>  
(standardised death rate per 100 000 inhabitants)

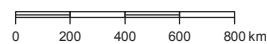


(standardised death rate per 100 000 inhabitants)

EU-27 = 43.0



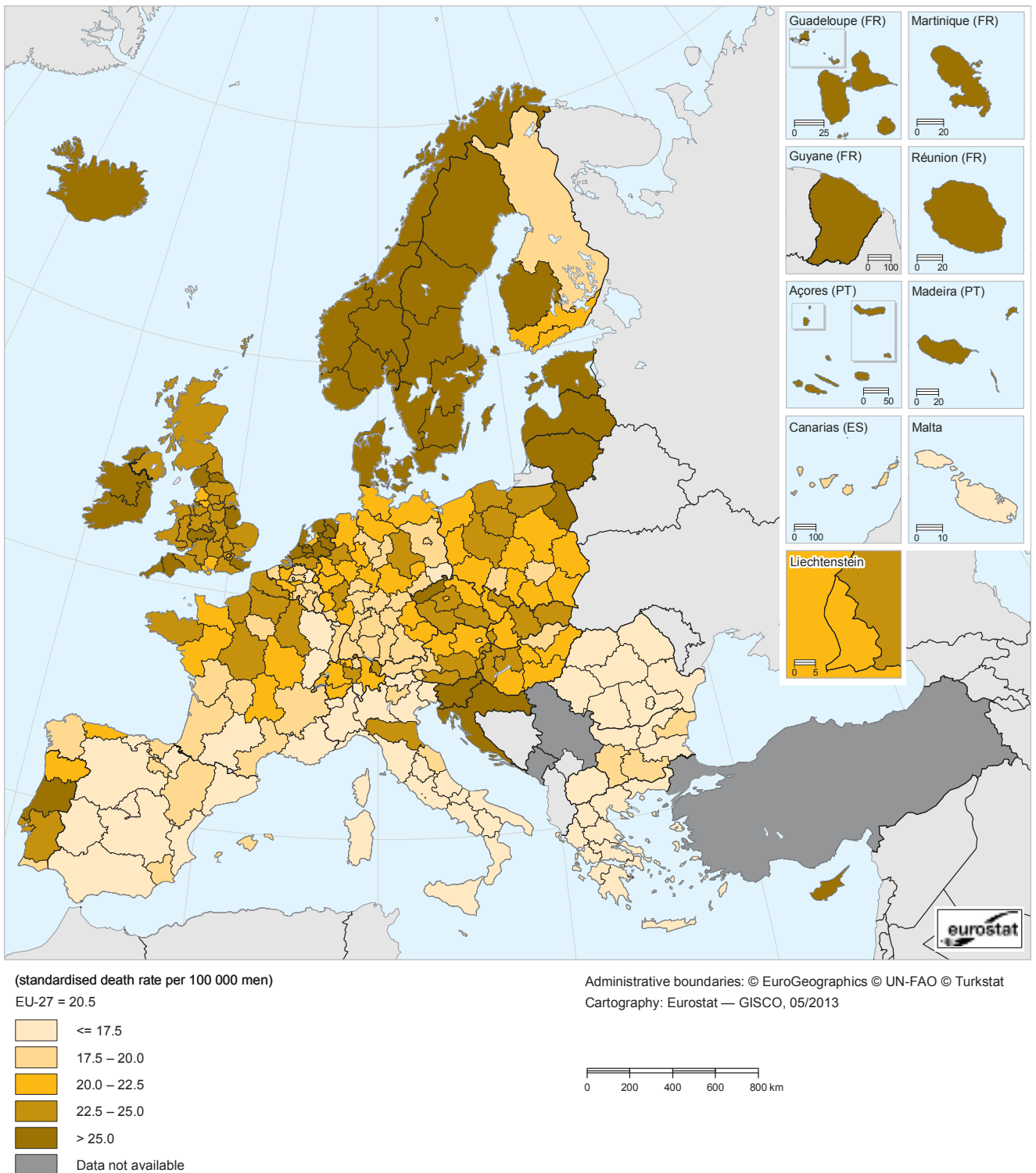
Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat  
Cartography: Eurostat — GISCO, 05/2013



<sup>(1)</sup> EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.

Source: Eurostat (online data code: [hlth\\_cd\\_ysdr1](#))

**Map 3.3:** Deaths from prostate cancer, men, by NUTS 2 regions, 2008–10 <sup>(1)</sup>  
(standardised death rate per 100 000 men)



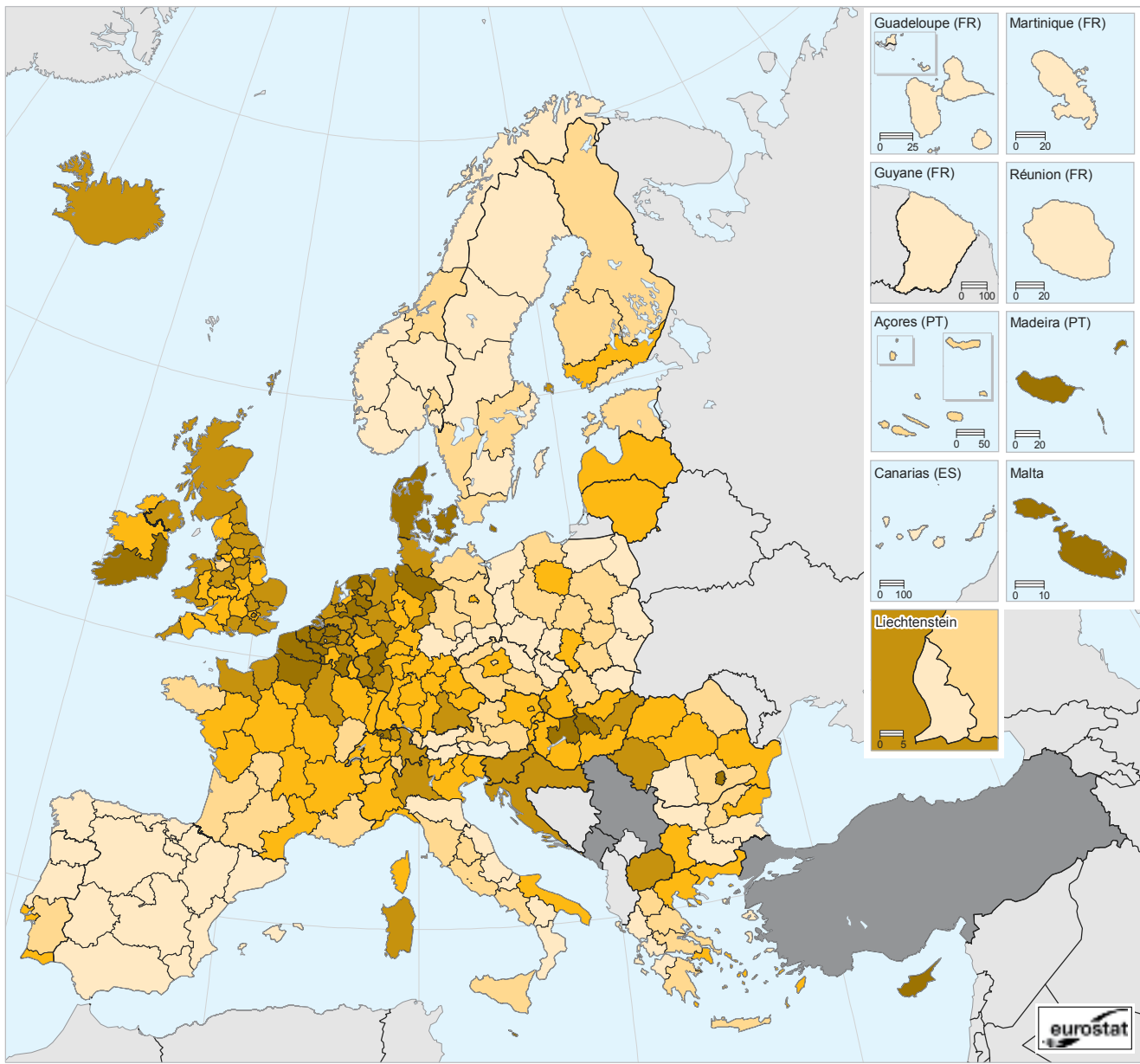
<sup>(1)</sup> EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.

Source: Eurostat (online data code: [hlth\\_cd\\_ysdr1](#))



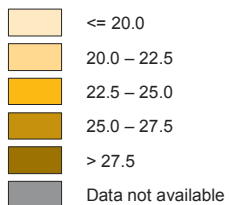


**Map 3.4:** Deaths from breast cancer, women, by NUTS 2 regions, 2008–10 <sup>(1)</sup>  
(standardised death rate per 100 000 women)

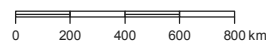


(standardised death rate per 100 000 women)

EU-27 = 23.1



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



<sup>(1)</sup> EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.

Source: Eurostat (online data code: [hlth\\_cd\\_ysdr1](#))



Map 3.3 shows average standardised death rates from prostate cancer (for men) between 2008 and 2010. The EU-27 standardised death rate for this gender-specific cancer was 20.5 per 100 000 male inhabitants. Prostate cancer was generally the second most common cause of death from cancers among men, behind deaths from malignant neoplasms of the larynx, trachea, bronchus and lung. The highest standardised death rate from prostate cancer was recorded for the Finnish island region of Åland (47.6), followed by the French overseas regions of Martinique (42.0), Guadeloupe (40.4) and Guyane (38.3). The lowest death rates from prostate cancer were recorded in the Romanian regions of Sud-Vest Oltenia (9.3) and Sud - Muntenia (10.6), followed by the north-western Greek region of Ipeiros (11.2).

Map 3.4 shows another mostly gender-specific cancer — namely, breast cancer. The standardised death rate from breast cancer in the EU-27 was 23.1 deaths per 100 000 female inhabitants during 2008–10. Breast cancer was the leading cause of death from cancer among women in most regions of the EU: the highest death rates were recorded in the capital city region of Romania (Bucuresti – Ilfov, 31.3 deaths), while six other NUTS level 2 regions had rates above 30.0 deaths per 100 000 female inhabitants: namely Cyprus (the whole country is covered at this level of the NUTS), the Região Autónoma da Madeira (Portugal) and four regions that were relatively close to each other in north-western Europe — Friesland and Overijssel (in the Netherlands), the Province/Provincie Oost-Vlaanderen (in Belgium, 2007–09) and Nord - Pas-de-Calais (in France). The lowest rates from breast cancer were found across a range of Spanish regions — including the Comunidad Foral de Navarra, which had the lowest death rate in the EU (14.2 deaths per 100 000 female inhabitants) — the four French overseas departments, as well as a range of Greek, Polish and southern Italian regions; death rates from breast cancer were also relatively low in Norway.

## Hospital beds

For many years, the number of hospital beds across the EU-27 has decreased. During the last decade this pattern continued, as the number of available beds in hospitals fell by 12.7% between 2000 and 2010. The total number of available hospital beds in the EU-27 was 2.70 million in 2010, equivalent to one bed for every 185.8 persons, or 538.2 hospital beds per 100 000 inhabitants. Sweden (272.6 available hospital beds per 100 000 inhabitants), the United Kingdom (295.5), Ireland (313.9) and Spain (315.7) had the lowest number of beds in relation to their respective populations, while the highest ratios were reported for a group of central European countries: Germany (824.8), Austria (762.9), Hungary (718.2) and the Czech Republic (701.0).

The EU-27 regions with the lowest number of hospital beds were generally in those countries that reported a low ratio of hospital beds relative to their national populations — often the regions at the lower end of the ranking were rural areas with relatively low levels of population density, for example Alentejo in Portugal, the central Greek region of Sterea Ellada, Andalucía in southern Spain, or East Wales (the United Kingdom). One of the main exceptions to this rule was Flevoland (the Netherlands) which had 164 hospital beds per 100 000 inhabitants (although the latest Dutch regional data available refer to 2002) — the lowest ratio across NUTS level 2 regions in the EU in 2010 (note that much of the Flevoland region is land reclaimed during the 1930s, 1950s and 1960s). The low density of hospital beds in Flevoland is all the more remarkable given that the next lowest density in a Dutch region was recorded in Zeeland, where there were more than twice as many beds relative to the size of population (374 per 100 000 inhabitants).

The highest ratio of hospital beds to population was often recorded in the capital city region of each EU Member State; this may be due to capital cities often having specialised hospital services (for the treatment of rare diseases or new types of intervention and care). More generally, regional disparities may result from the distribution of medical facilities in major cities and agglomerations, with these facilities not only being used by the local population but also people from a wider catchment area that extends into neighbouring regions. Berlin (Germany) and Stockholm (Sweden) were the two main exceptions to this rule, as each of these capital city regions reported the lowest density of available hospital beds in their respective countries.

The highest density of available hospital beds was recorded in the north-eastern German region of Mecklenburg-Vorpommern (1 265 beds per 100 000 inhabitants; note information is only available for NUTS level 1 regions for Germany), followed by its neighbouring Polish region of Zachodniopomorskie (1 194); these were the only regions in the EU-27 to record ratios above the level of 1 000 beds per 100 000 inhabitants. The Romanian capital city region of București - Ilfov (990 beds), three more German regions (Thüringen, Schleswig-Holstein and Saarland) and the Austrian region of Salzburg were the only other regions to record ratios above the level of 900 beds per 100 000 inhabitants.

The density of hospital beds varied considerably between regions in some of the EU Member States. As already indicated, this was particularly the case in the Netherlands, where there were, on average, 633 hospital beds per 100 000 inhabitants in Drenthe compared with only 164 beds per 100 000 inhabitants in Flevoland. A similar pattern was observed in Greece (data for 2009), where there were 584 hospital beds per 100 000 inhabitants in Attiki (which includes Athens)

compared with 189 in Sterea Ellada. At the other end of the range, the density of hospital beds was relatively homogeneous across Hungarian regions (data for 2009) — from 777 beds per 100 000 inhabitants in Közép-Magyarország (which includes Budapest) to 645 beds in Dél-Alföld in 2010. There was also a relatively homogeneous ratio of hospital beds to inhabitants across the regions of Italy and Sweden.

## Healthcare professionals

Regional data on healthcare professionals provides an alternative measure (compared with that for hospital beds) in order to study the availability of healthcare resources; Map 3.6 shows the rate of practising physicians per 100 000 inhabitants in 2010.

Given the differences in the concept of physicians between the EU Member States, there is no overall figure for the number of physicians in the EU-27, as the data is collected for three different concepts that are employed among the Member States, namely those of practising physicians, professionally active physicians and licensed physicians. The analysis that follows is based exclusively on what is considered to be the most reliable of these concepts, namely that of practising physicians. Across those regions for which data are available, the highest ratio of practising physicians per 100 000 inhabitants was recorded for the Spanish overseas region of the Ciudad Autónoma de Ceuta (941 in 2010), followed by Wien and Praha (the capital city regions of Austria and the Czech Republic); each of these regions reported a ratio above 650 physicians per 100 000 inhabitants. At the other end of the range, there were three regions in the EU that reported fewer than 150 physicians per 100 000 inhabitants in 2010; these included the Dutch regions of Flevoland and Zeeland, as well as the Sud – Muntenia region of Romania.

As with the data presented for hospital beds, the capital city region often reported some of the highest concentrations of physicians; the only exceptions (among those Member States with more than one NUTS level 2 region) were some of the largest countries, namely: Germany, Spain, France, Italy, the Netherlands and the United Kingdom.

## Data sources and availability

Regulation 1338/2008 of the European Parliament and of the Council of 16 December 2008 on Community statistics on public health and health and safety at work is the legal framework for compiling statistics on: causes of death; healthcare; health status and health determinants; accidents at work; and occupational diseases and other work-related health problems. The regulation is seen as a key statistical element that should help contribute towards a sustainable health

monitoring system across the EU, providing a framework for developing health statistics across the EU.

## Causes of death

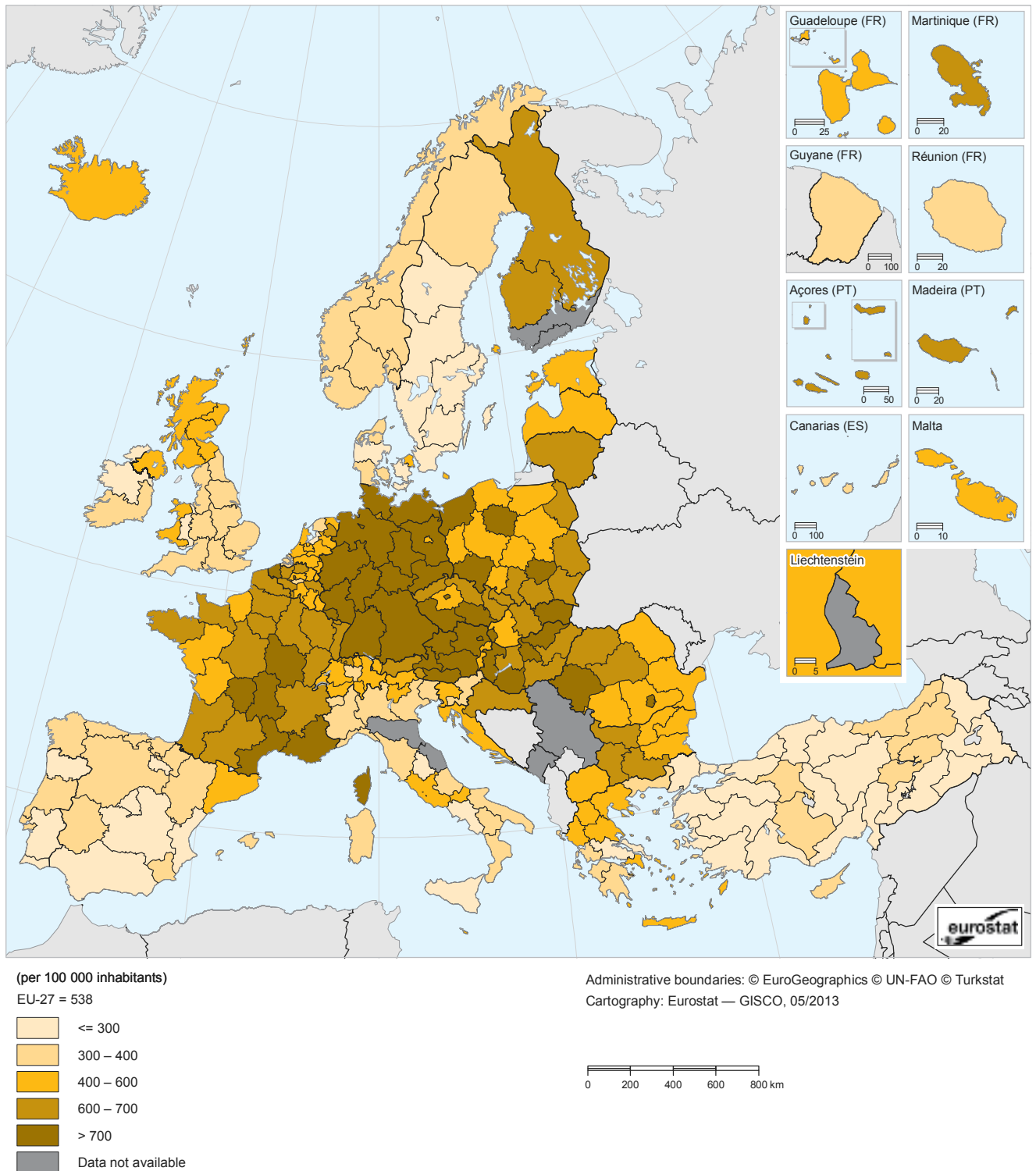
Statistics on causes of death are based on information from death certificates. These statistics record the underlying cause of death: the definition adopted by the World Health Assembly is ‘the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury’.

In addition to absolute numbers, crude death rates and standardised death rates are calculated for causes of death. Regional data are provided in the form of 3-year averages, as one-off events (for example a flu epidemic or a terrorist attack) may result in particularly high numbers of deaths for a specific cause of death for a single reference period. As such, the average value for the latest 3 years for which information is available is used to moderate these effects; for this publication, such averages are generally based upon the period 2008–10.

The crude death rate indicates mortality in relation to the total population; it is expressed per 100 000 inhabitants, in other words, it is calculated as the number of deaths in the population over a given period divided by the population during the same period. The crude death rate may be strongly influenced by population structure. Because mortality is higher among older age groups, a regional population considered to be relatively old will probably experience more deaths than a population that is considered to be relatively young. In order to account for these differences in the structure of populations, preference has been given to standardised death rates, which are weighted averages of age-specific mortality rates; the weighting factor is the age distribution of a standard reference population (for example, the standard European population defined by the World Health Organisation (WHO) is used for this purpose). Standardised death rates are expressed per 100 000 inhabitants and are calculated for the 0–64 age group (premature death), as well as for persons aged 65 and above and for persons of all ages. Deaths are classified to one of the 65 diseases (and other causes) that form part of a European shortlist, which is based on the international statistical classification of diseases and related health problems that has been developed and maintained by the WHO.

Commission Regulation 328/2011 on [Community statistics on public health and health and safety at work, as regards statistics on causes of death](#) was enacted in April 2011. It provides the legal basis for the collection of statistics concerning all registered deaths and stillbirths occurring in each Member State, distinguishing residents and non-residents from reference year 2011 onwards.

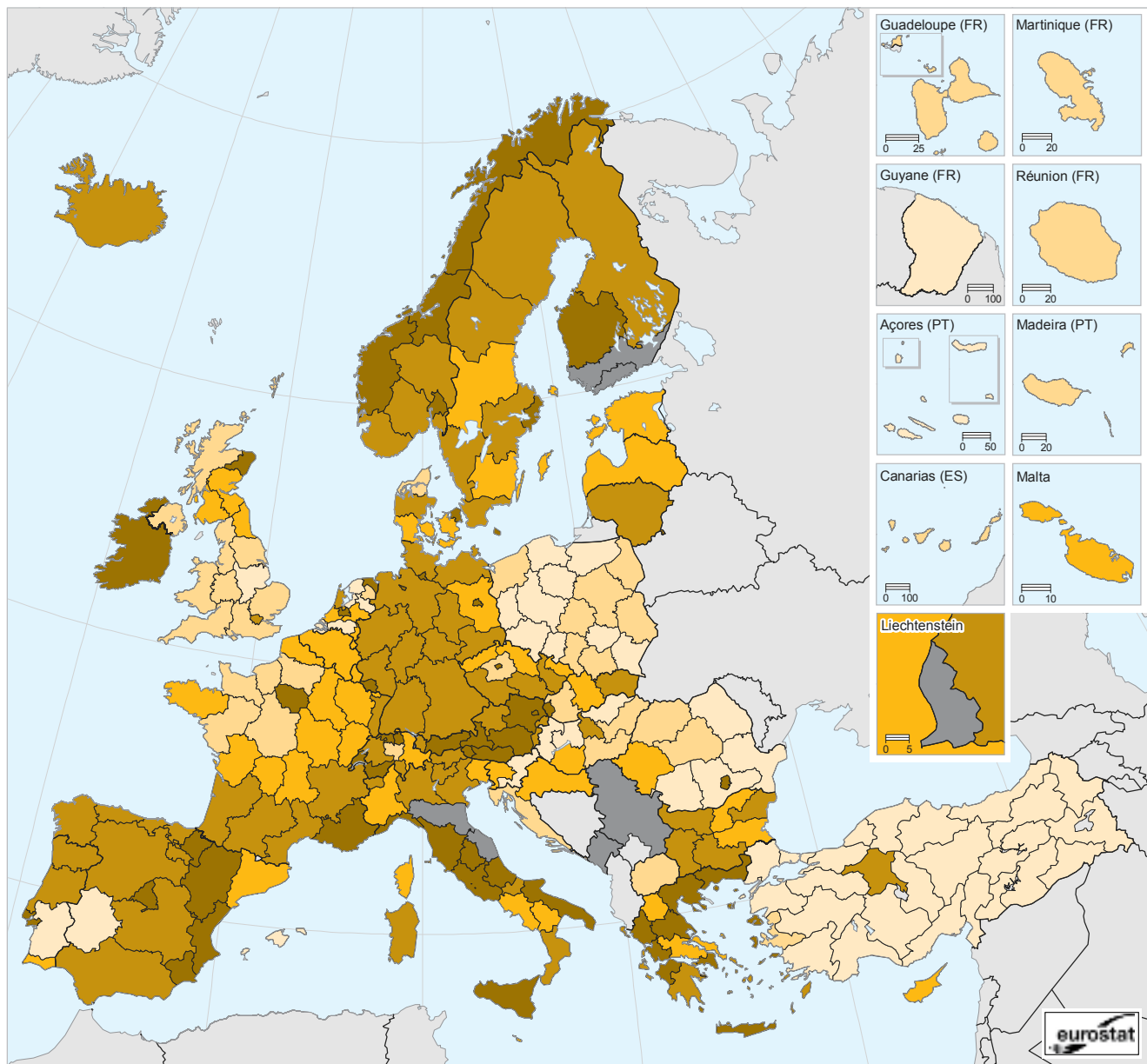
**Map 3.5:** Hospital beds, by NUTS 2 regions, 2010 <sup>(1)</sup>  
(per 100 000 inhabitants)



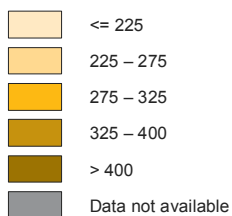
<sup>(1)</sup> Greece and the United Kingdom, 2009; Iceland, 2007; the Netherlands, 2002; Spain, the Netherlands and Iceland, estimates; EU-27 and Portugal, provisional; Germany, by NUTS 1 regions; England (UKC to UKK) — average for NUTS regions UKC to UKK.

Source: Eurostat (online data code: [hlth\\_rs\\_bdsrg](#))

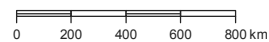
**Map 3.6:** Healthcare personnel — number of practising physicians, by NUTS 2 regions, 2010 <sup>(1)</sup>  
(per 100 000 inhabitants)



(per 100 000 inhabitants)



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



<sup>(1)</sup> Greece, France, Italy, the Netherlands, Slovakia, Finland, the former Yugoslav Republic of Macedonia and Turkey, professionally active physicians; Ireland and Portugal, licensed physicians; Denmark, the Netherlands and Sweden, 2009; Cyprus, estimate; Germany, England (UKC to UKK) and Wales (UKL), by NUTS 1 regions; Belgium and Ireland, national level.

Source: Eurostat (online data code: [hlth\\_rs\\_prsg](#))



## Healthcare

Non-expenditure healthcare data are mainly based on administrative sources; a few countries compile this information from surveys. As a consequence, the information collected is not always comparable. Work is ongoing to improve this situation and it is anticipated that this will lead to legislative developments to provide a more coherent and robust set of healthcare statistics in the future.

Resource-related healthcare data concern human, physical and technical resources, including staff (such as physicians, dentists, nursing and caring professionals, pharmacists and physiotherapists) and equipment (such as hospital beds). In addition, regional data are available for output-related data that focuses on hospital patients and their treatment(s), in particular for inpatients (although these statistics are not shown in this chapter). As well as data in absolute numbers, density rates are used to indicate the availability of resources or the frequency of services rendered; generally these rates are expressed per 100 000 inhabitants.

Hospital bed numbers provide information about healthcare capacities; in other words, on the maximum number of patients who can be treated in hospitals. Available hospital beds (occupied or unoccupied) are those which are regularly maintained and staffed and immediately available for the care of admitted patients. This indicator should ideally cover beds in all hospitals, including general hospitals, mental health and substance abuse hospitals, and other specialty hospitals. The statistics should include public as well as private sector establishments — although some Member States provide data only for the public sector.

Data on healthcare staff are provided regardless of whether the personnel are independent, or employed by a hospital or any other healthcare provider. Three main concepts are used for health professionals: practising, professionally active and licensed to practise. Practising physicians provide services directly to patients; professionally active physicians include those who practice as well as those working in administration and research with their medical education being a pre-requisite for the job they carry out; and physicians licensed to practice are those entitled to work as physicians plus, for example, those who are retired. To interpret Map 3.6, which presents data for the number of practising physicians per 100 000 inhabitants, it is necessary to consider that the statistics for Greece, France, Italy, the Netherlands, Slovakia, Finland, the former Yugoslav Republic of Macedonia and Turkey relate to professionally active physicians, while those for Ireland and Portugal relate to licensed physicians. As such, it is likely that the data for regions in these

countries are somewhat over-estimated (when compared with information for the number of practising physicians).

## Context

Health is an important priority for Europeans, who expect to have a long and healthy life, to be protected against illnesses and accidents and to receive appropriate healthcare. Health issues cut across a range of topics — including consumer protection (food safety issues), workplace safety and environmental or social policies. The policy areas covered by these health-related issues fall under the remit of the Directorate-General for Health and Consumers and of the Directorate-General for Employment, Social Affairs and Inclusion.

The competence for the organisation and delivery of health services and healthcare is largely held by the EU Member States, while the EU has a mandate to complement national action on health. The latter consists mainly of: protecting people from health threats and disease, promoting healthy lifestyles and helping national authorities in the EU cooperate on health issues.

A first programme for EU action in the field of public health covered the period from 2003–08. On 23 October 2007, the European Commission adopted a new strategy ‘Together for health: a strategic approach for the EU 2008–2013’ (COM(2007) 630 final). In order to bring about the changes identified within this new strategy, the second programme of EU action in the field of health came into force on 1 January 2008. It put in place an overarching, strategic framework for policy developments relating to health in the coming years; it has four main principles and three strategic themes for improving health in the EU. The four principles are:

- taking a value-driven approach;
- recognising the links between health and economic prosperity;
- integrating health in all policies;
- strengthening the EU’s voice in global health issues.

The three strategic themes include:

- fostering good health in an ageing Europe;
- protecting citizens from health threats;
- looking to develop dynamic health systems and new technologies.

Within this strategy there is a strong need for comparable data on health and health-related behaviour, diseases and health systems which needs to be based on a set of common EU health indicators, for which there is Europe-wide agreement regarding definitions, data collection and use.