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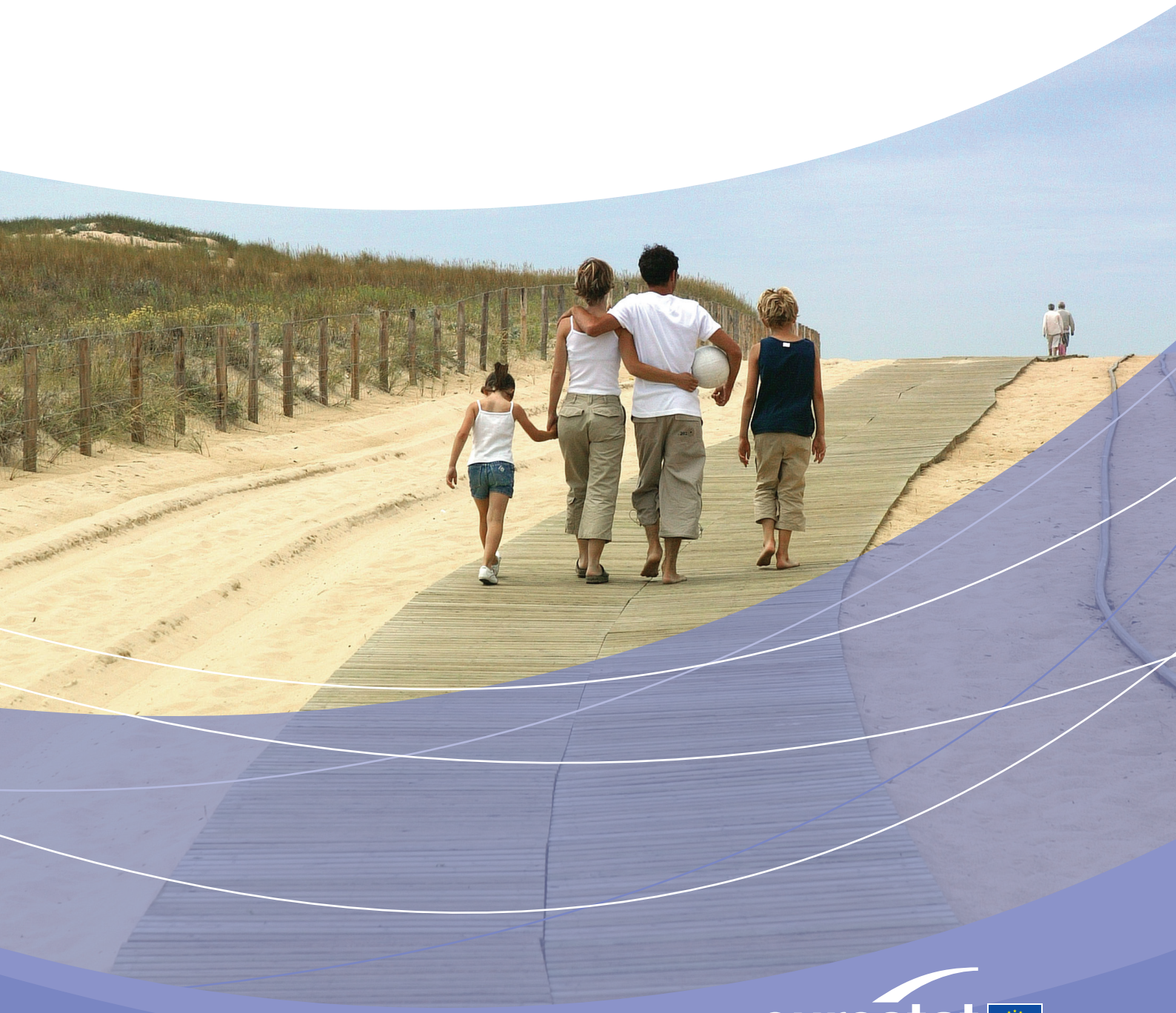

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Foreword

The European Union places considerable emphasis on cohesion policy, with the objective of bringing Europe's regions closer together in economic, social and environmental spheres.

The *Eurostat regional yearbook* provides an overview of key statistics available for each of the statistical domains that are covered by official European statistics. It is thus a helpful tool to understand the regional diversity that exists within Europe and also shows that considering national figures alone does not reveal the full picture of what is happening in the European Union. Indeed, there are often significant differences between regions of the same country when one looks at smaller geographical areas. Thus, the Eurostat regional yearbook is a valuable supplement to *Europe in figures — Eurostat yearbook*, which concentrates exclusively on national statistics for the European Union and its Member States.

Regional statistics in the European Union are based on a harmonised convention in the definition of regions which is contained in the classification of territorial units for statistics, known by the acronym NUTS. This classification has implications beyond the direct field of statistics. It is used more and more in other areas, and thus contributes to shaping the perception of EU citizens as regards how they identify with a certain regional structure. In this way NUTS has the potential to contribute towards the gradual creation of a common EU notion of regions.

In the 2012 edition of the *Eurostat regional yearbook* emphasis has been given to a more harmonised approach in relation to the commentaries provided alongside tables, graphs and maps. Furthermore, the practice of previous editions to gradually increase the number of statistical maps has been continued; these have the advantage of revealing regional variations at a glance.

The content of this book is also available online in 'Statistics explained' on the Eurostat website. The latest data can also be downloaded from Eurostat's database, where more disaggregated data can also be found.

Eurostat is the statistical office of the European Union. Working together with national statistical authorities in the European Statistical System, we produce official statistics, which meet the highest possible standards of quality.

I wish you an enjoyable reading experience.

Walter Radermacher
Director-General, Eurostat
Chief Statistician of the European Union

Abstract

Statistical information is an important tool for understanding and quantifying the impact of political decisions in a specific territory or region. The *Eurostat regional yearbook 2012* gives a detailed picture relating to a broad range of statistical topics across the regions of the 27 Member States of the European Union (EU), as well as the regions of EFTA and candidate countries. Each chapter presents statistical information in maps, figures and tables, accompanied by a description of the main findings, data sources and policy context. These regional indicators are presented for the following 11 subjects: economy, population, health, education, the labour market, structural business statistics, tourism, the information society, agriculture, transport, and science, technology and innovation. In addition, three special focus chapters are included in this edition: these look at European cities and coastal regions, while the publication ends with a description of the methods used to identify rural and urban areas.

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Data extracted

Most data were extracted on 15 February 2012; some data relating to structural business statistics (Chapter 6) were extracted at the end of February 2012; some data relating to regional GDP were extracted in the middle of March 2012 and have been included in three different areas, namely, for the economy (Chapter 1), agriculture (Chapter 9) and science, technology and innovation (Chapter 11).

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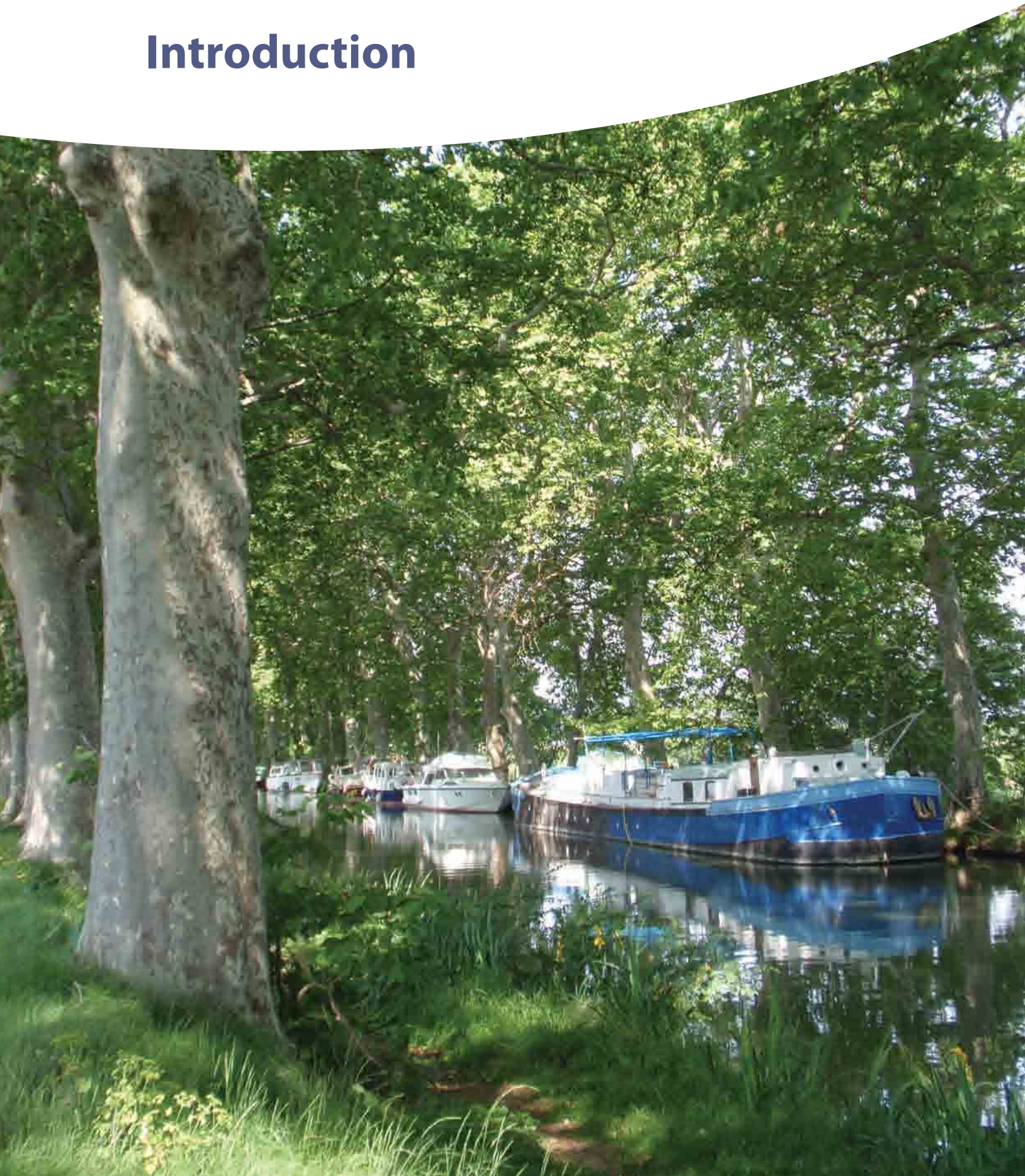
Introduction



EU statistics on regions and cities

Eurostat, the statistical office of the European Union (EU), is responsible for collecting and disseminating national and regional data, primarily for the 27 Member States of the EU, but also for the EFTA and candidate countries. The aim of this publication, the *Eurostat regional yearbook 2012*, is to give a flavour of the statistics that Eurostat collects on regions and cities and to present the most recent figures for each statistical subject.

The Member States within the EU are often compared with each other, but in reality it is very difficult to compare a small Member State like Malta, which has around 400 000 inhabitants, or Luxembourg, which has around 500 000 inhabitants, with Germany, the Member State which has the largest population in the EU at more than 80 million inhabitants. Comparing regional data that are as detailed as possible is often more meaningful and it also highlights the disparities — or similarities — within the Member States themselves.

The NUTS classification

At the heart of regional statistics is the NUTS classification (the classification of territorial units for statistics). This is a regional classification for the 27 Member States of the EU providing a harmonised hierarchy of regions on three geographical levels. The NUTS classification subdivides the national level of each Member State into regions at three different levels, NUTS levels 1, 2 and 3, from larger to smaller areas. If available, administrative structures are used for the different NUTS levels. In Member States where there is no administrative layer for a particular level, artificial regions are created by aggregating smaller administrative regions.

The NUTS regulation (Regulation (EC) No 1059/2003 of the European Parliament and of the Council) was adopted in May 2003 and entered into force in July 2003; it has since been amended twice and also supplemented twice with information pertaining to new Member States (10 extra Member States in 2004 and two extra Member States in 2008). The second regular amendment (EU No 31/2011) was adopted in January 2011 and entered into force from 1 January 2012 (note, however, that the data presented in this publication are not based on this amendment given that most of the information that is published refers to the reference years 2009 and 2010).

Below are the principles for determining the NUTS regions in the Member States.

Principle 1: the NUTS regulation defines the following minimum and maximum population thresholds for the size of the NUTS regions.

Level	Minimum population	Maximum population
NUTS level 1	3 million	7 million
NUTS level 2	800 000	3 million
NUTS level 3	150 000	800 000

Principle 2: NUTS favours administrative divisions (normative criterion). For practical reasons the NUTS classification is based on the administrative divisions applied in the Member States. That generally comprises two main regional levels; the additional third level is created by aggregating administrative units.

Principle 3: NUTS favours general geographical units. General geographical units are normally more suitable for any given indicator than geographical units specific to certain fields of activity.

Different regions have also been defined and agreed with the EFTA and candidate countries; these regions are called statistical regions and follow exactly the same rules as the NUTS regions in the EU, except that there is no legal base.

It should be noted that some Member States have a relatively small population and are therefore not divided into more than one NUTS level 2 region. Thus, for these Member States, data presented for NUTS level 2 regions are identical to national data. Following the revision of the NUTS classification in 2006, this applies to six Member States: Estonia, Cyprus, Latvia, Lithuania, Luxembourg and Malta. It also applies to the statistical regions at level 2 in the EFTA countries of Iceland and Liechtenstein and in the candidate countries of Montenegro and the former Yugoslav Republic of Macedonia ([1]). In each of these cases, the whole country consists of one single level 2 NUTS region or statistical region.

For more information about regional data collection and the NUTS classification, please refer to: http://epp.eurostat.ec.europa.eu/portal/page/portal/nuts_nomenclature/introduction.

The use of NUTS in this publication

Most statistics in this publication are based on NUTS level 2 regions, but some maps are based on NUTS level 3 regions (the most detailed NUTS level) and these are generally included when data at this level of detail are available. There are also a few maps where use is made of NUTS level 1 regions. Furthermore, there may be specific cases (on a map by map basis), where particular regions are presented using a different NUTS level — these changes are documented in the footnotes under each map and are generally made in order to improve the coverage of each map.

([1]) The name of the former Yugoslav Republic of Macedonia is shown in tables in this publication as FYR of Macedonia. This does not prejudge in any way the definitive nomenclature for this country, which is to be agreed following the conclusion of negotiations currently taking place on this subject at the United Nations.

One difficulty with regional statistics is that the volume of data inevitably gets very large (there are as many as 1 303 NUTS level 3 regions for the EU-27) and there has to be some kind of selection or sorting principle to make the data comprehensible. Statistical maps are an excellent means of presenting large amounts of statistical data in a user-friendly way. That is why this year's *Eurostat regional yearbook*, like previous editions, contains many thematic maps in which the data are categorised into different statistical classes represented by colour shades on a map (choropleth maps). Some chapters also make use of figures and tables to present the data, selected and sorted according to principles designed to make the results more accessible.

A folding map inside the back cover accompanies this publication. It shows all NUTS level 2 regions in the 27 Member States of the EU and the corresponding level 2 statistical regions in the EFTA and candidate countries; it also has a full list of codes and names of these regions. The map is intended to help readers to locate the name and NUTS code of a specific region on the other statistical maps in the publication. More information about the NUTS classification can be found at http://epp.eurostat.ec.europa.eu/portal/page/portal/nuts_nomenclature/introduction.

Coverage and timeliness

The *Eurostat regional yearbook 2012* contains statistics on the 27 Member States of the EU and, where available, data are also shown for the EFTA countries (Iceland, Liechtenstein, Norway and Switzerland) and the candidate countries (Montenegro, Croatia, the former Yugoslav Republic of Macedonia and Turkey); since 1 March 2012 Serbia has also been a candidate country (but was not at the time of compiling this edition of the publication). Since 27 July 2010, Iceland has been both an EFTA country and a candidate country and in this publication is grouped together with the other EFTA countries. The names (not the demarcated areas) of the level 2 statistical regions in Turkey were changed in early 2012; these names are included in the annex at the end of this publication and within the analyses presented.

Please note that the latest available reference year is not identical across the publication; each section aims to show the latest data available. In the light of the recent financial and economic crisis, which had severe implications for some of the subjects covered, it is important to keep in mind the reference year with respect to overall economic and social events. The following table gives an overview of the latest available reference year that is generally presented for each chapter.

Eurostat may have more recent data than the information that is shown in this publication. Data can be found directly on Eurostat's website: the online data codes below all maps, tables and figures in the publication help to locate each data source (see below for more information pertaining to Eurostat online data codes).

More information about regional statistics

Regional statistics are found on Eurostat's website under the heading 'Regions and cities' which is a subset of the domain for 'General and regional statistics'. Databases with more

Chapter number	Subject	Latest available reference year
1	Economy	2009 for GDP 2008 for income
2	Population	2010
3	Health	2008 for causes of death 2009 for healthcare
4	Education	2010
5	Labour market	2010
6	Structural business statistics	2009
7	Tourism	2010
8	Information society	2010
9	Agriculture	2007 and 2009 for economic accounts 2010 for livestock, arable farming and vineyards
10	Transport	2009
11	Science, technology and innovation	2009 for R & D 2010 for human resources 2008 for patents
12	Focus on European cities	2008 for the Urban Audit 2009 for perception surveys
13	Focus on coastal regions	2010
14	Focus on territorial typologies	Not relevant

dimensions and longer time series than those presented in this publication are available.

It is also possible to download a set of Excel files that contain the specific data used to produce the maps and other illustrations for each chapter in this publication. These are also available on Eurostat's website from the product page for the *Eurostat regional yearbook*.

More information about statistics on cities

Eurostat's statistics on cities, based on the Urban Audit data collection, provide a different focus to complement regional statistics. The main goal of the Urban Audit data collection is to provide information to assess the quality of life in European towns and cities. Eurostat collects and publishes data on several hundred indicators relating to the quality of urban life and living standards, including data on: demography, housing, health, crime, the labour market, economic activity, income disparity, local administration, civic involvement, educational qualifications, cultural infrastructure and tourism.

More information about Eurostat's statistics on cities is provided in Chapter 12, which is dedicated to this subject. For more information about the Urban Audit data collection in general, please refer to: http://epp.eurostat.ec.europa.eu/portal/page/portal/region_cities/city_urban.

Eurostat online data codes

Under each table, figure or map in all Eurostat publications you will find hyperlinks with Eurostat online data codes, allowing easy access to the most recent data on Eurostat's website. The online data code leads to either a two- or three-dimensional table in the TGM (table, graph, map) interface or to an open dataset which generally contains more dimensions and longer time series using the Data Explorer interface ([2]). In the *Eurostat regional yearbook*, these online data codes are given as part of the source below each table, figure and map.

In the PDF version of this publication, the reader is led directly to the freshest data when clicking on the hyperlinks for Eurostat online data codes. Readers of the printed version can access the freshest data by typing a standardised hyperlink into a web browser, for example:

http://ec.europa.eu/eurostat/product?code=<data_code>&mode=view, where <data_code> is to be replaced by the online data code in question.

([2]) There are two types of online data codes: (1) tables (accessed using the TGM interface) with eight-character codes, which consist of three or five letters — the first of which is 't' — followed by five or three digits, for example tps00001 and tsdph220; and (2) databases (accessed using the Data Explorer interface) which have codes that use an underscore '_' within the syntax of the code, for example nama_gdp_c.

Statistics explained

All the chapters in the *Eurostat regional yearbook* have, for the past couple of years, also been included as articles in 'Statistics explained', Eurostat's user-friendly guide to European statistics, which you will find on Eurostat's website. 'Statistics explained' is a wiki-based system, with an approach somewhat similar to Wikipedia, which presents statistical topics in an easy-to-understand way. Together, the articles make up an encyclopaedia of European statistics, which is completed by a statistical glossary clarifying the terms used. In addition, numerous links are provided to the latest data and metadata, as well as further information, making 'Statistics explained' a portal for regular and occasional users alike.

In March 2012, 'Statistics explained' contained more than 400 statistical articles and more than 1 300 glossary items, and its content is regularly expanded, while ongoing efforts are being made to increase its user friendliness (for example, extending the portal to cover additional languages). 'Statistics explained' is used as a tool to publish new content for the *Eurostat regional yearbook* as each chapter is finalised. This means that the latest text on each topic will be available in 'Statistics explained' earlier than in the printed version and, in this way, the most recent results will be made available to users without the inevitable delays that are part and parcel of the process of producing printed publications. Since the 2011 edition, the German and French versions of the publication are only available in 'Statistics explained', rather than as printed publications. 'Statistics explained' can be accessed via a link on the right-hand side of Eurostat's website or directly at http://epp.eurostat.ec.europa.eu/statistics_explained.

EU policies

Europe 2020 strategy

The Europe 2020 strategy, designed as the successor to the Lisbon strategy, was adopted by the European Council on 17 June 2010. It is the EU's common agenda for the next decade — and places an emphasis on the need for a new growth pact that can lead to a smart, sustainable and inclusive economy, a path that can overcome the structural weaknesses in Europe's economy, improve its competitiveness and productivity and underpin a sustainable social market economy.

The key areas of the strategy are limited to five headline targets for the EU as a whole, which are being translated into national targets for each EU Member State, reflecting the specific situation of each economy. The aim is to reach a set of objectives on employment, innovation, education, social inclusion and climate/energy by the year 2020. Eurostat provides statistical support for measuring the progress being made towards these strategic objectives. The European

Commission adopted seven flagship initiatives in addition to the headline targets, in order to drive progress towards the Europe 2020 goals. The Europe 2020 targets and initiatives are mentioned explicitly in many of the chapters of this publication. More information about the strategy is available at http://ec.europa.eu/europe2020/index_en.htm.

Data for the Europe 2020 headline indicators are available on Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/europe_2020_indicators/headline_indicators.

Achieving the Europe 2020 goals will require active involvement across all regions of the EU: the Committee of the Regions has set up a monitoring platform to help mobilise and involve regional and local authorities. This aims to facilitate the exchange of information and good practices between local and regional policymakers, and to help the EU and its Member States address challenges and obstacles, mainly by means of monitoring exercises at the territorial levels.

Regional policies

EU regional policy is designed to further economic, social and territorial cohesion, by reducing the gap in development between regions and among Member States of the EU. Regional policy helps finance specific projects for regions and towns, supporting job creation, competitiveness, economic growth, improved quality of life and sustainable development; as such, it is in line with the priorities set by the Europe 2020 strategy (see above). During the current programming period which covers 2007 to 2013, economic and social cohesion policy across the regions will benefit from EUR 347 410 million. The three main objectives are:

- convergence, under which the poorest Member States and regions (gross domestic product (GDP) per inhabitant less than 75 % of the EU average) are eligible, accounting for around 82 % of the funds for 2007 to 2013;
- regional competitiveness and employment, accounting for around 16 % of the funds; all regions which are not covered by the convergence objective or transitional assistance are eligible for funding;
- European territorial cooperation, accounting for around 2.5 % of the funds available.

Regional statistics are employed for a range of policy-related purposes, including the allocation of structural funds. NUTS is used as an objective base to demarcate regional boundaries and determine geographic eligibility for funds, including:

- the European Regional Development Fund (ERDF), which operates in all Member States and co-finances physical investments and, to a limited extent, training; the fund can intervene in the three objectives of regional policy;
- the European Social Fund (ESF), which aims to make the EU's workforce and companies better equipped to face global challenges through the promotion of better skills and job prospects;
- the Cohesion Fund, which co-finances mainly transport and environmental projects.

The ERDF supports regions covered by all three objectives. In relation to convergence, it focuses intervention on modernising and diversifying economic structures, as well as safeguarding or creating sustainable jobs. As regards regional competitiveness and employment, its priorities relate to innovation and the knowledge-based economy, environment and risk prevention, and access to transport and telecommunications services of general economic interest. Finally, in terms of its contribution to European territorial cooperation, the ERDF aims to develop economic and social cross-border activities, the establishment and development of transnational cooperation, and to increase the efficiency of regional policy through interregional promotion and cooperation, as well as the networking and exchange of experiences between regional and local authorities.

The ESF aims to improve employment and job opportunities through interventions that are made within the framework of convergence and regional competitiveness and employment objectives. The ESF supports actions in six fields: improving human capital; improving access to employment and sustainability; increasing the adaptability of workers and enterprises (lifelong learning, designing and spreading innovative working organisations); reinforcing social inclusion by combating discrimination and facilitating access to labour markets among disadvantaged people; strengthening institutional capacity at national, regional and local levels; and promoting partnership for reform in the fields of employment and inclusion.

The Cohesion Fund supports actions within the framework of the convergence objective; it finances activities including trans-European transport network and environmental projects, as well as energy or transport projects, as long as these demonstrate environmental benefits (such as energy efficiency, the use of renewable energy, developing rail transport systems or improving public transport); this fund concerns Bulgaria, the Czech Republic, Estonia, Greece, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovenia and Slovakia; while Spain is eligible for a phase-out fund.

Urban policies

One particular focus of economic and social cohesion policy has been urban development. Europe's cities are centres of economic activity, attracting innovation and employment. Upwards of 70 % of the EU's population live in urban areas. In addition, a considerable proportion face problems such as crime, poverty, unemployment, housing, traffic or environmental pressures.

The URBAN I and URBAN II Community initiatives ran from 1994 to 2006. As of 2007, the EU has reinforced the urban dimension of regional policy and fully integrated this into cohesion policy, with particular attention on promoting social cohesion and environmental sustainability. The EU contributes to the sustainable development of urban areas through a range of policies and initiatives which cover many areas of activity. The Community strategic guidelines on cohesion specify that programmes with a focus on urban areas can take different forms.

- There are actions to promote cities as motors of regional development: these aim to improve competitiveness, promote entrepreneurship, innovation and the development of services and boost the attractiveness of cities.
- Other actions aim to promote internal cohesion within urban areas: by improving the situation of deprived neighbourhoods, notably through rehabilitating the physical environment, redeveloping brownfield sites and preserving and developing their historical and cultural heritage.
- Other actions aim to promote a more balanced, polycentric development of the EU by developing urban networks at a national and Community level: to achieve this objective, these actions aim to put in place networks linking cities in both physical (infrastructure, information technologies, etc.) and human (promotion of cooperation, etc.) terms, while paying specific attention to urban–rural interfaces.

1

Economy

Gross domestic product (GDP) is a key measure of economic development and growth: the first part of this chapter presents a regional analysis of this indicator, based upon the level of GDP per inhabitant, as well as how this measure has changed in recent years. Economic accounts provide important information that may be used to make a regional analysis of the economy. These statistics (which are only available in current price terms) are also used for the allocation of expenditure under the European Union's (EU's) cohesion policy (see 'Regional policies' within the introductory chapter). Every region in the EU is covered by cohesion policy: however, most structural funds are directed to NUTS level 2 regions whose GDP per inhabitant is less than 75 % of the EU-27 average (on the basis of a 3-year average).

The second part of this chapter looks at regional household incomes (also only available in current price terms). This provides information in relation to primary income (for example, income from work) as well as disposable income that results from redistribution (taxes, social benefits and other transfers) by the state. Note that the data on regional household incomes refer to 2008, whereas the analysis of GDP is focused on 2009.

Main statistical findings

GDP and household incomes are initially calculated in national currencies, and then converted by purchasing power parities (PPPs) which take account of different price levels between Member States, allowing for a more accurate comparison. For GDP a general parity is used, whereas for household income a specific purchasing power parity for final consumption expenditure is used.

By using PPPs (rather than market exchange rates) these indicators are converted into an artificial common currency called a purchasing power standard (PPS), or in the case of household income a purchasing power consumption standard (PPCS). The use of PPSs and PPCSs makes it possible to compare purchasing power across the regions of Member States that use different currencies and where price levels are different. For more information about the use of PPPs please refer to the data sources and availability section below.

Regional GDP per inhabitant

Map 1.1 shows GDP per inhabitant in each NUTS level 2 region as a percentage of the EU-27 average, which in absolute terms was 23 500 PPS in 2009, down from 25 000 PPS in 2008. Among the NUTS level 2 regions in the EU, GDP per inhabitant ranged from 6 400 PPS (27 % of the EU-27 average) in Severozapaden in Bulgaria to 78 000 PPS (332 % of the EU-27 average) in the capital city region of Inner London in the United Kingdom; between the two ends of the distribution there was a factor of 12.2 to 1. Luxembourg (266 % of the EU-27 average), the Belgian capital city region (223 %) and the German region of Hamburg (188 %) occupied positions two to four in terms of a ranking of regions with the highest GDP per inhabitant, followed by the Slovakian, French and Czech capital city regions with 178 %, 177 % and 175 % of the EU-27 average respectively. Many of the regions with high GDP per inhabitant were capital city regions or neighbouring regions — this was the case in Belgium, the Czech Republic, Denmark, Ireland, Spain, France, Luxembourg (which is just one region), the Netherlands, Austria, Slovakia, Finland, Sweden and the United Kingdom. In addition, there were several regions with an average GDP per inhabitant more than 25 % above the EU-27 average: in southern Germany, around major cities in western Germany, northern Spain and Italy, western Austria, several regions of the Netherlands, and the Belgian region around Antwerpen, the island region of Åland (Finland) and North Eastern Scotland (United Kingdom). As such, the Slovakian and Czech capital city regions of Praha and Bratislavský kraj were the only regions from the Member States that joined the EU in 2004 or 2007 among the 39 regions where the average GDP per inhabitant was more than 25 % above the EU-27 average. The next most prosperous region (by this measure) in the Member States that joined the EU in 2004 or 2007 was a long way behind, namely Bucureşti - Ilfov in Romania at 111 % of the EU-27 average. The Slovenian region of Zahodna Slovenija and the Hungarian region of Közép-Magyarország were the only other regions in the Member States that joined the EU in 2004 or 2007 that had an average GDP per inhabitant (in PPS) that was above the EU-27 average.

Overall, there were 68 regions with an average GDP per inhabitant that was 25 % or more below the EU-27 average. A total of 20 regions were concentrated in six of the EU-15 Member States: Italy (five southern regions), France (four overseas regions), Greece and Portugal (four regions each), the United Kingdom (two regions) and Spain (the region of Extremadura). The remaining 48 regions were in Member States that joined the EU in 2004 or 2007: all of these 12 Member States had at least one region below this level except for Cyprus and Malta. Among these regions there were 22 regions where the average GDP per inhabitant was at most half the EU-27 average, and these regions were found in Bulgaria, Hungary, Poland, Romania and Slovakia. Around 38.5 million people lived in the 22 regions whose GDP per inhabitant in PPS was 50 % of the EU-27 average or less, equivalent to 7.7 % of the EU-27 population.

Generally low average GDP per inhabitant was also recorded in the former Yugoslav Republic of Macedonia and Croatia, although the region of Sjeverozapadna Hrvatska (the capital city region of Croatia) recorded a level equivalent to 78 % of the EU-27 average.

Table 1.1 presents an analysis of the proportion of the population in 2009 living in regions that had a GDP per inhabitant

(in PPS) below 75 % of the EU-27 average and the proportion above 125 % of the average. In 2009 the proportion of the population living in regions where the GDP per inhabitant was less than 75 % of the EU-27 average was 23.3 %, while the proportion living in regions where this value was greater than 125 % of the EU-27 average was 19.0 %; the proportion of the population in the mid-range (GDP per inhabitant between 75 % and 125 %) was 57.7 %. The three Baltic Member States, each with just one NUTS level 2 region, had all of their population living in regions with an average GDP per inhabitant below 75 % of the EU-27 average; this was also the case in the former Yugoslav Republic of Macedonia (also just one region). In Romania, Slovakia, Poland, the Czech Republic, Bulgaria, Hungary, Portugal and Slovenia, more than half of the population lived in regions with an average GDP per inhabitant lower than 75 % of the EU-27 average; this was also the case in Croatia.

In contrast, in Luxembourg (one NUTS level 2 region) the entire population lived in a region with an average GDP per inhabitant of more than 125 % of the EU-27 average; in Ireland, the Netherlands and Finland, more than half of the population lived in such regions. On the two island Member States of Cyprus and Malta (each just one NUTS level 2 region) the entire population lived in regions with a mid-range average GDP per inhabitant (between 75 % and 125 % of the EU-27 average), as did the majority of the population in the United Kingdom (86.8 %), France (78.8 %), Sweden (78.5 %), Greece (78.3 %), Spain (77.9 %), Germany (70.5 %), Denmark (69.7 %), Belgium (64.0 %) and Austria (60.6 %).

A more detailed regional analysis

While Map 1.1 is focused on NUTS level 2 regions, which are particularly important in terms of defining eligibility for structural funds, Map 1.2 provides a more detailed analysis of regional economies, based on NUTS level 3 regions. Understandably the overall analysis is similar to that for the NUTS level 2 regions, although there are a number of NUTS level 3 regions that are atypical for the higher level (NUTS level 2) regions to which they belong. This phenomenon may often result from commuting inflows into central NUTS level 3 regions from surrounding areas, resulting in a concentration of economic activity in the most built-up areas. For example, in the Bulgarian capital NUTS level 2 region of Yugozapaden the average GDP per inhabitant (in PPS terms) was 75 % of the EU-27 average, but at the more detailed NUTS level 3, the region Sofia (stolitsa) recorded a value of 104.3 % for this indicator while the remaining four NUTS level 3 regions had values below 50 %. A similar situation occurred in the Polish capital city NUTS level 2 region of Mazowieckie where the NUTS level 3 regions of Ostrołęcko-siedlecki and Radomski recorded an average GDP per inhabitant (in PPS) that was less than half the average for Mazowieckie, the latter being pulled up by a relatively high level for the NUTS level 3 region of Miasto Warszawa.

Within the German region of Oberbayern (NUTS level 2) there was a very large range in the values recorded for this indicator between the NUTS level 3 regions: Fürstenfeldbruck recorded an average GDP per inhabitant (in PPS) that was 79.6 % of the EU-27 average whereas München, Landkreis recorded a ratio of 330.2 %. In a similar manner in Rheinhessen-Pfalz (NUTS level 2) the NUTS level 3 region Südwestpfalz recorded an average GDP per inhabitant (in PPS) that was 52.3 % of the EU-27 average whereas Ludwigshafen am Rhein, Kreisfreie Stadt recorded a value of 215.3 %. The German NUTS level 3 regions of Regensburg, Schweinfurt, Wolfsburg, Düsseldorf and Koblenz (all Kreisfreie Städte) recorded an average GDP per inhabitant that was more than double the average for the NUTS level 2 regions of which they were part, namely Oberpfalz, Unterfranken, Braunschweig, Düsseldorf and Koblenz respectively. In a similar vein, the NUTS level 3 region of Oost-Groningen in the Netherlands recorded an average GDP per inhabitant (in PPS) that was 72.8 % of the EU-27 average, which was less than half the level (170 %) recorded in Groningen (NUTS level 2) as a whole.

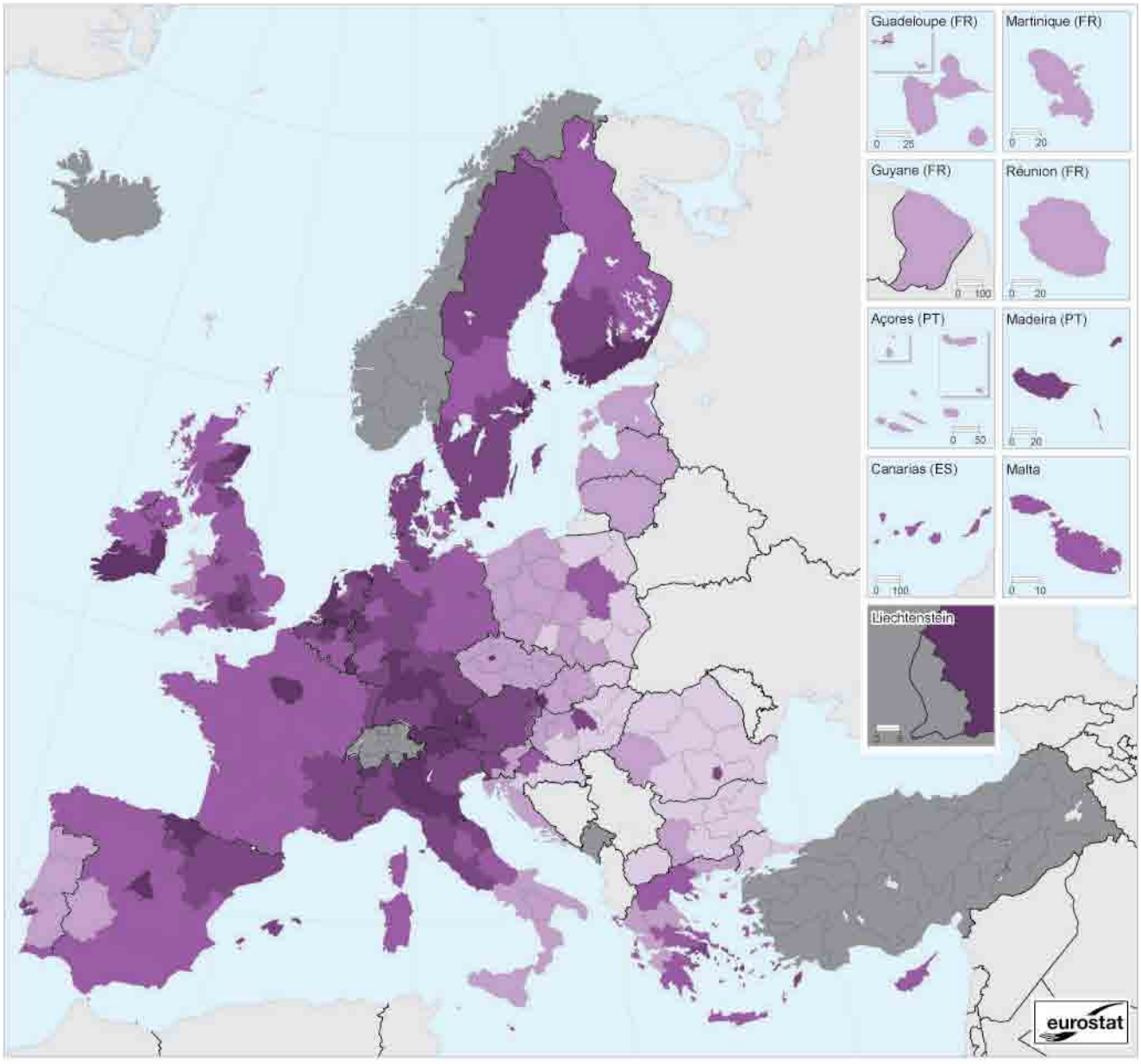
Major regional differences within countries

Whereas Map 1.2 highlights a number of cases where there were large differences in GDP per inhabitant between NUTS level 3 regions within the same NUTS level 2 region; Figure 1.1 provides an analysis of the substantial regional differences within countries. Note that Cyprus and Luxembourg consist of only one region at the NUTS level 3.

In 2009, the highest level of regional average GDP per inhabitant was less than twice the lowest level in Denmark, Malta and Sweden, whereas in the remaining countries shown in Figure 1.1 the difference was greater, exceeding a factor of 5 to 1 in Germany, France, Poland and Romania and reaching a factor of 10.5 to 1 in the United Kingdom.

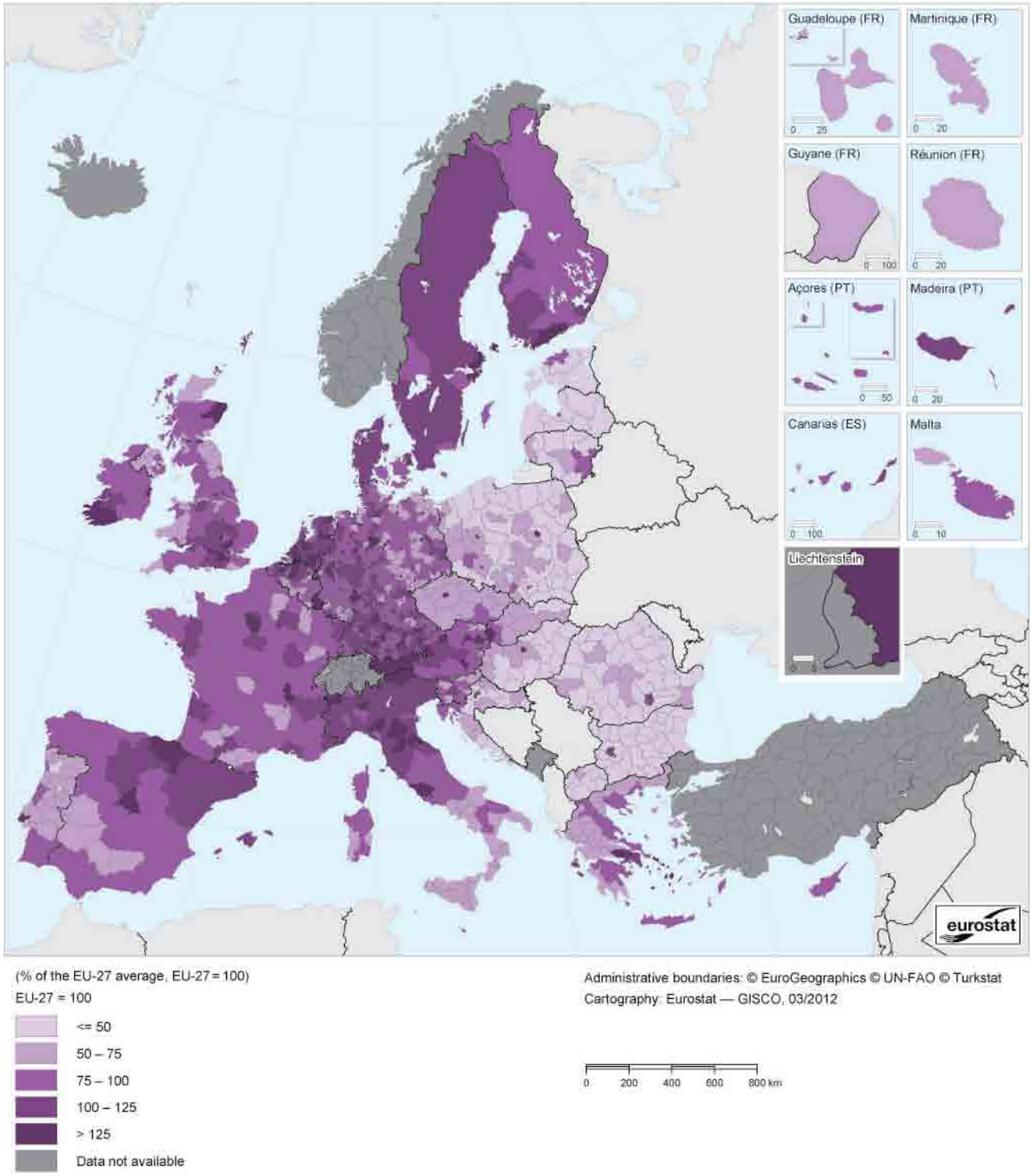
In many Member States the capital city region (at the NUTS level 3) had the highest GDP per inhabitant (in PPS): this situation occurred in Belgium, Bulgaria, the Czech Republic, Denmark, Estonia, Ireland, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Slovenia, Slovakia, Sweden and the United Kingdom (note that there are two NUTS level 3 regions that make up the capital city of the United Kingdom), as well as in Croatia and the former Yugoslav Republic of Macedonia. As such, the capital city region had the highest average GDP per inhabitant in all of the Member States that joined the EU in 2004 or 2007 except for Romania, where the highest level was recorded in the region surrounding the capital city region. A similar situation occurred in France where the NUTS level 3 region with the highest average GDP per inhabitant was a region neighbouring the capital city region. Germany was the only Member State where the capital city region at the NUTS level 3 had an average GDP per inhabitant that was below the national average.

Map 1.1: Gross domestic product (GDP) per inhabitant, in purchasing power standard (PPS), by NUTS 2 regions, 2009
(% of the EU-27 average, EU-27 = 100)



Source: Eurostat (online data code: nama_r_e2gdp)

Map 1.2: Gross domestic product (GDP) per inhabitant, in purchasing power standard (PPS), by NUTS 3 regions, 2009 (1)
(% of the EU-27 average, EU-27 = 100)



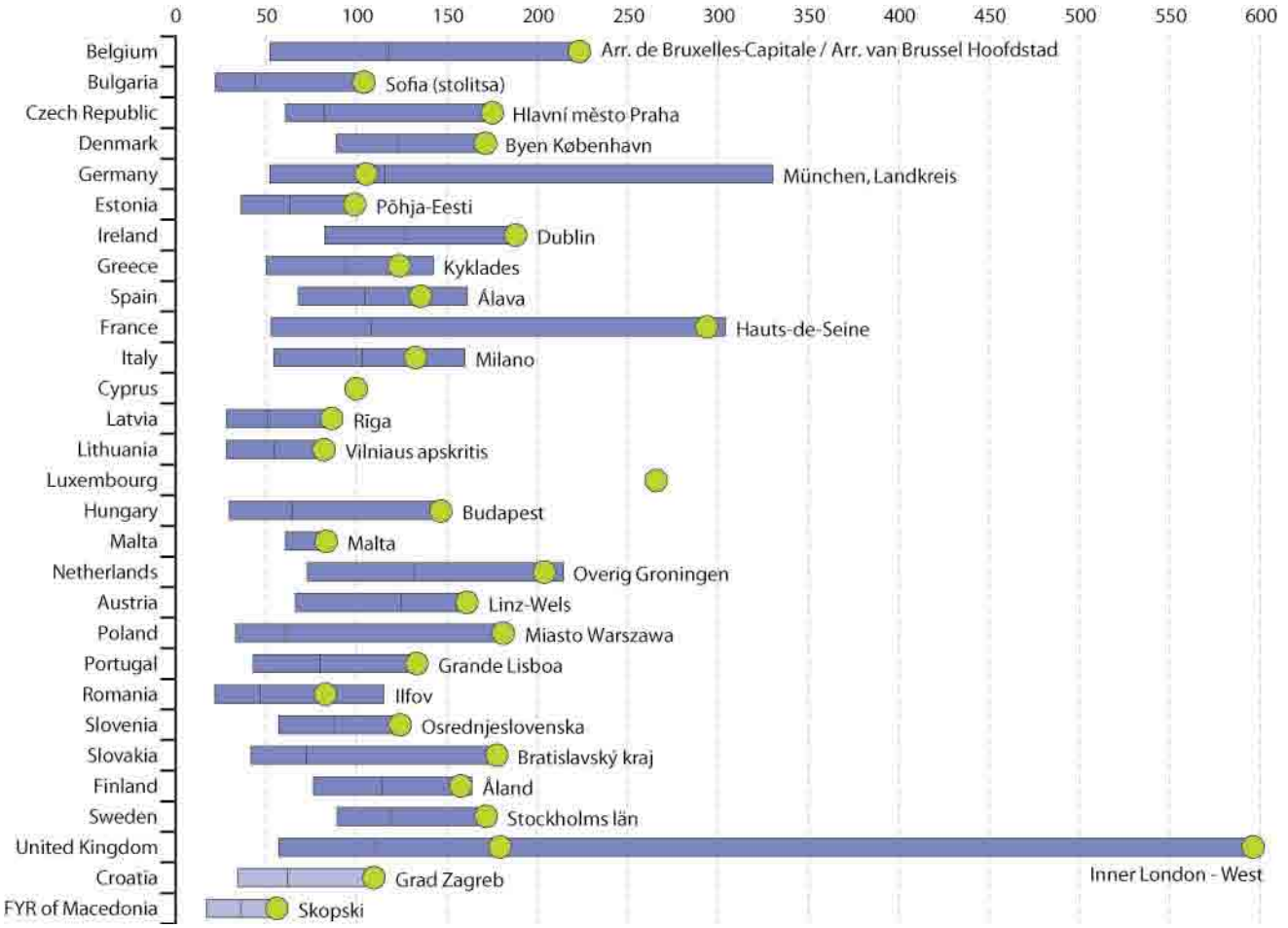
(1) Spain, 2007 (except for Asturias (ES120), Cantabria (ES130), Navarra (ES220), La Rioja (ES230), Madrid (ES300), Murcia (ES620), Cueta (ES630) and Melilla (ES640)).
Source: Eurostat (online data code: nama_r_e3gdp)

Table 1.1: Dispersion of GDP, by NUTS 2 regions, 2000 and 2009
(%)

	Dispersion of regional GDP per inhabitant		Proportion of the resident population living in NUTS 2 regions where GDP per inhabitant is:	
	2000	2009	< 75 % of the EU-27 average, 2009	> 125 % of the EU-27 average, 2009
EU-27	32.3	27.2	23.3	19.0
Belgium	25.5	24.2	0.0	36.0
Bulgaria	18.1	39.6	72.1	0.0
Czech Republic	22.0	26.9	72.3	11.8
Denmark	15.5	15.2	0.0	30.3
Germany	17.6	16.1	0.0	29.5
Estonia	-	-	100.0	0.0
Ireland	15.5	16.5	0.0	73.0
Greece	12.8	23.9	21.7	0.0
Spain	20.6	18.5	2.4	19.8
France	20.9	23.1	2.9	18.2
Italy	24.8	22.3	28.2	24.5
Cyprus	-	-	0.0	0.0
Latvia	-	-	100.0	0.0
Lithuania	-	-	100.0	0.0
Luxembourg	-	-	0.0	100.0
Hungary	32.5	39.8	70.7	0.0
Malta	-	-	0.0	0.0
Netherlands	10.6	10.6	0.0	62.8
Austria	18.2	15.1	0.0	39.4
Poland	17.4	20.7	86.3	0.0
Portugal	22.5	23.6	64.7	0.0
Romania	25.1	30.4	89.5	0.0
Slovenia	16.7	18.7	53.1	0.0
Slovakia	26.8	33.2	88.6	11.4
Finland	17.4	15.6	0.0	50.4
Sweden	15.9	19.0	0.0	21.5
United Kingdom	21.7	24.9	3.9	9.3
Croatia	:	19.3	62.2	0.0
FYR of Macedonia	-	-	100.0	0.0

Source: Eurostat (online data codes: nama_r_e0digdp, nama_r_e2gdp and demo_r_d3avg)

Figure 1.1: Gross domestic product (GDP) per inhabitant, in purchasing power standard (PPS), by NUTS 3 regions, 2009 (1)
(% of the EU-27 average, EU-27 = 100)



(1) The graph 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 region; the name of the region with the highest value is also included; Spain, 2007 (except for Asturias (ES120), Cantabria (ES130), Navarra (ES220), La Rioja (ES230), Madrid (ES300), Murcia (ES620), Cueta (ES630) and Melilla (ES640)); note that two NUTS 3 regions exist for the capital city of the United Kingdom (Inner London - West and Inner London - East).
Source: Eurostat (online data code: nama_r_e2gdp)

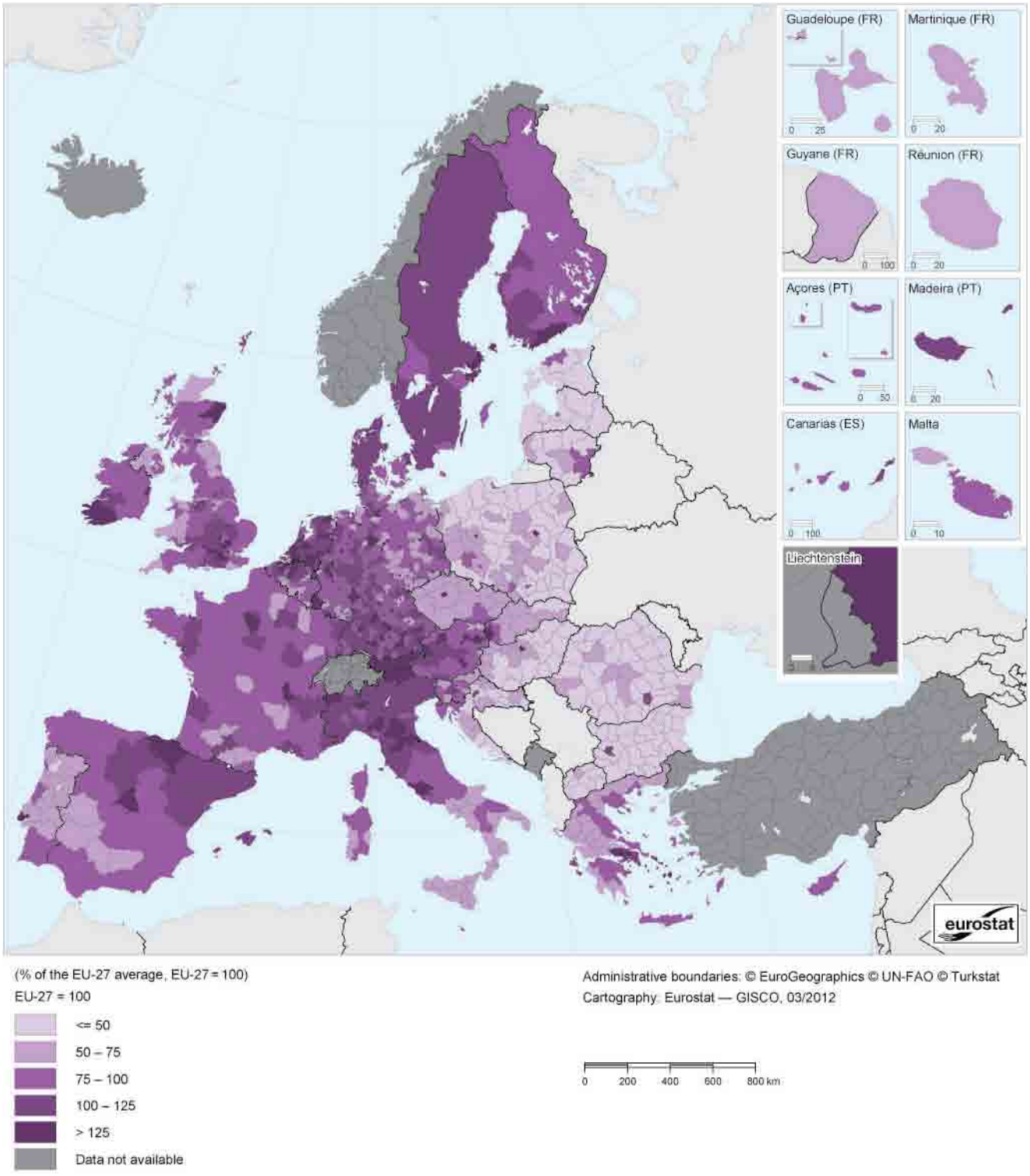
Convergence

Map 1.3 shows the extent to which GDP per inhabitant changed between 2000 and 2009, compared with the EU-27 average (expressed in percentage points of the EU-27 average). It should be noted that the period studied covers several years in which the EU as a whole recorded relatively strong growth followed by the beginnings of the financial and economic crisis. Furthermore, as the analysis is based on a comparison with the EU average, a negative value for an individual region may still reflect actual growth, albeit less than the EU-27 average where growth (in current prices) of 23.0 % was recorded over this period. The analysis compares the situation in 2 years and does not reflect the movements of individual years between the beginning and the end, but reflects the overall result of these years combined. This overall result may reflect periods when the rate of change for GDP per inhabitant in a region was positive (expansion) combined with periods where there was a negative rate of change (contraction).

Regions that expanded relatively fast, whose GDP per inhabitant increased by more than 10 percentage points compared with the EU-27 average, are shown in the darkest shade of purple. By contrast, regions which experienced lower rates of expansion or even contraction (those with a fall of more than 10 percentage points in GDP per inhabitant compared with the EU-27 average) are shown in the lightest shade of purple.

Several capital city regions recorded large increases, particularly among the Member States that joined the EU in 2004 or 2007. The highest growth rates relative to the EU-27 average were recorded in the capital city regions of Slovakia (+ 69 percentage points), Romania (+ 55), Bulgaria (+ 38) and the Czech Republic (+ 36), followed by the capital city

Map 1.3: Change of gross domestic product (GDP) per inhabitant, in purchasing power standard (PPS), by NUTS 2 regions, 2000–09 (1)
(percentage points difference between 2009 and 2000; in relation to the EU-27 average)



(1) Italy, Hungary and Austria, data for 2000 relate to Eurostat estimates made for the purpose of this publication.
Source: Eurostat (online data code: nama_r_e2gdp)

regions of Greece (+29) and the United Kingdom (+28). Capital city regions also occupied the first two positions at the other end of the range, with the Belgian capital city region (Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest) recording a fall of 33 percentage points relative to the EU-27 average, followed by the Austrian region of Wien (–25 percentage points).

The map shows that this measure of economic performance was above the EU-27 average in the south-western and eastern peripheral areas of the EU, particularly in the regions of the Baltic Member States, Poland, the Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Greece and Cyprus in the east, and Spain in the west. Apart from Spain and Greece, other EU-15 Member States that had one region with growth of more than 10 percentage points relative to the EU-27 average included Luxembourg, the Netherlands, Portugal, Finland and the United Kingdom.

In Bulgaria, the Czech Republic, Poland, Romania, Slovenia and Slovakia every region achieved growth in GDP per inhabitant (in PPS) between 2000 and 2009 that was above the EU-27 average growth rate; this was also the case in the Baltic Member States, Cyprus and Luxembourg, all of which are just one region at the NUTS level 2.

In contrast, every region in Denmark, Ireland, Italy, Austria and Sweden recorded a lower increase in GDP per inhabitant (in PPS) than the EU-27 average growth rate, as was the case for Malta (which is just one region). There were 53 regions where GDP per inhabitant fell back 10 percentage points or more relative to the EU-27 average, and none of these were in Member States that joined the EU in 2004 or 2007. These regions were mainly in the United Kingdom (16 regions), France or Italy (11 regions each), while there were four such regions in Sweden, three each in Belgium and Germany and one each in Denmark, Greece, Spain, the Netherlands and Austria.

Overall increase in convergence within the EU

Regional convergence of GDP per inhabitant (in PPS) can be assessed in various ways. The simplest approach is to measure the ratio between the highest and lowest values. By this method, among the EU-27 regions the gap closed from a factor of 17.1 in 2000 to 12.2 in 2009, mainly because of faster growth in Bulgaria and Romania. However, this approach uses only the extreme values and does not take account of the vast majority of regions. A comprehensive evaluation of regional convergence is provided by an indicator of the dispersion of regional GDP: more information about the method of calculation is given below under the heading 'Data sources and availability'. This measure takes account of divergences in GDP per inhabitant in each NUTS level 2 region from the national average, weighted by regional population. Table 1.1 compares the national values of dispersion (compiled from NUTS level 2 data) for 2000 with those for 2009. In 2009 most of the EU-15 Member States had a lower level of dispersion than the Member States that joined the EU in 2004 or 2007, although this was not the case in Slovenia or Poland. Furthermore, the level of dispersion generally increased between 2000 and 2009 in the Member States that joined the EU in 2004 or 2007: by far the greatest increase was recorded in Bulgaria, while the smallest increases were recorded in Slovenia and Poland. It would therefore appear that the process of economic catch-up taking place in many of the Member States that joined the EU in 2004 or 2007 has been accompanied by increasing regional disparities.

There was a more mixed picture among EU-15 Member States. In Greece the level of dispersion increased considerably, while there were smaller increases in Sweden, the United Kingdom, France, Ireland and Portugal. The level of dispersion declined between 2000 and 2009 within Austria (Eurostat estimates), Finland, Spain, Italy (also Eurostat estimates), Germany, Belgium and Denmark, while it was unchanged (and low) in the Netherlands.

On balance, the increasing convergence within several EU-15 Member States and an increasing convergence between Member States outweighed the increasing divergence within other Member States and as a result Eurostat estimates suggest that there was an increase in regional convergence for the EU-27 as a whole.

A comparison between the data for 2000 and 2009 reveals that six regions managed to pass from below the 75 % threshold used for structural funds in the course of this period to reach 75 % or higher: Yugozapaden (Bulgaria), Voreio Aigaio (Greece), Andalucía (Spain), Mazowieckie (Poland), the Região Autónoma dos Açores (Portugal) and București - Ilfov (Romania). These regions were home to 18.2 million people in 2009, or around 3.6 % of the population of the EU-27. At the same time, however, GDP per inhabitant (in PPS) in the region of West Wales and The Valleys (United Kingdom) fell from 75 % of the EU-27 average to below this threshold, while in the southern Italian region of Puglia the level of this indicator fell from a position above 75 % of the EU-27 average to a level below this threshold.

Private household income: 2008 results

In market economies with state redistribution mechanisms, a distinction is made between two stages of income distribution. Primary distribution relates to the income of private households generated directly from market transactions, in other words the purchase and sale of factors of production and goods. In particular this includes the income from paid work and self-employment, as well as income received in the form of interest, dividends and rents. Interest and rents payable are recorded as negative items and the balance of all these transactions is known as the primary income of private households.

The second concept is that of disposable income, this is derived from primary income by adding all social benefits and monetary transfers (from state redistribution) and subtracting taxes on income and wealth as well as social contributions and similar transfers — as such, it reflects 'in-pocket' income that people can spend or save.

Map 1.4 provides an overview of primary income per inhabitant in the NUTS level 2 regions for 24 of the Member States: unlike GDP, household income data are not available at NUTS level 3. The average primary income per inhabitant in the EU-27 was 17 200 PPCS in 2008. Primary income ranged from a high of 36 800 PPCS per inhabitant in Inner London (United Kingdom) down to 3 600 PPCS in Severozapaden (Bulgaria), a factor of 10.2 to 1.

One of the most striking features of Map 1.4 is the relatively high level of income per inhabitant that is registered in regions around capital cities. The highest level of income per inhabitant in the Czech Republic, Denmark, Ireland, Greece, France, Hungary, Poland, Portugal, Romania, Slovenia, Slovakia, Sweden and the United Kingdom was recorded in the NUTS level 2 region containing the capital city; note that six other Member States do not have any regional breakdown available at the level of NUTS level 2 regions. Lisboa (Portugal) and Berlin (Germany) were the only EU-15 regions containing capital cities to report primary income per inhabitant below the EU-27 average, while Bratislavský kraj (Slovakia) was the only capital city region among those Member States that joined the EU in 2004 or 2007 to report primary income per inhabitant above the EU-27 average.

Of the 51 NUTS level 2 regions that reported primary income per inhabitant more than 25 % higher than the EU-27 average in 2008, 19 were in Germany, seven each in Italy and the United Kingdom, six in Austria, four in Belgium, three each in Spain and the Netherlands, and one each in France and Sweden. Centres of high average income per inhabitant were apparent throughout Austria, in southern England and North Eastern Scotland in the United Kingdom, as well as in north-eastern Spain. Furthermore, there was a clear north–south divide apparent in Italy (higher incomes in the north) and an east–west divide in Germany and the Netherlands (higher incomes in the west).

There were 28 NUTS level 2 regions with primary income per inhabitant that was 50 % of the EU-27 average or less — all of these regions were located in those Member States that joined the EU in 2004 or 2007 — 10 were in Poland, seven in Romania (all except the capital city region of Bucureşti - Ilfov), six in Bulgaria (every Bulgarian region), four in Hungary and one in Slovakia.

EU-27 primary income was reduced by 13.3 % as a result of state intervention (redistribution), resulting in an average disposable income of 14 900 PPCS per inhabitant in 2008. Inner London (26 600 PPCS per inhabitant) had the highest level of disposable income per inhabitant (as was the case for primary income), while Severozapaden (Bulgaria) reported the lowest level (3 800 PPCS). As such, the ratio between the highest and lowest regional levels was 6.9 to 1 (compared with 10.2 to 1 for primary income).

A comparison between primary income and disposable income shows the levelling influence that state intervention generally plays. Redistribution resulted in considerably higher relative incomes in southern Italy, western Spain and the west of the United Kingdom, as well as in the eastern regions of Bulgaria, Germany, Hungary, Poland and Romania. Although most NUTS level 2 regions reported that disposable income per inhabitant was lower than primary income per inhabitant, there were nevertheless 30 regions which benefited from social benefits and other transfers to such a degree that their disposable income per inhabitant was higher; seven of these regions were in Poland, five each in Portugal and Romania, four each in Greece and the United Kingdom, three in Bulgaria and one each in Germany and Italy.

Figure 1.2 shows the variation in disposable income per inhabitant across the EU Member States and Norway in 2008. Most capital city regions reported the highest level of disposable income per inhabitant across the regions within their country; this was the case for 14 of the 21 Member States which have more than one NUTS level 2 region. Among the remaining seven Member States with multiple regions (Belgium, Germany, Spain, Italy, the Netherlands, Austria and Finland), disposable income per inhabitant for the capital city region generally remained above the national average; however, this was not the case for the Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (Belgium) or Berlin (Germany).

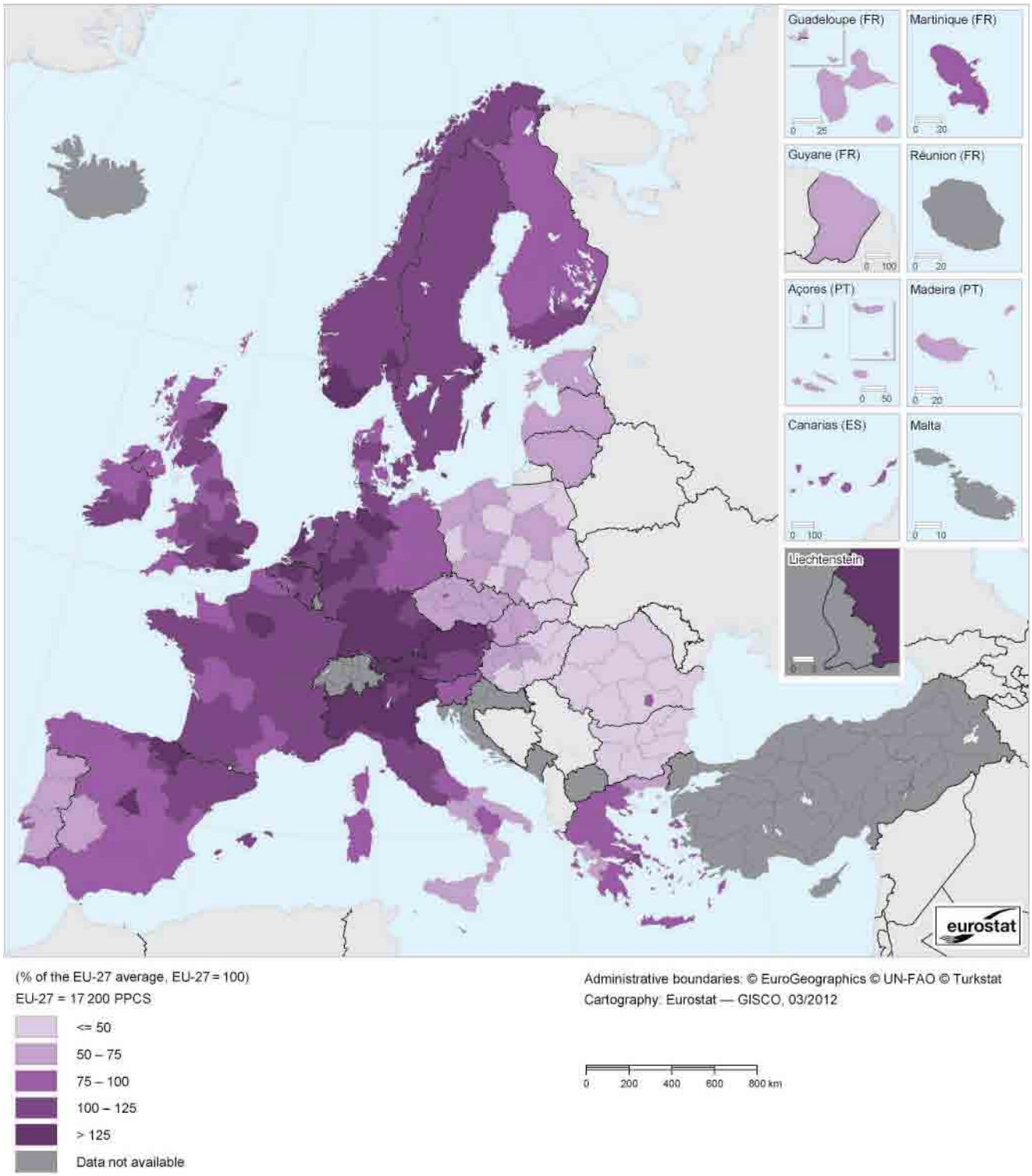
Disposable income per inhabitant was 2.5 times as high in Bucureşti - Ilfov as in the Nord-Est region of Romania, the highest ratio between regions in the same country; there was also a relatively wide range in disposable income per inhabitant between the highest and lowest regions of France, Greece, the United Kingdom and Slovakia. At the other end of the range, disposable income per inhabitant was quite homogeneous in Denmark (where the uppermost average regional income was 1.08 times as high as in the lowest region), Austria (1.09), Slovenia (1.16) and Ireland (1.17).

Data sources and availability

The European system of national and regional accounts (ESA) provides the methodology for regional accounts in the EU. ESA95 is fully consistent with worldwide guidelines for national accounts, the 1993 system of national accounts (1993 SNA). Following international agreement on an updated version of the SNA in 2008, the ESA is also being revised.

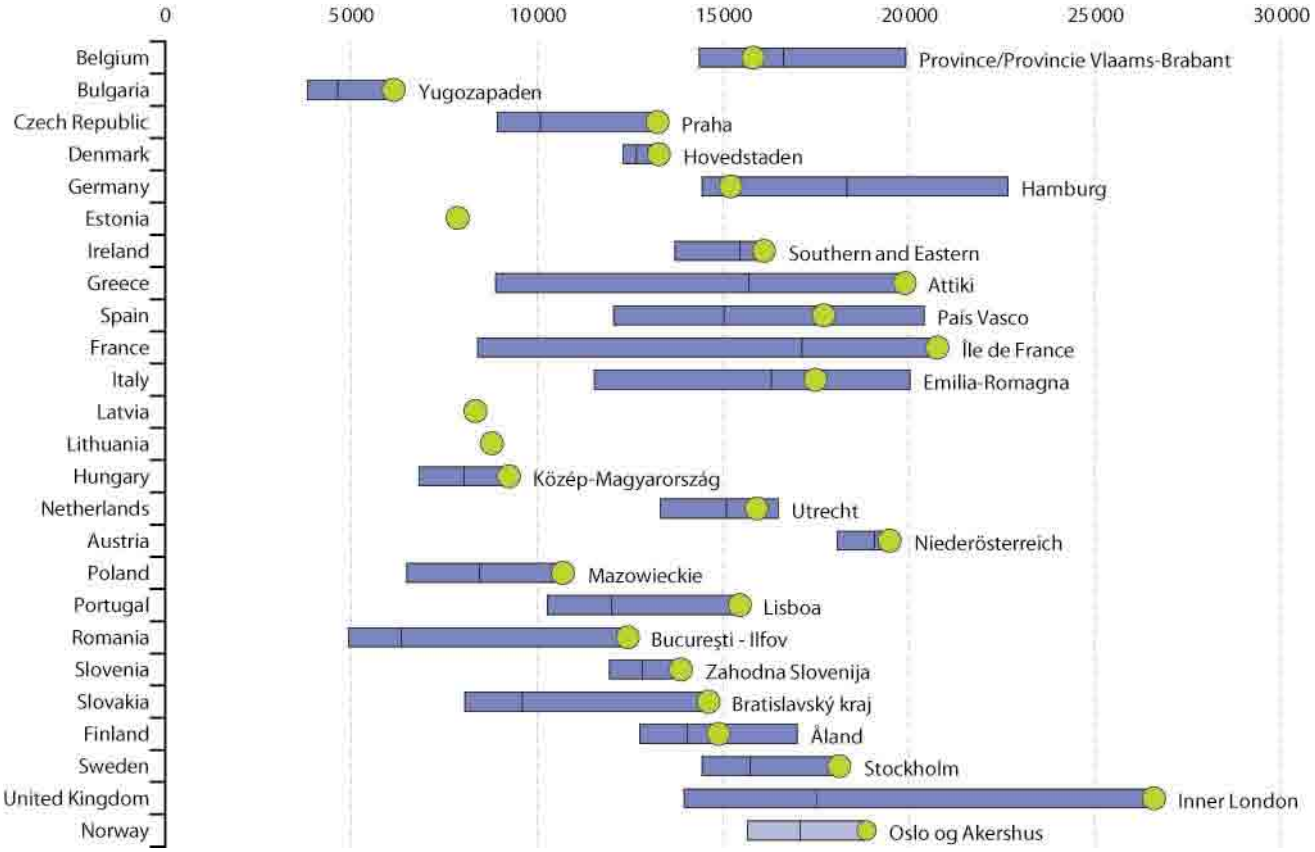
GDP is the central measure of national accounts, summarising the economic position of a country or region. It can be

Map 1.4: Primary income of private households per inhabitant (in PPCS), by NUTS 2 regions, 2008 ([1])
(% of the EU-27 average, EU-27 = 100)



([1]) EU-27 and Bulgaria, estimates; Guadeloupe (FR91), Martinique (FR92), Guyane (FR93) and Norway, 2007.
Source: Eurostat (online data code: nama_r_ehh2inc)

Figure 1.2: Disposable income of private households, by NUTS 2 regions, 2008 ([1])
(PPCS per inhabitant)



([1]) The graph 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 region; the name of the region with the highest value is also included; EU-27 and Bulgaria, estimates; Guadeloupe (FR91), Martinique (FR92), Guyane (FR93) and Norway, 2007; Réunion (FR94), Cyprus, Luxembourg and Malta, not available.

Source: Eurostat (online data code: nama_r_ehh2inc)

calculated using different approaches: the output approach; the expenditure approach; and the income approach.

Regional data on the income categories of private households were collected for the purposes of the regional accounts at NUTS level 2. The data on the income of private households for 2008 in Bulgaria (and hence, also the EU-27) are estimates.

Comparisons between where people work and where they live

A regional comparison of the level of economic output can be made by comparing regional GDP with the population of the region in question; this is where the distinction between place of work and place of residence becomes significant. GDP measures the economic output achieved within national or regional boundaries, regardless of whether this was attributable to resident or non-resident employed persons. As a result, regional GDP per inhabitant is based upon a numerator that reflects the place-of-work (the GDP produced in the region) which is divided by a denominator whose value reflects the place-of-residence (the population living in the region). This drawback is particularly relevant when there are significant net commuter flows into or out of a region. Areas that are characterised by a considerable number of inflowing commuters often display a regional GDP per inhabitant that is extremely high (when compared with surrounding regions). This is particularly the case for economic centres such as the regions of London (United Kingdom), Wien (Austria), Hamburg (Germany), Praha (Czech Republic) or Luxembourg. Because of this anomaly, high levels of GDP per inhabitant that are recorded for some regions with net commuter inflows do not necessarily translate into correspondingly high levels of income for the people living in the same region.

In contrast, private household income, regardless of whether it is based on primary or disposable income, reflects the income of persons resident in a region. As such, private

household income can be directly compared with the resident population in the same region. Apart from commuter flows, other factors can also cause the regional distribution of income not to correspond to the distribution of GDP, these include income from rent, interest or dividends received by the residents of a certain region, but paid by residents of other regions.

Purchasing power parities

Regional GDP is calculated in the local currency of the region (and therefore the country) in question. GDP can be converted into a common currency to make it more easily comparable — for example, converting into euros or dollars.

Exchange rates reflect many factors relating to supply and demand in currency markets, such as international trade, inflation forecasts and interest rate differentials. However, exchange rates do not reflect all the differences in price levels between countries. To compensate for this, GDP can be converted using conversion factors known as purchasing power parities (PPPs) to an artificial common currency, called a purchasing power standard (PPS); this makes it possible to compare the purchasing power of different national currencies. Even within a currency union, such as the euro area, a single currency continues to display different purchasing power across countries, depending on national price levels. In broad terms, the use of PPS series rather than the euro-based series tends to have a levelling effect, as those regions with very high GDP per inhabitant in euro terms also tend to have relatively high price levels (for example, the cost of living in central Paris or London is generally higher than the cost of living in rural areas of France or the United Kingdom).

Calculations for GDP per inhabitant that are based on PPS series instead of euro series can result in considerable differences when ranking regions. For example, in 2009, the Swedish region of Östra Mellansverige was recorded as having a GDP per inhabitant of EUR 26 600, ranking above the Italian region of Marche, with EUR 25 600. However, in PPS terms, Marche, at 24 600 PPS per inhabitant, was above Östra Mellansverige, at 23 800 PPS.

Dispersion of regional GDP per inhabitant

Since 2007, Eurostat has calculated a derived indicator which summarises the differences in GDP per inhabitant across the regions of the same country. The dispersion 'D' of regional GDP for NUTS level 2 regions is defined as the sum of the absolute differences between regional and national GDP per inhabitant, weighted according to the regional share of population and expressed as a percentage of national GDP per inhabitant:

$$D = 100 \frac{1}{Y} \sum_{i=1}^{n} \left| y_i - Y \right| \left(p_i / P \right)$$

In the above equation:

y_i is the regional GDP per inhabitant of region *i*;

Y is the national average for GDP per inhabitant;

p_i is the population of region *i*;

P is the national population;

n is the number of regions in the country.

The value of this dispersion indicator is zero if the values of regional GDP per inhabitant are identical in all regions of a country. The level of dispersion will increase, all other things being equal, if the differences in GDP per inhabitant between the regions grow. A value of 30 % means that the GDP per inhabitant of each region, weighted on the basis of regional population, differs from the national value by an average of 30 %.

Further information

For further information about national accounts (including household accounts) please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction.

Context

Economic development is commonly expressed in terms of GDP, which in the regional context may be used to measure macroeconomic activity and growth as well as providing the basis for comparisons between regions. GDP is also an important indicator from the policy perspective, as it is crucial in determining the extent to which each Member State should contribute to the EU's budget, while 3-year averages of GDP are used to decide which regions should be eligible to receive support from the EU's Structural Funds programme.

GDP has also come to be regarded as a proxy indicator for overall living standards. However, by design and purpose, it cannot be relied upon to inform policy debates on all issues. GDP does not measure, for example, environmental sustainability or social inclusion, and these limitations need to be taken into account when using GDP for analysis. Indeed, it is increasingly recognised that GDP alone should not be used to measure economic, social and environmental priorities.

A number of international initiatives have focused on this issue and in August 2009, the European Commission adopted a communication 'GDP and beyond — Measuring progress

in a changing world' (COM(2009) 433 final), which outlined a range of actions to improve and complement GDP measures. The European Commission noted that there was a clear case for complementing GDP with statistics covering other economic, social and environmental issues on which individuals' well-being critically depends. The communication proposed five actions for better measurement of progress in a changing world:

- Action 1: complementing GDP with environmental and social indicators (a comprehensive environmental index, quality of life and well-being);
- Action 2: near real-time information for decision-making (more timely environmental and social indicators);
- Action 3: more accurate reporting on distribution and inequalities;
- Action 4: developing a European sustainable development scoreboard (coordinated by the Directorate-General for the Environment);
- Action 5: extending national accounts to environmental and social issues.

2 Population

This chapter describes demographic trends across the regions of the European Union (EU): most of the data refer to 2010, while information is also presented in relation to regional population developments over recent years.

The trend in EU-27 population growth has been unbroken since 1960, but the population's growth has been at a slower pace since the 1980s. This slowdown in population growth is closely linked to the natural change of the population (total births minus total deaths), which was negative in a majority of EU-27 regions in 2010; net migration has counterbalanced these negative developments in some regions such that the overall population of the EU-27 continues to grow.

Demographic change in the EU will be of considerable importance in the coming decades as consistently low birth rates and increasing life expectancy will be reflected in an older age structure of the population, a pattern which is already apparent in several regions.

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 2010 there were 501.1 million people living across the Member States. In 2010, 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 (21 258 inhabitants per km² in 2009), with more than twice as many people living on average in each km² when compared with Inner London regions (the United Kingdom). Inner London - West (10 263 inhabitants per km²) and Inner London - East (9 227) ranked as the second and third most densely populated regions, while in 2009 population density was also above 5 000 inhabitants per km² in the following regions: Hauts-de-Seine, Seine-Saint-Denis and Val-de-Marne (all around Paris, France), Arrondissement de Bruxelles-Capitale/Arrondissement van Brussel-Hoofdstad (the capital city region of Belgium), București (the capital city region of Romania, data are for 2010), Melilla (a Spanish overseas territory, also 2010) and Portsmouth (the United Kingdom).

The least densely populated NUTS level 3 regions were generally located around the periphery of the EU in remote environments. There were 13 regions that reported a population density below 10 inhabitants per km² in 2009 or 2010: four of these regions were in Sweden, three in Finland, three in the north of the United Kingdom and two in central Spain; the other one was a French overseas region. Lappi (the most northerly region of Finland) had the lowest regional population density in the EU-27 with 2.0 inhabitants per km².

Among the non-member countries for which data are presented in Map 2.1, the most densely populated region was Basel-Stadt (Switzerland), where the population density rose to just over 5 000 inhabitants per km² in 2009, making it the 10th most densely populated region in this map. There were four other regions that reported a population density above 1 000 inhabitants per km², these were: İstanbul (Turkey), Genève (Switzerland), Oslo (Norway) and Grad Zagreb (Croatia). At the other end of the range, the least densely populated region was Landsbyggd (Iceland) with 1.2 inhabitants per km².

Population change

Population change for a given reference year is calculated as the difference between the population size on 1 January of the following year and on 1 January of the given reference year. Population change consists of two components: natural change and net migration including statistical adjustment (hereafter simply referred to as net migration — see below under the heading 'Data sources and availability' for more information).

Maps 2.2, 2.3 and 2.4 present total population change and its two components. Information is generally available for 2010 for NUTS level 3 regions. For comparability, all three of these measures (population change and its two components) are presented as crude rates per 1 000 inhabitants. The maps show the different patterns of population change across regions, from growth to decline (in Map 2.2), as a result of positive or negative natural change (in Map 2.3), and positive or negative net migration (in Map 2.4).

Between 1960 and 2010 the combined population of all the regions in the EU-27 Member States increased by 98.5 million inhabitants, which was a mean annualised growth rate of 4.4 per 1 000 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 105 812 more births than deaths). There was subsequently a slight recovery and by 2010 the natural change of the EU-27's population was an increase of 514 025. 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, net migration outweighed the natural increase in EU-27 population. This pattern was more pronounced during the period 2002–08, when net migration was

particularly high (accounting for 95.1 % of the total population change in 2003). However, data available for 2009 and 2010 show a diminishing share of net migration relative to population change. The EU-27's population grew by 2.7 per 1 000 inhabitants in 2010, with the crude rate of net migration at 1.7 per 1 000 inhabitants and the crude rate of natural increase at 1.0 per 1 000 inhabitants.

Although the EU-27 population continued to increase in 2010, the population change was unevenly distributed across the Member States. The total number of inhabitants grew in 20 of the Member States, and in relation to the size of the population in each country; the highest crude rates of total population change were recorded in Luxembourg (an increase of 19.3 per 1 000 inhabitants, Belgium (10.3), Sweden (8.0) and Malta (7.8), before the United Kingdom (6.6) and France (5.5). The largest negative crude rates of total population change were in Lithuania (– 25.7 per 1 000 inhabitants), Latvia (– 8.4) and Bulgaria (– 7.8).

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 (699 regions) and those where the population was in decline (604 regions). The population was growing at its most rapid pace in most regions in Belgium, eastern Ireland and northern Italy, and in Luxembourg as well as certain regions in Spain, France and the United Kingdom, while the crude rate of population growth was also above the EU-27 average in most regions of the Netherlands, Finland and Sweden, as well as in Malta. Rapid population decline was most apparent in east European regions, for example, in parts of Bulgaria, eastern Germany, the Baltic Member States, Hungary and Romania. Declining populations were also apparent in several regions of Spain, eastern Finland, central Austria, western Germany and inland parts of Greece and Portugal.

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: this was the case in 105 regions compared with 54 regions where the population declined. There was a mixed picture in Turkey with some regions among those with the highest population growth, while others had some of the largest declines. Nevertheless, the overall effect in Turkey was for a considerable increase in the crude rate of total population change (second only to Luxembourg among those countries presented in Map 2.2). In 2010, population growth was positive in Norway, Switzerland, Liechtenstein, Montenegro, Iceland and the former Yugoslav Republic of Macedonia, whereas Croatia reported a declining number of inhabitants.

Map 2.3 shows natural population change 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 south-east Germany, where there was overall population growth despite negative natural rates of change; there was a similar situation in southern Norway. In contrast, in several parts of Turkey the overall population change was negative despite positive natural change.

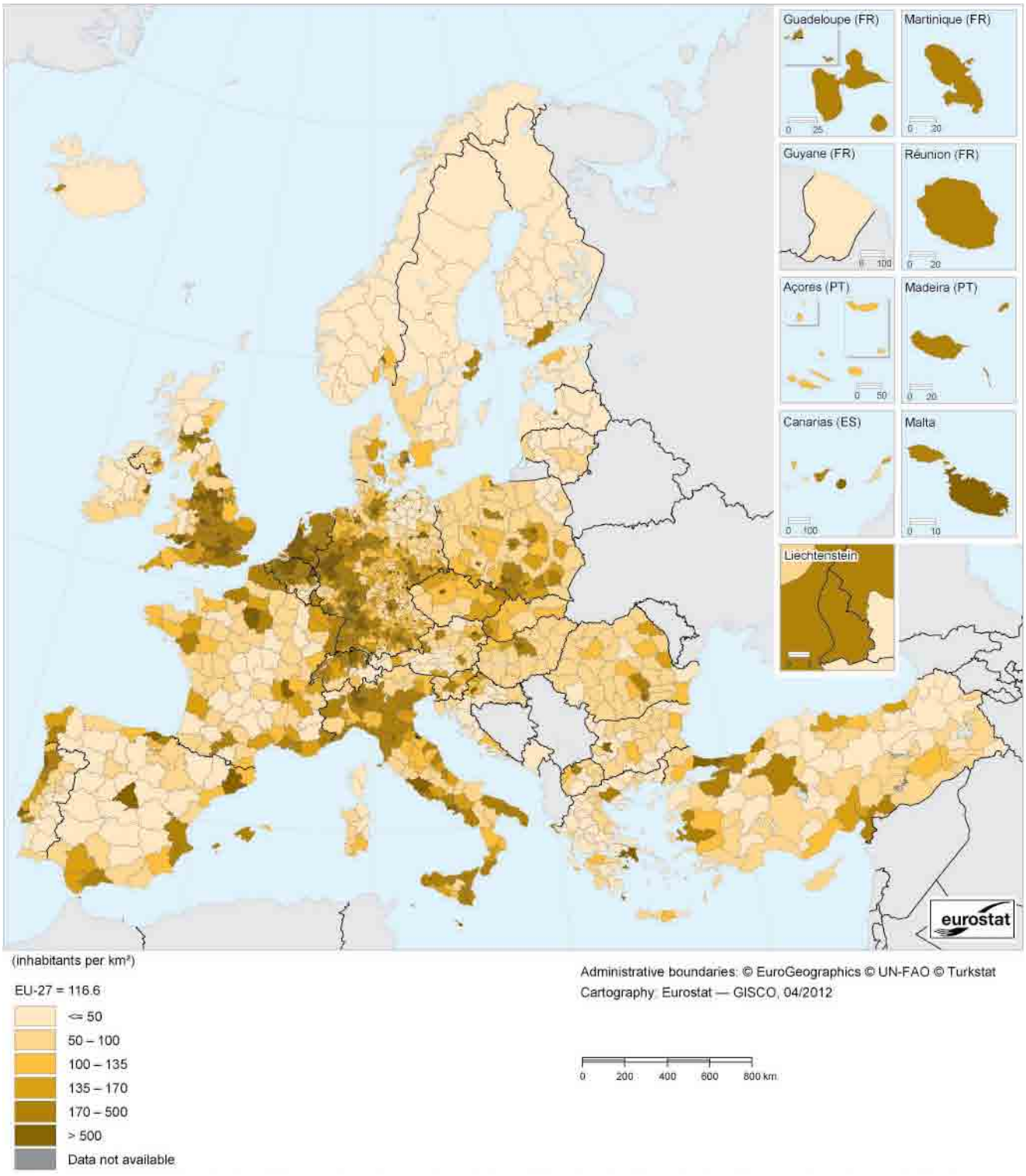
Some 773 EU regions (at NUTS level 3) experienced a higher number of deaths than births in 2010, while in 529 regions births outnumbered deaths; in West Cumbria (United Kingdom) births and deaths were equal. Positive crude rates of natural change could be seen in Ireland, as well as in many densely populated (built-up) areas in the Benelux countries, France and the United Kingdom. In contrast, significant negative rates of natural population change were recorded in Bulgaria, Latvia, Lithuania, south-east Hungary, eastern Germany, north-west Spain and inland 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.

Some 542 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 per 1 000). As such, net migration can play 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 childbearing age.

Map 2.4 shows the crude rate of net migration in 2010 for NUTS level 3 regions. The map closely resembles that for Map 2.2, emphasising the close relationship between migratory patterns and overall population change when the rate of natural population change is close to being balanced. There were 769 NUTS level 3 regions in the EU that had positive net migration (more immigrants than emigrants) in 2010. Among these, the highest net influx of migrants was registered in Ilfov (the area around Bucharest, Romania) and in Fokida (central Greece), where crude rates of net migration were 38.6 and 27.1 per 1 000 inhabitants respectively. The remaining regions that reported net migration in excess of 10 per 1 000 inhabitants were mainly urban regions that included Bonn, München and Münster in Germany; Bologna, Parma and Pisa in Italy; or Bristol, Edinburgh and Sheffield in the United Kingdom. This pattern was reversed in France, where the regions with the highest crude rates of net migration were generally rural and in the south of the country (Aude, Corse, Landes and Tarn-et-Garonne).

When net migration is negative, more people have left the region than arrived; this was the case for 532 NUTS level 3 regions in the EU in 2010. These regions were spread across most parts of Germany, Austria and eastern Europe (particularly Bulgaria, Latvia, Lithuania, Hungary, Poland and Romania), north-eastern France, southern Italy, inland Portugal, much of Spain, western Ireland and eastern and northern Finland. The 10 NUTS level 3 regions contained within

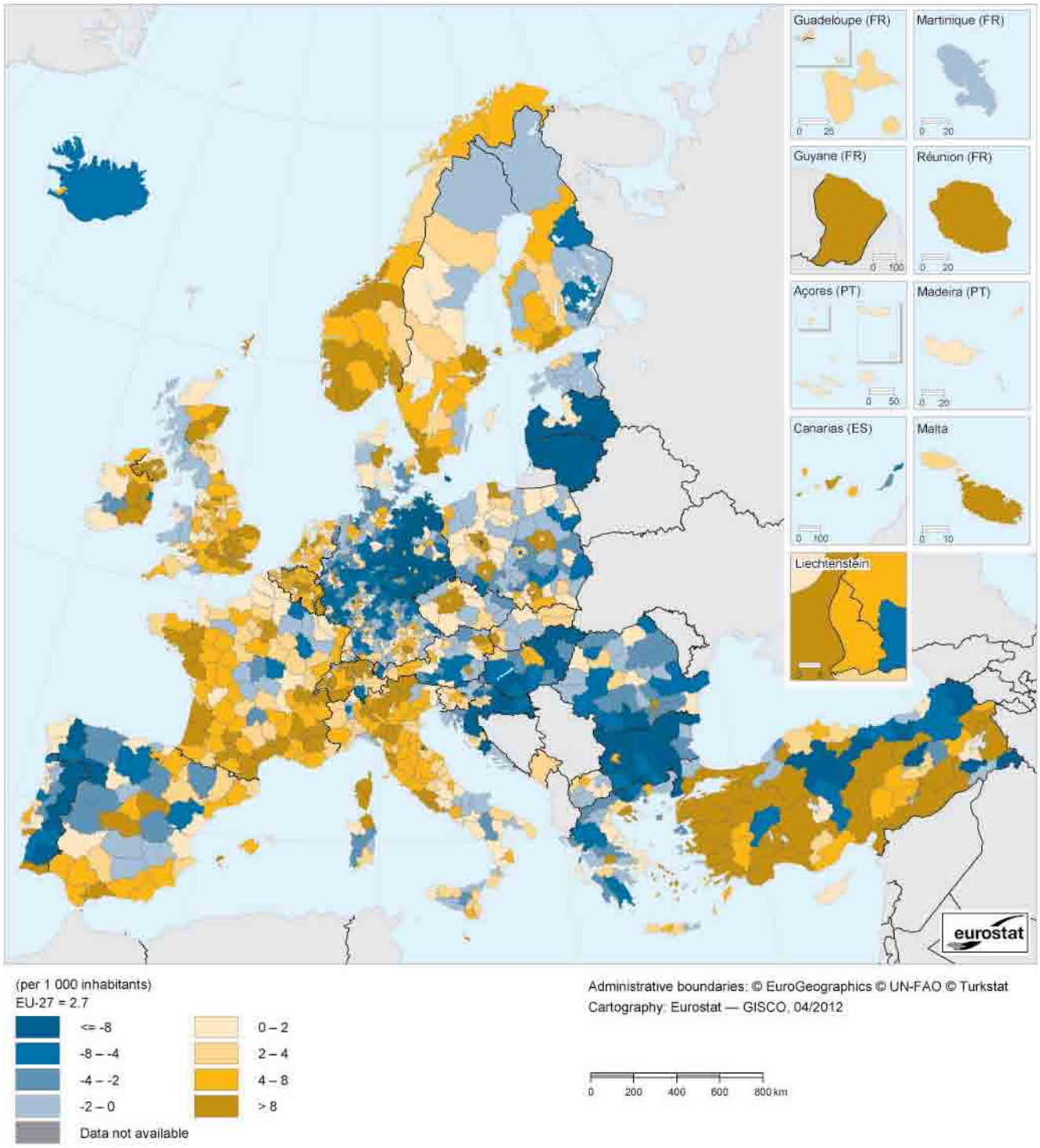
Map 2.1: Population density, by NUTS 3 regions, 2010 (1)
(inhabitants per km²)



(1) Population density is calculated as the ratio between (annual average) population and the surface (land) area; land area is a country's total area, excluding the area under inland water; Denmark, Germany, France, Cyprus, Italy, Hungary, Poland, Portugal, Slovakia, Liechtenstein and Montenegro, total area has been used instead of land area; Belgium, Sachsen (DED), Illes Balears (ES53), Canarias (ES7), France, the United Kingdom and Norway, 2009.

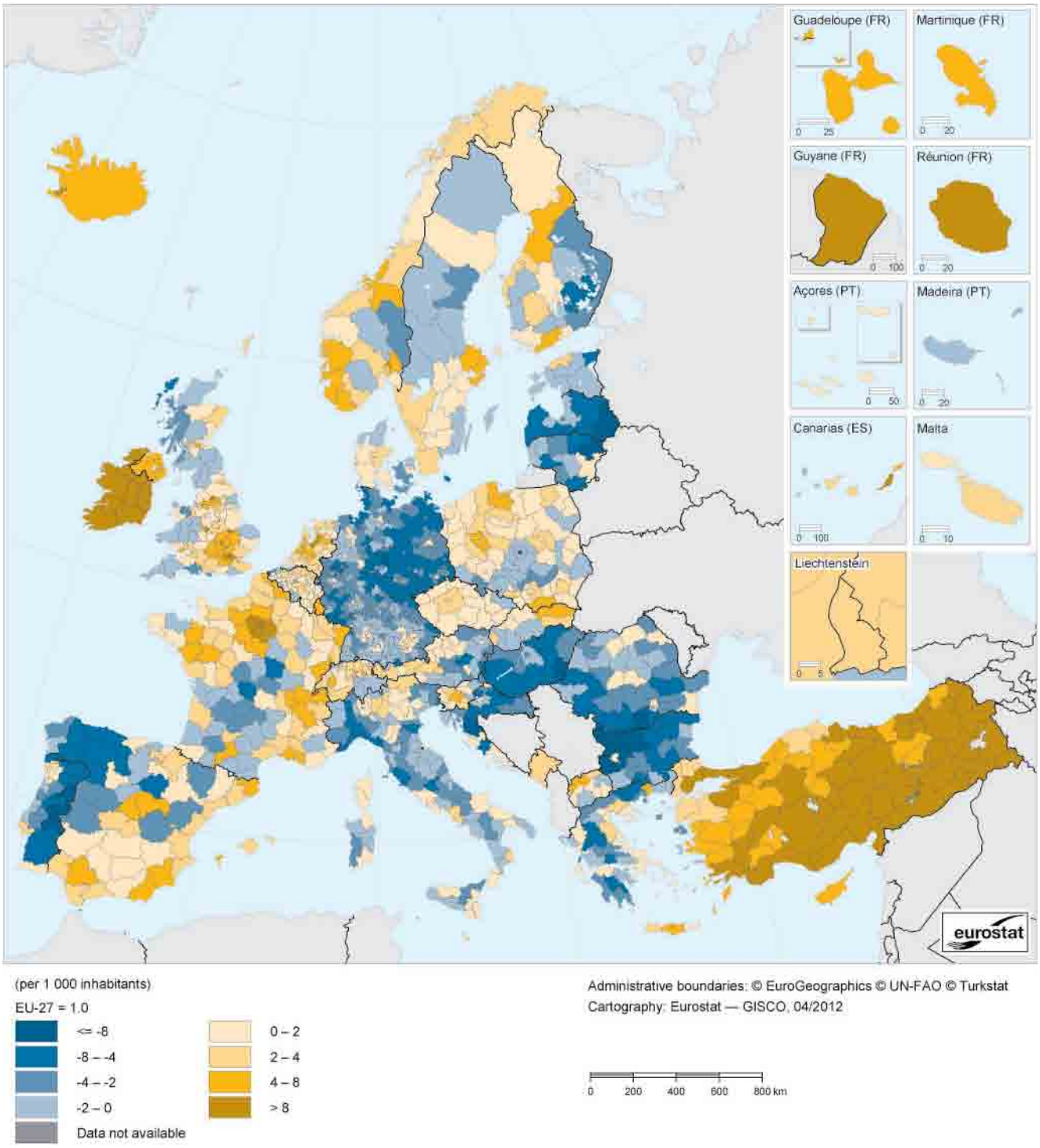
Source: Eurostat (online data code: demo_r_d3dens)

Map 2.2: Population change, by NUTS 3 regions, 2010 (1)
(per 1 000 inhabitants)



(1) EU-27, provisional; Belgium, Aachen, Kreisfreie Stadt (DEA21), Aachen, Kreis (DEA25), Sachsen (DED), Illes Balears (ES53), Canarias (ES7), France, the United Kingdom and Norway, 2009.
Source: Eurostat (online data code: demo_r_gind3)

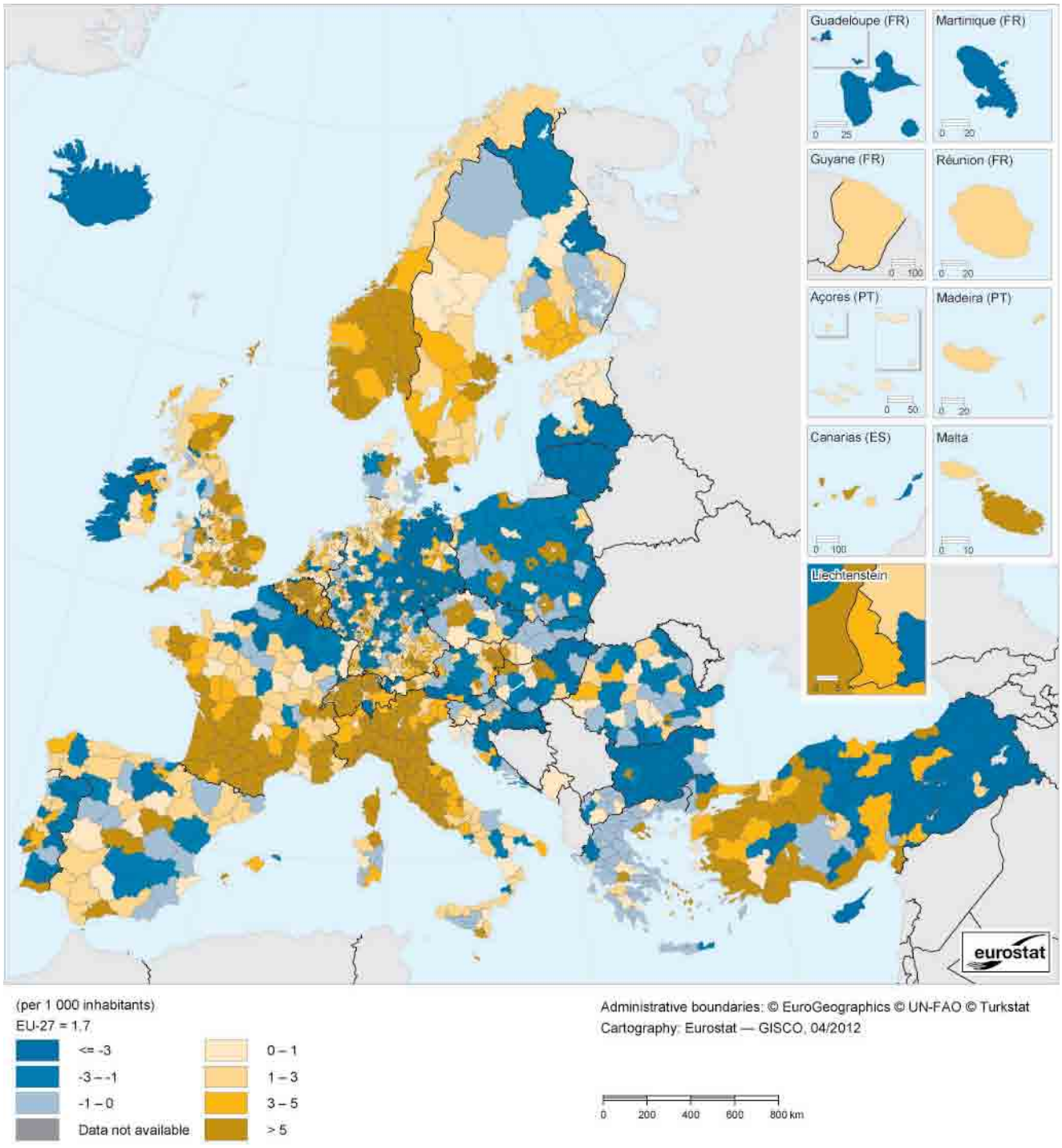
Map 2.3: Natural population change, by NUTS 3 regions, 2010 ([1])
(per 1 000 inhabitants)



([1]) EU-27, provisional; Belgium, Aachen, Kreisfreie Stadt (DEA21), Sachsen (DED), Illes Balears (ES53), Canarias (ES7), France, the Netherlands, the United Kingdom, Norway and Turkey, 2009; Aachen, Kreis (DEA25), 2008.

Source: Eurostat (online data code: demo_r_gind3)

Map 2.4: Net migration (including statistical adjustment), by NUTS 3 regions, 2010 ([1])
(per 1 000 inhabitants)



([1]) EU-27, provisional; Belgium, Aachen, Kreisfreie Stadt (DEA21), Sachsen (DED), Illes Balears (ES53), Canarias (ES7), France, the Netherlands, the United Kingdom, Norway and Turkey, 2009; Aachen, Kreis (DEA25), 2008.
Source: Eurostat (online data code: demo_r_gind3)

Lithuania all featured among the 13 regions with the highest negative crude rates of net migration, all below – 14 per 1 000 inhabitants. The only other regions to report such high net outflows of migrants (relative to their respective number of inhabitants) were Dublin (Ireland), Hoyerswerda, Kreisfreie Stadt (Germany) and Zuidoost-Zuid-Holland (the Netherlands).

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 and Malta, and in most of the regions in Belgium and the Netherlands, as well as in eastern and southern Spain, north-west and south-east France, and the south-east of the United Kingdom — most 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 NUTS level 3 regions that contain capital cities shows that 17 regions in the EU-27 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 14 out of these 17 regions, net migration accounted for a larger share of population growth, while natural growth was the main determinant of growth in the capital city regions of Estonia, Spain, Slovenia and Finland. Negative net migration was more than offset by a higher rate of natural increase in the capital city regions of Greece, France, Cyprus, Portugal and the United Kingdom (both NUTS level 3 regions for Inner London). In Ireland and Lithuania the relatively large negative crude rate of net migration was not offset by a positive rate of natural change, while in Hungary the high positive rate for net migration did offset a smaller negative rate of natural change. The capital city regions of Latvia and Romania were the only ones among the Member States where both components of population change were moving in a negative direction, therefore reinforcing the shrinking number of inhabitants in Riga and Bucureşti.

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 exception was the Hofudborgarsvadi region of Iceland (which includes Reykjavik), where an overall increase in the population was due to positive natural growth, while there was a negative 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 2.1 live births per woman is currently considered to be the replacement rate, in other words the level at which the population size would remain stationary in the long run if there were no inward or outward migration.

The total fertility rate in the EU-27 declined from around 2.5 live births per woman in the early 1960s to an average close to 1.6 for the period 2007–09. The highest fertility rates across the EU Member States were recorded in Ireland (2.05) and France (2.00). Iceland (2.16) was the only EFTA or candidate country that displayed a fertility rate for 2007 to 2009 above the replacement rate of 2.1, followed by Turkey with a total fertility rate of 2.09 (average for 2008–09). A total fertility rate lower than 1.5 children per woman was observed in 17 of the EU Member States over the period 2007–09.

Map 2.5 shows the regional distribution of the total fertility rate: among the 269 NUTS level 2 regions across the whole of the EU-27, nine regions reported a total fertility rate that was above the replacement rate of 2.1 (the darkest shade in the map). The highest fertility rates were recorded in the French overseas regions of Guyane (3.59 children per woman), Réunion (2.40) and Guadeloupe (2.22), the Spanish territories of Melilla (2.30) and Ceuta (2.14), Pohjois-Suomi in northern Finland (2.29), the Border, Midland and Western region of Ireland, the West Midlands of the United Kingdom and the Pays de la Loire in France (all close to 2.1). Of the 27 regions that followed in the ranking, with a total fertility rate between 2.0 and 2.1, a high proportion were regions in either the United Kingdom (12 regions) or France (10 regions), while the other regions were in Belgium, Ireland, Denmark, the Netherlands and Sweden.

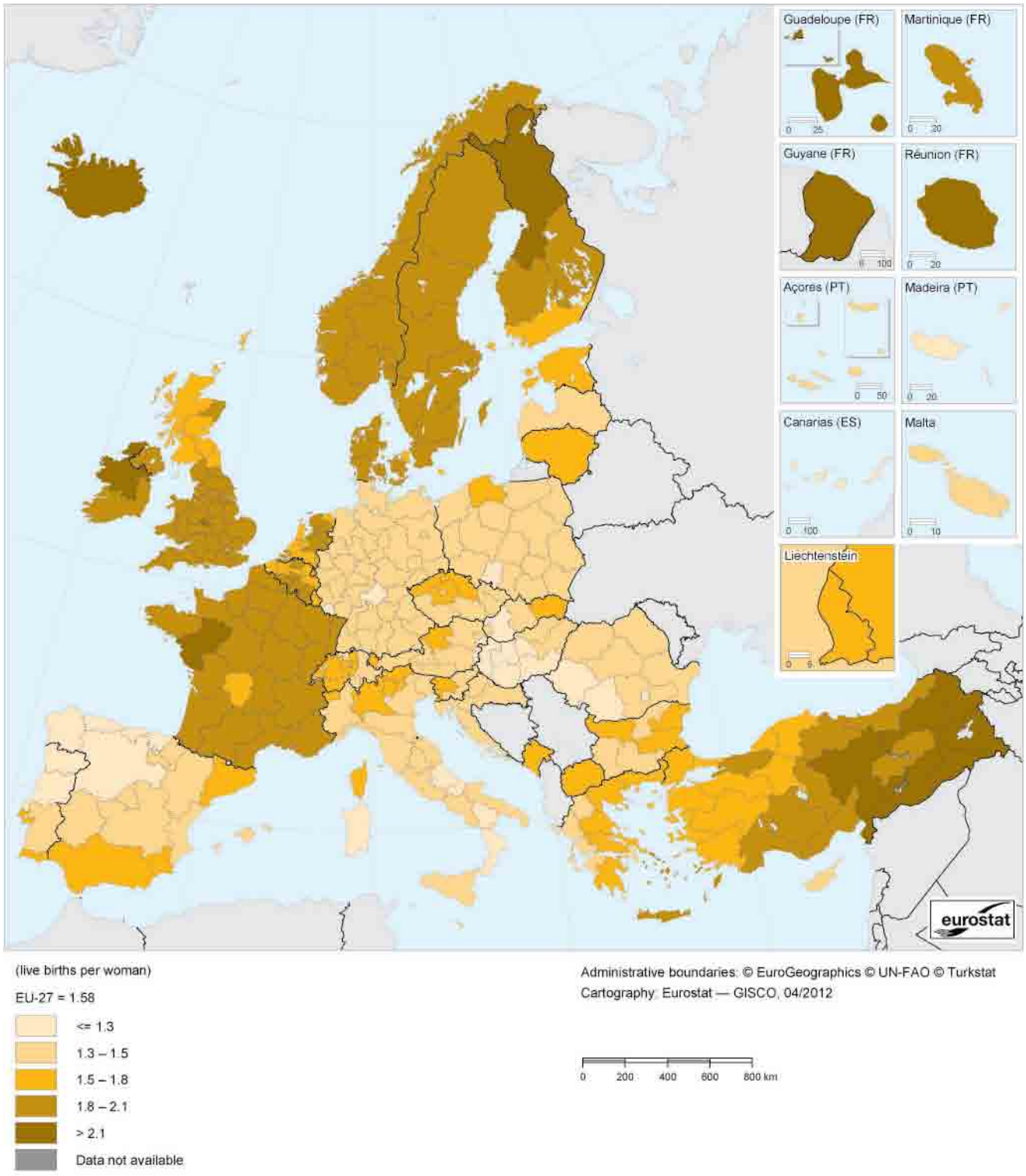
The lowest fertility rates were generally recorded in eastern and southern Europe. There were 29 NUTS level 2 regions in the EU that reported a total fertility rate equal to or below 1.3, including: six regions in Spain, five regions each in Hungary and (southern) Italy, four regions in Germany, three regions each in Portugal and Romania, and one region in each of Austria, Poland and Slovakia. The lowest fertility rates were recorded in the north-west of Spain in the Principado de Asturias and Galicia (both around 1.10 children per woman).

Among the non-member countries shown in Map 2.5, Turkey and Iceland each had statistical regions with total fertility rates above the replacement level, while in Norway there was one region with a total fertility rate equal to the replacement level. The highest total fertility rates (above the 3.0 live births per woman) were recorded in the four Turkish regions of: Mardin, Batman, Şırnak, Siirt (3.77); Şanlıurfa, Diyarbakır (3.75); Van, Muş, Bitlis, Hakkari (3.66); and Ağrı, Kars, Iğdır, Ardahan (3.31).

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 large part to improved socioeconomic and environmental conditions

Map 2.5: Total fertility rate, by NUTS 2 regions, average 2008–10 (1)
(live births per woman)



(1) Ireland, 2010; Turkey, 2009–10; Eastern Scotland (UKM2) and South Western Scotland (UKM3), 2008–09; EU-27, Spain, France, Cyprus, the Netherlands, the United Kingdom (other than UKM2 and UKM3) and Norway, 2007–09; Belgium and Sachsen (DED), 2006–08; Brandenburg (DE4), by NUTS 1 region.
Source: Eurostat (online data code: demo_r_frate2)

and better medical treatment and care. Maps 2.6 and 2.7 present average male and female life expectancy at birth for NUTS level 2 regions; these maps are directly comparable thanks to the common colour patterns used.

Map 2.6 shows that male life expectancy at birth was 74 years or less in all of the regions covered by the Baltic Member States, Poland, Slovakia, Hungary, Romania and Bulgaria; while the only other EU regions that recorded values for life expectancy at birth for males that were below 74 years were Severozápad, Střední Morava and Moravskoslezsko in the Czech Republic, and the two island regions of Açores and Madeira in Portugal. Relatively low male life expectancy at birth was also apparent in the former Yugoslav Republic of Macedonia and in Montenegro, as well as in the Croatian regions of Sredisnja i Istocna (Panonska) Hrvatska and Sjeverozapadna Hrvatska.

The highest levels of male life expectancy at birth (equal to or greater than 78 years) were spread across a wide range of countries: 11 of the top 40 NUTS level 2 regions were located in the United Kingdom, while eight were in Italy, five each in Germany and Sweden (out of a total of eight), four in Spain, two each in Greece, France and the Netherlands, and one in Finland. The highest value of male life expectancy at birth was registered in Åland (Finland) with an average of 80.8 years for the period 2008–10.

Map 2.7 depicts the regional distribution of female life expectancy at birth. The lowest values were (as for men) recorded in eastern Europe (Romania, Bulgaria and Hungary, as well as in the former Yugoslav Republic of Macedonia). The Bulgarian regions of Severozapaden and Yugoiztochen recorded the lowest values for female life expectancy at birth, at 76.5 years for the period 2008–10. The highest value for life expectancy at birth among women was recorded in the Comunidad Foral de Navarra (Spain), averaging 86.1 years for the period 2007–09; in Ticino (Switzerland), this ratio averaged 86.2 years over the period 2008–10. The top 40 NUTS level 2 regions in the EU with the highest levels of female life expectancy at birth were almost all located in either France (17 regions), Italy (11 regions) or Spain (10 regions), other than Ipeiros in Greece and Vorarlberg in Austria.

In all regions of the EU-27, EFTA and candidate countries, women could expect to live longer than men. For the EU-27 as a whole, life expectancy at birth averaged 82.2 years for women and 76.1 for men during the period 2006–08. 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 11.1 (Lithuania) and 10.2 (Latvia) years longer than men. There were also relatively wide gender gaps, more than 8 years, for a number of regions in Poland, Hungary, France, Romania and Slovakia. The lowest gender gap was recorded for the islands of Åland (Finland), where female life expectancy at birth of 83.4 years was 2.6 years higher than the corresponding figure for male life expectancy. Many of the regions with small gender gaps, less than or equal to 4 years' difference between the sexes, were found in the Netherlands, Sweden or the United Kingdom.

Among the non-member countries, Iceland had the smallest gender gap, equal to 3.9 years, while the largest gap was 7.1 years, as recorded for the two Croatian regions of Sjeverozapadna Hrvatska and Sredisnja i Istocna (Panonska) Hrvatska.

It is also interesting to look at life expectancy figures at age 65: as with the data for life expectancy at birth, there were no NUTS level 2 regions where male life expectancy was higher than female life expectancy at age 65. Across the EU-27 regions the highest gender gap at age 65 was recorded in Estonia, at 5.2 years for the period 2008–10. There were 10 Greek regions at the other end of the ranking with the lowest gender gaps, within the range of 2.0 to 1.5 years' difference. Among the non-member countries, the range among the regions for life expectancy at age 65 was from 2.0 years in the former Yugoslav Republic of Macedonia up to 4.0 years for the Swiss region of Ticino.

Data for the infant mortality rate show that the NUTS level 2 regions with the highest infant mortality rates were in Bulgaria and Romania; these two Member States had a combined total of seven regions with infant mortality rates (number of deaths per 1 000 live births) in double figures.

Demographic ageing

The EU-27's population is getting progressively older. This change has resulted from a significant and continuous increase in life expectancy at birth, combined with low fertility rates and the entry into retirement of the post-Second World War baby-boom generation. One means of illustrating this structural change in the EU-27's population is through the old-age dependency ratio, which analyses the relationship between the number of elderly persons (aged 65 and above) and the working-age population (aged 15 to 64). The elderly population aged 65 or over was equivalent to 25.9 % of the working-age population in the EU-27 at the beginning of 2010.

Map 2.8 shows the old-age dependency ratio calculated for NUTS level 3 regions on 1 January 2011. There were 125 EU-27 regions that had old-age dependency ratios equal to or below the level of 20 %, 45 from Poland, 19 from the United Kingdom, 13 from Romania, 11 from Spain, nine from France, eight each from Ireland and Slovakia, five from Portugal, two from the Netherlands and one each from the Czech Republic, Denmark, Cyprus, Malta and Finland. The lowest old-age dependency ratio was recorded in Guyane (6.8 %). Two regions reported old-age dependency ratios that were above 50 % (in other words, there were less than two persons of working-age supporting an elderly person aged 65 or over), namely, Hoyerswerda, Kreisfreie Stadt in Germany and Pinhal Interior Sul in Portugal.

The pattern of demographic ageing was less evident in the regions of the EFTA and candidate countries. There were three NUTS level 3 regions, all in Croatia, where the old-age dependency ratio was above 30 %. At the other end of the scale, there were 89 regions that reported old-age dependency ratios equal to or below 20 %; these were almost exclusively Turkish regions (76), while the remainder were regions from the former Yugoslav Republic of Macedonia (seven), Iceland and Norway (two each), Liechtenstein and Montenegro (one each). The lowest old-age dependency ratio in the EFTA and candidate countries was recorded in the region of Van, Muş, Bitlis and Hakkari in Turkey (4.9 % on 1 January 2011).

Data sources and availability

Eurostat provides a wide range of demographic data: these include 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.

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

Population change is the difference between the sizes of population at the end and at the beginning of the period. 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 by 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 by 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.

The crude rate of population change is the ratio of the total population change during the year to the average population of the area in question in the same year; this value is expressed per 1 000 inhabitants.

The crude rate of natural population change is the ratio of natural population change over a period to the average population of the area in question during the same period; this value is also expressed per 1 000 inhabitants.

The crude rate of net migration (including statistical adjustment) is the ratio of net migration (including statistical adjustment) during the year to the average population in the same year; this value is expressed per 1 000 inhabitants. As stated above, the crude rate of net migration is equal to the difference between the crude rate of population change and the crude rate of natural population change (in other words, net migration is considered to be the part of population change not attributable to births or deaths).

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 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 (conventionally 15–64 years old).

Further information

For further information about population statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/population/introduction.

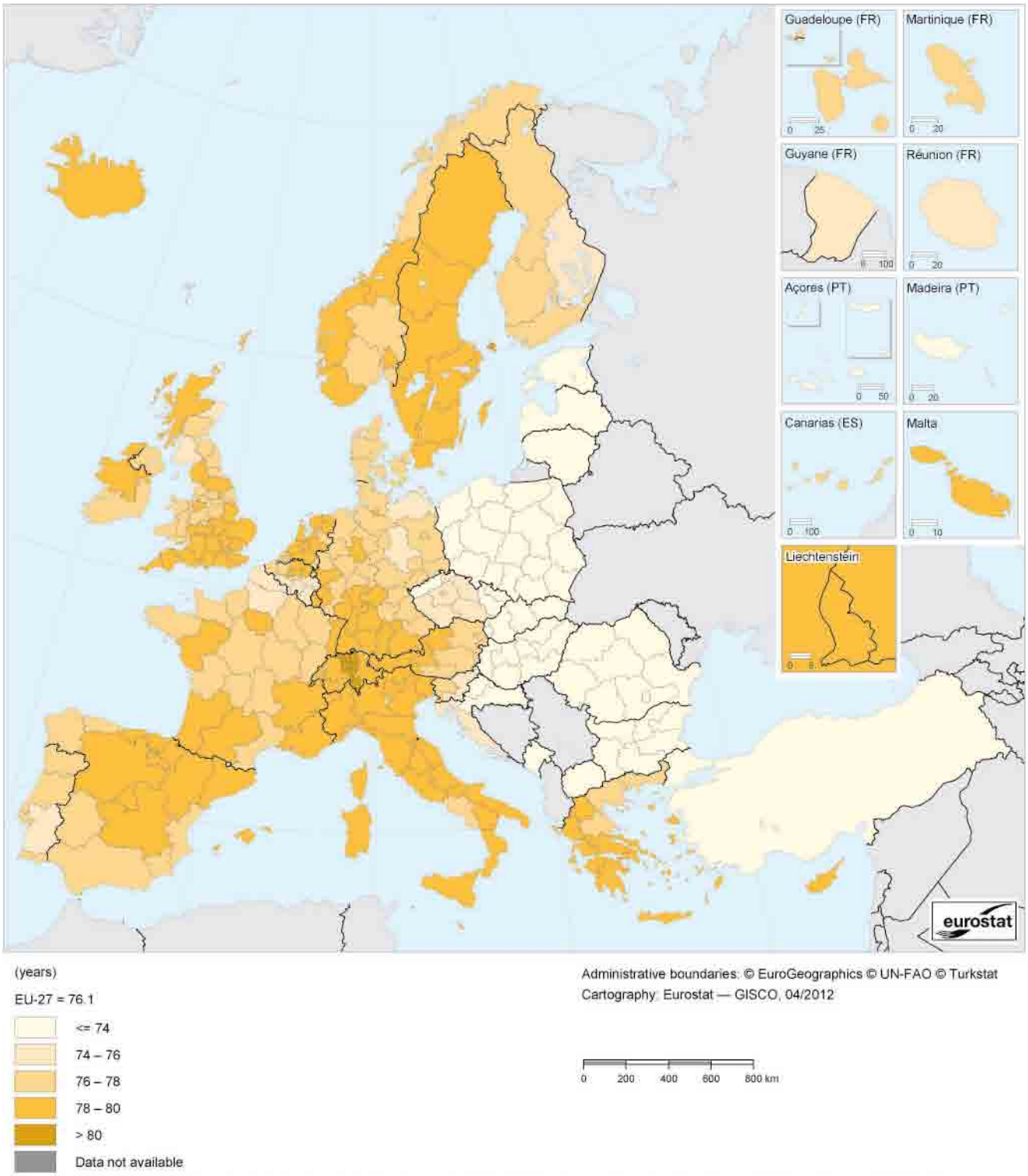
Context

Consistently low fertility levels, combined with extended longevity and the fact that the baby-boomers are reaching retirement age, are resulting 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, at both national and regional levels. 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.

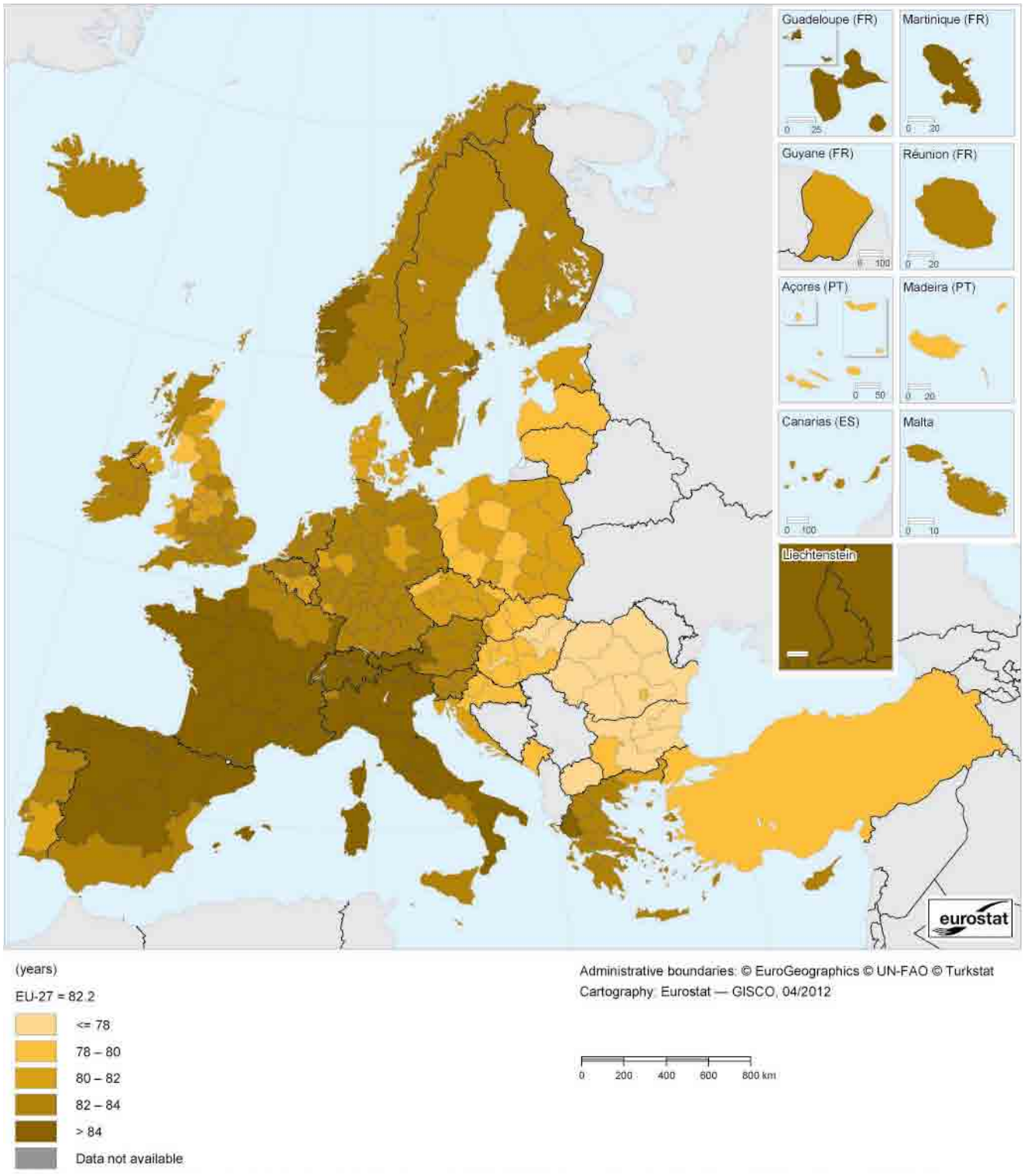
Statistics on population change and the structure of population are increasingly used to support policymaking and to provide the opportunity to monitor demographic behaviour within political, economic, social and cultural contexts.

Map 2.6: Life expectancy at birth, males, by NUTS 2 regions, average 2008–10 ([1])
(years)



([1]) Ireland, 2008 and 2010; Belgium, Spain (other than Ciudad Autónoma de Melilla (ES64)), France (other than Guadeloupe (FR91) and Guyane (FR93)), Cyprus, the Netherlands, the United Kingdom and Norway, 2007–09; Turkey, 2009; EU-27, Sachsen (DED) and Italy, 2006–08; Guyane (FR93), 2008; Ciudad Autónoma de Melilla (ES64) and Guadeloupe (FR91), 2007; Brandenburg (DE4), by NUTS 1 region; Turkey, national level.
Source: Eurostat (online data code: demo_r_mlifexp)

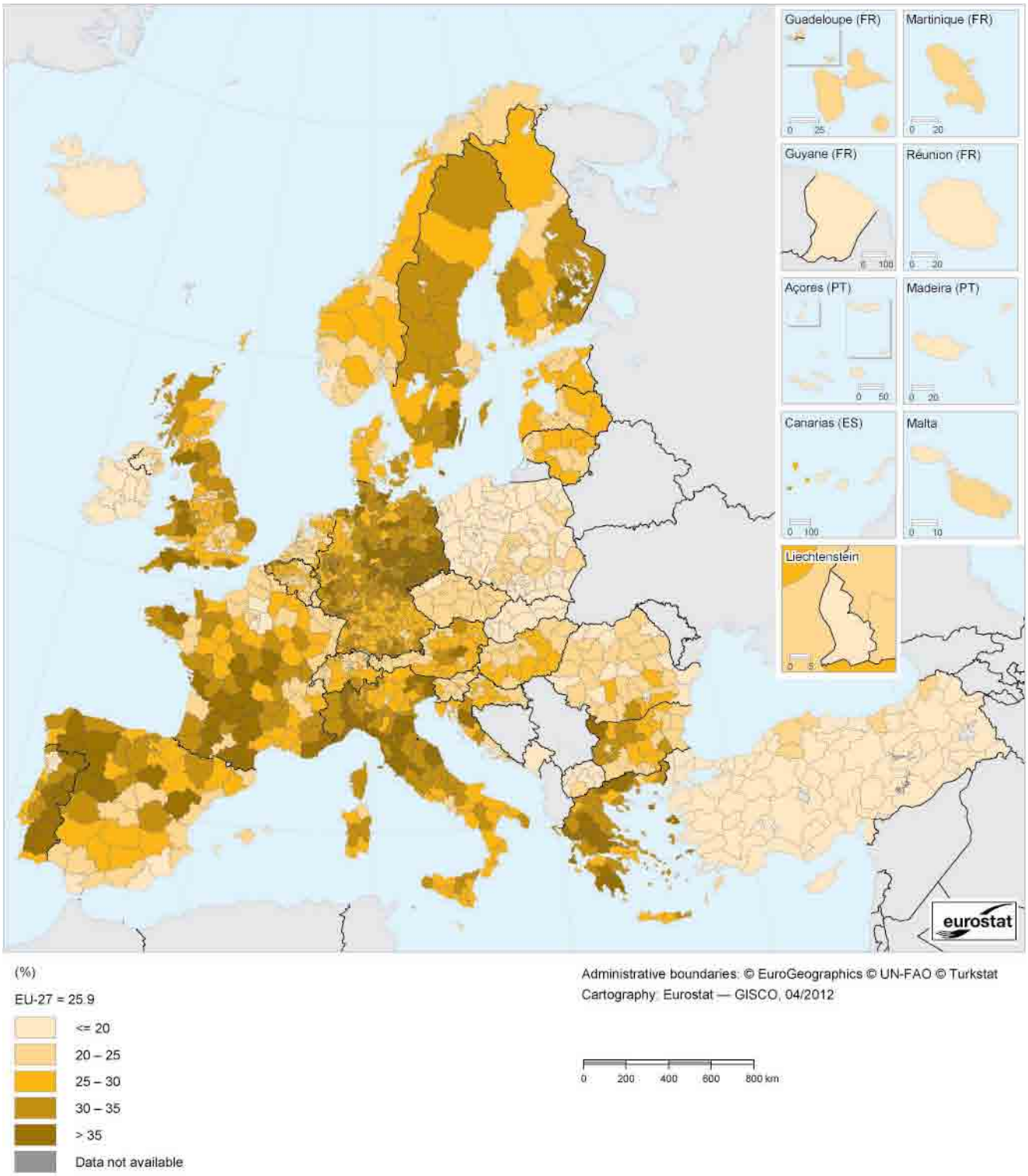
Map 2.7: Life expectancy at birth, females, by NUTS 2 regions, average 2008–10 ([1])
(years)



([1]) Ireland, 2008 and 2010; Belgium, Spain (other than Ciudad Autónoma de Melilla (ES64)), France (other than Guadeloupe (FR91) and Guyane (FR93)), Cyprus, the Netherlands, the United Kingdom and Norway, 2007–09; Turkey, 2009; EU-27, Sachsen (DED) and Italy, 2006–08; Guyane (FR93), 2008; Ciudad Autónoma de Melilla (ES64) and Guadeloupe (FR91), 2007; Brandenburg (DE4), by NUTS 1 region; Turkey, national level.

Source: Eurostat (online data code: demo_r_mlifexp)

Map 2.8: Old-age dependency ratio, by NUTS 3 regions, 1 January 2011 ([1])
(%)



([1]) EU-27, Belgium, Aachen, Kreisfreie Stadt (DEA21), Aachen, Kreis (DEA25), Sachsen (DED), Illes Balears (ES53) and Canarias (ES7), France, Cyprus, the United Kingdom and Norway, 1 January 2010.

Source: Eurostat (online data code: demo_r_pjanaggr3)

3

Health

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. Other indicators that may be used include the infant mortality rate (due to its association with education and economic development), the prevalence of preventable diseases and information relating to the availability of healthcare services. Eurostat compiles and publishes all of these statistics at regional and national levels and for the EU-27.

This chapter addresses some of the most common causes of death, notably cancer and diseases of the circulatory and respiratory systems. It also presents regional information concerning healthcare services through an analysis of the number of hospital beds and numbers of healthcare professionals (physicians).

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 biological or social elements, and living and working conditions — while individual factors, such as lifestyle, smoking, alcohol consumption, driving or sexual behaviour, may also play a role. As a general rule, mortality is higher among men than women for all age groups.

Provisional figures indicate that 4.84 million persons died in the EU-27 in 2008. Diseases of the circulatory system accounted for almost 40 % of this total (43.3 % among women and 36.2 % among men). Cancer (malignant neoplasms) accounted for just over one quarter (25.7 %) of the total number of deaths in the EU-27 in 2008, while the third most prevalent causes of death were diseases of the respiratory system (7.9 %).

These pathologies generally affect the population at advanced ages — for example, over 80 % of the deaths in the EU-27 in 2008 resulting from diseases of the circulatory or respiratory system occurred among people aged 70 years and above. In contrast, a higher proportion of relatively young persons died from cancer: more than one third (37.9 %) of the total number of deaths from malignant neoplasms were recorded among those aged between 40 and 70.

Diseases of the circulatory system

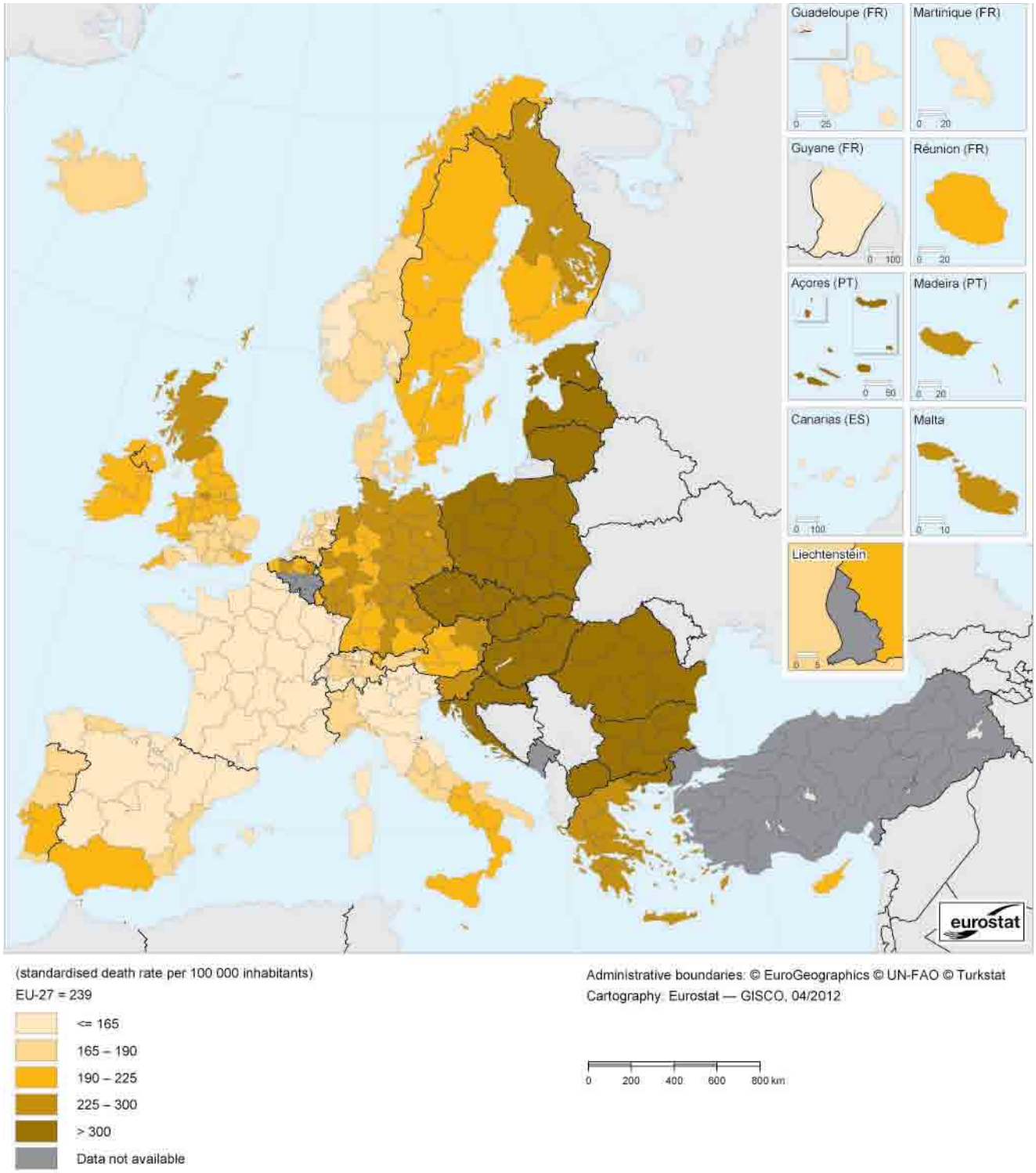
Diseases of the circulatory system include cerebrovascular diseases, ischaemic heart diseases and other heart diseases; these pathologies accounted for 39.7 % of deaths in the EU-27 in 2008. The average standardised death rate from diseases of the circulatory system between 2006 and 2008 was 239.0 per 100 000 inhabitants, with the rate for men (294.8) just over 50 % higher than that recorded for women (193.7).

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.

Among the 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; this was particularly true with respect to regions in Bulgaria and Romania, as each of these countries accounted for six of the 12 regions with the highest standardised death rates from diseases of the circulatory system. The highest death rates were recorded in the three Bulgarian regions of Severozapaden (733.0 per 100 000 inhabitants during the period 2006–08, which was more than three times as high as the EU-27 average), Yugoiztochen (678.6) and Severen tsentralen (665.6). 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 and Croatia.

At the other end of the range, the lowest death rates from diseases of the circulatory system were systematically recorded across France and Spain, as 33 regions from 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 2006–08 were recorded in the three French regions of Île de France (104.3 per 100 000 inhabitants), Rhône-Alpes (116.9, which contains Lyon) and Provence-Alpes-Côte d'Azur (118.1, which contains Marseille).

Map 3.1: Deaths from diseases of the circulatory system, by NUTS 2 regions, 2006–08 ([1])
(standardised death rate per 100 000 inhabitants)



([1]) EU-27 and Ireland, provisional; Malta, the United Kingdom and Switzerland, 2005–07; Belgium, 2000–02; Scotland (UKM), by NUTS 1 regions; Denmark, Slovenia and Croatia, national level.
Source: Eurostat (online data code: hlth_cd_ysdr1)

A higher number of men than women died from diseases of the circulatory system in each of the regions of the EU-27 in 2008. The Baltic Member States 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 France and Finland. 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, Portugal and southern Italy; this pattern was also repeated in the former Yugoslav Republic of Macedonia.

The three Bulgarian regions with the highest overall standardised death rates were also the three EU-27 regions with the highest male death rates from diseases of the circulatory system — Severozapaden (893.6 per 100 000 male inhabitants), Severen tsentralen (907.4) and Yugoiztochen (831.7); they were followed by the Nord-Vest region of Romania and Latvia. At the other end of the range, the regions with the lowest male death rates from diseases of the circulatory system were in France and Spain: Île de France (137.0 per 100 000 male inhabitants), the Comunidad de Madrid (150.6) and Rhône-Alpes (152.7).

The pattern for women was similar (although rates were at a lower level), as the five regions with the highest female death rates during the period 2006–08 included the three Bulgarian regions of Severozapaden (599.8 per 100 000 female inhabitants), Yugoiztochen (554.9) and Severen tsentralen (551.5), as well as the Romanian regions of Sud-Vest Oltenia and Nord-Vest. The lowest death rates for women were recorded in the French regions of Île de France (80.4 per 100 000 female inhabitants), Provence-Alpes-Côte d'Azur (89.1) and Rhône-Alpes (90.1).

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. As noted above, malignant neoplasms were the second most common cause of death in 2008, accounting for 25.7 % of deaths in the EU-27. The standardised death rate from cancer between 2006 and 2008 was 176.0 per 100 000 inhabitants, with the rate for men (234.4) around 75 % higher than that for women (133.9).

Among the regions of the EU-27, standardised death rates from malignant neoplasms were highest in the Hungarian region of Észak-Alföld (258.1 deaths per 100 000 inhabitants) and lowest in the French overseas department of Guyane (113.2). All seven Hungarian NUTS level 2 regions were present among the top 10 regions with the highest standardised deaths rates from malignant neoplasms over the 3-year period 2006–08; the other three regions were also located in central or eastern Europe, with two from Poland (Kujawsko-pomorskie and Pomorskie) and one from the Czech Republic (Severozápad).

The lowest regional death rates from cancer were recorded in the French overseas regions, southern Europe, a cluster of regions in southern Germany and Austria, as well as most of the regions in Finland and Sweden; low death rates from cancer were also recorded throughout Switzerland.

An analysis by sex shows that standardised death rates from malignant neoplasms for men ranged from 378.5 per 100 000 male inhabitants in Észak-Alföld down to 135.8 in Guyane; whereas for women the range was narrower, peaking at 188.6 per 100 000 female inhabitants in Közép-Magyarország (Hungary) and falling to a low of 88.6 in Ipeiros (Greece).

The highest death rates for different types of cancer in the EU were recorded for malignant neoplasms of the larynx, trachea, bronchus and lung. Across the whole of the EU-27, standardised death rates for cancers of the larynx, trachea, bronchus and lung averaged 40.0 per 100 000 inhabitants; however, there was a considerable difference between the sexes, as the male death rate (66.8 per male 100 000 inhabitants) was more than three times as high as the corresponding figure among women (19.1).

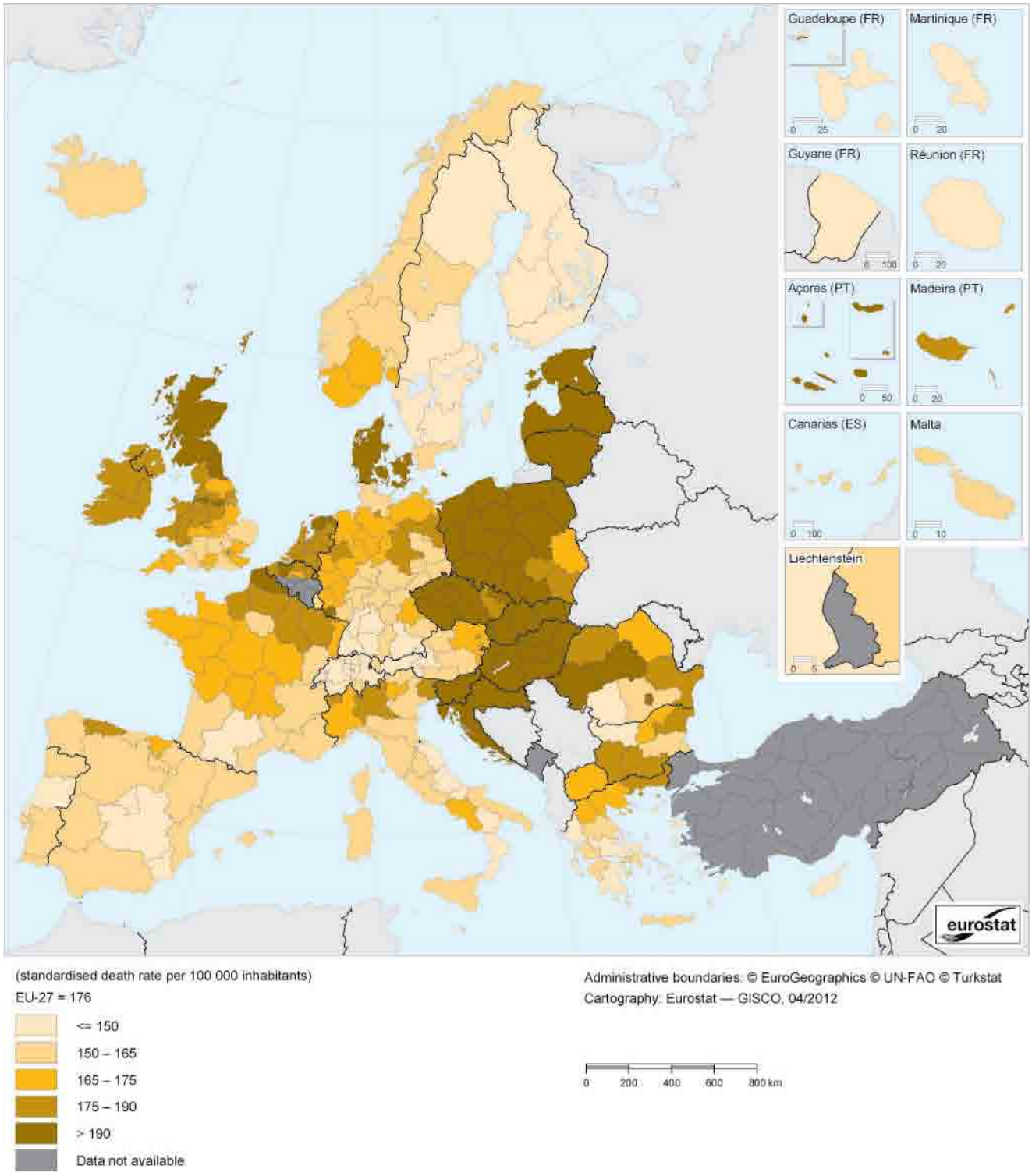
The EU-27 standardised death rate (for women) from breast cancer (24.2 per female 100 000 inhabitants over the period 2006–08) was higher than that recorded for cancers of the larynx, trachea, bronchus and lung. Indeed, breast cancer was the leading cause of death among women in most regions of the EU: the highest rates were recorded in Friesland in the Netherlands (35.9), Trier in Germany (31.7) and Bucureşti - Ilfov in Romania (31.3), while the lowest rates were found in the French overseas department of Réunion (14.1), Cantabria in Spain (15.2) and Ionia Nisia in Greece (15.3).

Malignant neoplasm of the prostate is another gender-specific cancer. Its standardised death rate (22.1 per 100 000 male inhabitants for the EU-27) was broadly comparable with the death rate recorded for women from breast cancer. 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 rates from prostate cancer were recorded for the French overseas regions of Martinique (47.0) and Guadeloupe (41.1), the Finnish island region of Åland (44.2) and the Border, Midland and Western region of Ireland (41.3 for the period 2007–09). The lowest death rates from prostate cancer were recorded in the Romanian regions of Sud-Vest Oltenia (10.2) and Sud - Muntenia (10.8) and the Spanish Ciudad Autónoma de Melilla (10.5).

Diseases of the respiratory system

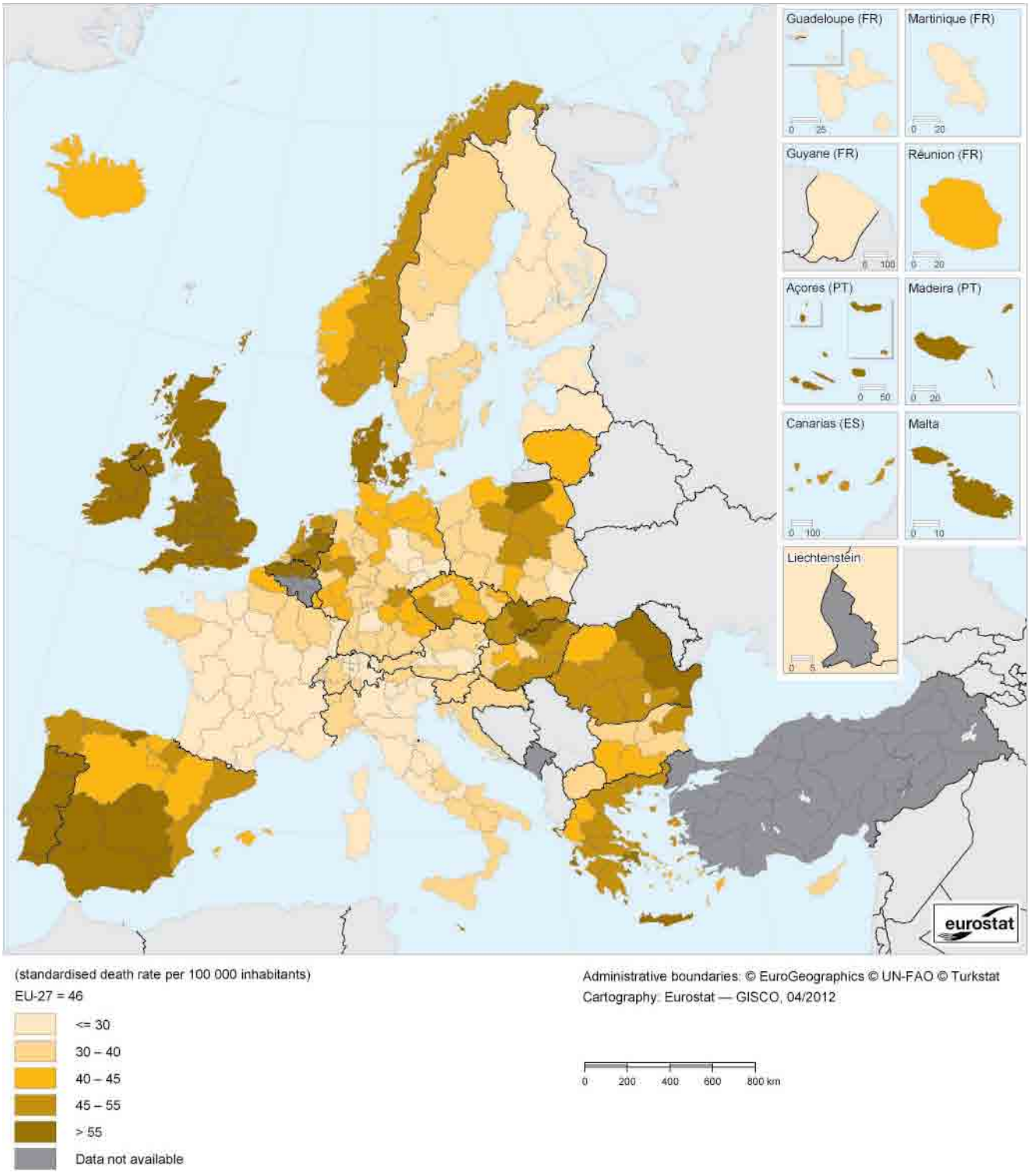
Respiratory diseases include infectious acute respiratory diseases (such as influenza and pneumonia) and chronic lower

Map 3.2: Deaths from malignant neoplasms, by NUTS 2 regions, 2006–08 ([1])
(standardised death rate per 100 000 inhabitants)



([1]) EU-27 and Ireland, provisional; Malta, the United Kingdom and Switzerland, 2005–07; Belgium, 2000–02; Scotland (UKM), by NUTS 1 regions; Denmark, Slovenia and Croatia, national level.
Source: Eurostat (online data code: hlth_cd_ysdr1)

Map 3.3: Deaths from diseases of the respiratory system, by NUTS 2 regions, 2006–08 ([1])
(standardised death rate per 100 000 inhabitants)



([1]) EU-27 and Ireland, provisional; Malta, the United Kingdom and Switzerland, 2005–07; Belgium, 2000–02; Scotland (UKM), by NUTS 1 regions; Denmark, Slovenia and Croatia, national level.
Source: Eurostat (online data code: hlth_cd_ysdr1)

respiratory diseases (such as asthma). They were the third most frequent cause of death in the EU-27 in 2008, accounting for 7.9 % of all deaths. Diseases of the respiratory system mainly affected older people, as nine out of 10 deaths from these diseases occurred after the age of 65. Chronic lower respiratory diseases (40.9 % of all deaths from respiratory diseases) and pneumonia (33.5 %) were responsible for the highest number of deaths from respiratory diseases in the EU-27 in 2008; while asthma (1.9 %) and influenza (0.3 %) accounted for relatively few deaths.

The average standardised death rate (2006–08) from diseases of the respiratory system in the EU-27 was 45.9 per 100 000 inhabitants, with the rate for men (65.9) almost double that recorded for women (33.2). Some of the highest death rates were recorded in Denmark (data only available at the national level), Ireland, Portugal and the United Kingdom, as well as many regions of Belgium and Spain. The highest death rates from diseases of the respiratory system were reported in the Portuguese island region of Madeira (144.6 deaths per 100 000 inhabitants during the period 2006–08), while several metropolitan areas in the north and centre of the United Kingdom — for example, Greater Manchester, Merseyside, West Yorkshire and the West Midlands — also recorded relatively high death rates; there were many regions in central and northern parts of the United Kingdom that reported a standardised death rate from respiratory diseases of more than 80 deaths per 100 000 inhabitants during the period 2005–07.

At the other end of the scale, the regions with the lowest death rates from respiratory diseases were all island regions of France, including the overseas regions of Martinique and Guadeloupe, and Corse. Otherwise, the regions with the lowest death rates were often located in predominantly rural areas of France, the north-eastern EU (Estonia, Latvia and Finland) and several regions in Germany, central and northern Italy and Austria.

On the basis of a comparison of NUTS level 2 regions, the widest divergences in death rates between the sexes was recorded in the Baltic Member States, where standardised death rates for men were more than four times as high as those for women in each of Estonia, Latvia and Lithuania. The difference in death rates was much lower in Denmark (national level), as well as in the three Greek regions of Attiki, Ionia Nisia and Thessalia, as male death rates were no more than 30 % higher than the corresponding female rates.

Hospital beds

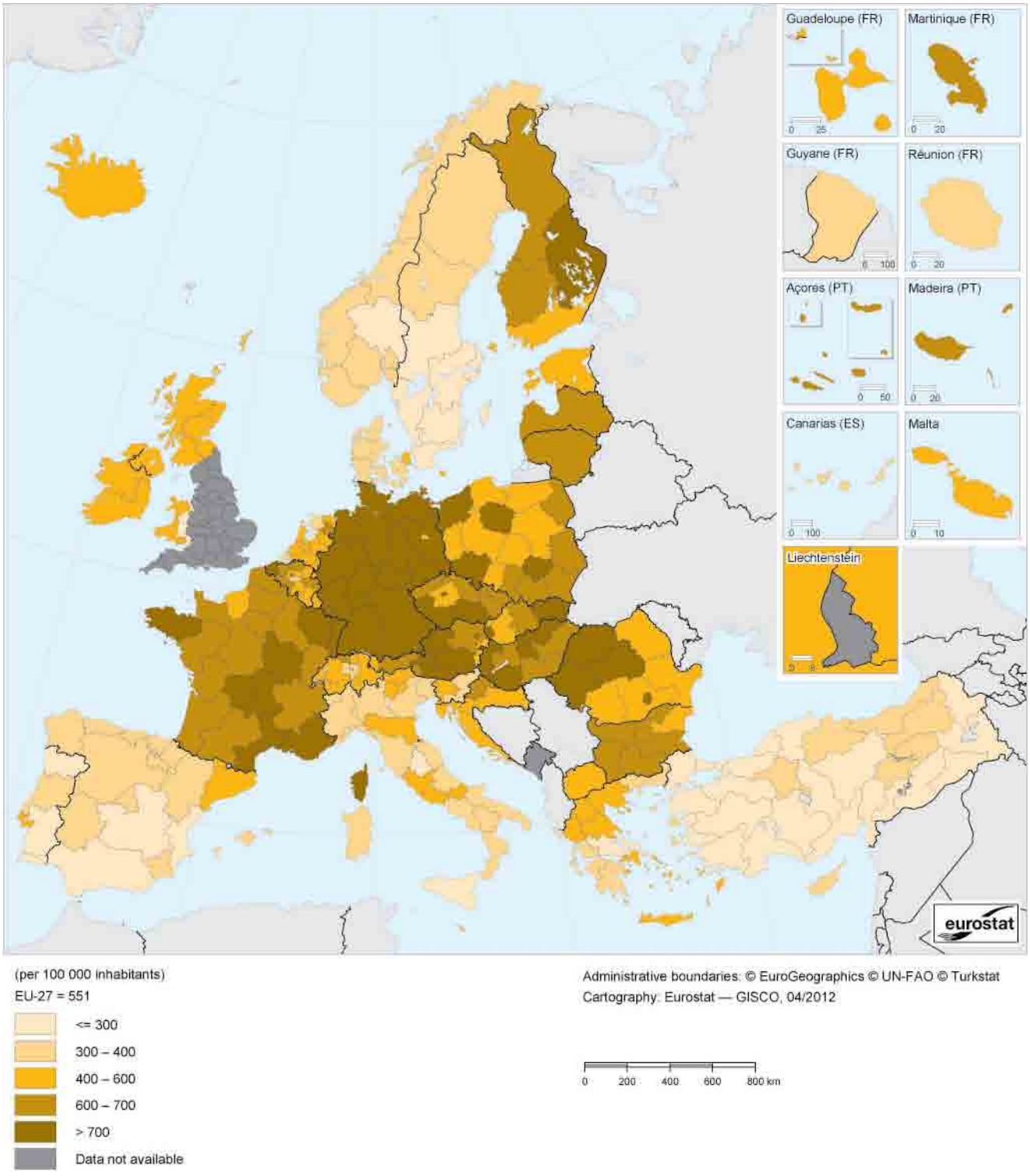
For many years, the number of hospital beds across the EU has been decreasing. During the last decade this pattern has continued, as the number of available beds in hospitals fell by a further 10.7 % in the EU-27 between 2000 and 2009. The total number of available hospital beds in the EU-27 was 2.76 million in 2009;, equivalent to one bed for every 181.5 persons, or 550.9 hospital beds per 100 000 inhabitants. Sweden (277.1 available hospital beds per 100 000 inhabitants), Spain (319.3), the United Kingdom (330.2) and Portugal (334.9) 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 (822.9), Austria (765.0), Hungary (715.0) and the Czech Republic (710.1).

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, East Wales in the United Kingdom, Andalucía in Spain, or Sterea Ellada in Greece. One of the main exceptions to this rule was Flevoland (Netherlands) which had 159.2 hospital beds per 100 000 inhabitants, the lowest number of hospital beds in relation to its population across all NUTS level 2 regions in the EU in 2009; this was less than half the next lowest value in a Dutch region. At the other end of the ranking, the highest number of available hospital beds was recorded in the north-eastern German region of Mecklenburg-Vorpommern (1 247.7 beds per 100 000 inhabitants), followed by its neighbouring Polish region of Zachodniopomorskie (1 124.5); these were the only regions in the EU-27 to record ratios above the level of 1 000 beds.

The density of hospital beds varied considerably between regions in some Member States. As already indicated, this was particularly the case in the Netherlands, where there were, on average, 630 hospital beds per 100 000 inhabitants in Drenthe in 2009 compared with only 159 beds per 100 000 inhabitants in Flevoland. A similar pattern was observed in Greece 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 — from 777 beds per 100 000 inhabitants in Közép-Magyarország (which includes Budapest) to 638 beds in Dél-Alföld — as well as in Denmark — from a high of 413 beds in Hovedstaden (the region that includes Copenhagen) to 316 beds in Midtjylland.

The highest ratio of hospital beds to population was often recorded in the capital city region of each Member State; this may be due to capital cities often having specialist 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 number of available hospital beds in

Map 3.4: Hospital beds, by NUTS 2 regions, 2009 ([1])
(per 100 000 inhabitants)



([1]) Ireland, Spain, Cyprus, Lithuania and Luxembourg, 2008; Iceland, 2007; Estonia, 2006; the former Yugoslav Republic of Macedonia, 2004; the Netherlands, 2002 and estimates; Germany, by NUTS 1 regions.
Source: Eurostat (online data code: hlth_rs_bdsrg)

their respective countries; German data are only available by NUTS level 1 regions.

Healthcare professionals

Regional data on healthcare professionals provide an alternative measure (compared with that for hospital beds) in order to study the availability of healthcare resources; Map 3.5 shows the rate of practising physicians per 100 000 inhabitants in 2009.

Given the differences in the concept of physicians between the Member States, there is no overall figure for the number of physicians in the EU-27. The analysis that follows is based on the most common concept employed among the Member States, 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 Italian region of Liguria (807 in 2009), followed by Ciudad Autónoma de Ceuta (Spain), Praha (the Czech Republic) and Wien (Austria) — the only other regions to report a ratio above 650 physicians per 100 000 in habitants. At the other end of the range, there was only one region in the EU that reported fewer than 150 practising physicians per 100 000 inhabitants in 2009; this was the Sud - Muntenia region of Romania. There were fewer than 200 practising physicians per 100 000 inhabitants in six Polish regions, three additional Romanian regions and one region each in Slovenia and Finland.

As with the data presented for hospital beds, the capital city region often reported some of the highest concentrations of physicians; this was the case, for example, for Praha and Wien, as well as Berlin, the Comunidad de Madrid and Hovedstaden (Denmark).

Data sources and availability

Regulation (EC) No 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; 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.

Causes of death

Cause of death statistics 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 for causes of death are provided at national and regional levels. Regional data are provided in the form of 3-year averages, along with yearly crude death rates for some age groups. 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 of the latest 3 years for which information is available is used to moderate these effects; for this publication, such averages are based upon the period 2006–08.

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.

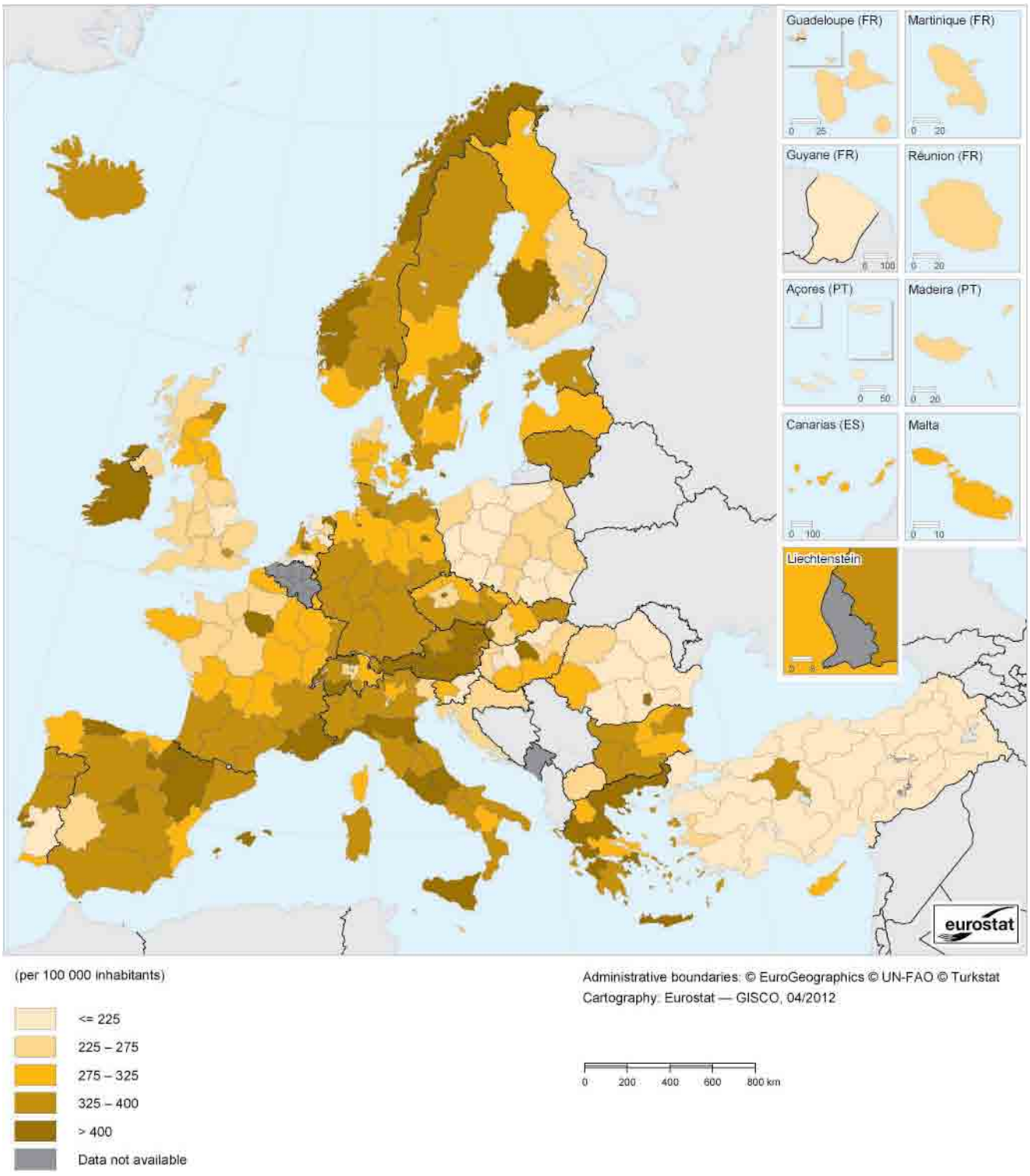
The standardised death rate is a weighted average of age-specific mortality rates. The weighting factor is the age distribution of a standard reference population. The standard European population defined by the World Health Organisation (WHO) is used for this purpose. Standardised death rates are expressed 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. Causes of death are classified as one of 65 diseases 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.

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

Hospital bed numbers provide information about healthcare capacities; in other words, on the maximum number of

Map 3.5: Healthcare personnel — number of practising physicians, by NUTS 2 regions, 2009 ([1])
(per 100 000 inhabitants)



([1]) Greece, France, the Netherlands, Slovakia, the former Yugoslav Republic of Macedonia and Turkey, professionally active physicians; Ireland and Portugal, licensed physicians; Denmark, Estonia, Cyprus, Lithuania, the Netherlands and Sweden, 2008; Luxembourg, 2007; the former Yugoslav Republic of Macedonia, 2006; the Netherlands and the United Kingdom, estimates; Germany, Ireland, England and Wales, by NUTS 1 regions; Croatia, national level.

Source: Eurostat (online data code: hlth_rs_prsrg)

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 irrespective of the sector of employment (in other words, regardless of whether the personnel are independent, 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 practise as well as those working in administration and research with their medical education being a prerequisite for the job they carry out; physicians licensed to practise are those entitled to work as physicians plus, for example, those who are retired. To interpret Map 3.5, which presents data for the number of practising physicians per 100 000 inhabitants, it is necessary to consider that the statistics for Greece, France, the Netherlands, Slovakia, 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 overestimated (when compared with information for the number of practising physicians).

Further information

For further information about health statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/health/introduction.

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 remits 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 Member States, while the European Union (EU) complements the Member States' health policies through launching actions such as those in relation to cross-border health threats or patient mobility.

A first programme for Community action in the field of public health covered the period 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). In order to bring about the changes identified within this new strategy, the second programme of Community action in the field of health came into force from 1 January 2008. It puts 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 are:

- 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 need to be based on common EU health indicators for which there is Europe-wide agreement regarding definitions, data collection and use — the latter includes the development of indicators relating to healthy life years (HLY) and European Community health indicators (ECHI).

4

Education

Education, vocational training and lifelong learning play a vital role in the economic and social strategies of the European Union (EU). This chapter presents Eurostat's regional educational statistics and includes information relating to enrolment, educational attainment and participation. These indicators can be used to study the progress being made at a regional level in relation to a range of benchmark targets. Indeed, education is one of five central pillars which are central to Europe's growth strategy, Europe 2020.

Main statistical findings

Figures for the EU-27 for 2009 indicate that there were around 93 million students enrolled in the regular education system covering all levels of education from primary to postgraduate studies (excluding pre-primary education); there were an additional 14.6 million students enrolled in pre-primary education across the EU-27.

Participation of 4-year-olds in education

The legal age to start education varies across the Member States: in Northern Ireland (United Kingdom) compulsory education starts at age 4, while in other EU regions it starts between 5 and 7 years of age; enrolment in pre-primary education is generally voluntary in most EU Member States.

The Europe 2020 strategy emphasises raising participation rates of young children in preparation for the start of compulsory education. One of its headline targets is to raise the share of children participating in pre-primary education to at least 95 % by the year 2020.

Map 4.1 shows that 90.5 % of 4-year-olds were in pre-primary or primary education across the whole of the EU-27 in 2009. There were 48 regions in the EU that reported more than 99 % of 4-year-old children attended pre-primary or primary education in 2010; most of these were in France (18 NUTS level 2 regions), Spain (11 regions), the United Kingdom (seven NUTS level 1 regions), Belgium (five regions) and Italy (four regions), while the Netherlands (national level) was also above this threshold, as was one region in Denmark and one in Austria. Participation rates of 4-year-olds in education were generally high in Belgium, Denmark, Germany, Spain, France, Italy, Luxembourg, Hungary, Malta, the Netherlands, Sweden and the United Kingdom (except for Scotland), as well as in Iceland and Norway. In contrast, Greece, Ireland and most regions in Poland and Finland reported that fewer than 70 % of 4-year-olds were enrolled; this was also the case in Switzerland, Croatia and the former Yugoslav Republic of Macedonia, as well as all regions in Turkey.

Students aged 17 in education

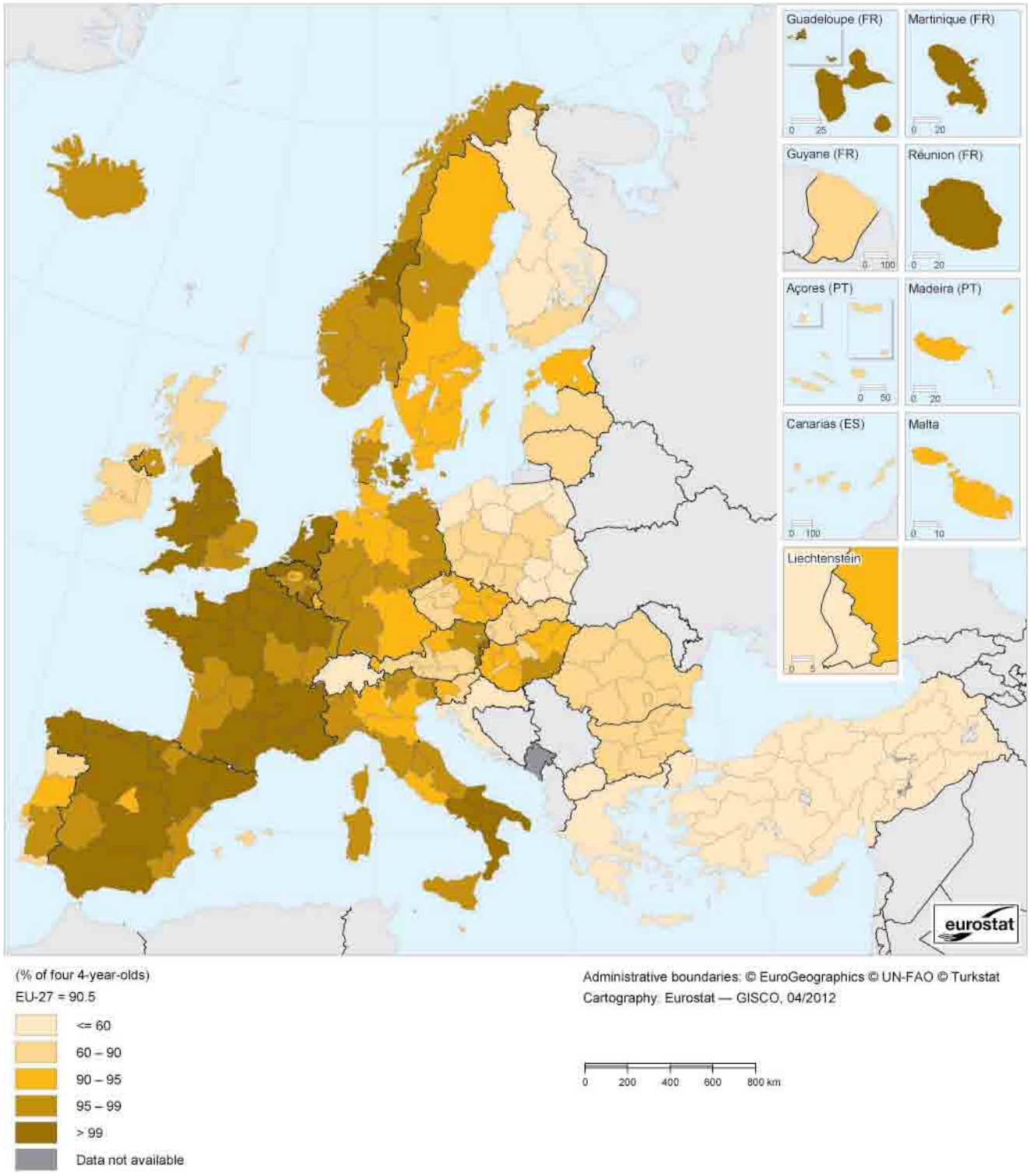
The number of students aged 17 in education (at all levels) in the EU-27 in 2009 was 5.2 million, equivalent to 88.3 % of all 17-year-olds. The age of 17 is important as it often marks the age at which young people are faced with a choice between remaining in education, following some form of training or looking for a job. The number of 17-year-olds in education relative to the population of 17-year-olds exceeded 80 % in the vast majority of the regions of the EU, as well as in the non-member countries shown in Map 4.2. This means that, for one reason or another, many young people of this age remained in the education system even after the compulsory schooling age. There were several regions where the number of 17-year-olds in education was higher than the number of 17-year-olds resident in the same region; among other reasons, this may arise from students resident in one region crossing regional borders to attend an establishment in another region (or country) that provides a specific course or training.

There were 23 regions in the EU where fewer than four out of five 17-year-olds remained in education in 2010. Several of these were in eastern Europe, with seven regions in Romania and two in Bulgaria, while relatively low ratios were also recorded in the island regions of Illes Balears (Spain), Malta and the Açores (Portugal). Low ratios were also registered in four regions in northern Italy (the autonomous provinces of Bolzano/Bozen and Trento, as well as Lombardia and Valle d'Aosta/Vallée d'Aoste) and three NUTS level 1 regions in the United Kingdom (the East Midlands, Yorkshire and the Humber, and Wales). There were four other countries that each reported one region with less than 80 % of 17-year-olds remaining in education; they were: Province/Provincie Vlaams-Brabant in Belgium (2007), Střední Čechy in the Czech Republic, Guyane in France and Niederösterreich in Austria. Note that some students domiciled in a particular region may choose or have to travel to another region (or country in the example of Malta) in order to be able to continue their educational studies.

Early leavers from education and training

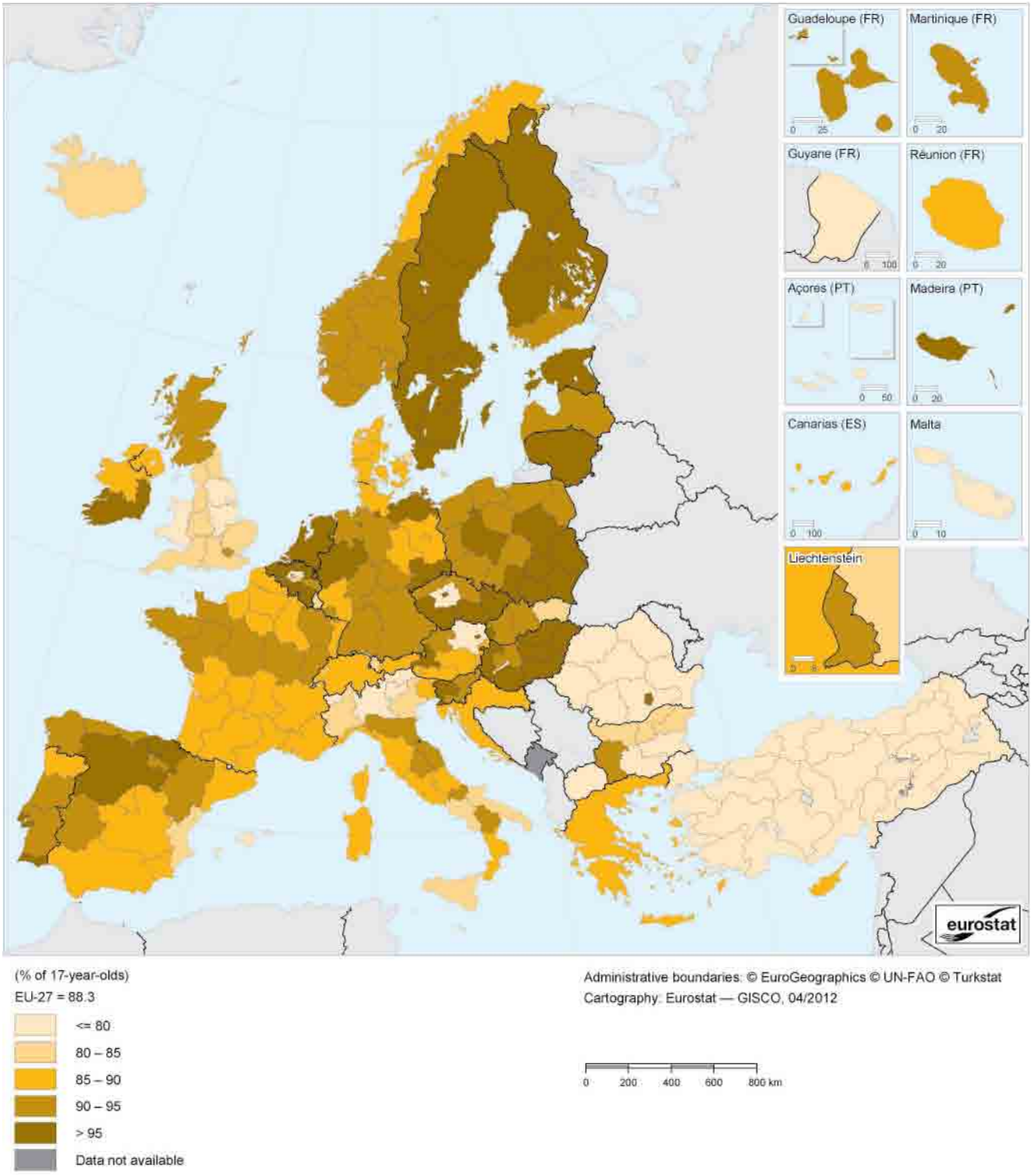
An indicator that presents information about early leavers from education and training tracks the percentage of individuals aged 18 to 24 who have finished no more than a lower secondary education, and who are not involved in further education or training: some 14.1 % of 18- to 24-year-olds

Map 4.1: Participation rates of 4-year-olds in pre-primary and primary education (ISCED levels 0 and 1), by NUTS 2 regions, 2010 ([1])
(% of 4-year-olds)



([1]) EU-27, Estonia, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Iceland, Liechtenstein, Switzerland, the former Yugoslav Republic of Macedonia and Turkey, 2009; Greece, 2008; Vlaams Gewest (BE2), 2007; Région Wallonne (BE3), 2001; Germany and the United Kingdom, by NUTS 1 regions; Greece, the Netherlands, Switzerland and Croatia, national level.
Source: Eurostat (online data code: educ_regind)

Map 4.2: Students aged 17 years in all levels of education (ISCED levels 0–6), by NUTS 2 regions, 2010 ([1])
(% of 17-year-olds)



([1]) Number of students aged 17 years divided by the resident population of 17-year-olds; EU-27, Estonia, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Iceland, Liechtenstein, Switzerland, the former Yugoslav Republic of Macedonia and Turkey, 2009; Greece, 2008; Vlaams Gewest (BE2), 2007; Région Wallonne (BE3), 2001; Germany and the United Kingdom, by NUTS 1 regions; Greece, the Netherlands, Switzerland and Croatia, national level.

Source: Eurostat (online data code: educ_regind)

in the EU-27 were classified as early leavers from education and training in 2010, with a somewhat higher proportion of male early leavers (16.0 %) compared with female early leavers (12.1 %).

Map 4.3 shows that the proportion of early leavers from education and training varied significantly across the EU in 2010. There were 26 NUTS level 1 regions where 10 % or less of the population aged 18 to 24 years were classified as early leavers from education and training; as such, they had already attained one of the objectives set in the Europe 2020 strategy. These regions were situated in 15 different Member States, including the Czech Republic, Lithuania, Luxembourg, Slovenia and Slovakia (which are all one region at NUTS level 1); Poland accounted for the largest number of regions (all six Polish regions), followed by Germany (three regions) and Austria (all three Austrian regions), France and Sweden (two regions each). The lowest ratio of early leavers was recorded in Region Południowy (Poland), at 3.8 %.

In 14 NUTS level 1 regions, early leavers accounted for upwards of 20 % of the population aged 18 to 24. These regions were spread across six different Member States, and were predominantly found in southern Europe, with six of the seven Spanish regions, all three regions in Portugal, two in southern Italy, and one each from Greece, Malta (the whole country at NUTS level 1) and Romania. The highest ratios of early leavers were recorded for three island regions, namely, the Portuguese island regions of the Açores and Madeira, and Malta. Note that young persons who are officially residing at their parents' address in one of these islands may follow an educational course on the mainland or in another country and hence the indicator needs to be interpreted with some care when large numbers of students leave a region to study elsewhere.

Students in tertiary education

Tertiary education is the level of education offered by universities, vocational universities, institutes of technology and other institutions that award academic degrees or professional certificates. In 2009 (the 2008/09 academic year), the number of students enrolled in tertiary education in the EU-27 stood at 19.5 million; this was equivalent to 61.3 % of all persons aged 20 to 24.

Map 4.4 shows the number of students enrolled in tertiary education in each region relative to the number of residents aged 20 to 24 in that region: this gives an idea of how attractive the region is to tertiary students. Note that it is possible that some students were not resident in the region where they were studying. For this reason there are some regions which show very high values (especially those of more than 100 %) as they host large universities or other tertiary education institutions and these high ratios reflect the fact that they attract considerable numbers of students from outside of their region. Note also, that with the promotion of education and learning for all members of society, tertiary-level students increasingly fall outside of the traditional 20 to 24 age group (used as the denominator for this ratio).

Ten of the 15 regions that reported more students in tertiary education than residents aged 20 to 24 in 2010 were capital city regions: București - Ilfov (Romania), Praha (the Czech Republic), Bratislavský kraj (Slovakia), Wien (Austria), Zahodna Slovenija (Slovenia), Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest (Belgium, data are for 2008), Mazowieckie (Poland), Attiki (Greece), Közép-Magyarország (Hungary) and Lisboa (Portugal). One of the other five regions with more students in tertiary education than residents aged 20 to 24 was in Belgium and the other four were in Greece — these four Greek regions had a ratio of students in tertiary education to residents aged 20 to 24 that was higher than in the capital city region of Attiki. Capital city regions reported the highest concentration of tertiary students in Bulgaria, Denmark, Ireland, Spain, France, Italy, Finland and the United Kingdom, although in these cases the ratios were below 100 %. As such, Germany was the only large Member State that was an exception to this rule, with its most dense concentration of tertiary students found in Hamburg (75.6 %) and Bremen (74.1 %) as opposed to Berlin (67.3 %); Groningen (89.8 %) had the highest concentration of tertiary students in the Netherlands, while Övre Norrland (97.5 %) had the highest concentration in Sweden.

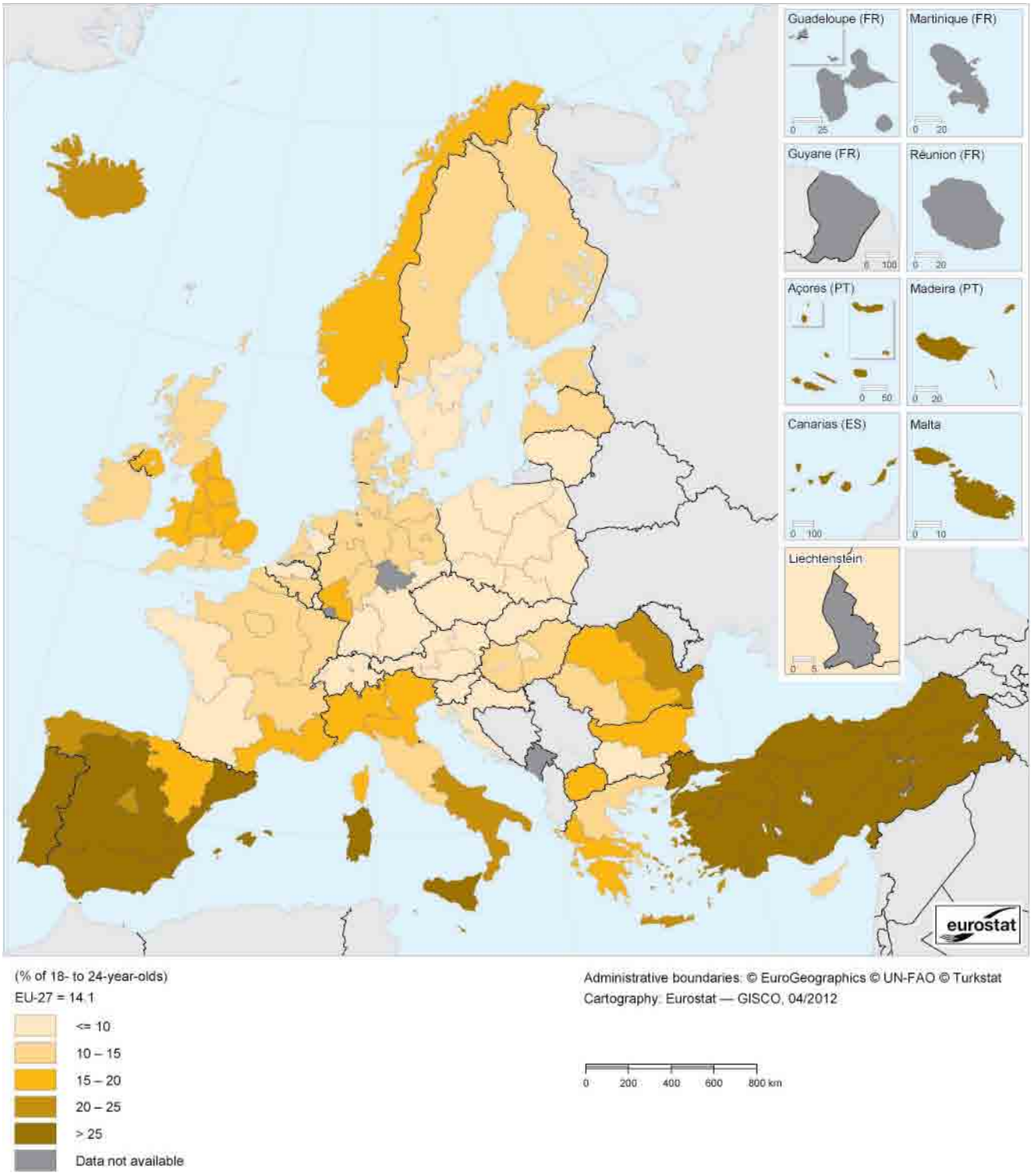
Tertiary educational attainment

Maps 4.5 and 4.6 present two further indicators relating to tertiary education. The first shows the educational attainment among a relatively young age group, those aged 30 to 34, giving an indication of the recent level of attainment in tertiary education. The second looks at those aged 25 to 64, and provides information as to the proportion of the working age population that has attained a tertiary education.

For the EU-27 as a whole, in 2010 just over one third (33.6 %) of 30- to 34-year-olds had completed tertiary education. These figures support the premise that the proportion of the population in the EU that has studied to a higher level has increased. This trend is in keeping with one of the Europe 2020 targets, namely, that by 2020 at least 40 % of persons aged 30 to 34 will have attained a tertiary level education.

Map 4.5 shows that in 2010 there were 28 regions in the Member States (among 91 regions at the NUTS level 1 for which data are available) that reported that more than four out of 10 persons aged 30 to 34 had attained a tertiary level education; ratios of more than 40 % were also registered in Norway, Switzerland and Iceland. In contrast, there were nine regions where less than one in five persons aged 30 to 34 had attained a tertiary level of education. Three of these nine regions were in Romania, including the region with the lowest ratio — Macroregiunea doi (14.3 %); another three were in Italy, while Greece, Germany and Hungary each had one such region.

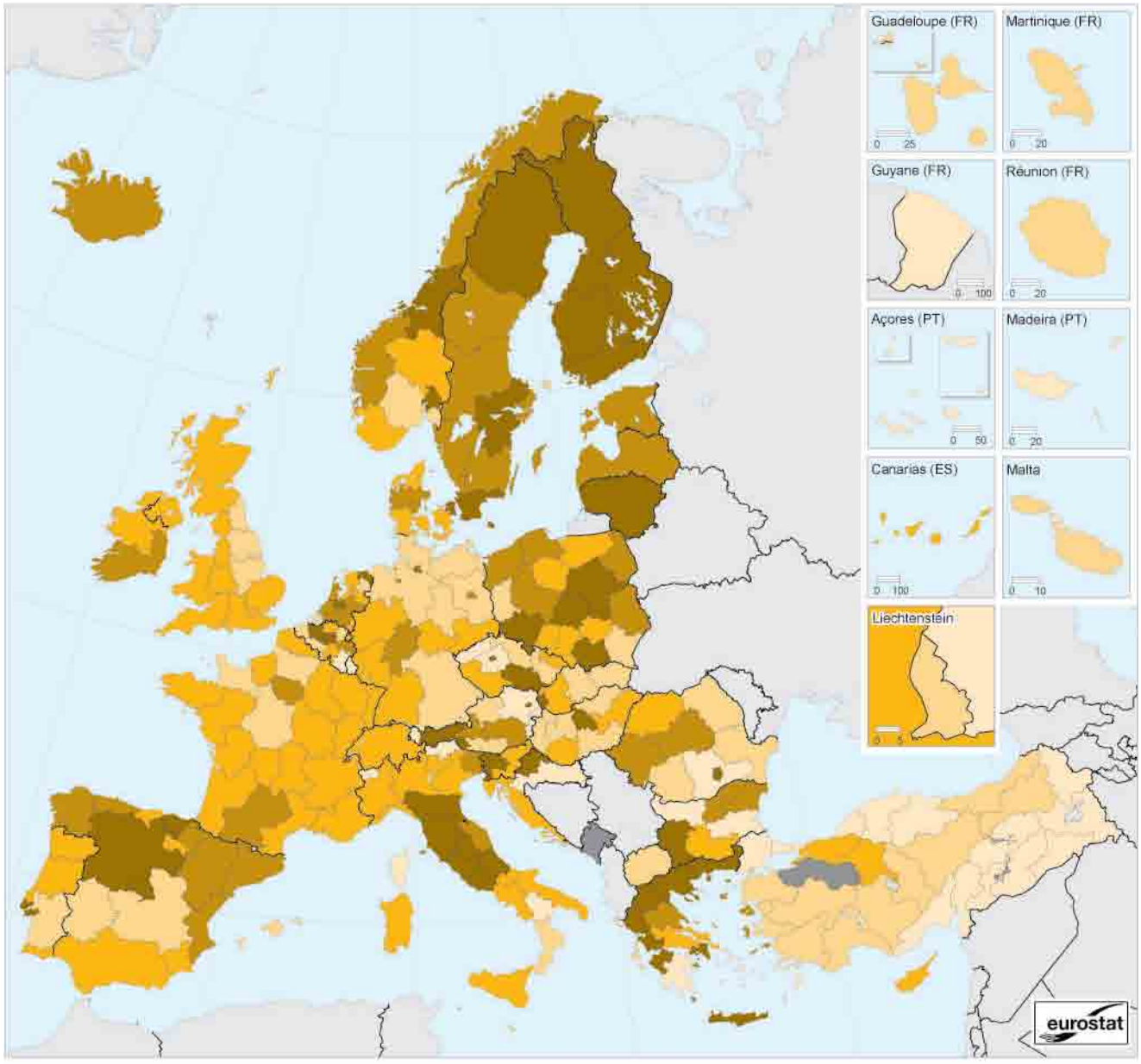
Map 4.3: Early leavers from education and training, by NUTS 1 regions, 2010 ([1])
(% of 18- to 24-year-olds)



([1]) Proportion of those aged 18 to 24 years having attained at most a lower secondary education and not being involved in further education or training; France, Sweden and Switzerland, provisional; Hamburg (DE6), 2008; Brandenburg (DE4), 2007; Mecklenburg-Vorpommern (DE8), 2005; Finland, national level.

Source: Eurostat (online data code: edat_lfse_16)

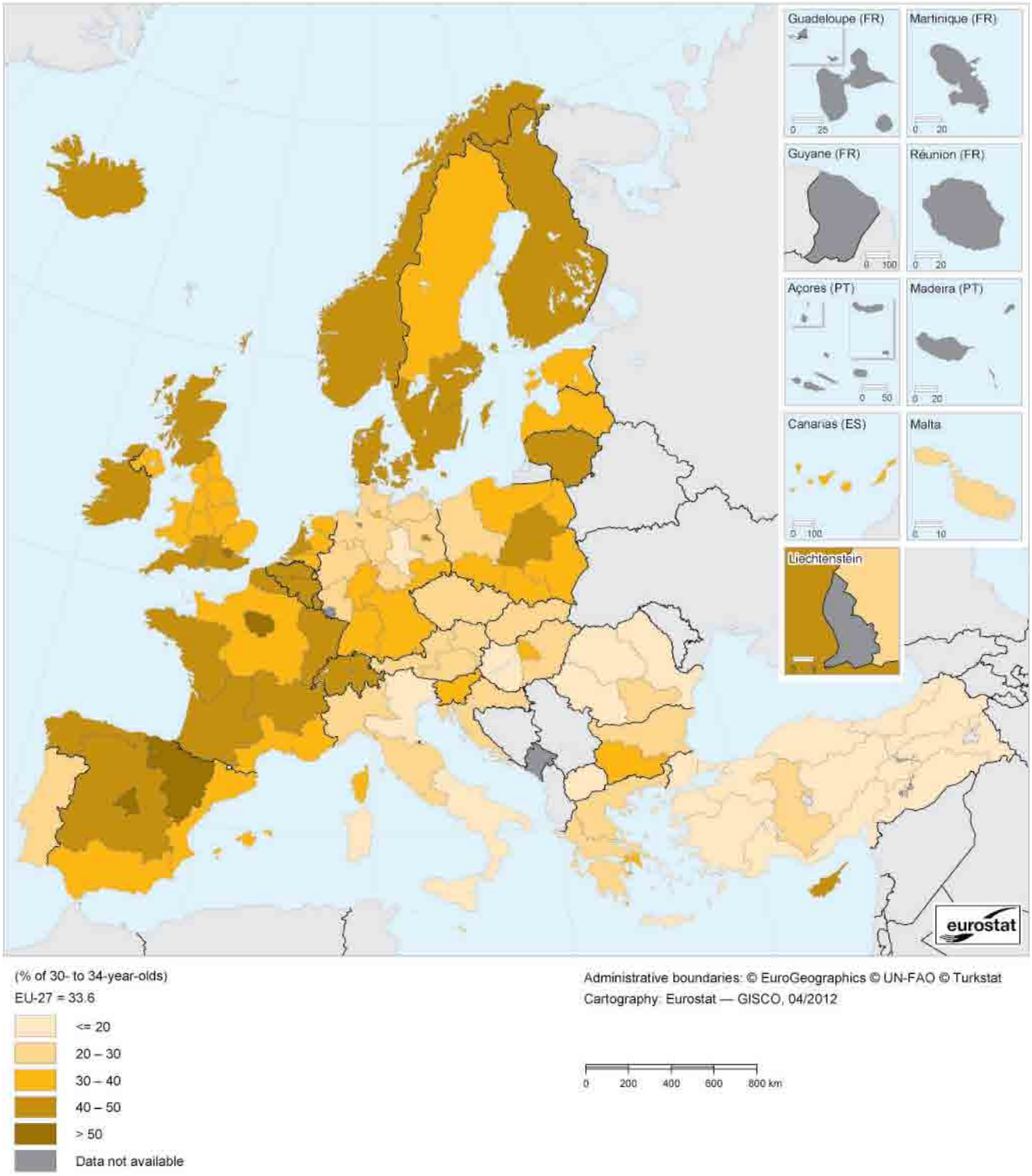
Map 4.4: Total number of students in tertiary education (ISCED levels 5 and 6), as a percentage of the population aged 20 to 24 years, by NUTS 2 regions, 2010 ([1])
(%)



([1]) Total number of tertiary students divided by the resident population of 20- to 24-year-olds; data cover enrolments at regional level in school year 2009/10; EU-27, Estonia, Cyprus, Latvia, Lithuania, Malta, Iceland, Liechtenstein, Switzerland, the former Yugoslav Republic of Macedonia and Turkey, 2009; Greece and Luxembourg, 2008; Germany and the United Kingdom, by NUTS 1 regions; Switzerland, national level.

Source: Eurostat (online data code: educ_regind)

Map 4.5: Persons aged 30 to 34 years with tertiary education (ISCED levels 5 and 6) attainment, by NUTS 1 regions, 2010 (1)
(% of 30- to 34-year-olds)



(1) France and Luxembourg, provisional; Finland, national level.
Source: Eurostat (online data code: edat_lfse_12)

Among the candidate counties, all but one of the regions in Turkey (Bati Anadolu) reported a ratio of less than 20 %.

Given that most persons aged 30 to 34 will have completed their tertiary education prior to the age of 30, this indicator may also be used to assess the attractiveness (or pull effect) of regions with respect to employment opportunities for graduates. More than half of the 30- to 34-year-olds resident in London (United Kingdom), Noreste and the Comunidad de Madrid (both Spain) and the Île de France (France) had attained a tertiary education.

Map 4.6 shows the proportion of the population aged 25 to 64 who had successfully completed a university or similar (tertiary level) education; the demographic profile of a region has some influence on this measure, as younger generations tend to report higher levels of attainment than older persons. In 2010, an average of 25.9 % of the EU-27 working age population (25 to 64 years) had attained a tertiary level of education.

There were 14 NUTS level 2 regions (out of a total of 266 regions) in the EU where more than 40 % of the population aged 25 to 64 had completed a tertiary level education. Five of these regions were in the United Kingdom (four located in or around London and the fifth in North Eastern Scotland, which provides support for North Sea oil and gas extraction), three were in Belgium (in and around the Belgian capital), while the others were the capital city regions of Denmark, Sweden, Finland and Spain, as well as the País Vasco (Spain) and Utrecht (the Netherlands). Outside of the EU Member States, Oslo (Norway) and Zürich (Switzerland) also reported that in excess of 40 % of their residents between the ages of 25 and 64 possessed a tertiary level of education.

At the bottom end of the ranking, 36 regions reported that 15 % or less of their population aged 25 to 64 had attained a tertiary level education. Among these were 12 regions in Italy (just over half of all the Italian regions), seven in Romania (all except the capital city region of Bucureşti - Ilfov), six in Portugal (all except the capital city region of Lisboa), four regions in the Czech Republic, two regions each in Greece and Slovakia, and one region each in Hungary and Austria; Malta (which is just one NUTS level 2 region) also had a ratio below 15 %. Looking within each country, the regions which had the lowest proportion of working age residents with a tertiary education were often concentrated in rural or remote regions — for example, the island region of the Açores (Portugal), or Valle d'Aosta/Vallée d'Aoste (Italy).

Data sources and availability

As the structure of education systems varies from one country to another, a framework for assembling, compiling and presenting regional, national and international education statistics and indicators is a prerequisite for comparability. The International Standard Classification of Education (ISCED) provides the basis for collecting data on education. ISCED-97, the current version of the classification introduced in 1997, classifies all educational programmes by field of education and level; it presents standard concepts, definitions and classifications. A full description is available on the Unesco Institute of Statistics website: http://www.uis.unesco.org/ev.php?ID=3813_201&ID2=DO_TOPIC.

Eurostat collates education statistics at a European level as part of a jointly administered (UOE) data collection exercise that includes the United Nations Educational, Scientific and Cultural Organisation Institute for Statistics (Unesco-UIS) and the Organisation for Economic Cooperation and Development (OECD).

Age is generally the sole criterion for admission to compulsory primary education, which starts at the age of 5 or 6 in most Member States, although Bulgaria, the Baltic Member States, Finland and Sweden have a compulsory starting age of seven, and compulsory education in Northern Ireland (United Kingdom) starts at the age of 4. In general, compulsory education is completed at the end of lower secondary education, although in some countries it continues into upper secondary education. On average, compulsory education lasts 9 or 10 years in most of the EU Member States, lasting longest in Hungary, the Netherlands and the United Kingdom. At the age of 17, many young people are faced with the choice of whether to remain in education, go into training or look for a job.

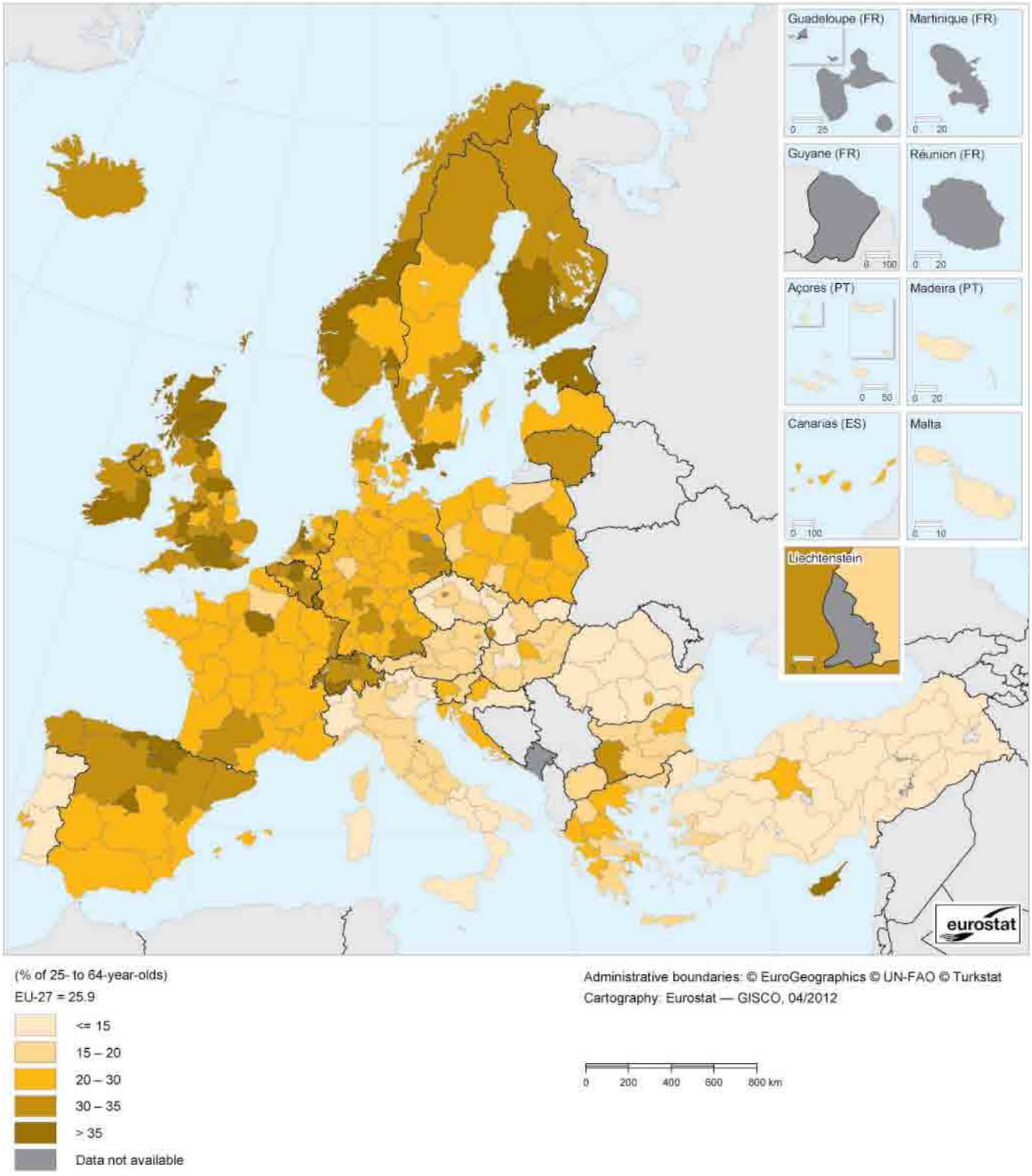
Upper secondary education usually begins at the end of full-time compulsory education and typically requires 9 years or more of full-time education (starting from the beginning of primary level) for admission. General upper secondary education includes school programmes which, upon successful completion, typically give access to university-level programmes. Vocational upper secondary education is designed mainly to introduce students to the world of work and prepare them for further vocational or technical education programmes. Students generally start upper secondary education at the age of 15 to 17 and finish it 2 to 4 years later. The starting/finishing ages and the age range depend on national educational programmes. Access to tertiary-level education typically requires successful completion of an upper secondary and/or post-secondary non-tertiary level programme.

Statistics on enrolment in education include enrolment in all initial education programmes and all adult education programmes with content similar to initial education programmes or leading to qualifications similar to the corresponding initial programmes. Apprenticeship programmes are included, except those which are entirely work-based and which are not supervised by any formal education authority.

The indicator on early leavers from education and training tracks the proportion of individuals aged 18 to 24 who have finished no more than a lower secondary education (ISCED levels 0, 1, 2 or 3c), and who are not engaged in further education and training.

Education attainment is defined as the proportion of people of a given age group (excluding those who did not answer the

Map 4.6: Persons aged 25 to 64 years with tertiary education (ISCED levels 5 and 6) attainment, by NUTS 2 regions, 2010 (1)
(% of 25- to 64-year-olds)



(1) France and Luxembourg, provisional.
Source: Eurostat (online data code: edat_lfse_11)

question concerning the highest level of education or training attained) having attained a given education level.

Note that Maps 4.2 and 4.4 mix two distinct concepts, namely a numerator based on a count of students who are recorded according to the educational institution where they are inscribed and a denominator that is based on population statistics which are recorded according to residence. As a result, the region of study does not always match the region of residence. Furthermore, student numbers may also include persons who are not registered in the population register (for example, temporary foreign students). It is therefore possible that a region reports ratios in excess of 100 % of the population attending a specific level of education. (This is particularly the case for higher levels of education where student mobility becomes a more usual phenomenon.)

Further information

For further information about education and training statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/education/introduction.

For further information about the UOE data collection, see: http://circa.europa.eu/Public/irc/dsis/edtcs/library?l=/public/unesco_collection&vm=detailed&sb=Title.

Qualitative information about school systems in the EU Member States is organised and disseminated by Eurydice (http://www.eurydice.org/) and covers, for example, ages for compulsory school attendance and numerous issues relating to the organisation of school life in the Member States (for example, decision-making, curricula and school hours).

Context

Diversity of national education systems

In February 2011, the European Commission adopted the communication 'Early childhood education and care: providing all our children with the best start for the world of tomorrow' (COM(2011) 66). This noted that early childhood education and care is an essential foundation for successful lifelong learning, social integration, personal development and later employability and that it is particularly beneficial for the disadvantaged and can help to lift children out of poverty and family dysfunction.

Most Europeans spend significantly longer in education than the legal minimum requirement. This reflects the choice to enrol in higher education, as well as increased enrolment in pre-primary education and wider participation in lifelong learning initiatives, such as mature (adult) students returning to education — often in order to retrain or equip themselves for a career change.

Education, vocational training and more generally lifelong learning play a vital role in both an economic and social context. The opportunities which the EU offers its citizens for living, studying and working in other countries make a major contribution to cross-cultural understanding, personal development and the realisation of the EU's full economic potential. Each year, well over a million EU citizens of all ages benefit from EU-funded educational, vocational and citizenship-building programmes.

Education and training 2020

Nevertheless, around one in seven children leave school or training early and this has an impact on individuals, society and economies. In January 2011, the European Commission adopted the communication 'Tackling early school leaving: a key contribution to the Europe 2020 agenda' (COM(2011) 18). This outlined the reasons why pupils decide to leave school early and gave an overview of existing and planned measures to tackle this issue across the EU.

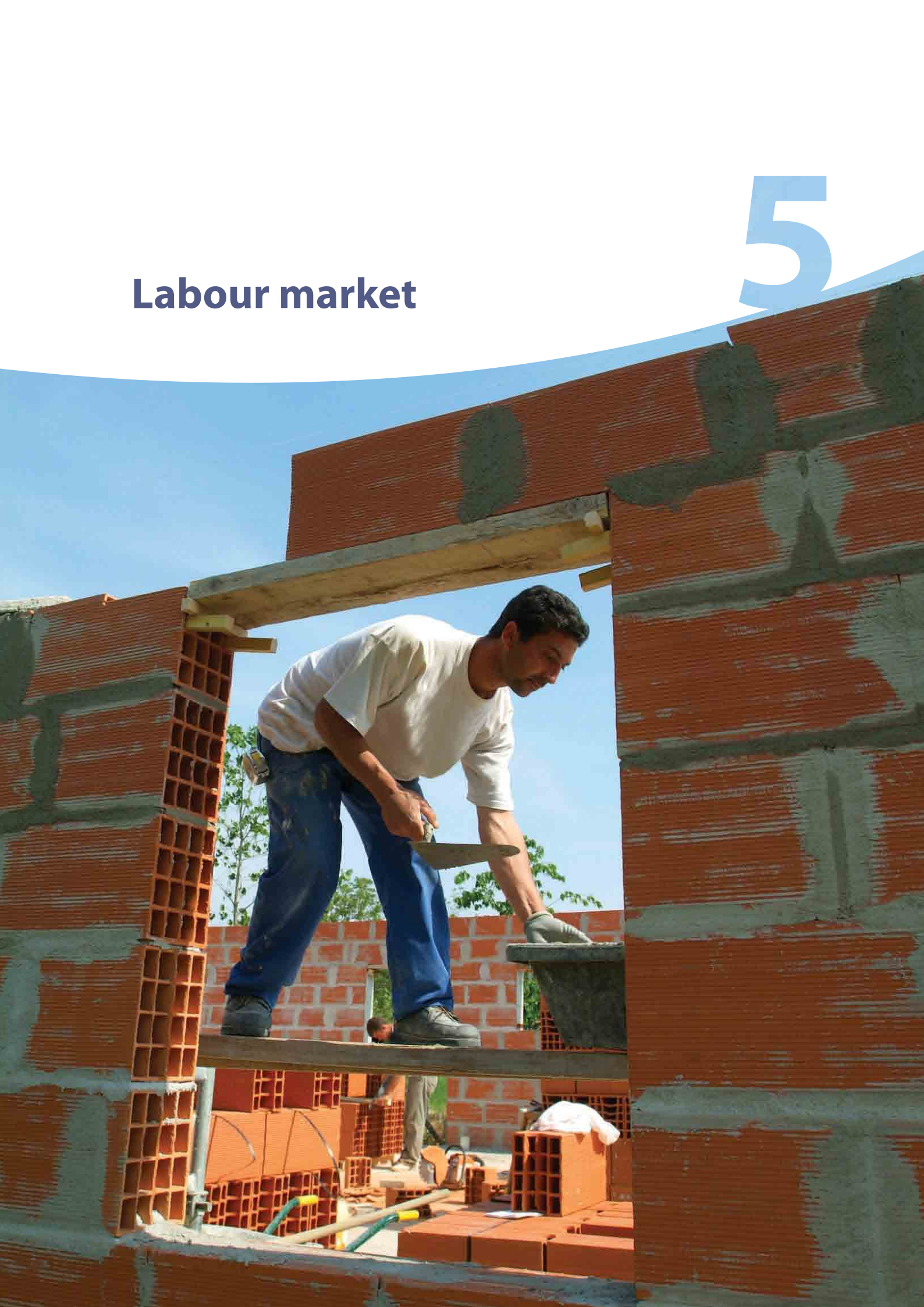
Political cooperation within the EU has been strengthened through the education and training 2010 work programme, which integrated previous actions in the fields of education and training. The follow-up to this programme is the strategic framework for European cooperation in education and training (known as ET 2020) which was adopted by the Council in May 2009. This set a number of benchmarks to be achieved by 2020:

- at least 95 % of children between the age of 4 and the age for starting compulsory primary education should participate in early childhood education;
- the share of low-achieving 15-year-olds with insufficient abilities in reading, mathematics and science should be less than 15 %;
- the share of early leavers from education and training should be less than 10 %;
- the share of 30- to 34-year-olds with tertiary educational attainment should be at least 40 %;
- an average of at least 15 % of adults aged 25 to 64 should participate in lifelong learning.

The indicator on early leavers from education and training has been adopted as one of the sustainable development indicators, under the social inclusion theme. Early leavers from education and training as well as an indicator on tertiary educational attainment are also headline indicators for the Europe 2020 strategy. They were selected to help monitor progress towards a smarter, knowledge-based, greener economy, delivering high levels of employment, productivity and social cohesion. In the flagship initiative 'Youth on the move', the European Commission has set out its proposals concerning how the EU can reach its Europe 2020 targets in the domains of education and employment, both nationally and for the EU as a whole.

5

Labour market



This chapter analyses the situation in European Union (EU) labour markets at a regional level. The first half provides an overview of employment across EU regions, focusing on those aged 20 to 64 years; it includes an analysis of the regional dispersion of employment to study whether or not employment rates are moving closer together or further apart (cohesion). The second half of the chapter looks at regional unemployment, the change in unemployment rates and two of the main concerns of policymakers: long-term and youth unemployment. The analysis of unemployment also includes information relating to regional cohesion, looking at the dispersion of unemployment rates.

The unemployment rate is considered to be a lagging indicator. When there is an economic downturn, it usually takes several months before the unemployment rate begins to rise. Once the economy starts to pick up again, employers usually remain cautious about hiring new staff and it may take several months before unemployment rates start to fall. The financial and economic crisis resulted in a decline in economic activity that was generally at its strongest during 2008 and 2009. As labour market indicators tend to lag economic phenomena, it was not until 2009 that labour markets within the EU-27 started to experience the full impact of the crisis, as the gains made in employment rates over the previous decade were reversed in the space of a year.

Main statistical findings

Employment rates

The EU-27 employment rate for the 20 to 64 age group increased from an average of 66.5 % in 2000 to peak at 70.4 % in 2008 before dropping in successive years to 69.1 % in 2009 and 68.5 % in 2010; as such, the employment rate has, in the two most recent years for which data are available, moved away from its Europe 2020 target of 75 %.

Map 5.1 presents the distribution of employment rates in 2010 for persons aged 20 to 64 for NUTS level 2 regions, with the darkest colour shade in the map indicating those regions that were above the Europe 2020 target of 75 %. In 2010, 69 of the 271 NUTS level 2 regions for which the employment rate was available were above the 75 % mark; at the other end of the range, there were 76 regions where employment rates were at least 10 percentage points below the 75 % target; among these were 28 regions where the employment rate was at least 15 percentage points below the 75 % target (in other words, where there was an employment rate of 60 % or lower).

The highest regional employment rates in the EU were predominantly recorded in northern and central Europe, particularly in Germany, the Netherlands, Austria, Sweden and the United Kingdom, and to a lesser degree in Denmark and Finland, while there was also one region in each of the Czech Republic, Italy, Cyprus (which is just one region at NUTS level 2) and Portugal reporting an employment rate of more than 75 %. The highest employment rate in 2010 was recorded in the Åland region of Finland (83.6 %), while there were three other regions that had employment rates in excess of 80 %: they were Stockholm (Sweden), Freiburg (Germany) and North Eastern Scotland (United Kingdom).

The lowest regional employment rates were generally found in southern regions of Spain and Italy, as well as in the Spanish territories of Ceuta and Melilla and the French overseas regions, while one or more regions in Belgium, Hungary, Malta (which is just one region at NUTS level 2), Poland and Romania also reported relatively low rates (60 % or lower). There were four regions — all in southern Italy — where less than half of the population aged 20 to 64 were in employment, namely Puglia, Sicilia, Calabria and Campania, where the lowest rate was registered (43.7 %).

Employment rates in Iceland, Norway and Switzerland were relatively high, as each level 2 region reported a rate that was above 75 % in 2010. This was in stark contrast to the candidate countries, where none of the regions had an employment rate above 75 %, as rates ranged from a high of 64.9 % in Sjeverozapadna Hrvatska (Croatia) down to 34.4 % in Şanlıurfa, Diyarbakır (Turkey).

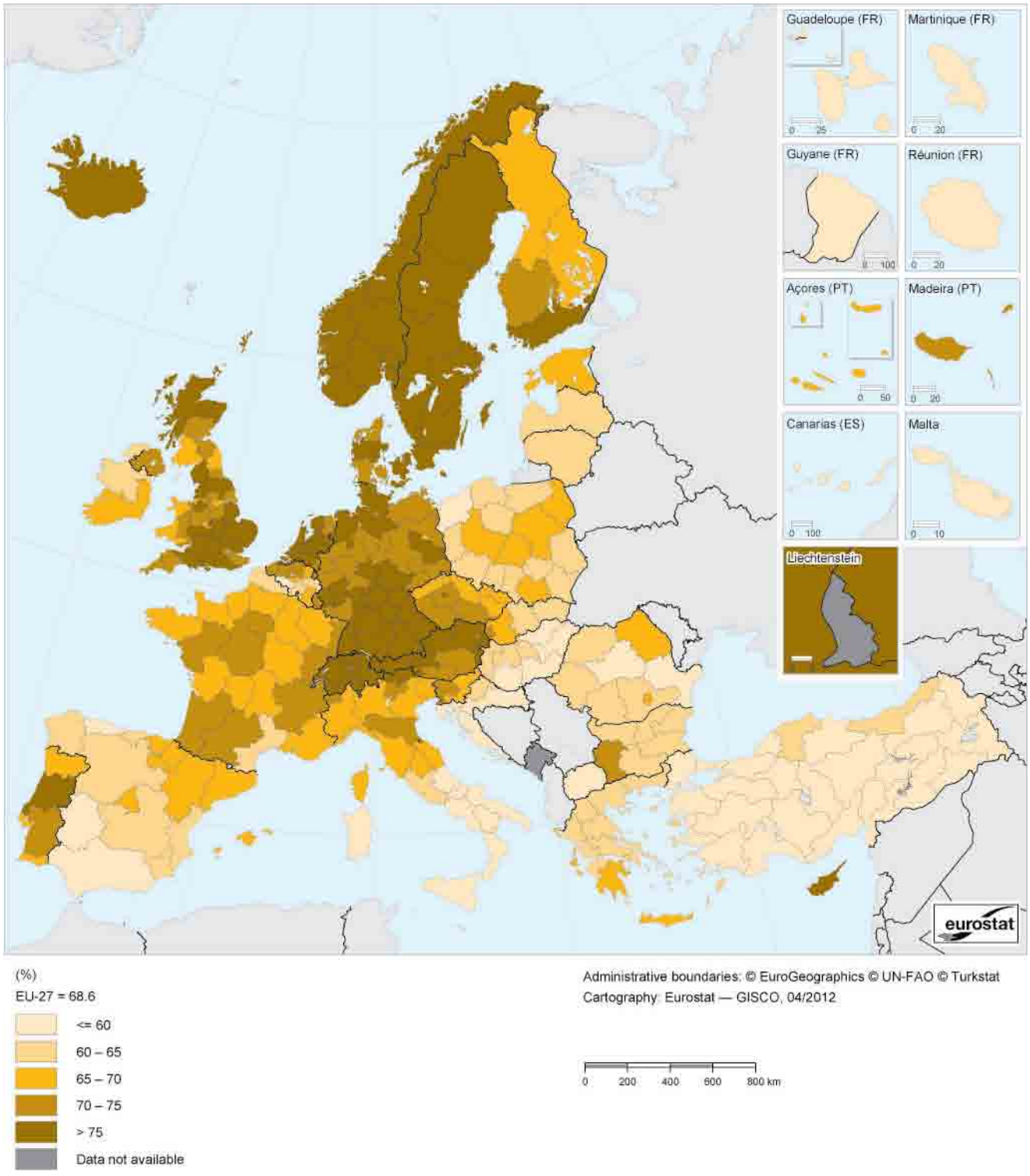
The biggest fall for any employment rate during the period 2007–10 was recorded in the Spanish region of Canarias — where the rate dropped by as much as 11.8 percentage points; there were also double-digit reductions in Latvia and Estonia, while employment rates fell at a relatively fast pace in a number of other Spanish regions as well as in Ireland and Lithuania.

The employment rate rose between 2007 and 2010 in 84 of the 271 NUTS level 2 regions for which data are available and there were considerable gains in employment rates in some regions. The highest gain was recorded in Corse (France), where an increase of 9.7 percentage points was registered between 2007 and 2010; there were also relatively large gains in several regions of eastern Germany and Poland.

The European social cohesion objective seeks to minimise disparities in regional labour markets. The difference in employment rates between regions (across the NUTS level 2 regions of the same country) can be measured in terms of a dispersion rate; if the rate falls then regional cohesion has been enhanced and employment rates have, on average, moved closer together.

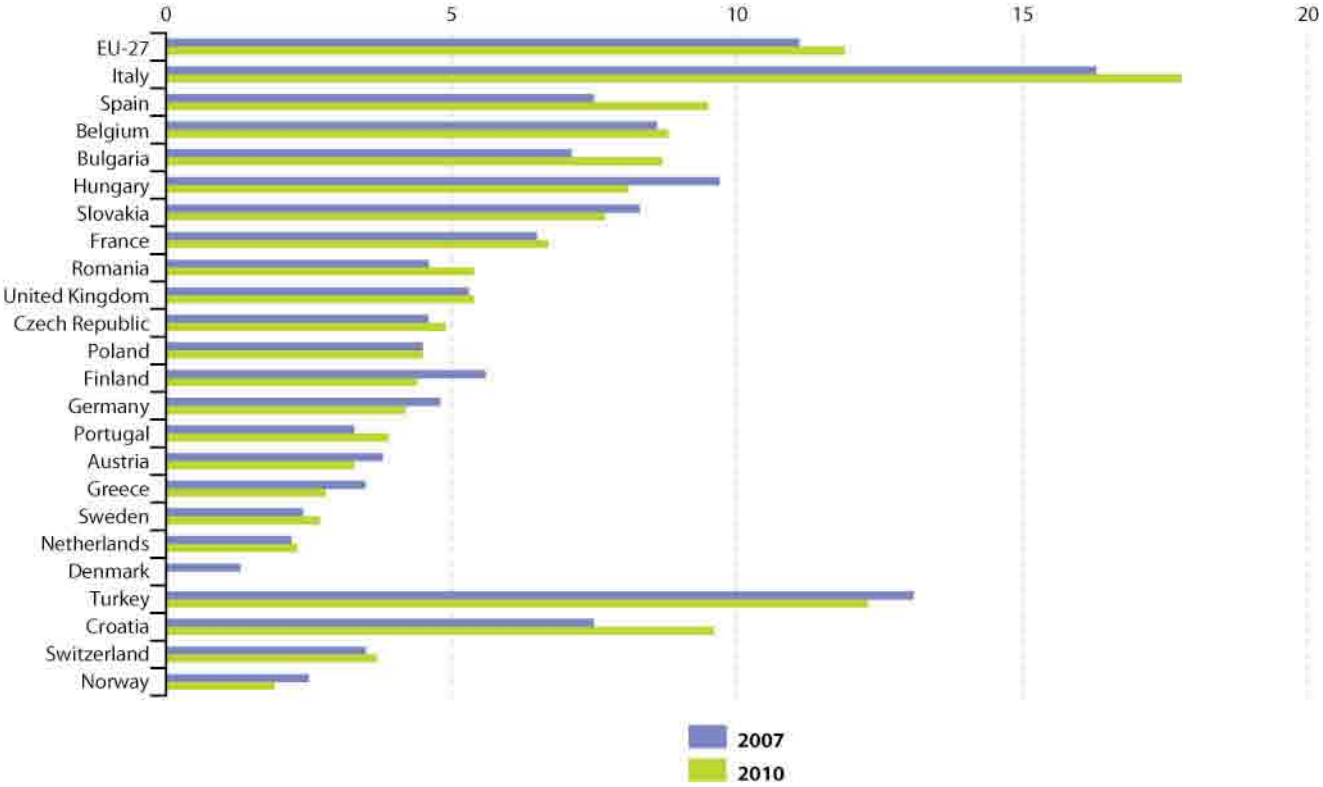
Having stood at 13.0 % in 2000, the coefficient of variation for the dispersion of regional employment across the EU-27 generally followed a downward path through to 2007 (11.1 %). The impact of the financial and economic crisis was evident thereafter, as this pattern was reversed, with the dispersion rate increasing for three successive years to reach 11.9 % by 2010.

Map 5.1: Employment rate, persons aged 20 to 64 years, by NUTS 2 regions, 2010
(%)



Source: Eurostat (online data code: lfst_r_lfe2emprt)

Figure 5.1: Dispersion of regional employment rates, persons aged 15 to 64 years, by NUTS 2 regions, 2007 and 2010 (1)
(coefficient of variation)



(1) Estonia, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta and Slovenia comprise only one or two NUTS 2 regions, therefore dispersion rates are not applicable; Denmark, not available for 2010.
Source: Eurostat (online data code: lfst_r_lmder)

Dispersion rates for the individual EU Member States showed a mixed pattern of development, rising between 2007 and 2010 in 11 of the 18 countries for which data are available — note that by definition there are no dispersion rates for Member States with only one or two regions at NUTS level 2, namely Estonia, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta and Slovenia. The increases in dispersion were particularly notable in Spain, Bulgaria and Italy, where the disparity in employment rates between NUTS level 2 regions became much wider. The Member State with the highest dispersion rate in 2010 was Italy (17.8 %), resulting from marked differences in employment rates between the north and south of the country.

In contrast, dispersion rates for Hungary, Finland — and to a lesser extent, Greece, Germany, Slovakia and Austria — narrowed, suggesting that employment rates in these countries were becoming more homogeneous. Denmark (2008 data), the Netherlands, Sweden and Greece had the lowest employment dispersion rates.

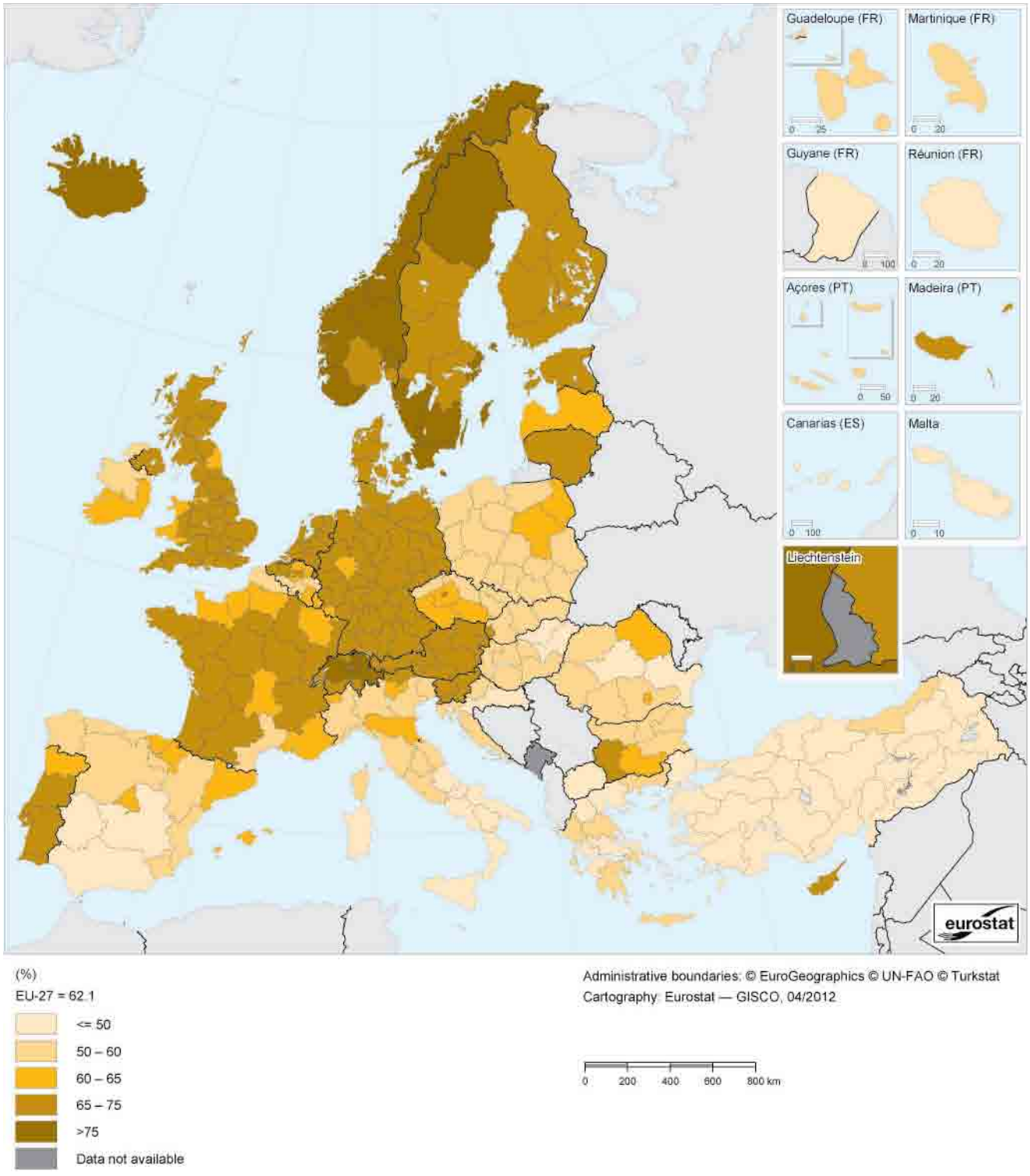
Among the non-member countries, there was a high degree of dispersion within regional employment rates in Turkey (coefficient of variation of 12.3 % in 2010), as well as in Croatia (9.6 %). In contrast, the dispersion rates posted in Switzerland and Norway were relatively low in comparison with those recorded across the EU; indeed, at 1.9 % the Norwegian rate was lower than for any of the Member States.

Employment rates for men and women

The female employment rate (the employment rate for women aged 20 to 64) in the EU-27 fell for the second consecutive year in 2010, to stand at 62.1 %. There was an overall reduction of 0.9 percentage points for the female employment rate between 2008 and 2010, while the corresponding reduction for the male employment rate was considerably bigger, at 2.9 percentage points; the male ratio stood at 75.0 % in 2010.

There is a strong link between the female employment rate and the overall employment rate, as Maps 5.1 and 5.2 show broadly similar patterns. Map 5.2 shows the distribution of female employment rates for NUTS level 2 regions, with Åland (Finland) reporting a female employment rate (81.2 %) that was almost three times as high in Campania (Italy), where the

Map 5.2: Female employment rate, persons aged 20 to 64 years, by NUTS 2 regions, 2010
(%)



Source: Eurostat (online data code: lfst_r_lfe2emprt)

lowest rate was recorded (27.9 %). The corresponding range for the male employment rate was considerably less, from a high of 87.3 % in North Eastern Scotland (United Kingdom) to a low of 56.8 % in Réunion (France).

The Europe 2020 strategy does not make a distinction between the sexes with respect to its target (75 % by 2020) for the employment rate among those aged 20 to 64. There were seven regions which recorded a female employment rate in excess of this target in 2010, these included five Swedish regions — Övre Norrland, Småland med öarna, Stockholm, Sydsverige and Västsverige — as well as Åland (Finland) and Hovedstaden (Denmark). With the exception of three regions in Switzerland (Nordwestschweiz, Région lémanique and Ticino) and one in Norway (Sør-Østlandet), all of the level 2 regions in Iceland, Norway and Switzerland also reported female employment rates above 75 %.

Male employment rates were in excess of 75 % in a majority of NUTS level 2 regions. While the highest female employment rates were often recorded in the Nordic countries, the highest male rates were generally found in Germany, the Netherlands, Austria and the United Kingdom. The latter reported the three highest rates in 2010, which were recorded in: North Eastern Scotland; Surrey, East and West Sussex; Bedfordshire and Hertfordshire.

There was only one NUTS level 2 region in the EU where the female employment rate exceeded the male employment rate in 2010: this was in Lithuania, where the female employment rate was 1.5 percentage points higher than the corresponding rate for men. Female employment rates in regions in the Nordic countries and other Baltic Member States were generally close to corresponding male employment rates for the same region. At the other end of the range, the largest differences between male and female employment rates were recorded in southern regions of the EU, in particular across Greece, southern Italy, Malta and a few regions in Spain. The biggest difference between male and female employment rates among EU regions was recorded in Voreio Aigaio (Greece), where the male employment rate (81.5 %) was 37.5 percentage points higher than the female employment rate. The gender gap between male and female employment rates was very large in all Turkish regions, ranging from 25.8 % (higher for men) in Trabzon, Ordu, Giresun, Rize, Artvin and Gümüşhane to 59.3 % in Mardin, Batman, Şırnak and Siirt; the female employment rate reached 51.8 % in Trabzon, Ordu, Giresun, Rize, Artvin and Gümüşhane and was below 20 % in four Turkish regions.

Employment rates for older workers

The EU-27 employment rate for older workers (aged between 55 and 64) stood at 46.3 % in 2010; this marked an increase of 8.3 percentage points when compared with the rate in 2000. The employment rate among those aged 65 years or over remained almost unchanged during the last decade and averaged 4.7 % across the EU-27 in 2010.

Despite the financial and economic crisis, the employment rate for older workers continued to expand during the period 2007–10, although the pace of growth slowed. A breakdown by sex reveals that while the female employment rate for older workers remained lower than the equivalent rate for men, it was catching up with the male rate, the gap narrowing from 18.0 percentage points in 2007 to 15.9 percentage points in 2010.

In 2010, there were 114 NUTS level 2 regions across the EU that had an employment rate for older workers above 50 %; among these, 77 regions had a rate that exceeded 55 %, 29 had a rate that exceeded 60 % and four had a rate that was over 70 %. In contrast, there were 157 regions with an employment rate for older workers of 50 % or less in 2010; 90 of these had a rate of 40 % or less, and 30 of these recorded rates below 35 %. Employment rates for older workers ranged from a high of 75.9 % in Åland (Finland) to a low of 27.9 % in Śląskie (Poland); the latter is a region that is specialised in the mining of coal and lignite.

In the EFTA countries there were relatively high employment rates for older workers. This was particularly true in Iceland (79.8 %), and there were also a number of Norwegian and Swiss regions that recorded rates above 70 %. With the exception of Ticino (Switzerland), each level 2 region in Norway and Switzerland had an employment rate for older persons in excess of 60 %. Much lower employment rates for older persons were recorded in Croatia, the former Yugoslav Republic of Macedonia and Turkey, with the lowest rate being for İstanbul (14.5 %).

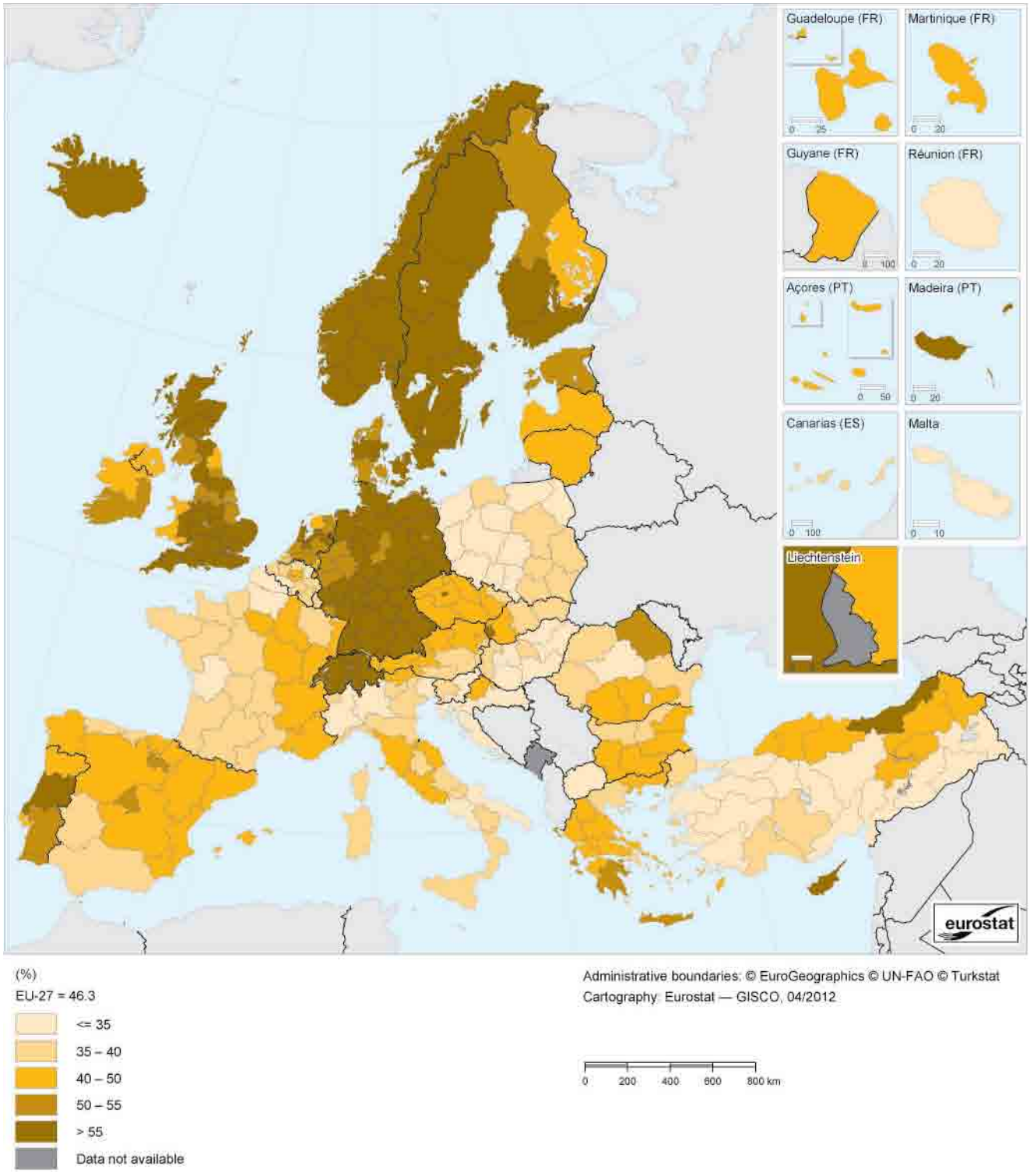
Unemployment rates

The overall unemployment rate in the EU-27 was 9.7 % in 2010. Map 5.4 shows the distribution of unemployment rates by NUTS level 3 regions. The highest regional unemployment rate in 2010 was 33.2 % in Fuerteventura (one of the Canary Islands in Spain), while the lowest rate was 0.6 % in the Romanian region of Satu Mare.

A breakdown by sex indicates that the highest male unemployment rate (at NUTS level 2) was 29.2 % which was also registered for the Canarias (Spain), while the highest rate among women was 31.9 %, as recorded in the Ciudad Autónoma de Melilla (also Spain).

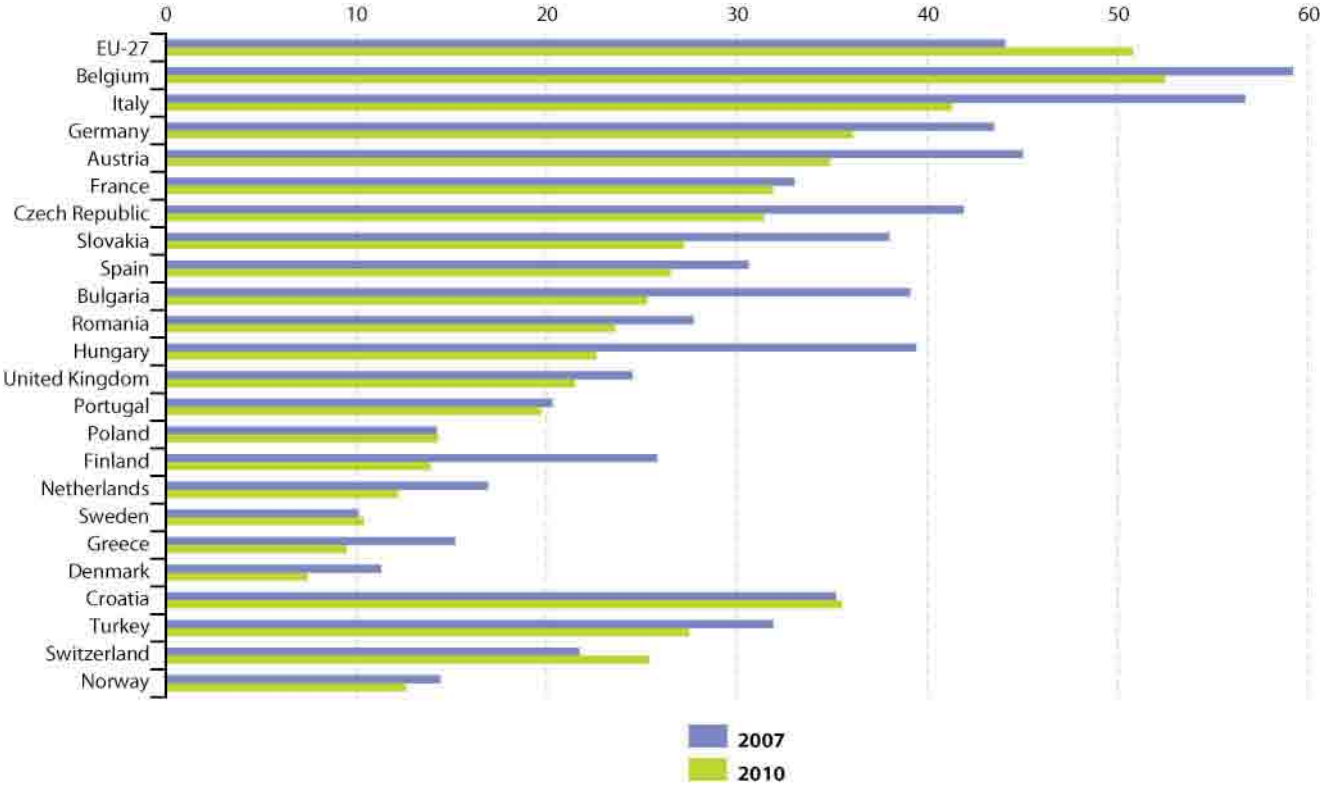
The highest unemployment rates were generally recorded in southern Spain and the three Baltic Member States. Among the 35 NUTS level 3 regions that reported an unemployment rate in excess of 20 % for 2010, there were 29 regions from Spain, three from Lithuania, two from Latvia and one from Estonia; unemployment rates were also relatively high in the south of Italy and in several regions of Greece, Ireland and Slovakia.

Map 5.3: Older persons employment rate, persons aged 55 to 64 years, by NUTS 2 regions, 2010
(%)



Source: Eurostat (online data code: lfst_r_lfe2emprt)

Figure 5.2: Dispersion of regional unemployment rates, persons aged 15 to 74 years, by NUTS 2 regions, 2007 and 2010 (1)
(coefficient of variation)



(1) Estonia, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta and Slovenia comprise only one or two NUTS 2 regions, therefore dispersion rates are not applicable; Denmark, 2009 instead of 2010.
Source: Eurostat (online data code: lfst_r_lmdur)

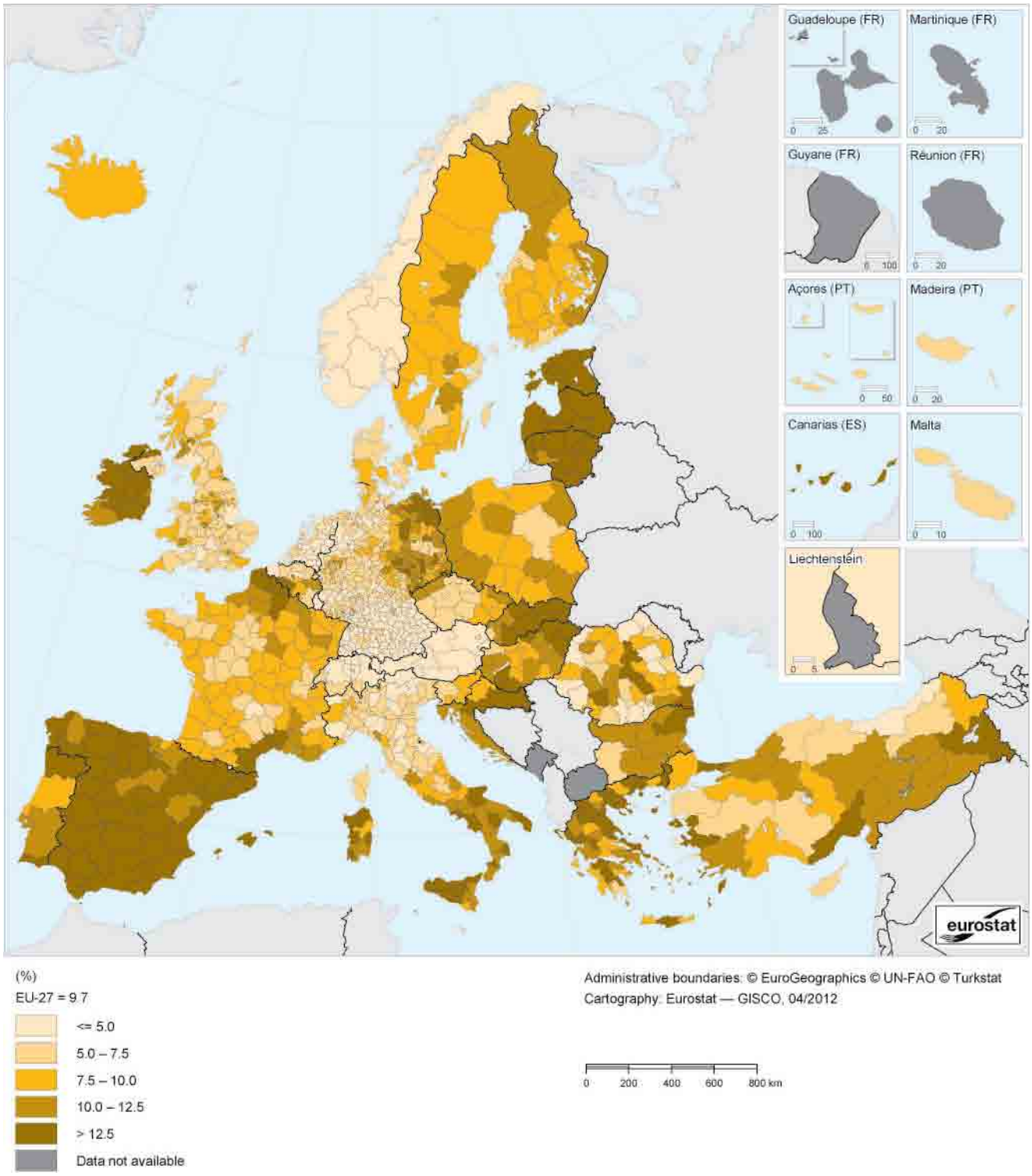
There were 225 NUTS level 3 regions that recorded an unemployment rate that was 5 % or lower in 2010; of these, some 26 regions had rates that were 3 % or lower. The lowest unemployment rates were found in parts of Bayern (Germany), the north of Italy, the Netherlands, the west of Austria, and Romania.

Apart from the Région lémanique and Ticino in Switzerland, unemployment rates in Norway and Switzerland were also consistently below 5 % in 2010. In Iceland, the unemployment rate experienced a steep increase, rising from 2.9 % in 2008 to 7.2 % in 2009, and increasing further still in 2010 to 7.6 %. In the candidate countries, regional unemployment rates ranged from 4.8 % in Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane (Turkey) to 18.0 % in Središnja i Istočna (Panonska) Hrvatska (Croatia).

Figure 5.2 shows the dispersion of regional unemployment rates in 2007 and 2010. The indicator shows that regional differences in unemployment rates across the whole of the EU-27 widened between these 2 years suggesting that the labour market effects of the crisis were unevenly spread. During this period (2007–10), marked by the financial and economic crisis, the coefficient of variation for the EU-27 rose by 6.7 points. This was in contrast to the developments recorded within the individual Member States, where the dispersion of unemployment rates was generally reduced; note that during the period associated with the crisis, unemployment rates were usually rising, even if the dispersion between different regions of the same country was narrowing. The largest reductions in the dispersion of unemployment rates between 2007 and 2010 were recorded in Hungary, Italy, Bulgaria, Finland, Slovakia, the Czech Republic and Austria.

Belgium recorded the highest dispersion of regional unemployment rates in 2010 among the EU Member States, while Italy also had relatively high dispersion, as did Germany and Austria but to a lesser extent. There were stark differences in unemployment rates between the regions of some of these Member States — as shown in Map 5.4 — with much lower unemployment rates in the Vlaams Gewest (Flanders) region of Belgium, parts of western Germany, northern Italy and outside of the capital city region in Austria. The lowest degrees of dispersion for unemployment were recorded in Denmark, Greece, Sweden and the Netherlands — all of which

Map 5.4: Unemployment rate, persons aged 15 to 74 years, by NUTS 3 regions, 2010 (1)
(%)



(1) Belgium, Bulgaria, Denmark, Malta, Austria, Poland, Portugal, Slovenia, Iceland, Norway, Switzerland, Croatia and Turkey, by NUTS 2 regions.
Source: Eurostat (online data code: lfst_r_lfu3rt)

had reported relatively low dispersion for employment rates — suggesting they had rather homogeneous labour markets from a regional perspective.

Changes in unemployment rates

Between 2007 and 2010 the unemployment rate in the EU-27 rose from 7.2 % to 9.7 %, an increase of 2.5 percentage points. Map 5.5 reflects the change in regional unemployment rates over this period, presenting the percentage point difference between unemployment rates (data for reference year 2010 minus 2007). Out of the 271 NUTS level 2 regions in the EU for which data are available, the unemployment rate increased between 2007 and 2010 in 215 regions, remained unchanged in seven and fell in 49.

There were 10 regions across the EU-27 that reported their unemployment rate rising by more than 10 percentage points between 2007 and 2010. Seven of these regions were in Spain, while the remaining three were the Baltic Member States (each of which is just one region). The rise in unemployment was most marked in the island region of the Canarias, followed by the Región de Murcia and then Andalucía. Almost all of the German regions and many regions in Poland reported a decrease in unemployment rates between 2007 and 2010. The largest decreases (of at least five percentage points) were recorded in the Thüringen and Mecklenburg-Vorpommern regions of Germany, as well as the French island region of Corse.

Long-term unemployment

Long-term unemployment is one of the main concerns of policymakers. Not only does it affect people's personal lives, it may also impact negatively on social cohesion and has the potential to act as an obstacle to economic growth. There were 9.3 million persons across the EU-27 classified as long-term unemployed in 2010.

Map 5.6 shows the regional pattern of the long-term unemployment share at NUTS level 2; in other words, the percentage of all unemployed persons who had been out of work and looking for a job for more than a year. Across the whole of the EU-27, long-term unemployment affected almost four out of every 10 (39.9 %) unemployed persons in 2010.

Among the 271 regions for which data are available, some 43 regions recorded a long-term unemployment share of more than 50 % in 2010; in other words, at least half of those persons who were unemployed had been without a job for more than a year. This persistent structural nature of unemployment was most apparent in parts of Germany, Greece, the French overseas regions, southern Italy, central and northern Portugal and Slovakia. The highest long-term unemployment shares in the EU were recorded in the French overseas regions of Guadeloupe (78.8 %), Guyane (73.6 %) and Martinique (70.4 %); however, an even higher rate (83.1 %) was recorded for the former Yugoslav Republic of Macedonia.

In contrast, there were 18 EU regions where the long-term unemployment share was below 20 % (in other words, less than one in five unemployed persons had been without work for more than a year); this was particularly the case in some regions in Denmark, western Austria and Sweden — although the two lowest long-term unemployment shares were recorded in Bucureşti - Ilfov (Romania) and Åland (Finland). There were nine level 2 regions in the EFTA and candidate countries that recorded a long-term unemployment share that was below 20 %. Six of these were in Turkey, including the region with the lowest share — Antalya, Isparta, Burdur (13.0 %).

Figure 5.3 provides an analysis of the long-term unemployment rate (in other words, the proportion of the labour force that had been out of work for 12 months and more); the average rate across the whole of the EU-27 was 3.8 % in 2010. Generally, those Member States with some of the highest long-term regional unemployment rates also reported a wide range of rates between regions: this was particularly the case in France, Slovakia, Spain, Belgium and Italy.

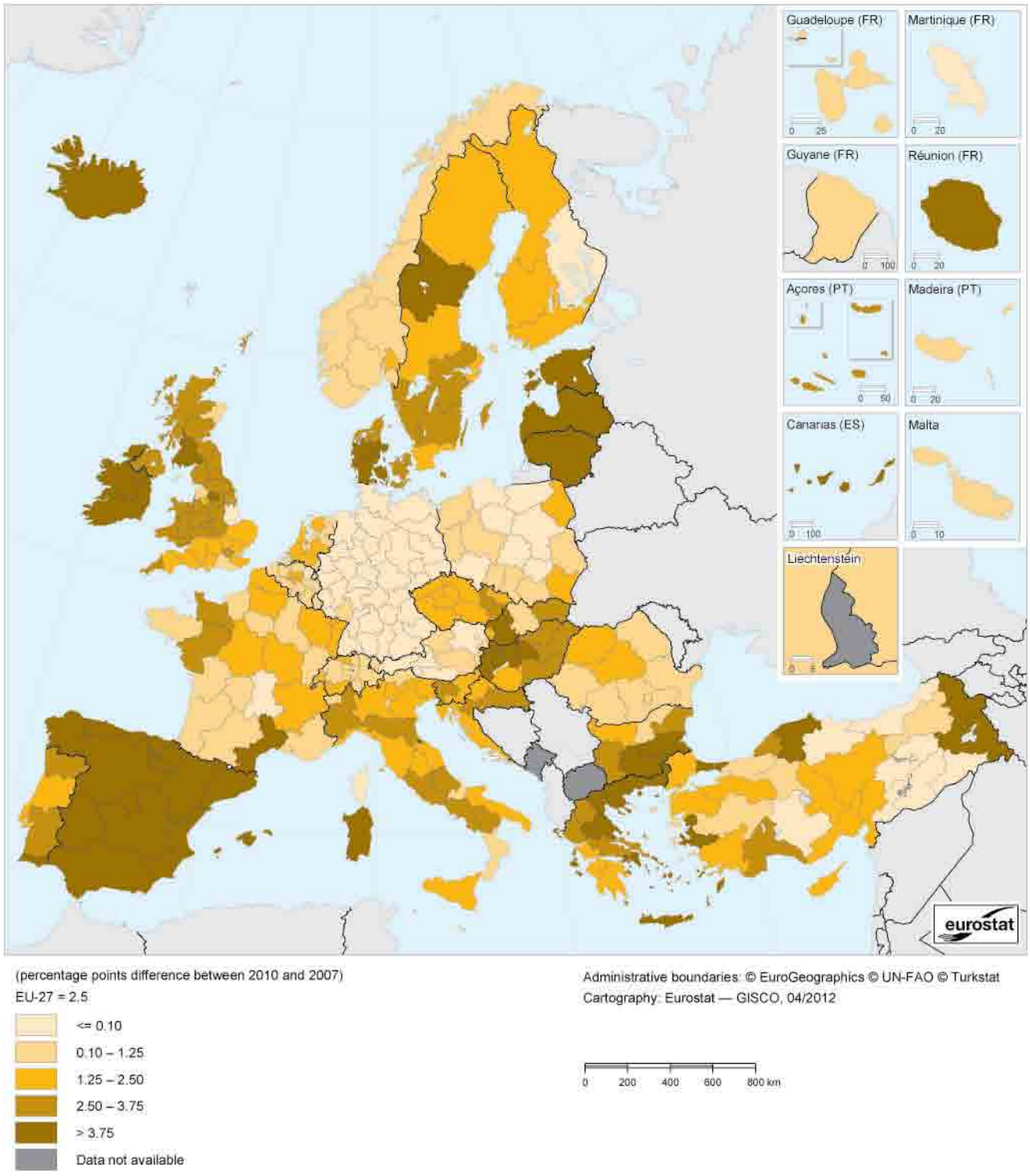
There were considerable differences between Member States as regards the long-term unemployment rate for regions containing capital cities. While the highest long-term unemployment rates in Belgium, Germany and Austria were recorded in the regions containing the capital city, the opposite was true in Bulgaria, the Czech Republic, Denmark, Hungary, Poland, Romania, Slovenia, Slovakia and Sweden.

Youth unemployment

Given that unemployment rates rose during the financial and economic crisis — while employment rates for older persons continued to grow — it is apparent that other age groups, and in particular young people aged 15 to 24, were disproportionately affected by the downturn in economic fortunes. The youth unemployment rate in the EU-27 was 21.1 % in 2010, which was more than double the EU-27's overall unemployment rate (9.7 %).

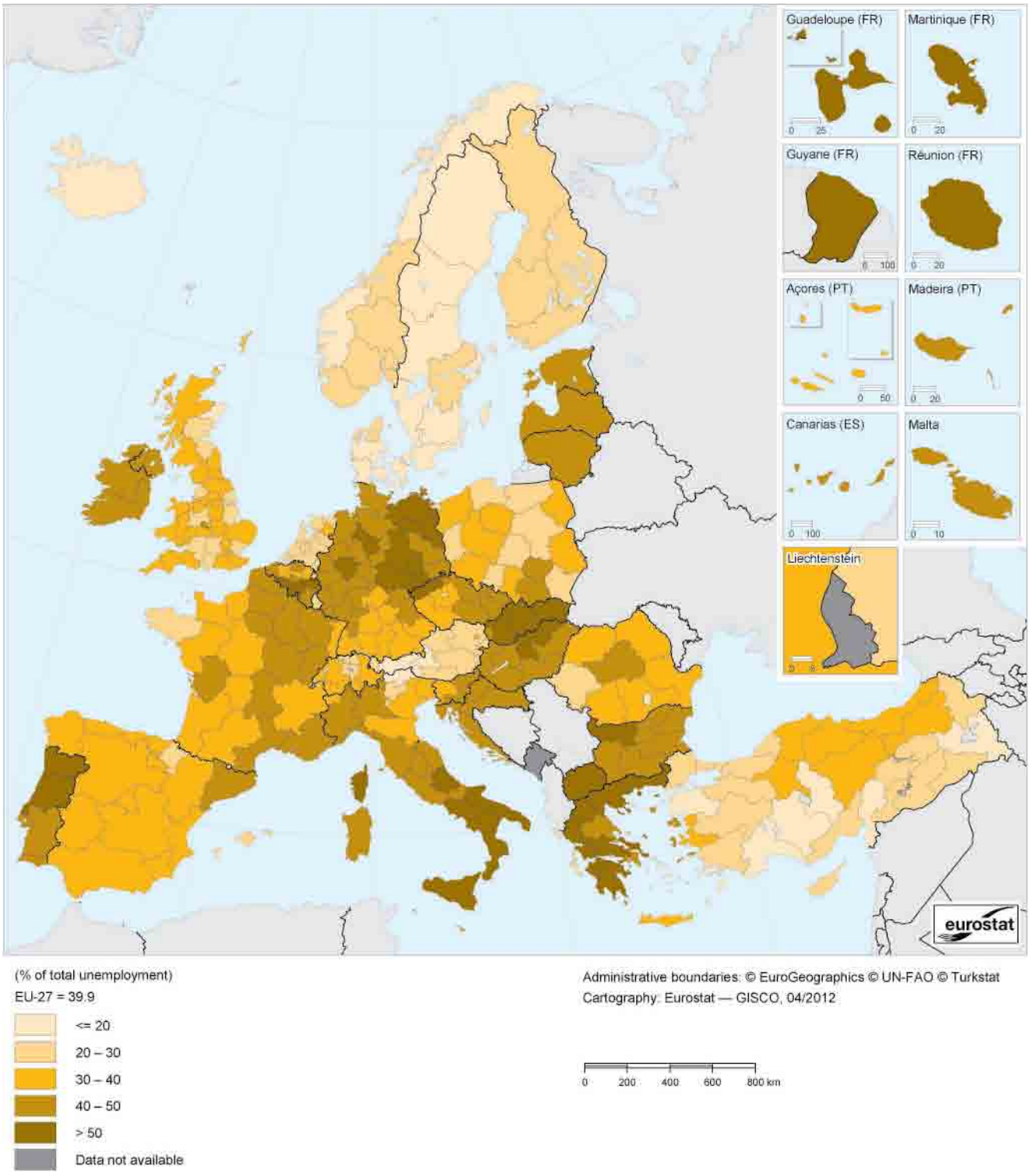
The number of youths (aged 15 to 24) who were unemployed increased between 2007 and 2010 by 1.1 million additional persons to reach 5.3 million in total, an overall increase of 27.2 % compared with 2007. While the rising youth unemployment rate could be attributed in part to a higher number of persons being unemployed, it also resulted from demographic changes, as the EU-27 population aged 15 to 24 fell by almost 2 million persons between 2007 and 2010. These two movements combined to produce a rapidly increasing EU-27 youth unemployment rate, which passed from 15.7 % in 2007 to 21.1 % by 2010. At the same time, an increasing proportion of the youth labour force remained in education — suggesting that some young people extended ongoing

Map 5.5: Change in unemployment rate, persons aged 15 to 74 years, by NUTS 2 regions, 2007–10
(percentage points difference between 2010 and 2007)



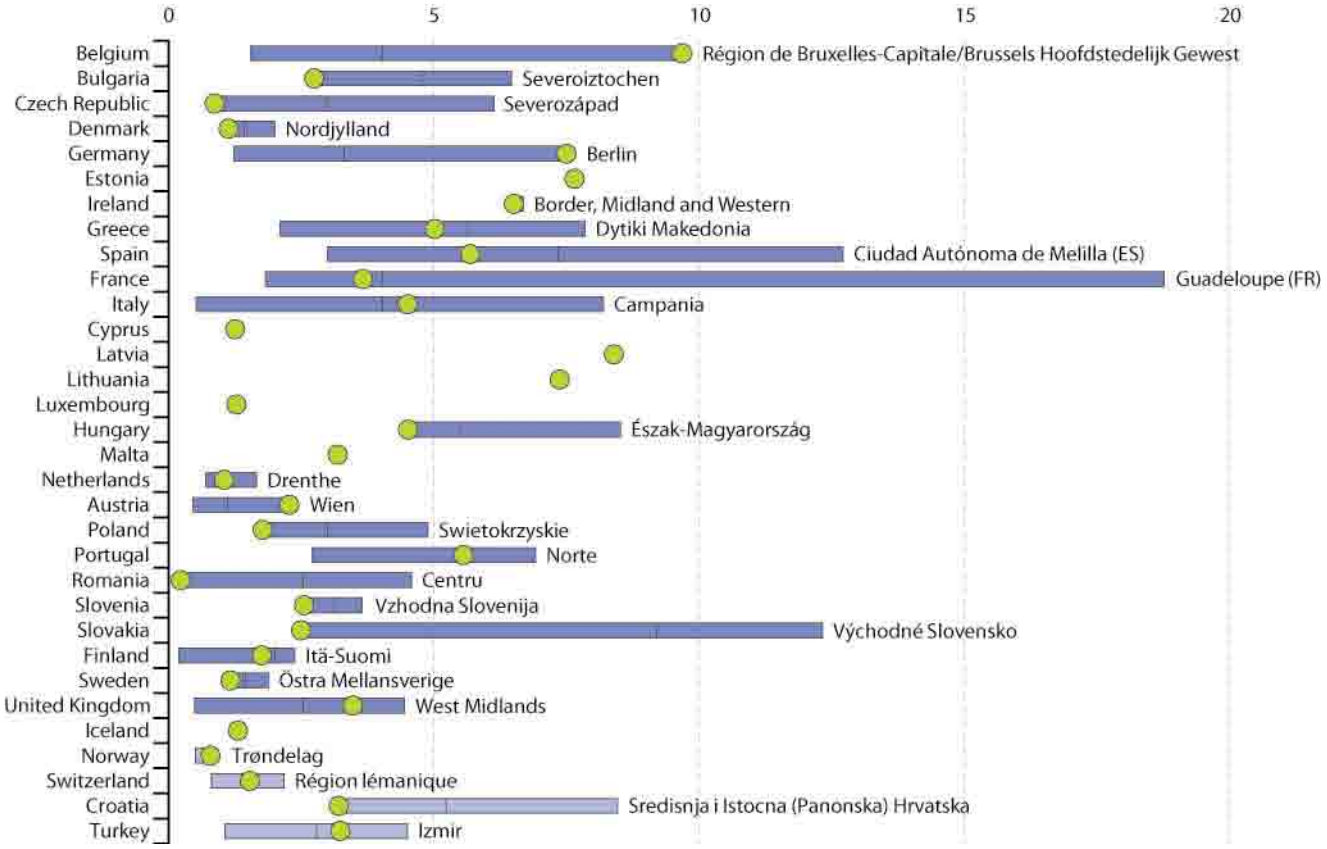
Source: Eurostat (online data code: lfst_r_lfu3rt)

Map 5.6: Long-term unemployment share, persons aged 15 to 74 years, by NUTS 2 regions, 2010
(% of total unemployment)



Source: Eurostat (online data code: lfst_r_lfu2ltu)

Figure 5.3: Long-term unemployment rate, persons aged 15 to 74 years, by NUTS 2 regions, 2010 ([1])
(%)



([1]) The graph 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 region; the name of the region with the highest value is also included.
Source: Eurostat (online data code: lfst_r_lfu2ltu)

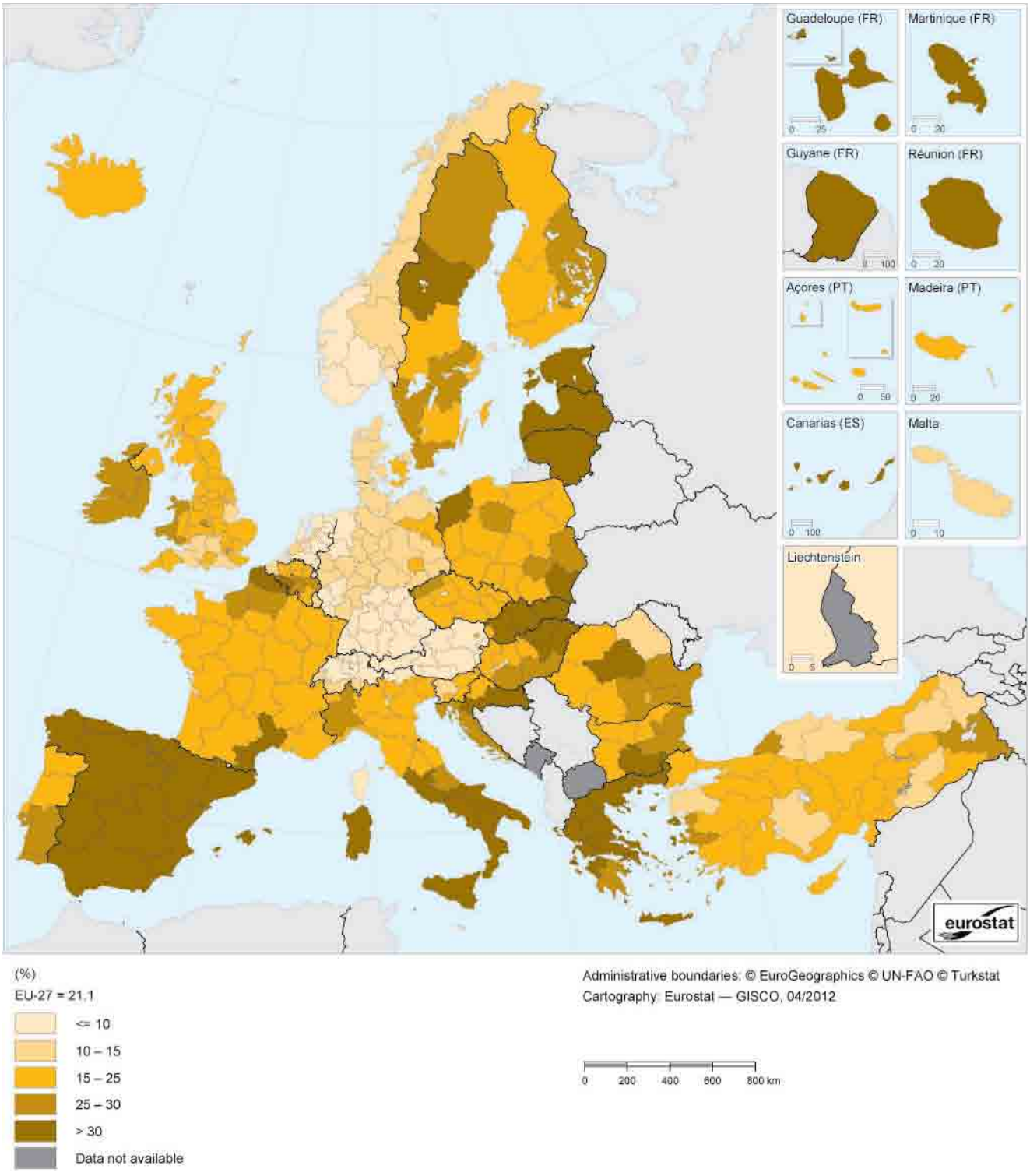
studies or returned to studying, in this way postponing their entry into the labour force; this decision may in part have been influenced by the state of the economy.

Map 5.7 presents the regional distribution of the youth unemployment rate at NUTS level 2. There is a clear similarity between youth unemployment rates and total unemployment rates in terms of the pattern of regions with particularly high or particularly low rates. Youth unemployment rates were consistently higher than overall unemployment rates in each and every NUTS 2 region in 2010. The largest difference (in percentage point terms) was in the French overseas region of Martinique, where the youth unemployment rate (59.0 %) was 38.0 points higher than the overall unemployment rate in 2010. In relative terms, the youth unemployment rate in the Romanian capital city region of București - Ilfov (20.3 %) was some 4.4 times as high as the overall unemployment rate.

The highest youth unemployment rates were recorded in the French overseas regions, the Spanish autonomous cities, as well as southern regions of Spain and Italy. The youth unemployment rate exceeded 50 % in six regions in 2010, including three of the French overseas regions, the two Spanish overseas territories of Ceuta and Melilla, and the Canarias (also Spain). The highest youth unemployment rate among the EFTA and candidate countries was recorded for the Croatian region of Sredisnja i Istocna (Panonska) Hrvatska, where youth unemployment was 44.8 % in 2010.

There were 40 NUTS level 2 regions across the EU that reported a youth unemployment rate that was 10 % or lower in 2010. The lowest rates were generally registered in Germany (18 regions at or below 10 %), the Netherlands (10 regions) and Austria (eight regions), while the Czech Republic, France, Italy and Finland each had one region with a youth unemployment rate of 10 % or less. There were eight level 2 regions in the EFTA and candidate countries that recorded youth unemployment rates below the 10 % threshold. Five of these were in Switzerland – including the lowest rate of 4.8 % for Zentralschweiz — while the remaining three regions were all Norwegian.

Map 5.7: Youth unemployment rate, persons aged 15 to 24 years, by NUTS 2 regions, 2010
(%)



Source: Eurostat (online data code: lfst_r_lfu3rt)

Data sources and availability

Most regional results in this chapter concern NUTS level 2 regions; these regional figures pertain to annual averages of the quarterly LFS, with the exception of employment and unemployment rates. NUTS level 3 employment and unemployment data are provided by Member States on a voluntary basis and in a few cases (for NUTS level 3) this involves the use of estimations and/or data from registers.

The LFS is a quarterly household sample survey conducted in the EU Member States. The survey population covers persons aged 15 and over, living in private households (persons living in collective households, such as residential homes, boarding houses, hospitals, religious institutions and workers' hostels, are therefore not included).

The population comprises all persons living in the households surveyed during the reference week. The definition also includes persons who are absent for short periods due, for example, to studies, holidays, illness or business trips (but who have maintained a link with the household); persons on compulsory military service are not included. The survey follows the definitions and recommendations of the International Labour Organisation (ILO). To achieve further harmonisation, the Member States also adhere to common principles when formulating questionnaires.

Employment statistics can be used for a number of different analyses, including macroeconomic (in other words, labour as a production factor), productivity or competitiveness studies. They can also be used to study a range of social and behavioural aspects related to an individual's employment situation, such as the social integration of minorities, or employment as a source of household income.

The unemployment rate is an important indicator with both social and economic dimensions. Rising unemployment levels result in: a loss of income for affected individuals; increased pressure with respect to government spending on social benefits; and a reduction in tax revenue. From an economic perspective, unemployment may be viewed as unused labour capacity.

The following definitions may be of interest when reading the main findings of this chapter:

Employed persons are those aged 15 years and over who during the reference week performed work, even for just 1 hour, for pay, profit or family gain or were not at work but had a job or business from which they were temporarily absent, for example due to illness, holidays, industrial dispute or education and training. The following exceptions apply to the age range used: 16 and over in Spain, Sweden (1995–2001) and the United Kingdom; 15 to 74 in Denmark, Estonia, Finland, Hungary, Latvia and Sweden (from 2001 onwards); 16 to 74 in Iceland and Norway.

The employment rate represents employed persons as a percentage of the population. Note that in this publication the focus for employment is on those aged 20 to 64 (a Europe 2020 target) and so the standard employment rate that is presented relates to employed persons aged 20 to 64 as a percentage of the population aged 20 to 64.

The old-age employment rate represents employed persons aged 55 to 64 as a percentage of the population aged 55 to 64.

The dispersion rate of employment (unemployment) is the coefficient of variation for regional employment (unemployment) rates in a Member State (or other geographical aggregate), weighted by the absolute population (active population) of each region.

Unemployed persons are persons aged 15 to 74 who were without work during the reference week, were currently available for work and were either actively seeking work in the past 4 weeks or had already found a job to start within the next 3 months. The following exceptions apply to the age range used: 16 to 74 in Spain, Sweden (1995–2001), the United Kingdom, Iceland and Norway.

The unemployment rate represents unemployed persons as a percentage of the economically active population. The youth unemployment rate relates to persons aged 15 to 24. The long-term unemployment rate is the percentage of the economically active population who have been without work for at least 12 months. The long-term unemployment share represents the proportion of the total number of unemployed persons who have been seeking a job for more than 1 year.

Further information

For further information about labour market statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/introduction.

Context

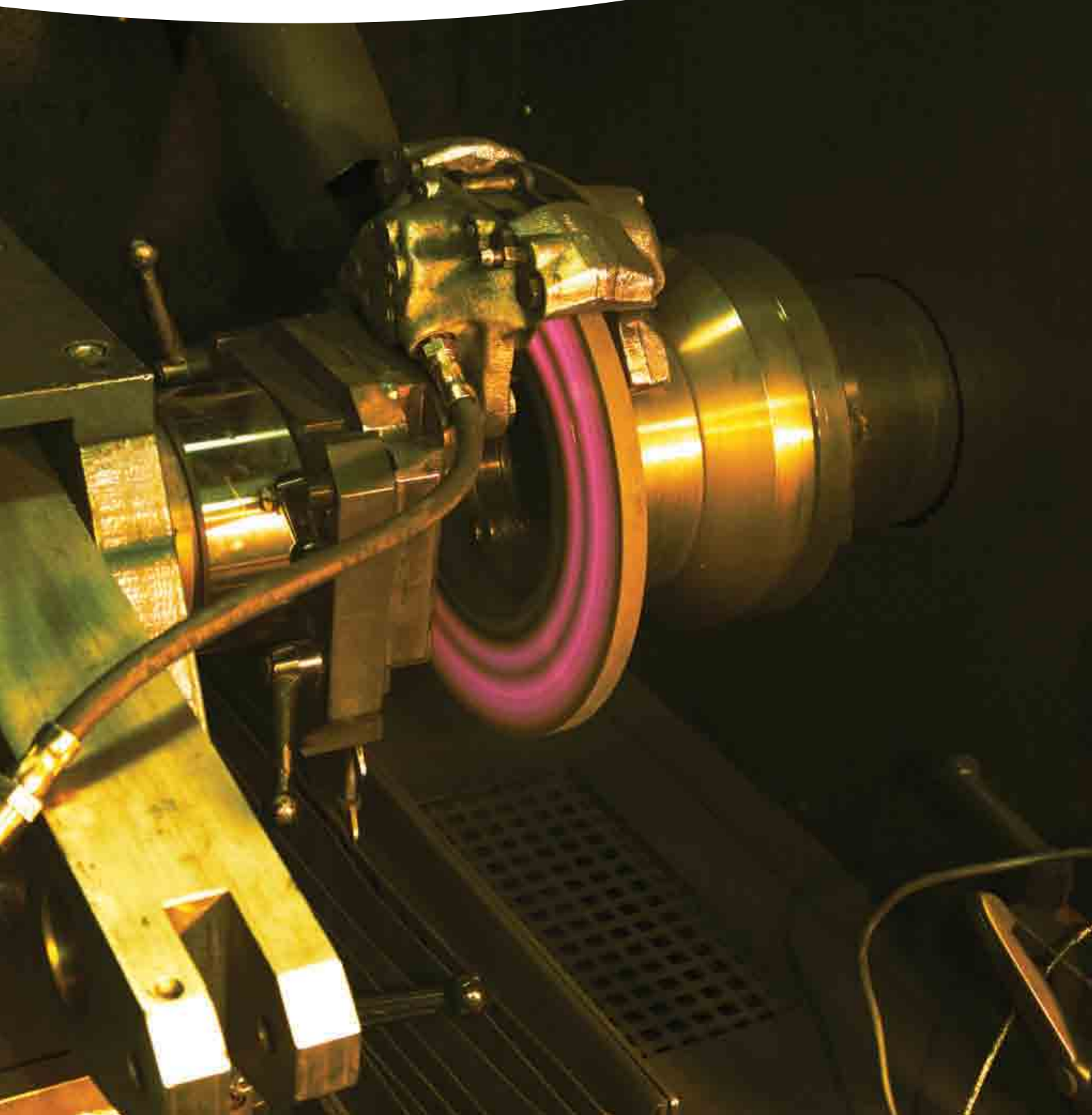
Male, youth and long-term unemployment appear to be more susceptible to cyclical economic changes than overall unemployment. Indeed, social policymakers often face the challenge of remedying these situations by designing ways to increase employment opportunities for various groups of society, those working in particular economic activities, or those living in specific regions.

Employment statistics are at the heart of many EU policies. The European employment strategy (EES) was launched at the Luxembourg jobs summit in November 1997 and was revamped in 2005. Integrated economic and employment guidelines were

updated as part of the Europe 2020 strategy. Furthermore, when adopting the Europe 2020 strategy, the European Council agreed on five headline targets; the first being to raise the employment rate for women and men aged 20 to 64 to 75 % by 2020. Member States may set their own national targets in the light of these headline targets and will draw up national reform programmes that will include the actions they aim to undertake in order to implement the strategy.

As part of the flagship initiatives within the Europe 2020 strategy, 'An agenda for new skills and jobs' and 'Youth on the move', (youth) unemployment and employment rates will be targeted through a range of policies, including proposals aimed at education and training institutions, or measures for the creation of a (work) environment conducive to higher activity rates and higher labour productivity. There are also initiatives aimed at facilitating the entry of young people into the labour market.

6 Structural business statistics



Structural business statistics (SBS) cover industry, construction and non-financial services. Presented according to the activity classification NACE, they describe the structure, conduct and performance of businesses. These statistics can be analysed at a very detailed sectoral level (several hundred economic activities), by enterprise size class or by region.

There are significant disparities between European Union (EU) regions in terms of the importance of different activities within the non-financial business economy. While some activities are distributed relatively evenly across most regions, many others exhibit a considerable variation in their level of regional specialisation, often with a few regions having a particularly high degree of specialisation.

The share of a particular activity within the non-financial business economy gives an idea of which regions are the most or least specialised in that activity, regardless of whether the region or the activity is large or small. The reasons for regional specialisation are varied and include the availability of natural resources (for example, for mining and quarrying and forest-based manufacturing), the availability of skilled employees, costs, infrastructure, legislation, climatic and topographic conditions (particularly regarding tourism-related activities) and the proximity to markets.

Main statistical findings

In 2009 more than 20 million enterprises were active in the EU-27's non-financial business economy: this covers industry, construction and services other than financial intermediation. Together, these enterprises generated approximately EUR 5 500 billion ([1]) of gross value added and employed around 175 million persons. According to national accounts data, industry accounted for 18.3 % of value added (at basic prices) in the whole economy, construction 6.7 % and non-financial services around 44.2 %; in employment terms the shares were 16.5 % for industry, 7.4 % for construction and 39.2 % for non-financial services.

Industrial and services specialisation

The shares of the non-financial business economy workforce working in the industrial sector and in the non-financial services sector in 2009 are shown in Maps 6.1 and 6.2; no data are available for Greece, France or Malta. When analysing the data for 2009 it is important to bear in mind that the impact of the financial and economic crisis was particularly strong at this time: GDP fell in 2009 by 4.3 % in the EU-27 and employment fell by1.8 %. Among the EU Member States, only Poland recorded an increase in employment and GDP (in real terms) in 2009; the largest contraction in GDP among the Member States was in Latvia (– 17.7 %), which also recorded the largest fall in employment (– 13.2 %).

In 26 regions the share of the industrial workforce in the non-financial business economy workforce exceeded 40 %: all of these regions, aside from Tübingen (Germany), were located in those Member States that joined the EU in 2004 or 2007. By this measure the most industrialised workforces were in the Czech Republic and Poland (each with six regions above 40 %), Romania (four regions) Bulgaria, Slovakia (three regions each), Hungary (two regions) and Slovenia (one region). The highest regional share of the industrial workforce was 58.2 % in the Slovak region of Západné Slovensko, the only region where more than half of the non-financial business economy workforce was active in an industrial activity. The regions where less than 10 % of the non-financial business economy workforce was active in an industrial sector were the capital city regions of the Netherlands and the United Kingdom, as well as Utrecht (Netherlands), the Algarve (Portugal) and the Spanish island regions and overseas territories of the Canarias, Illes Balears, Ceuta and Melilla. Within Norway, the capital city region of Oslo og Akershus stood out for its relatively low share of industrial employment, just 8.7 %; this ratio was just below 20 % in Nord-Norge, which was the Norwegian region with the next lowest share.

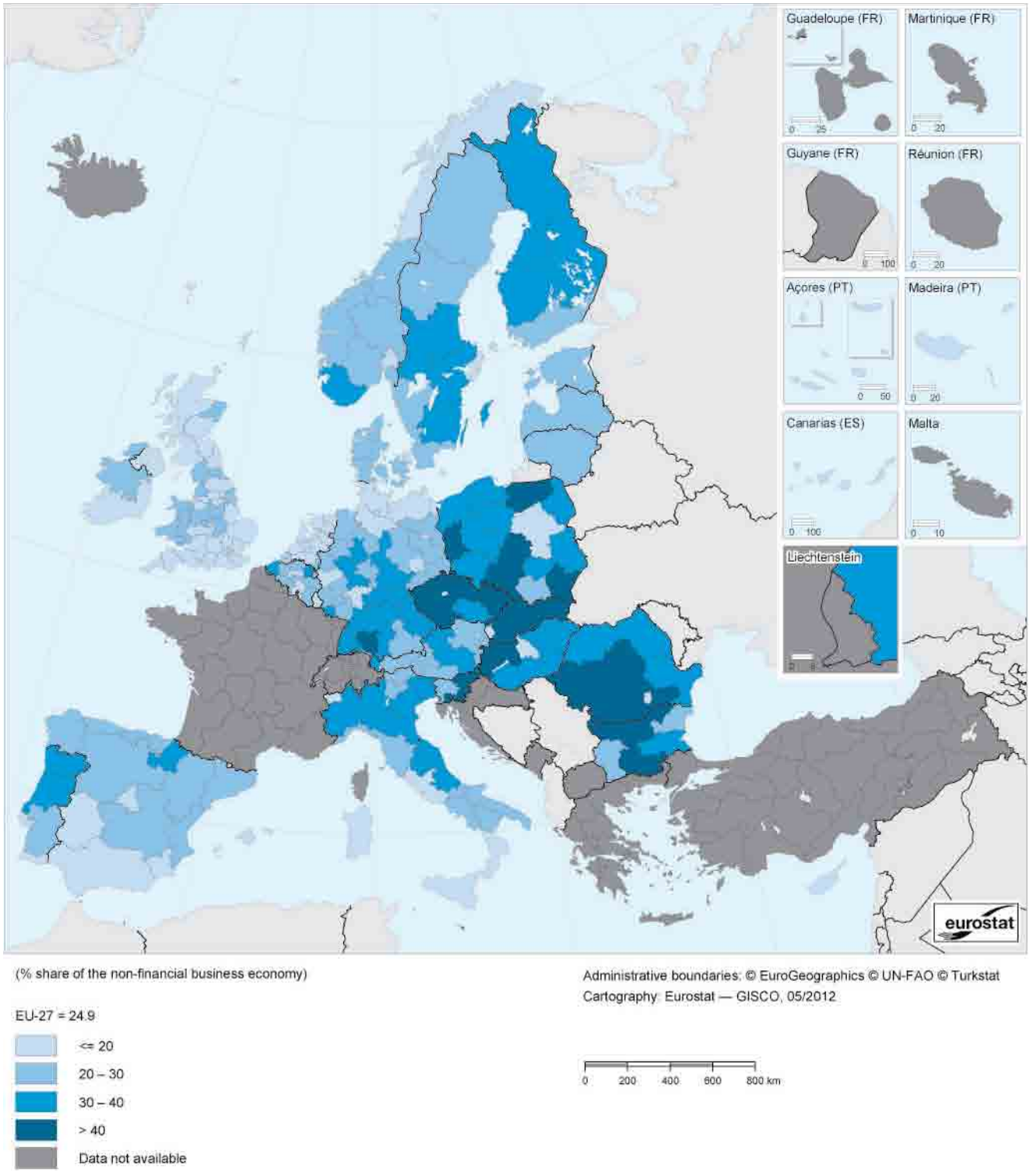
The most service-oriented non-financial business economy workforces were mainly in or bordering major urban areas such as London and the surrounding south-east of England, Hamburg and Berlin in Germany, Noord-Holland (including Amsterdam) in the Netherlands and Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest in Belgium. The highest share of non-financial services in the non-financial business economy workforce was 93.2 % in Inner London. Non-financial services accounted for more than 75 % of the non-financial business economy workforce in a total of 34 regions in the EU Member States, among which were 11 capital city regions. Alongside these, the remaining 23 regions with a high proportion of employment in non-financial services included a further 12 regions in the United Kingdom, three more in each of Germany, Spain and the Netherlands, one more in Belgium and one in Finland; the Norwegian capital city region of Oslo og Akershus also recorded in excess of 75 % of its non-financial business economy workforce employed within the non-financial services sector.

In total there were 56 regions in the EU where the non-financial services share of employment was 55 % or less, and in 12 of these regions the share was 45 % or less. The lowest shares were mainly in Slovakia (three of the four Slovak regions) and the Czech Republic (five of the eight Czech regions), as well as in Romania, Bulgaria and Slovenia. The Norwegian region of Agder og Rogaland also reported that the non-financial services share of employment was 55 % or less.

The remaining share of non-financial business economy employment that is not represented either in Map 6.1 or

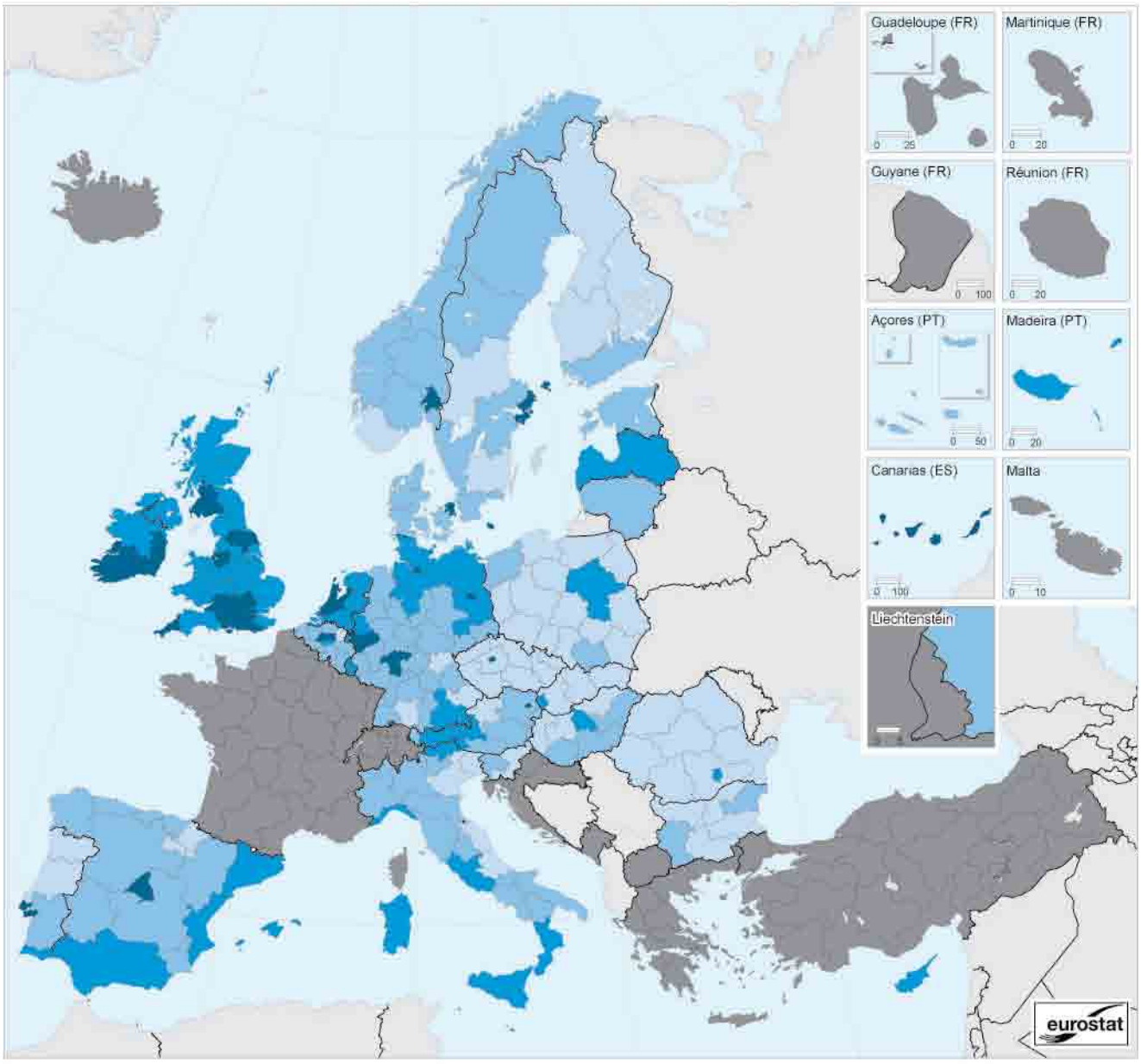
([1]) Billion is 1 000 million.

Map 6.1: Employment in the industrial economy, by NUTS 2 regions, 2009
(% share of the non-financial business economy)



Source: Eurostat (online data code: sbs_r_nuts06_r2)

Map 6.2: Employment in the non-financial services economy, by NUTS 2 regions, 2009
(% share of the non-financial business economy)



Source: Eurostat (online data code: sbs_r_nuts06_r2)

Map 6.2 was in construction. The share of construction in non-financial business economy employment ranged across the EU from less than 5 % in the urban regions of Darmstadt, Bremen, Köln, Hamburg (all Germany) and Inner London (United Kingdom) to more than 18 % in the Regiões Autónomas of the Açores and Madeira (Portugal), the territories of Melilla and Ceuta, the regions of Extremadura and Castilla-La Mancha (Spain), the Province/Provincie Luxembourg (Belgium) and Valle d'Aosta/Vallée d'Aoste and Molise (Italy).

Detailed specialisation within the non-financial business economy

Table 6.1 presents a more detailed activity analysis, at the NACE section and division levels. For each of these activities the table indicates the median and mean share of that activity in the non-financial business economy workforce for all regions. The final two columns in the table show which region was the most specialised for each activity in 2009, as well as the relative importance of the most specialised region within the total workforce for that activity in the EU (for reasons of data availability the share in the EU is based on an aggregate of all Member States except Greece, France and Malta).

Mining and quarrying activities of energy-producing and metallic minerals tend to be very concentrated as a consequence of the geographical location of deposits, and therefore only a small number of regions tend to be highly specialised in these activities. The most notable case was the mining of coal and lignite, where Śląskie (Poland) was the most specialised region in 2009 and alone accounted for 40.5 % of the EU employment in this activity. In a similar manner, North Eastern Scotland (United Kingdom) was the most specialised in mining support services as this region provides support for the offshore extraction of crude petroleum and natural gas, for which it was also the most specialised region; furthermore it was the most specialised region for two services divisions that also support oil and gas extraction, namely architectural and engineering activities and rental and leasing activities. In contrast, for many other activities the most specialised regions accounted for a relatively small share of total EU employment; this was particularly the case for construction activities, distributive trades and real estate, which are activities commonly found in most regions where there is little specialisation.

Manufacturing activities which involve the primary processing stages of agricultural, fishing or forestry products tend to be concentrated in areas close to the source of the raw material. The regions most specialised in food manufacturing (NACE Division 10) were often located in rural areas or close to agricultural production centres: Podlaskie (the most specialised of all the regions) and other regions in the eastern part of Poland, Dél-Alföld in Hungary, Alentejo in Portugal, Severen tsentralen in Bulgaria and Lincolnshire in the United Kingdom. Heavily forested Nordic and Baltic regions were the most specialised regions in the manufacture of wood and wood products (NACE Division 16) and in the related manufacturing of paper and paper products (NACE Division 17). Itä-Suomi (Finland) was the most specialised region in wood and wood products and Norra Mellansverige (Sweden) was the most specialised for pulp and paper.

Construction activities (NACE Divisions 41 to 43) accounted for the highest shares of the workforce in Região Autónoma dos Açores in Portugal; these activities were also historically one of the main employers in some Spanish regions; however, the financial and economic crisis is likely to have resulted in a reduction in employment levels in recent years (data for the 2009 reference year are not available for construction at the division level for Spain).

Transport services are also influenced by location, with water transport (NACE Division 50) naturally being important for coastal regions and islands, while air transport (NACE Division 51) is generally important for regions with or close to major cities, but also for island regions (especially those focused on tourism). The small island region of Åland (Finland) is a centre for the ferry services between Sweden and Finland and other Baltic Sea traffic. Åland was very highly specialised in water transport, which accounted for over 40 % of the total number of persons employed in this region's non-financial business economy in 2009, many times more than the next most specialised region. Outer London was the region most specialised in air transport; while other regions with a high share of their non-financial business economy workforce in air transport included Noord-Holland (the Dutch region including Amsterdam), Köln in Germany and Niederösterreich in Austria. The German region of Köln (which includes the city of Bonn) is home to Deutsche Post DHL and was particularly specialised in postal and courier activities.

Regions in Member States traditionally associated with tourism, for example in Portugal, Spain and Italy, were the most specialised in accommodation (NACE Division 55) and food service activities (NACE Division 56). Accommodation services accounted for more than 10 % of the non-financial business economy workforce in the Alpine regions of the Provincia Autonoma Bolzano/Bozen (Italy) and Tirol (Austria), the island regions of Illes Balears (Spain) and the Região Autónoma da Madeira (Portugal), the Scottish Highlands and Islands (United Kingdom) and the German coastal region of Mecklenburg-Vorpommern. The Algarve in Portugal was the most specialised region in terms of its employment share for food and beverage service activities.

Specialisation in information and communication activities (NACE Divisions 58 to 63), real estate activities (NACE Division 68), professional scientific and technical activities (NACE Divisions 69 to 75) and administrative and support service activities (NACE Divisions 77–82) may be based on access to a critical mass of clients (enterprises or households) or access to a specific knowledge base (external researchers and/or qualified staff).

Table 6.1: Average shares of non-financial business economy employment and most specialised regions by activity (NACE sections and divisions), by NUTS 2 region, 2009 ([1])
(% share of non-financial business economy employment)

Activity (NACE)	Across EU regions		Most specialised region	
	Median share	Mean share	Name (NUTS 2 region)	Regional share of EU total
Mining and quarrying (B)	0.3	0.6	North Eastern Scotland (UKM5)	3.8
Mining of coal and lignite (05)	0.0	0.2	Śląskie (PL22)	40.5
Extraction of crude petroleum and natural gas (06)	0.0	0.1	North Eastern Scotland (UKM5)	11.7
Mining of metal ores (07)	0.0	0.0	Övre Norrland (SE33)	c
Other mining and quarrying (08)	0.2	0.2	Świętokrzyskie (PL33)	1.4
Mining support service activities (09)	0.0	0.1	North Eastern Scotland (UKM5)	33.1
Manufacturing (C)	22.6	23.5	Západné Slovensko (SK02)	0.6
Food (10)	2.9	3.1	Podlaskie (PL34)	0.5
Beverages (11)	0.3	0.4	La Rioja (ES23)	0.7
Tobacco products (12)	0.0	0.1	Trier (DEB2)	c
Textiles (13)	0.3	0.5	Province/Provincie West-Vlaanderen (BE25)	2.1
Wearing apparel (14)	0.3	0.9	Severozapaden (BG31)	1.5
Leather and leather products (15)	0.1	0.3	Marche (ITE3)	7.6
Wood and wood products (16)	0.7	1.0	Itä-Suomi (FI13)	0.7
Paper and paper products (17)	0.4	0.5	Norra Mellansverige (SE31)	1.6
Printing and reproduction of recorded media (18)	0.6	0.6	Province/Provincie Oost-Vlaanderen (BE23)	0.6
Coke and refined petroleum products (19)	0.0	0.1	Opolskie (PL52)	c
Chemicals and chemical products (20)	0.7	0.8	Rheinhessen-Pfalz (DEB3)	4.1
Pharmaceutical products and preparations (21)	0.2	0.3	Province/Provincie Brabant Wallon (BE31)	2.3
Rubber and plastic products (22)	1.1	1.3	Oberfranken (DE24)	1.1
Other non-metallic mineral products (23)	1.0	1.2	Świętokrzyskie (PL33)	0.9
Basic metals (24)	0.5	0.9	Norra Mellansverige (SE31)	2.3
Fabricated metal products (25)	2.6	2.9	Vorarlberg (AT34)	0.3
Computer, electronic and optical products (26)	0.7	0.8	Közép-Dunántúl (HU21)	1.3
Electrical equipment (27)	0.8	1.1	Oberpfalz (DE23)	2.0
Other machinery and equipment (28)	1.6	2.2	Tübingen (DE14)	2.3
Motor vehicles, trailers and semi-trailers (29)	0.9	1.8	Braunschweig (DE91)	c
Other transport equipment (30)	0.3	0.5	Lancashire (UKD4)	c
Furniture (31)	0.6	0.9	Warmińsko-mazurskie (PL62)	1.8
Other manufacturing (32)	0.5	0.6	Border, Midland and Western (IE01)	1.8
Repair and installation of machinery (33)	0.8	0.8	Mittelfranken (DE25)	2.2
Electricity, gas, steam, and air conditioning supply (D)	0.8	1.0	Sud-Vest Oltenia (RO41)	1.4
Water supply, sewerage, waste management (E)	0.9	1.0	Východné Slovensko (SK04)	c
Water supply (36)	0.2	0.3	Východné Slovensko (SK04)	c
Sewerage (37)	0.1	0.1	Trier (DEB2)	0.8
Waste management (38)	0.6	0.6	Sicilia (ITG1)	2.1
Remediation (39)	0.0	0.0	Canarias (ES70)	4.5
Construction (F)	10.9	11.1	Região Autónoma dos Açores (PT20)	0.1
Buildings (41)	2.9	3.1	Região Autónoma dos Açores (PT20)	0.2
Civil engineering (42)	1.2	1.3	Região Autónoma dos Açores (PT20)	0.2
Specialised construction activities (43)	5.2	5.3	Sjælland (DK02)	0.3

Table 6.1: Average shares of non-financial business economy employment and most specialised regions by activity (NACE sections and divisions), by NUTS 2 region, 2009 ([1]) *(cont.)*
(% share of non-financial business economy employment)

Activity (NACE)	Across EU regions		Most specialised region	
	Median share	Mean share	Name (NUTS 2 region)	Regional share of EU total
Distributive trades (G)	25.6	25.3	Ciudad Autónoma de Melilla (ES64)	0.0
Motor trades and repair (45)	3.1	3.1	Province/Provincie Luxembourg (BE34)	0.1
Wholesale trade (46)	7.5	7.6	Región de Murcia (ES62)	0.5
Retail trade (47)	14.9	15.0	Ciudad Autónoma de Melilla (ES64)	0.0
Transport and storage (H)	7.3	7.8	Åland (FI20)	0.0
Land transport and pipelines (49)	4.1	4.3	Lietuva (LT00)	1.4
Water transport (50)	0.0	0.3	Åland (FI20)	1.8
Air transport (51)	0.0	0.2	Outer London (UKI2)	11.5
Supporting transport activities (52)	1.6	1.8	Bremen (DE50)	1.1
Postal and courier activities (53)	1.2	1.3	Köln (DEA2)	12.2
Accommodation and food service activities (I)	7.7	8.1	Algarve (PT15)	0.4
Accommodation (55)	1.6	2.2	Provincia Autonoma Bolzano/Bozen (ITD1)	1.1
Food and beverage service activities (56)	5.8	6.0	Algarve (PT15)	0.3
Information and communication (J)	2.7	3.5	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE10)	0.9
Publishing activities (58)	0.5	0.6	Inner London (UKI1)	7.1
Multimedia publishing (59)	0.2	0.2	Inner London (UKI1)	13.0
Programming and broadcasting (60)	0.1	0.2	Ciudad Autónoma de Ceuta (ES63)	0.1
Telecommunications (61)	0.5	0.7	Köln (DEA2)	9.7
Computer activities (62)	1.2	1.6	Utrecht (NL31)	1.7
Information service activities (63)	0.2	0.3	Wien (AT13)	1.8
Real estate activities (L)	1.9	2.0	Latvija (LV00)	0.8
Professional, scientific and technical activities (M)	6.8	7.6	Inner London (UKI1)	4.7
Legal and accounting activities (69)	2.2	2.3	Inner London (UKI1)	5.8
Activities of head offices (70)	0.9	1.4	Inner London (UKI1)	7.8
Architectural and engineering activities (71)	2.0	2.1	North Eastern Scotland (UKM5)	1.0
Scientific research and development (72)	0.2	0.3	East Anglia (UKH1)	3.1
Advertising and market research (73)	0.5	0.7	Bratislavský kraj (SK01)	0.8
Other professional, scientific and technical activities (74)	0.6	0.7	Inner London (UKI1)	3.7
Veterinary activities (75)	0.1	0.2	Cumbria (UKD1)	0.5
Administrative and support service activities (N)	7.8	8.4	Lisboa (PT17)	1.9
Rental and leasing activities (77)	0.4	0.5	North Eastern Scotland (UKM5)	0.7
Employment activities (78)	1.8	2.6	Groningen (NL11)	0.7
Travel agency and related activities (79)	0.3	0.4	Illes Balears (ES53)	1.2
Security and investigation (80)	0.8	1.0	Yugozapaden (BG41)	3.3
Service to buildings and landscape activities (81)	2.7	2.8	Ciudad Autónoma de Melilla (ES64)	0.0
Other administrative and business activities (82)	1.1	1.2	Mellersta Norrland (SE32)	0.2
Repair of computers and personal and household goods (95)	0.3	0.3	Herefordshire, Worcestershire and Warwickshire (UKG1)	1.0

([1]) Excluding Greece, France and Malta; NACE Divisions 41 to 43, not available for Spanish regions.
Source: Eurostat (online data code: sbs_r_nuts06_r2)

Inner London in the United Kingdom was the most specialised region for publishing activities and multimedia publishing (divisions 58 and 59), while Köln was the most specialised in telecommunications, boosted by the presence of Deutsche Telekom's headquarters in Bonn. Latvia was the most specialised region for real estate activities in 2009, ahead of Inner London (United Kingdom), Rheinhessen-Pfalz (Germany) and Közép-Magyarország (the capital city region of Hungary). British regions were the most specialised in nearly all of the professional scientific and technical activities: Inner London for legal and accounting activities, activities of head offices and other professional, scientific and technical activities; East Anglia (which includes Cambridge) in scientific research and development; Cumbria for veterinary services and North Eastern Scotland (which provides services for the North Sea oil and gas platforms) for architectural and engineering activities. The Slovakian capital city region of Bratislavský kraj was the most specialised region for advertising and market research.

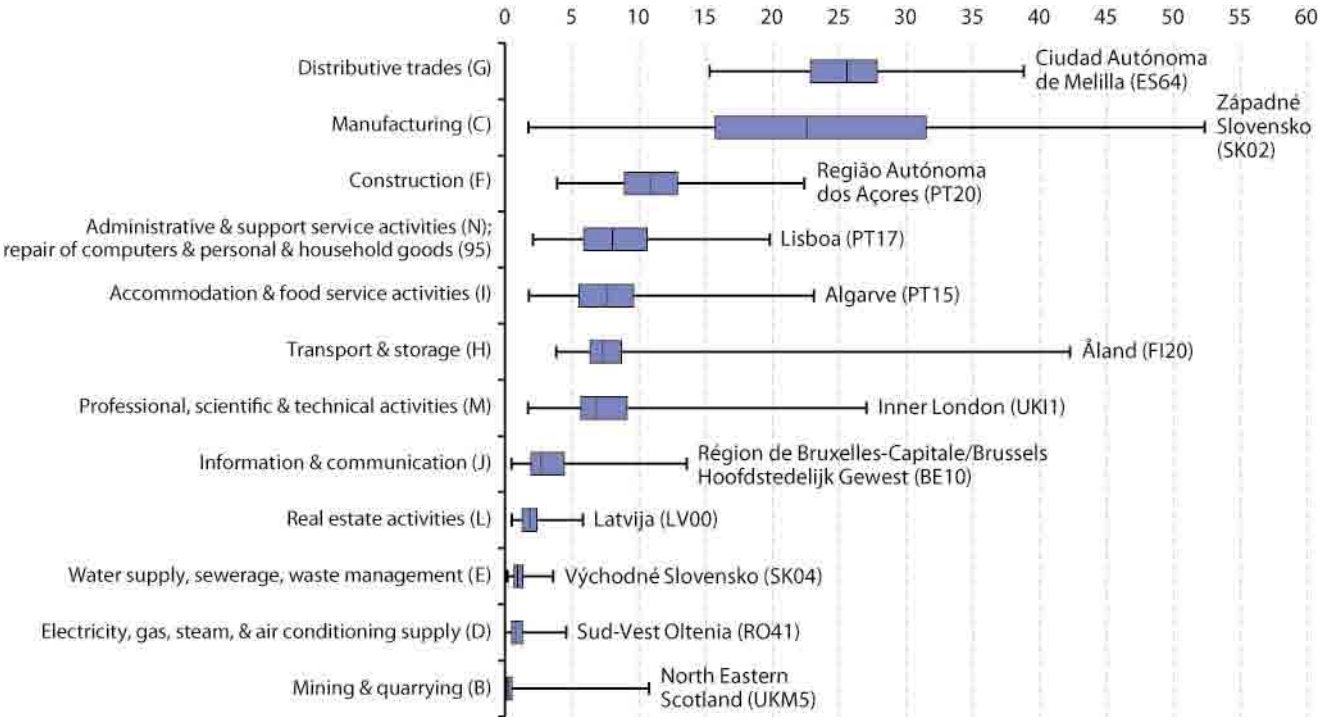
The Portuguese capital city region of Lisboa was most specialised in administrative and support service activities (NACE Section N). At a more detailed level, Groningen (Netherlands) was particularly specialised in employment activities (division 78).

Range of specialisation

Figure 6.1 provides an overview of the relative importance among the EU regions of various activities (at the NACE section level) in the non-financial business economy workforce. For each activity, the horizontal lines indicate the spread from the region with the lowest share of its non-financial business economy workforce in that activity to the region with the highest share; the region with the highest share is named in the figure. The extremes of the highest and lowest shares can be influenced by a single region, and the coloured box shows a narrower range, defined to cover half of the regions (the inter-quartile range), with one quarter of all regions having a higher employment share in that activity and one quarter of the regions having a lower share. The central bar within the coloured box shows the value of the median region. The activities are ranked from the largest employer (distributive trades) to the smallest (mining and quarrying).

The situation in manufacturing is particular in several ways. The range between least and most specialised is very large for manufacturing as is the width of the coloured box, indicating a very varied importance of manufacturing. In contrast, the employment spread for large, basic activities, like construction and distributive trades, which tend to serve more local

Figure 6.1: Regional specialisation by activity, by NUTS 2 regions, EU, 2009 (1)
(%, share of regional non-financial business economy employment)



(1) Minimum and maximum share (vertical lines at the extremes); inter-quartile range (box); median share (vertical line within the box); excluding Greece, France and Malta.
Source: Eurostat (online data code: sbs_r_nuts06_r2)

clients, was much narrower, both in terms of the spread of the extreme values (shown by the horizontal lines) and in terms of the spread of the inter-quartile range (the coloured box containing half of the regions).

Manufacturing accounted for only 1.8 % of the total number of persons employed in the non-financial business economy in the region where it had its smallest share; however, in Západné Slovensko (Slovakia) it accounted for 52.3 % of non-financial business economy employment; manufacturing also exceeded a 40 % share in Střední Morava and Severovýchod (Czech Republic), Stredné Slovensko and Východné Slovensko (Slovakia), Severen tsentralen (Bulgaria), Közép-Dunántúl (Hungary) and Vzhodna Slovenija (Slovenia).

In contrast, the spread of employment was much narrower in distributive trades (NACE Section G), which was the activity displaying the highest median employment share, and was present on a relatively large scale in all regions as it often serves local clients. Employment shares for distributive trades ranged from 15.3 % to close to two fifths (38.8 %) in the Ciudad Autónoma de Melilla (Spain).

Transport and storage (NACE Section H) and mining and quarrying (NACE Section B) are also activities where a few regions are very highly specialised. The highest specialisation for transport and storage was in the small Finnish island region of Åland, where more than two fifths of the workforce (42.3 %) was employed in this sector, far ahead of Köln in Germany (18.8 %); the specialisation in Åland is due almost exclusively to the importance of water transport. Natural endowments play an important role in mining and quarrying and, as such, many regions record little or no such activity, with only very few regions being highly specialised on account of deposits of metallic ores, coal, oil or gas. Mining and quarrying accounted for 0.1 % or less of the total number of persons employed in the non-financial business economy workforces of a quarter of all regions, and between 0.1 % and 0.5 % of employment in half of all the regions. However, this activity did account for over 4 % of the non-financial business economy workforce in five regions, while its share rose to around 10 % of the total in North Eastern Scotland (United Kingdom) and Śląskie (Poland). In Agder og Rogaland (Norway) mining and quarrying accounted for 17.2 % of non-financial business economy employment.

Business concentration

The analysis of specialisation (above) shows the relative importance of an individual activity in a region, regardless of the size of the region or the activity. Figure 6.2 shows the extent to which a particular activity is concentrated in a small number of regions or more widely spread. Four of the five mining and quarrying divisions topped the rankings in terms of having the most concentrated number of persons employed within the 10 largest regions across the EU. By this measure the most concentrated activity was the mining of metal ores (NACE Division 07): the entire workforce of the EU in this sector was concentrated in less than one quarter of all regions, with no employment in this activity in the remaining three quarters.

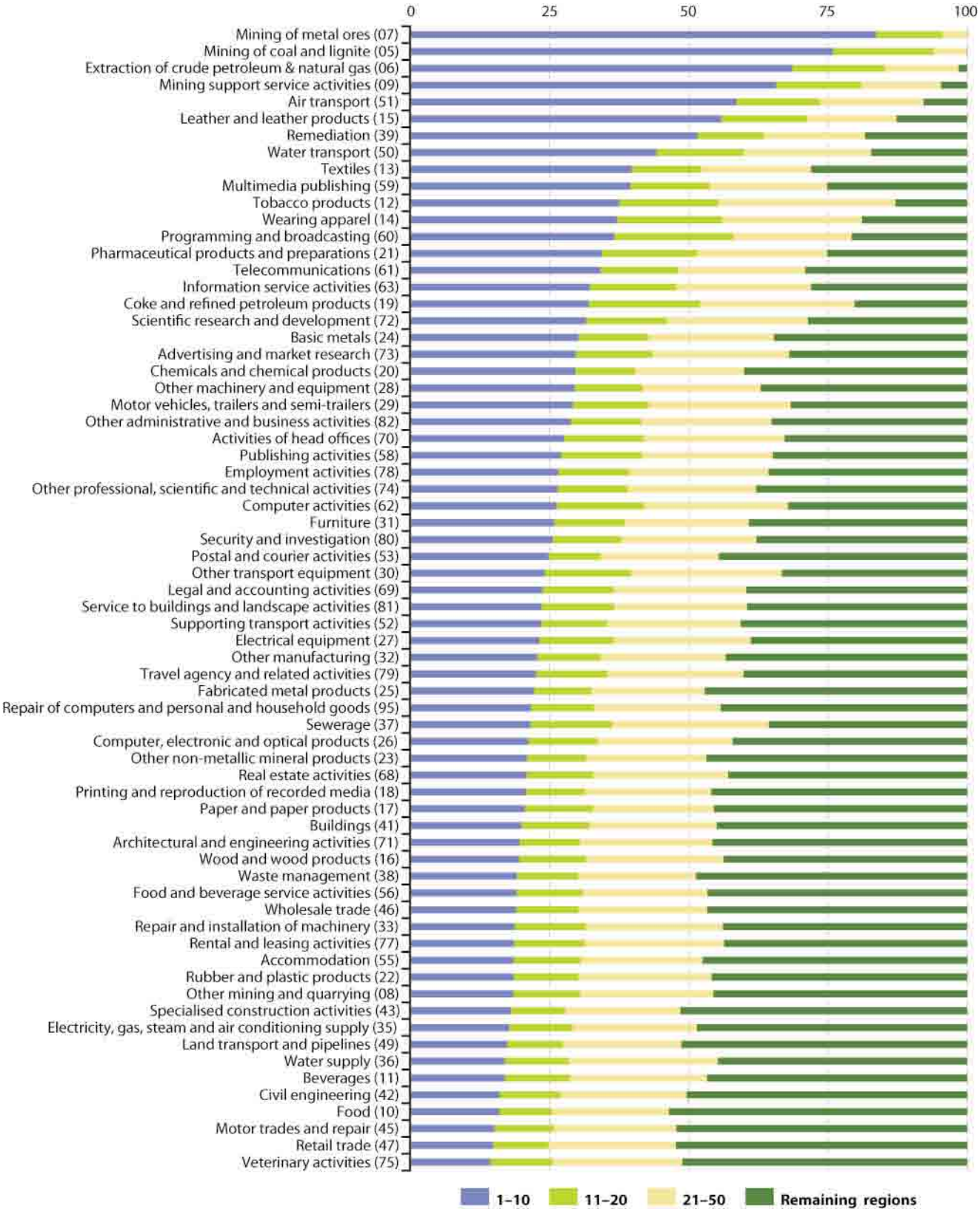
Air transport (NACE Division 51) and leather and leather products manufacturing (NACE Division 15) were also highly concentrated in the 10 largest regions, which together accounted for 59 % and 56 % of their total employment respectively. In the case of air transport, this dominance is due to a concentration within large metropolitan regions, where main airports tend to be situated: chief among these were the regions of Paris, Outer London, Köln, Amsterdam and Madrid. Leather and leather products manufacturing, on the other hand, is a relatively small activity in the EU that is heavily concentrated in Italy, Portugal and Romania.

In contrast to the energy and metals-related types of mining and quarrying, the activity of other mining and quarrying (NACE Division 08) was among the activities in which the 10 largest regions were least dominant, as they accounted for 18.5 % of EU-27 sectoral employment. This is due to the widespread availability and local sourcing of many construction materials, such as sand, clay and stone, which dominate this type of mining and quarrying activity in most regions. Of all the activities (NACE divisions), motor trades and repair (NACE Division 45), retail trade (NACE Division 47) and veterinary activities (NACE Division 75) had the lowest levels of concentration in 2009; the two distributive trades activities are both major activities in terms of their overall contribution to the level of non-financial business economy employment in the EU.

Map 6.3 presents a different aspect of concentration; namely the extent to which a region is dependent on a small number of large activities, or, alternatively, whether it displays the characteristics of being more diversified. The map is based on an indicator that combines the shares of the five largest activities (NACE divisions) in the total non-financial business economy workforce in each region: the five largest activities are selected independently for each region, although there are several, such as retail trade, that are found in nearly all regions. As a result, the level of concentration tends to be highest in regions where construction, distributive trades or other services dominate the business economy, as industrial activities are more fragmented. By this measure, the most concentrated regions were generally in Member States traditionally associated with tourism, in particular Spain, Italy, Cyprus, Austria and Portugal, underlining the importance of construction, trade, transport, and accommodation and food service activities in tourism-oriented regions. There were 23 regions at the NUTS level 2 that reported in excess of 47 % of their non-financial employment spread across their five largest activities.

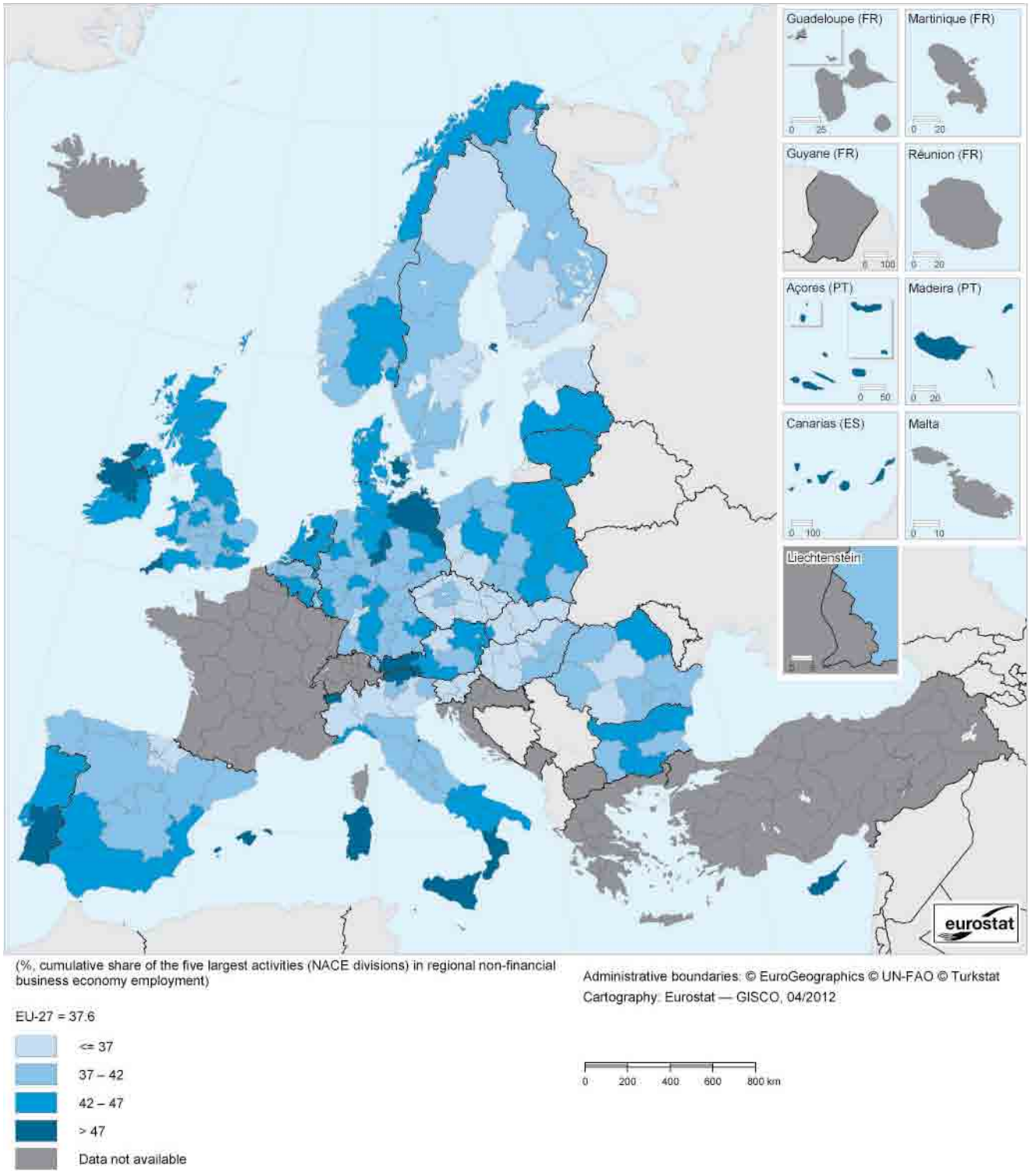
In contrast, the lowest concentrations were recorded mainly in regions with a relatively small services sector and a relatively large manufacturing activity; this was often the case in

Figure 6.2: Concentration of activities (NACE divisions), by NUTS 2 regions, EU, 2009 ([1])
(%, cumulative share of top X regions in sectoral employment)



([1]) Excluding Greece, France and Malta; NACE Divisions 41 to 43, not available for Spanish regions.
Source: Eurostat (online data code: sbs_r_nuts06_r2)

Map 6.3: Regional business concentration, by NUTS 2 regions, 2009 ([1])
(%, cumulative share of the five largest activities (NACE divisions) in regional non-financial business economy employment)



([1]) NACE Divisions 41 to 43, not available for Spanish regions.
Source: Eurostat (online data code: sbs_r_nuts06_r2)

eastern Europe, in particular in Slovakia, the Czech Republic, Estonia, Hungary, Slovenia and Slovakia. The five largest activities accounted for as little as one third of non-financial business economy employment in five regions in the Czech Republic and in the Comunidad Foral de Navarra in Spain.

Data sources and availability

Regional SBS are collected under a regulation of the European Parliament and of the Council, using the definitions and breakdowns specified in Commission implementing regulations. Data available for the reference year 2009, at the time of writing, cover most of the EU Member States, Norway and Croatia; data series are continuously updated and revised where necessary.

The regional SBS data presented in this chapter are restricted to the non-financial business economy, which includes NACE Sections B (mining and quarrying), C (manufacturing), D (electricity, gas, steam and air conditioning supply), E (water supply, sewerage and waste management), F (construction), G (distributive trades), H (transport and storage), I (accommodation and food service activities), J (information and communication), L (real estate activities), M (professional, scientific and technical activities) and N (administrative and support service activities), as well as NACE Division 95 (repair of computers and personal and household goods). The aggregate for the non-financial business economy therefore excludes agricultural, forestry and fishing activities and public administration and other non-market services (such as education and health, which are not covered by SBS) as well as financial services (NACE Section K). Regional SBS are presented by sectors of activity, available down to the NACE 2-digit (divisions) level.

The type of statistical unit used for regional SBS data is normally the local unit, which is an enterprise or part of an enterprise situated in a geographically identified place. Local units are classified into sectors (by NACE) normally according to their own main activity, but in some Member States the activity code is assigned on the basis of the principal activity of the enterprise to which the local unit belongs. The main SBS data series are presented at national level only, and for this national data the statistical unit is the enterprise. It is possible for the principal activity of a local unit to differ from that of the enterprise to which it belongs. Hence, national SBS data from the main series are not necessarily directly comparable with national aggregates compiled from regional SBS.

The main variable used for analysis in this chapter is the number of persons employed. For SBS, this is defined as the total number of persons who work (paid or unpaid) in the observation unit, as well as persons who work outside the unit but who belong to it and are paid by it. The number of persons employed includes working proprietors, unpaid family workers, part-time workers and seasonal workers.

Further information

For further information about SBS please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/european_business/introduction.

Context

Regional SBS offer users who want to know more about the structure and development of the regional business economy a detailed, harmonised data source, describing for each activity the number of workplaces, number of persons employed, wage costs and investments made. This chapter shows how some of these data can be used to analyse different regional business characteristics, for example, the focus, diversity and specialisation of regional business economies.

7

Tourism

This chapter presents regional patterns of tourism in the European Union (EU) for 2010; its main focus is tourism occupancy within tourist accommodation establishments, while it also presents figures on the capacity of tourist accommodation across EU regions. The number of overnight stays, which reflects both the length of stay and the number of visitors, is considered a key indicator for accommodation statistics.

Coastal regions are very important for tourism in many EU Member States. Chapter 13, which is dedicated to coastal regions, provides a specific focus on tourism and on transport.

Main statistical findings

According to the United Nations World Tourism Organisation, Europe is the most frequently visited region in the world. In 2009, five of the top 10 countries for visitors in the world were EU Member States. The wealth of European cultures, the variety of its landscapes and the exceptional quality of its tourist infrastructure are likely to be among many of the reasons why tourists choose to take their holidays in Europe.

Number of overnight stays

There were 2 233 million nights spent in hotels, campsites and other collective accommodation establishments (the latter includes tourist dwellings) across the EU-27 in 2009, of which 1 331 million were by domestic tourists in their own country of residence.

Map 7.1 gives an overview of the number of overnight stays by, both, residents and non-residents in 2010. Tourism in the EU is often concentrated in coastal regions, although the Alpine regions and some cities also experience high demand. A total of 54 regions (and Ireland for which no regional analysis is available) in the EU-27 recorded more than 10 million nights spent in hotels, campsites and other collective accommodation establishments, among which 20 regions recorded more than 24 million nights. This top 20 list included six regions from Italy, five each from Spain and France, two from Germany and one each from Austria and the United Kingdom; note that Ireland as a whole recorded 33.7 million overnight stays.

The top 20 tourist regions (excluding Ireland) are shown in Figure 7.1, with an analysis between the different types of accommodation. These 20 regions together accounted for 38.3 % of all overnight stays in the 270 regions of the EU-27 for which data are available. The Spanish island region of the Canarias and the French capital city region of Île-de-France had by far the highest numbers of overnight stays, 79.1 million and 74.0 million respectively. They were followed by: the Spanish region of Cataluña, which includes Barcelona, the Costa Brava and Costa Dorada (65.1 million); the Italian region of Veneto, which includes Venice (60.8 million); and another Spanish region, the Illes Balears, which includes the main island destinations of Mallorca, Menorca, Eivissa (Ibiza) and Formentera (58.2 million). Almost one in seven tourism nights spent in the EU was spent in one of these five regions. Inner London in the United Kingdom (eighth place), Tirol in Austria (16th place) and the German regions of Oberbayern (18th place) and Mecklenburg-Vorpommern (20th place), were the only regions in the top 20 that were not in one of the three leading tourism Member States. Jadranska Hrvatska (Croatia) recorded 34.9 million overnight stays in 2010, which was between the levels recorded by the regions ranked 12th and 13th in the EU.

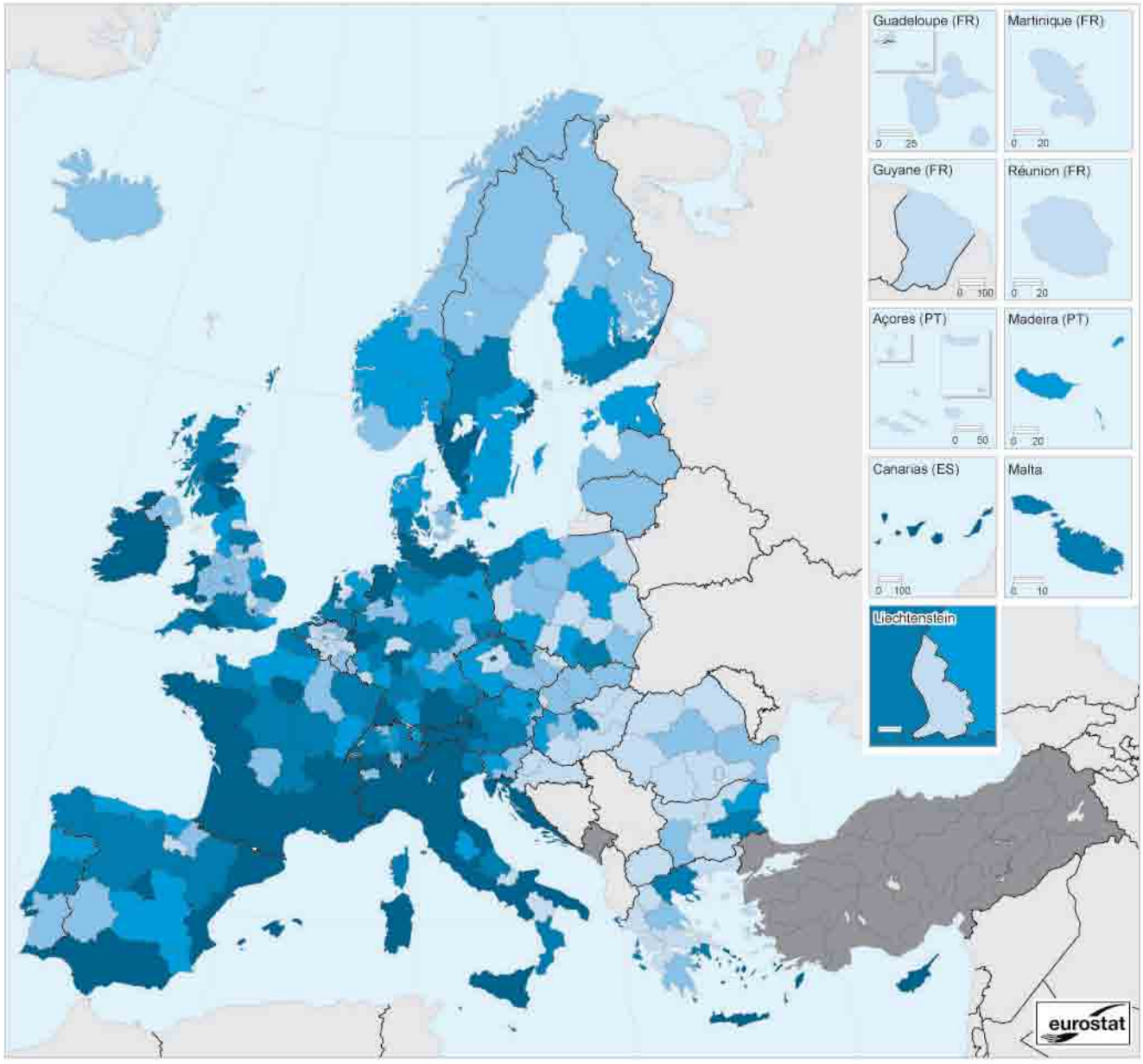
In 14 of the top 20 regions in the EU, more than half of the nights were spent in hotels and similar establishments. The regions with the largest number of overnight stays in hotels in 2010 were the capital city regions of the Île de France and Inner London, alongside the Spanish regions of the Canarias, Illes Balears, Cataluña and Andalucía, all with more than 40 million overnight stays; the top 20 region with the highest proportion of nights spent in hotels was Tirol in Austria (91.2 %). Among the six remaining top 20 regions (four southern French regions, Veneto in Italy and Mecklenburg-Vorpommern in Germany) a majority of the nights spent by tourists were in campsites and other types of collective accommodation. Overall, the regions with the highest number of overnight stays on campsites were the French regions of Languedoc-Roussillon, Aquitaine, Provence-Alpes-Côte d'Azur and the Pays de la Loire (the latter was not one of the top 20 regions), as well as Veneto in Italy and Cataluña in Spain, all with more than 10 million overnight stays on campsites; note that Jadranska Hrvatska (Croatia) also recorded more than 10 million overnight stays on campsites. The top two tourist regions for other collective accommodation establishments were the Canarias (Spain) and Rhône-Alpes (France), both with more than 20 million overnight stays.

Recent trends in tourism

Maps 7.2 and 7.3 show the annual average rate of change in the number of nights spent in hotels and on campsites during the period 2007–10. In the EU-27, this measure of tourism showed an average fall of 2.2 % per year for hotels and a rise of 2.3 % per year for campsites. It is likely that the different developments observed for hotels and campsites can be linked to the financial and economic crisis, and the substitution of nights spent in hotels by nights spent in campsites may have been in order to lower the cost of a holiday.

Concerning hotels, this measure of tourism fell in 145 of the 268 regions with data available, with average reductions of 4 % or more per annum in 47 regions and losses of 10 % or more in nine regions. Several of the regions with large falls were in France, Romania and the United Kingdom, with the largest reduction (– 16.5 % per annum) in the French region of Guadeloupe. Among the regions in the EFTA countries,

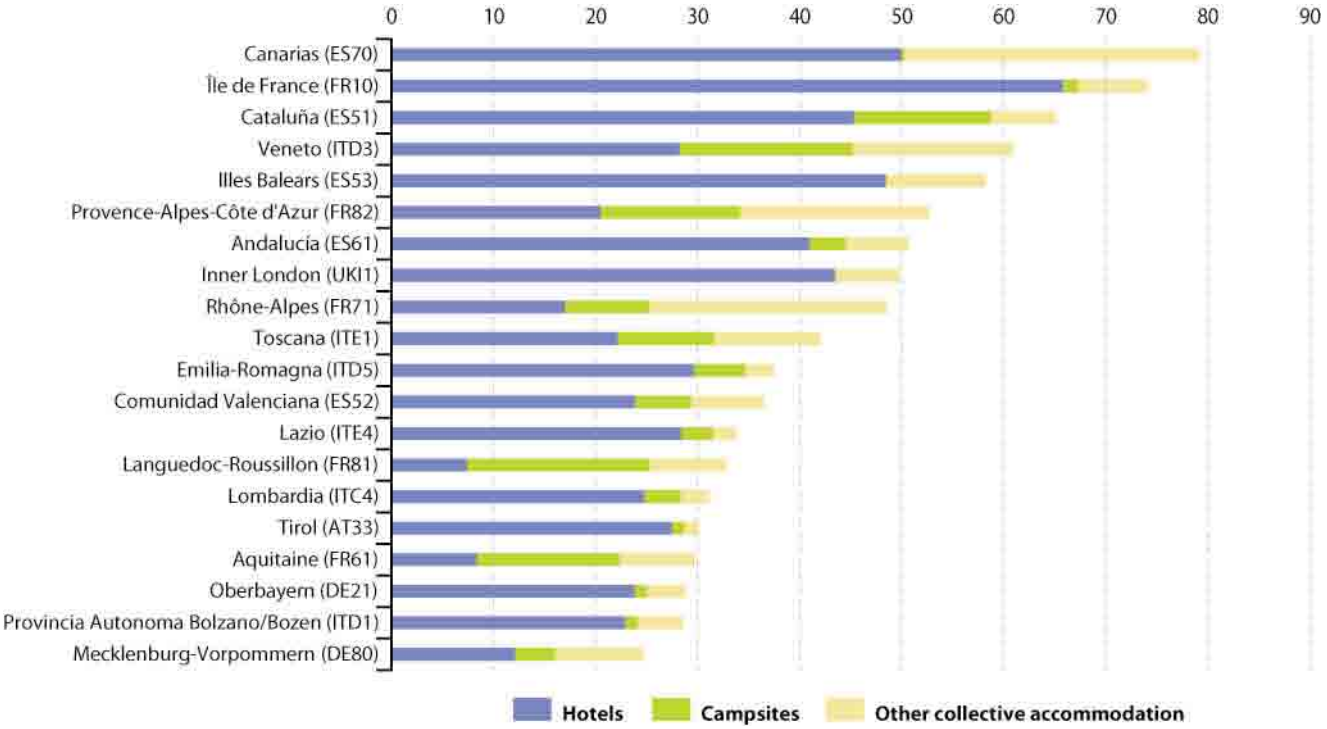
Map 7.1: Nights spent in hotels, campsites and other collective accommodation establishments, by NUTS 2 regions, 2010 (1)
(million nights)



(1) Nord-Est (ITD), Centro (ITE) and Hungary, provisional; EU-27 and Luxembourg, 2009; Ireland, 2006; Switzerland, hotels and campsites only; Ciudad Autónoma de Ceuta (ES63), Ciudad Autónoma de Melilla (ES64), Guadeloupe (FR91), Martinique (FR92), Guyane (FR93) and Réunion (FR94), hotels only; Ireland, national level.

Source: Eurostat (online data code: tour_occ_nin2)

Figure 7.1: Top 20 EU-27 tourist regions, number of nights spent in hotels, campsites and other collective accommodation establishments, by NUTS 2 regions, 2010 (1)
(million nights)



(1) Veneto (ITD3), Toscana (ITE1), Emilia-Romagna (ITD5), Lazio (ITE4) and Provincia Autonoma Bolzano/Bozen (ITD1), provisional.
Source: Eurostat (online data code: tour_occ_nin2)

the largest fall was –4.9 % per annum in the Norwegian region of Hedmark og Oppland. All four regions in Croatia and the former Yugoslav Republic of Macedonia recorded a reduction in their respective number of nights spent in hotels, but the Croatian region of Središnja i Istočna (Panonska) Hrvatska was the only one to record an average decline in excess of 5 % per annum.

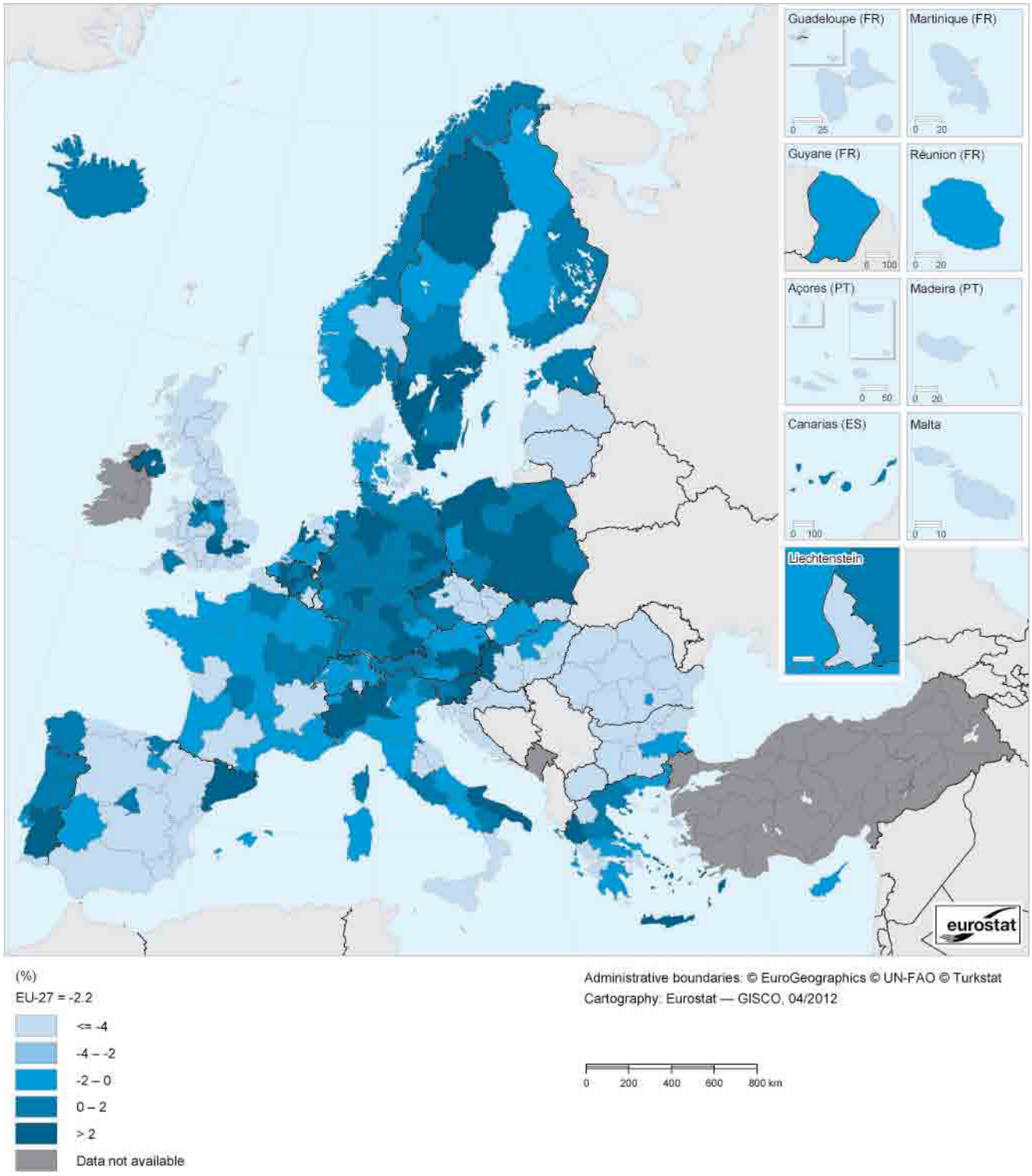
In contrast, 54 regions in the EU recorded an annual average increase in excess of 2 %, among which 16 recorded average growth above 5 % per annum, but only the Dutch region of Flevoland recorded growth in excess of 10 %. Six of the regions with average growth above 5 % were in Poland and three each in Belgium and Germany, two in the United Kingdom and one each in Italy and the Netherlands.

Camping

A more varied development could be seen for campsites (see Map 7.3), with a much wider range in the rates of change between 2007 and 2010. The number of nights spent on campsites fell by an average of 8 % or more per annum in 47 of the 248 regions for which data are available; among these there were reductions of 20 % or more per annum in 17 regions, with the largest decline recorded for the Bulgarian region of Yugoiztochen (– 52.3 % per annum). The regions where the number of nights spent in campsites fell by 20 % or more per year were spread across eight Member States, but included several capital city regions, notably those in the Czech Republic, Spain and Slovakia. In contrast, 47 regions recorded an annual average increase in excess of 4 %, among which 20 regions posted growth averaging more than 10 % per annum. The fastest average growth was also recorded in Bulgaria, 129.8 % in the region of Severozapaden; this high growth rate was recorded from a very low number of nights spent on campsites. Four of the regions with average growth above 10 % were in Poland, three each in Germany, Greece and the United Kingdom, two in Bulgaria and one each in Belgium, Cyprus, Spain, Italy and the Netherlands.

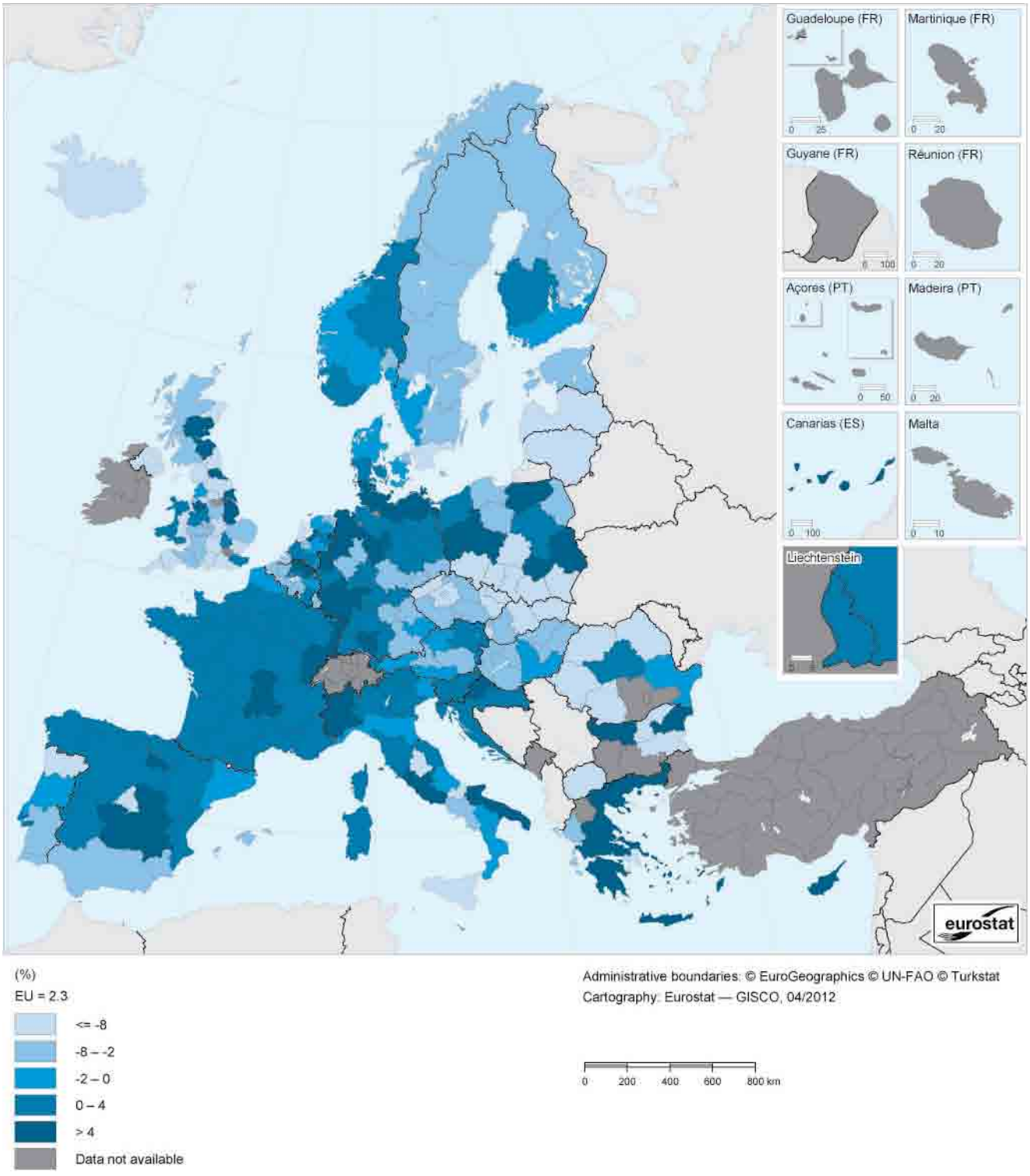
In the regions of western Europe (mainly coastal), particularly in Scandinavian countries, campsites were more frequently used as tourist accommodation than in central and eastern Europe. Taking an average across the 257 regions of the EU-27 for which data are available, around one in six of all overnight stays were spent on campsites, with the remaining five out of six in hotels and other collective accommodation establishments. Map 7.4 shows significant disparities in the regional share of camping: regions with campsites accounting for more than 30 % of the total nights spent in

Map 7.2: Nights spent in hotels, by NUTS 2 regions, average annual change, 2007–10 ([1])
(%)



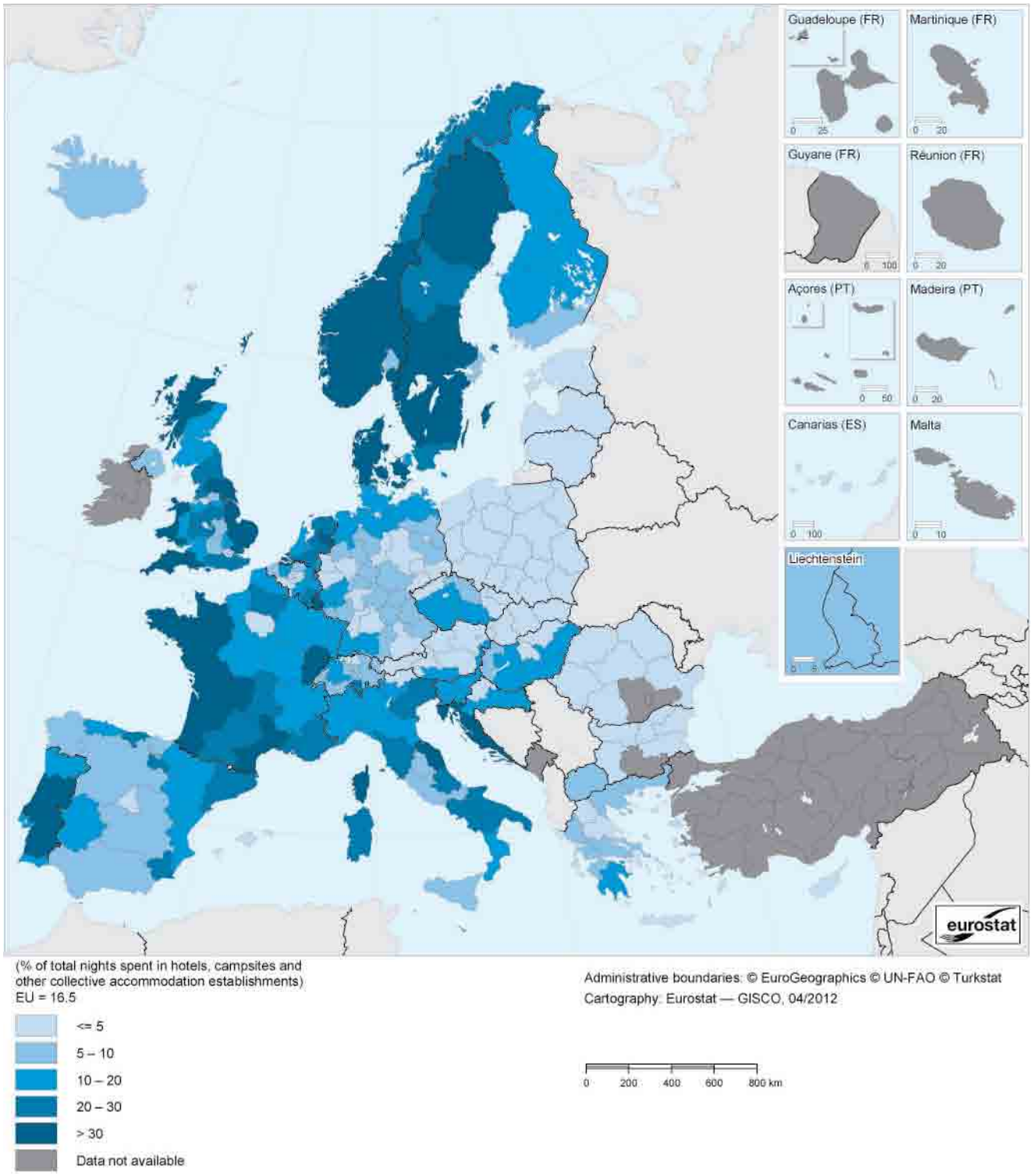
([1]) Nord-Est (ITD), Centro (ITE) and Hungary, provisional; EU-27 and Luxembourg, 2007–09; the former Yugoslav Republic of Macedonia, 2008–10; London (UKI), by NUTS 1 region.
Source: Eurostat (online data code: tour_occ_nin2)

Map 7.3: Nights spent in campsites, by NUTS 2 regions, average annual change, 2007–10 ([1])
(%)



([1]) EU (excluding Ireland and Malta), Nord-Est (ITD), Centro (ITE) and Hungary, provisional; Severozapaden (BG31) and Luxembourg, 2007–09; Freiburg (DE13), Tübingen (DE14), Düsseldorf (DEA1), Münster (DEA3), Sud-Vest Oltenia (RO41), West Yorkshire (UKE4) and the former Yugoslav Republic of Macedonia, 2008–10; London (UKI), by NUTS 1 region.
Source: Eurostat (online data code: tour_occ_nin2)

Map 7.4: Share of nights spent in campsites, by NUTS 2 regions, 2010 (1)
(% of total nights spent in hotels, campsites and other collective accommodation establishments)



(1) Nord-Est (ITD), Centro (ITE) and Hungary, provisional; EU (excluding Ireland and Malta), Severozapaden (BG31) and Luxembourg, 2009; Switzerland, nights spent in campsites as a proportion of total nights spent in hotels and campsites.
Source: Eurostat (online data code: tour_occ_nin2)

hotels, campsites and other collective accommodation establishments were concentrated in the United Kingdom (10 regions), France (nine regions), Sweden (five out of eight Swedish regions), Denmark (four out of five Danish regions), the Netherlands and Portugal (two regions each) and Italy and Luxembourg (one region each). Furthermore, five of the seven Norwegian regions reported that more than 30 % of the tourist nights spent in hotels, campsites and other collective accommodation establishments were on campsites, as was the case in one of the Croatian regions.

No regions in Bulgaria, Estonia, Latvia, Lithuania, Poland, Romania or Slovakia had a share of nights spent on campsites above 5 %. With the exception of Luxembourg (analysis based on the whole country at NUTS level 2), where the share of nights spent on campsites reached 32.8 % in 2009, the likelihood of spending the night on a campsite was generally low in capital city regions. This share exceeded 10 % (but was under 14 %) only in the capital city regions of the Netherlands, Slovenia, Denmark and Portugal, all of which are coastal regions; in 16 of the Member States the share of nights spent on campsites was under 5 % in the capital city regions.

Share of inbound tourism

For the EU-27 as a whole, non-residents accounted for 40.4 % of all overnight stays in hotels, campsites and other collective accommodation establishments in 2009. Across the regions of the EU in 2010, the share of inbound tourism (visits from abroad) differed very widely, ranging from a low of 3.1 % of the total nights spent in the Romanian region of Sud-Vest Oltenia to a high of 95.3 % of all nights spent in Malta. Foreign overnight visitors also accounted for more than 90 % of overnight stays in Luxembourg, the Greek region of Kriti, the Czech capital city region of Praha and Cyprus; this level was also exceeded in Liechtenstein and the Croatian region of Jadranska Hrvatska.

Map 7.5 shows overnight stays by foreign visitors as a percentage of total overnight stays. In total there were 48 EU regions where more than half of the overnight stays in 2010 were made by non-residents. This was often the case in capital city regions — the only exceptions being Germany, Spain, Finland, Sweden and Poland; no data are available for Ireland. Southern Europe's island and coastal regions recorded particularly high shares of overnight stays by foreign visitors, especially Malta, Cyprus, the Greek island regions, the Spanish Illes Balears and Canarias, the Spanish region of Cataluña, the Portuguese Região Autónoma da Madeira, the Portuguese region of the Algarve, the Bulgarian Black Sea coast and the Italian region of Veneto. Alpine regions in Austria and Italy also recorded a majority of their overnight stays being made by foreign visitors, as did many regions in Belgium, Greater Manchester in the United Kingdom, the Finnish island region of Åland and Severozápad in the Czech Republic (which includes the spa city of Karlovy Vary).

Top 20 tourist regions in the EU-27 visited by foreign tourists

Figure 7.2 shows the top 20 EU regions recording the highest number of overnight stays by foreign (inbound) tourists in 2010. These top 20 regions accounted for more than half of all overnight stays by non-residents across the EU-27. The top six regions visited by foreign tourists (Canarias, Illes Baleares, Inner London, Cataluña, Île-de-France and Veneto) collectively recorded more overnight stays than the next 14 regions put together. The list of the top 20 tourist regions visited by foreign tourists includes regions from eight different Member States: Spain, the United Kingdom, France, Italy, Austria, Greece, Cyprus and the Netherlands: five of the regions were Spanish and five were Italian. The Croatian region of Jadranska Hrvatska had 32.1 million overnight stays from non-residents, which placed it between the sixth and seventh most popular regions within the EU (by this measure).

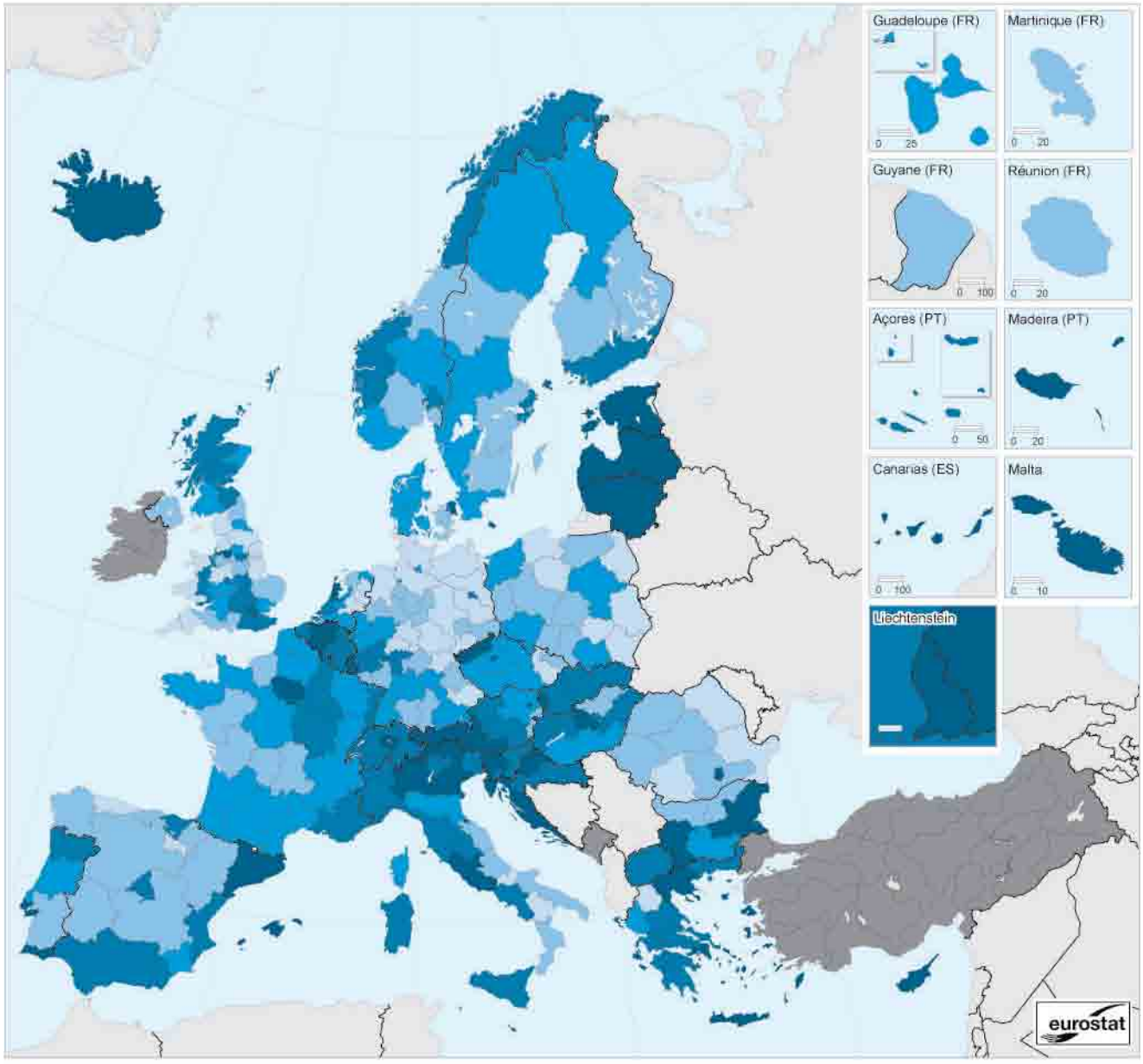
Most popular regions

Across the whole of the EU-27 in 2009, the most popular region for residents to visit was the capital city region of France (Île de France) with almost 30 million nights spent by domestic tourists — this increased to 36 million nights in 2010. The most popular destinations for non-residents were the Spanish island regions of the Canarias and Illes Balears, where almost 61 million nights and just over 48 million nights, respectively, were spent by foreign tourists in 2009; this increased to 65 million and 51 million in 2010.

Table 7.1 shows by country, separately for residents and non-residents, which region had the most overnight stays in hotels, campsites and other collective accommodation establishments in 2010. Tourists often visit regions with a coastline and this is, by definition, the case for the nine Member States where all NUTS level 2 regions have a coastline; equally this was not the case for the five Member States that are landlocked.

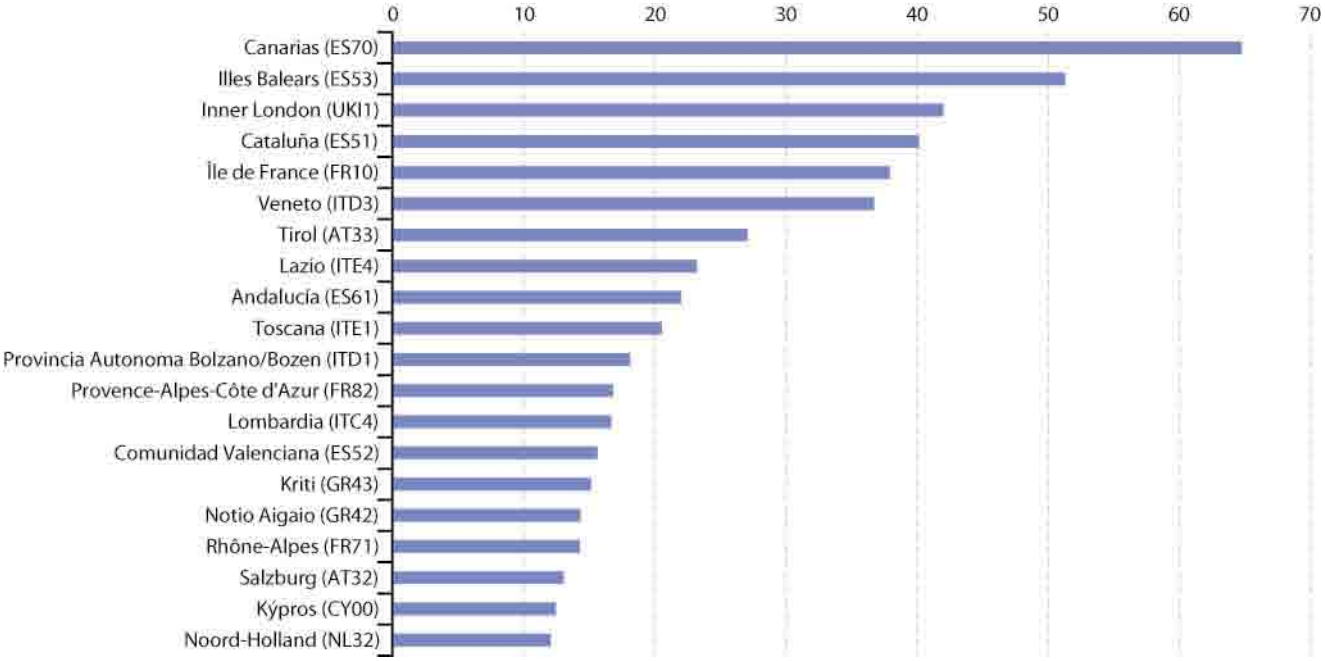
Of the remaining 13 Member States (that were neither landlocked nor completely coastal) the most visited region was generally different for residents and for non-residents, the only exceptions being the Black Sea coastal region of Yugoiztochen (Bulgaria), the Île de France (which includes Paris, France) and Etelä-Suomi (which includes Helsinki, Finland). Among residents, the most popular region had a coastline in 10 of these 13 Member States, the exceptions being in France, the Netherlands and Slovenia. Among non-residents, the situation was more balanced, with the most visited region having a coastline in seven of the 13 Member States; in five of the most popular regions for non-residents that did not have a coastline the most popular region was the capital city region, the only exception being Poland where the region of Małopolskie (including the city of Kraków) was the most popular for non-residents.

Map 7.5: Share of non-resident nights spent in hotels, campsites and other collective accommodation establishments, by NUTS 2 regions, 2010 (1)
(% of total nights spent by residents and non-residents)



(1) Nord-Est (ITD), Centro (ITE) and Hungary, provisional; EU-27 and Luxembourg, 2009; Switzerland, hotels and campsites only; Ciudad Autónoma de Ceuta (ES63), Ciudad Autónoma de Melilla (ES64), Guadeloupe (FR91), Martinique (FR92), Guyane (FR93) and Réunion (FR94), hotels only; London (UKI), by NUTS 1 region.
Source: Eurostat (online data code: tour_occ_nin2)

Figure 7.2: Top 20 EU-27 tourist regions, number of nights spent by non-residents in hotels, campsites and other collective accommodation establishments, by NUTS 2 regions, 2010 (1)
(million nights)



(1) Nord-Est (ITD), Centro (ITE) and Hungary, provisional; Luxembourg, 2009.
Source: Eurostat (online data code: tour_occ_nin2)

Among the nine Member States where all NUTS level 2 regions have a coastline, there were only four countries with more than one region. Of these, non-residents were most likely to visit the capital city regions in Denmark and Sweden, while in Portugal they were more likely to visit the Algarve; for Ireland information is not available for non-residents.

Among the four landlocked Member States with more than one region (therefore excluding Luxembourg) the most popular regions were a mixture of capital city regions (for non-residents visiting the Czech Republic or Hungary) and regions with mountains, lakes and historic towns and cities.

Tourism intensity

Map 7.6 provides a measure of tourism intensity (also called carrying capacity): it measures the number of overnight stays in relation to the resident population. This serves as an indicator of the relative importance of tourism for a region. It provides a more nuanced guide to the economic significance of tourism for a region than the absolute number of overnight stays. Furthermore, in the context of the sustainability of tourism, it can also be seen as an indicator of possible tourism pressure. The average tourism intensity in the EU-27 was 4 463 overnight stays per 1 000 inhabitants in 2009.

The huge importance of tourism to many of the EU's coastal regions and, even more so, to its islands and most of the Alpine region, is clear from Map 7.6. A total of 30 EU regions recorded a tourism intensity of more than 10 000 overnight stays (in hotels, campsites or other collective tourist accommodation) per 1 000 inhabitants (data are generally available for 2010): six were in the United Kingdom (data are for 2009), five in Italy, four in Austria, three in Greece, two each in Germany, Spain, the Netherlands and Portugal, and one each in Cyprus, Finland, France (2009) and Malta. From a geographical perspective, seven of these regions were Alpine and 20 of them had a coastline; the three regions that were neither Alpine nor had a coastline were the German region of Trier, the Dutch region of Drenthe and Inner London in the United Kingdom.

The Italian Provincia Autonoma Bolzano/Bozen had the highest tourism intensity, with 56 519 overnight stays per 1 000 inhabitants in 2010, followed by the Spanish region of Illes Balears and the Greek region of Notio Aigaio, both with more than 50 000 overnight stays per 1 000 inhabitants.

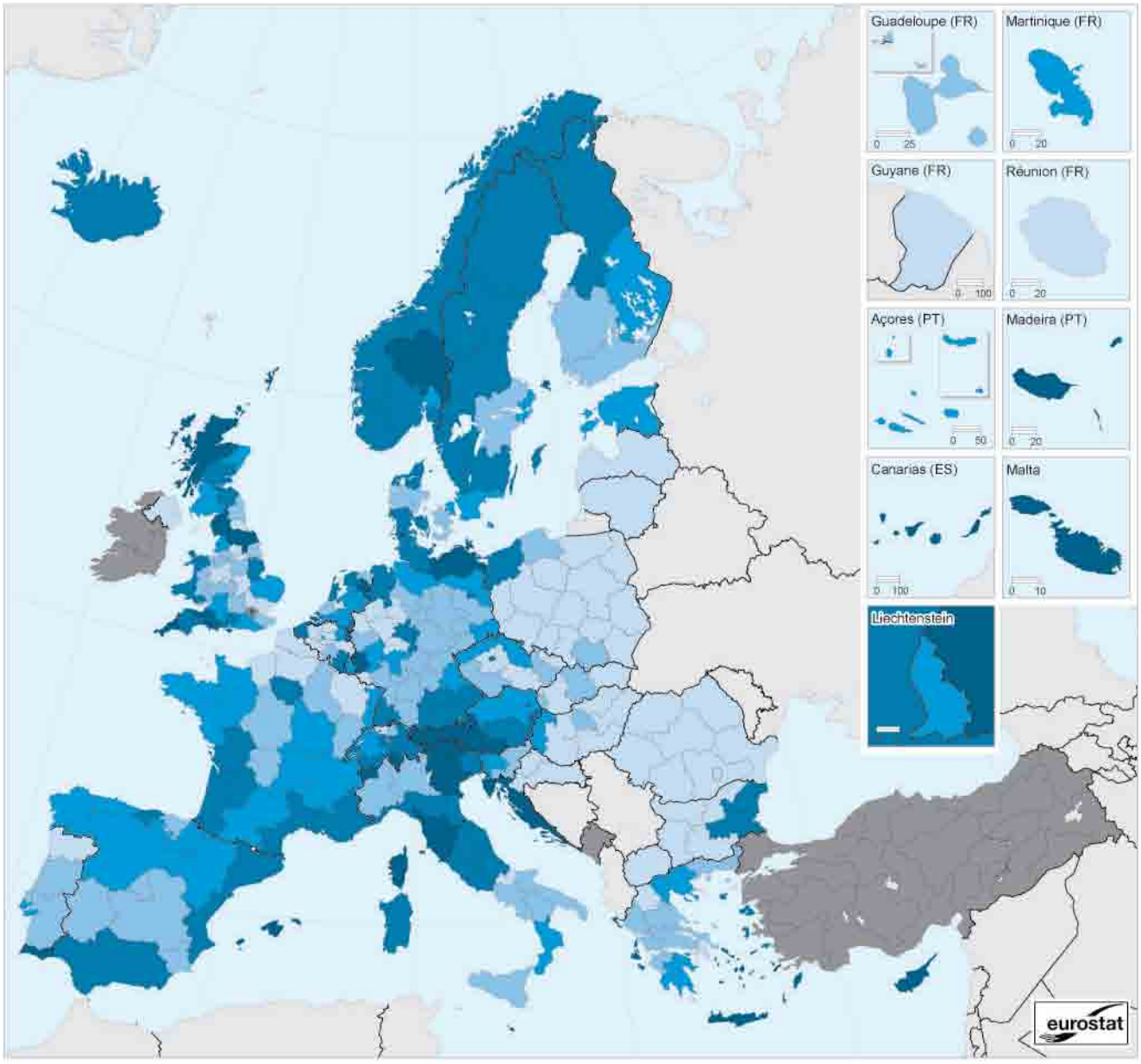
Among the regions within Iceland, Liechtenstein, Norway (2009) and Switzerland, the mountainous Norwegian region of Hedmark og Oppland had the highest tourism intensity, with 11 505 overnight stays per 1 000 inhabitants; the only other mountainous region with in excess of 10 000 overnight

Table 7.1: Most popular tourist regions, number of nights spent in hotels, campsites and other collective accommodation establishments, by NUTS 2 regions, 2010 (1)

	Residents			Non-residents		
	Total nights spent in country (million nights)	Most popular region	Share of most popular region in national total (%)	Total nights spent in country (million nights)	Most popular region	Share of most popular region in national total (%)
Belgium	14.1	Province/Provincie West-Vlaanderen (BE25)	31.4	16.2	Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest (BE10)	27.8
Bulgaria	5.6	Yugoiztochen (BG34)	27.7	10.5	Yugoiztochen (BG34)	46.0
Czech Republic	18.5	Severovýchod (CZ05)	26.3	18.4	Praha (CZ01)	59.6
Denmark	18.2	Syddanmark (DK03)	31.7	9.0	Hovedstaden (DK01)	43.5
Germany	265.8	Mecklenburg-Vorpommern (DE80)	9.0	59.7	Berlin (DE30)	14.2
Estonia	1.5		-	3.2		-
Ireland	12.7	Southern and Eastern (IE02)	68.6	:		:
Greece	17.8	Kentriki Makedonia (GR12)	18.3	49.0	Kriti (GR43)	30.9
Spain	151.5	Andalucía (ES61)	18.9	213.3	Canarias (ES) (ES70)	30.3
France	270.8	Île de France (FR10)	13.3	120.4	Île de France (FR10)	31.5
Italy	210.3	Emilia-Romagna (ITD5)	13.6	165.2	Veneto (ITD3)	22.2
Cyprus	1.4		-	12.4		-
Latvia	0.9		-	1.9		-
Lithuania	1.2		-	1.6		-
Luxembourg	0.2		-	2.1		-
Hungary	9.7	Nyugat-Dunántúl (HU22)	24.4	9.4	Közép-Magyarország (HU10)	55.9
Malta	0.4		-	7.3		-
Netherlands	58.1	Gelderland (NL22)	14.8	26.8	Noord-Holland (NL32)	45.0
Austria	31.2	Steiermark (AT22)	19.3	66.8	Tirol (AT33)	40.5
Poland	45.7	Zachodniopomorskie (PL42)	16.3	10.1	Malopolskie (PL21)	21.2
Portugal	19.6	Algarve (PT15)	24.9	25.4	Algarve (PT15)	40.1
Romania	13.3	Sud-Est (RO22)	26.2	2.8	Bucureşti - Ilfov (RO32)	38.6
Slovenia	3.7	Vzhodna Slovenija (SI01)	58.5	4.7	Zahodna Slovenija (SI02)	66.3
Slovakia	6.5	Stredné Slovensko (SK03)	37.0	3.7	Stredné Slovensko (SK03)	27.5
Finland	14.2	Etelä-Suomi (FI18)	35.7	5.0	Etelä-Suomi (FI18)	55.7
Sweden	36.7	Västsverige (SE23)	21.2	11.2	Stockholm (SE11)	29.8
United Kingdom	149.7	West Wales and The Valleys (UKL1)	6.5	84.6	London (UKI)	49.6
Iceland	0.8		-	2.1		-
Liechtenstein	0.0		-	0.2		-
Norway	20.6	Sør-Østlandet (NO03)	20.2	7.9	Vestlandet (NO05)	24.9
Croatia	3.8	Jadranska Hrvatska (HR03)	75.8	33.2	Jadranska Hrvatska (HR03)	96.4
FYR of Macedonia	0.7		-	0.5		-

(1) Nord-Est (ITD), Centro (ITE) and Hungary, provisional; Ireland, estimates; Ireland and Luxembourg, 2009; London (UKI), by NUTS 1 region.
Source: Eurostat (online data code: tour_occ_nin2)

Map 7.6: Tourism intensity: nights spent in hotels, campsites and other collective tourist accommodation, by NUTS 2 regions, 2010 (1)
(per 1 000 inhabitants)



(1) Nord-Est (ITD), Centro (ITE) and Hungary, provisional; EU-27, Belgium, Chemnitz (DED1), Dresden (DED2), Leipzig (DED3), France, Luxembourg, the United Kingdom and Norway, 2009; Switzerland, hotels and campsites only; Ciudad Autónoma de Ceuta (ES63), Ciudad Autónoma de Melilla (ES64), Guadeloupe (FR91), Martinique (FR92), Guyane (FR93) and Réunion (FR94), hotels only.

Source: Eurostat (online data codes: tour_occ_nin2 and demo_r_d3avg)

stays per 1 000 inhabitants was Ticino (Switzerland). The Croatian coastal region of Jadranska Hrvatska recorded 23 784 overnight stays per 1 000 inhabitants, which was a slightly higher intensity than the 13th ranked region within the EU.

In contrast, at the other end of the ranking there were 71 regions with 2 000 or fewer overnight stays per 1 000 inhabitants, of which 22 had 1 000 or fewer overnight stays per 1 000 inhabitants. Most of the latter were located in Poland (8 regions), Romania (6 regions), Bulgaria (3 regions) or Belgium (2 regions, 2009). Apart from Jadranska Hrvatska, the remaining two Croatian regions as well as the former Yugoslav Republic of Macedonia also recorded a level of intensity below 1 000 overnight stays per 1 000 inhabitants.

Average length of stay

Map 7.7 shows the average length of stay in hotels, campsites and other collective tourist accommodation in 2010. The total number of nights spent in a region is influenced by the number of visitors and their average length of stay. The importance of each of these two factors depends on the nature of the region. For example, urban regions frequently have very large numbers of visitors, but they tend to stay for only a few days. A large proportion of visitors to these regions are often there for professional reasons, but tourists staying for private reasons also tend to opt for relatively short stays. In contrast, the average length of stays was substantially longer in typical holiday regions visited chiefly for recreational purposes. Note that the data presented refer to the average duration of stay at a particular establishment and as such does not necessarily reflect the duration of stay in a particular region, as it is possible that tourists move from one establishment to another, staying at different hotels or campsites within the same region when they are touring around a specific area.

There were 56 NUTS level 2 regions within the EU that reported an average length of stay in hotels, campsites and other collective tourist accommodation of more than 3.5 nights in 2010. The highest figures were recorded in Spanish and Greek holiday destinations, with the top five regions including the Canarias (7.5 nights), Kriti (6.7 nights), the Illes Balears (6.6 nights) and Notio Aigaio and Ionia Nisia (both 6.3 nights).

The highest average numbers of nights spent in campsites were observed mainly in coastal regions, while for hotels the longest average stays were mainly in island regions. Overall, visitors tended to stay longer in campsites than in hotels: for the EU-27 as a whole the average length of stay in campsites was 4.9 nights in 2010 (excluding Ireland, Luxembourg and Malta) compared with 2.5 nights for hotels (excluding Ireland and Luxembourg).

Accommodation capacity

In the EU-27 there were more than 200 000 hotels and in excess of 27 000 tourist campsites in 2010; together these provided 12.5 million bed places in hotels and around 9.4 million places on tourist campsites; a further 5.6 million bed places (2009 data) were available in other collective accommodation establishments, including tourism dwellings.

Eight NUTS level 3 regions within the EU offer more than 100 000 bed places in hotels: three in Spain (Mallorca, Barcelona and Madrid), three in Italy (Bolzano/Bozen, Rimini and Roma), one in France (Paris) and one in Greece (Dodekanisos). Map 7.8 gives an overview of the number of bed places in hotels in 2010. Regions with a high number of bed places in hotels are, unsurprisingly, often the same regions that recorded a high number of overnight stays. They were mainly concentrated around coastal, mountainous and lake regions as well as in regions with capital and other major cities.

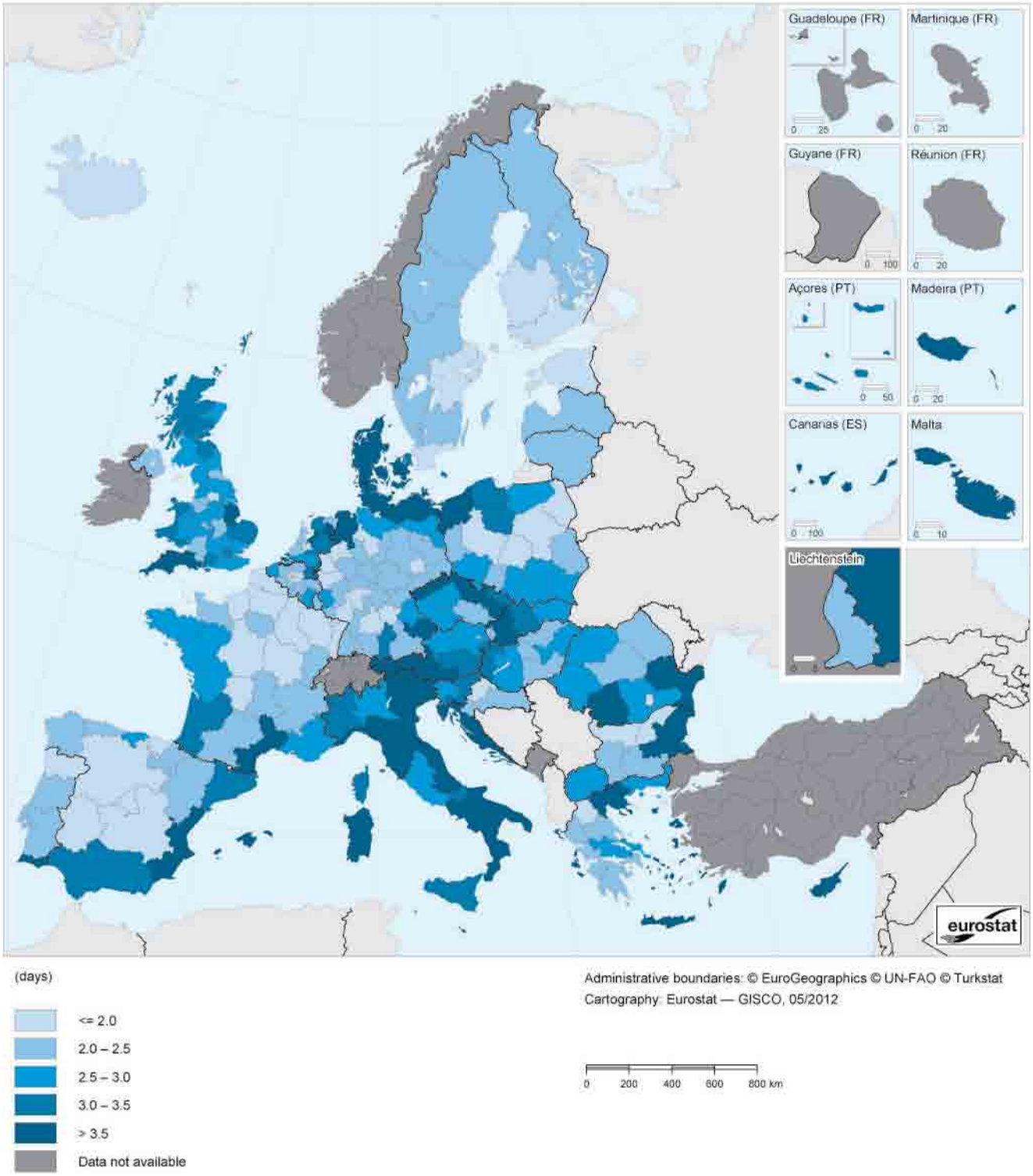
Nine out of the top 20 EU regions (NUTS level 3) ranked according to their accommodation capacity in 2010 were in France, while five each were in Spain and Italy and one in the United Kingdom. Figure 7.3 shows these top 20 regions with an analysis by type of accommodation. With the exceptions of Paris, and to a lesser extent Savoie, the French regions in this list offered mainly accommodation on campsites, while the Italian regions had a higher share of their capacity located in hotels (with the exception of Venezia). The Spanish regions were more diverse, with hotels dominating accommodation capacity on Mallorca, campsites providing more than half of the accommodation capacity in Girona (Costa Brava) and other collective accommodation (for example, tourist dwellings available for rent) reaching close to 40 % in Alicante/Alacant.

Data sources and availability

Harmonised statistical data on tourism have been collected since 1996 in the EU Member States on the basis of Council Directive 95/57/EC of 23 November 1995 on the collection of statistical information in the field of tourism. The programme covers both the supply side, for example through data on available accommodation capacity (establishments, rooms and bed places) and its occupancy (number of visitor arrivals and overnight stays), and the demand side, such as the travel behaviour of the population. Regional results are available only for the supply side.

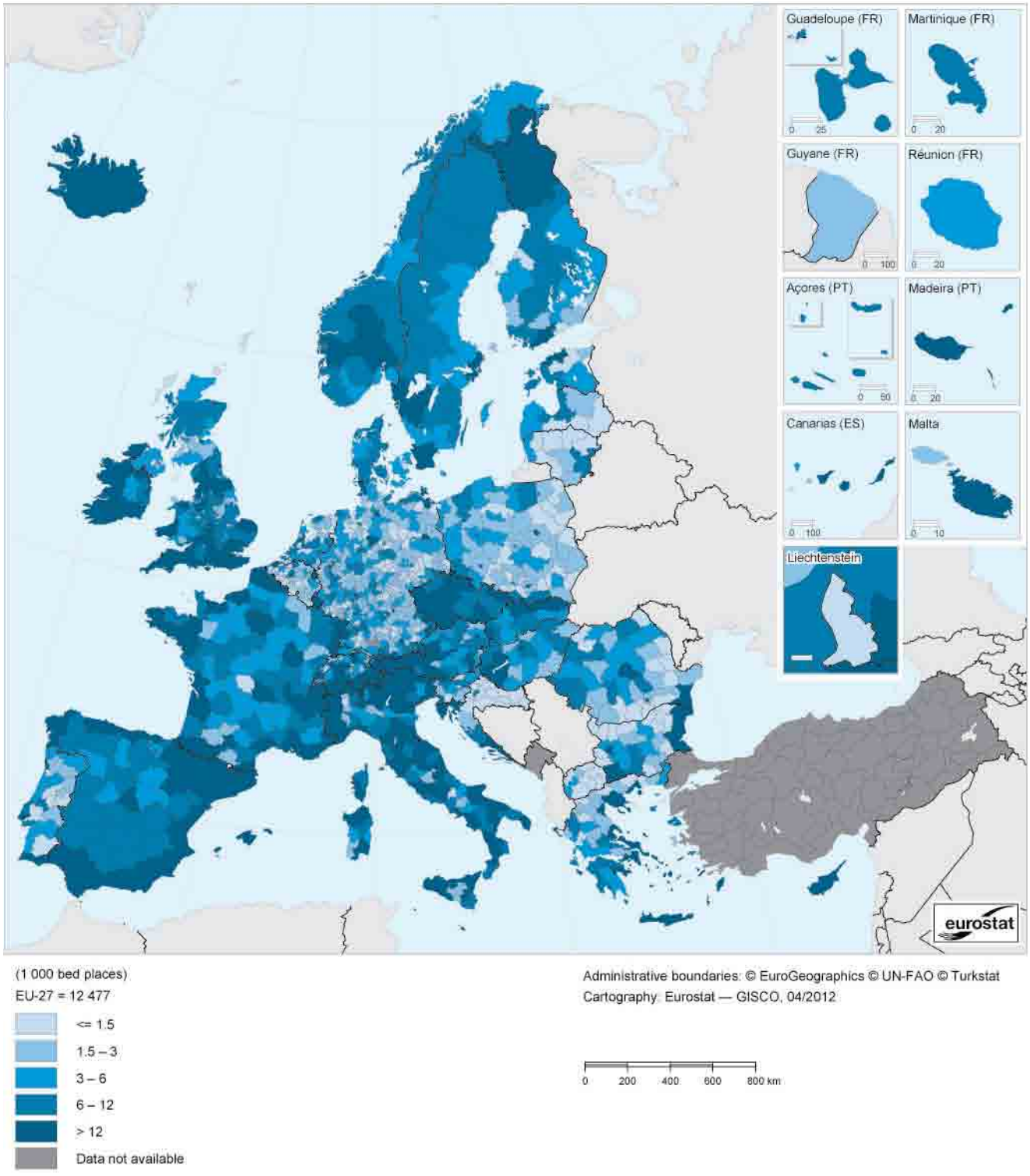
The statistical definition of tourism is broader than the common, everyday definition. It encompasses not only private trips but also business trips. This is primarily because it views tourism from an economic perspective. Private visitors and business visitors have broadly similar consumption patterns.

Map 7.7: Average length of stay in hotels, campsites and other collective tourist accommodation, by NUTS 2 regions, 2010 (1)
(days)



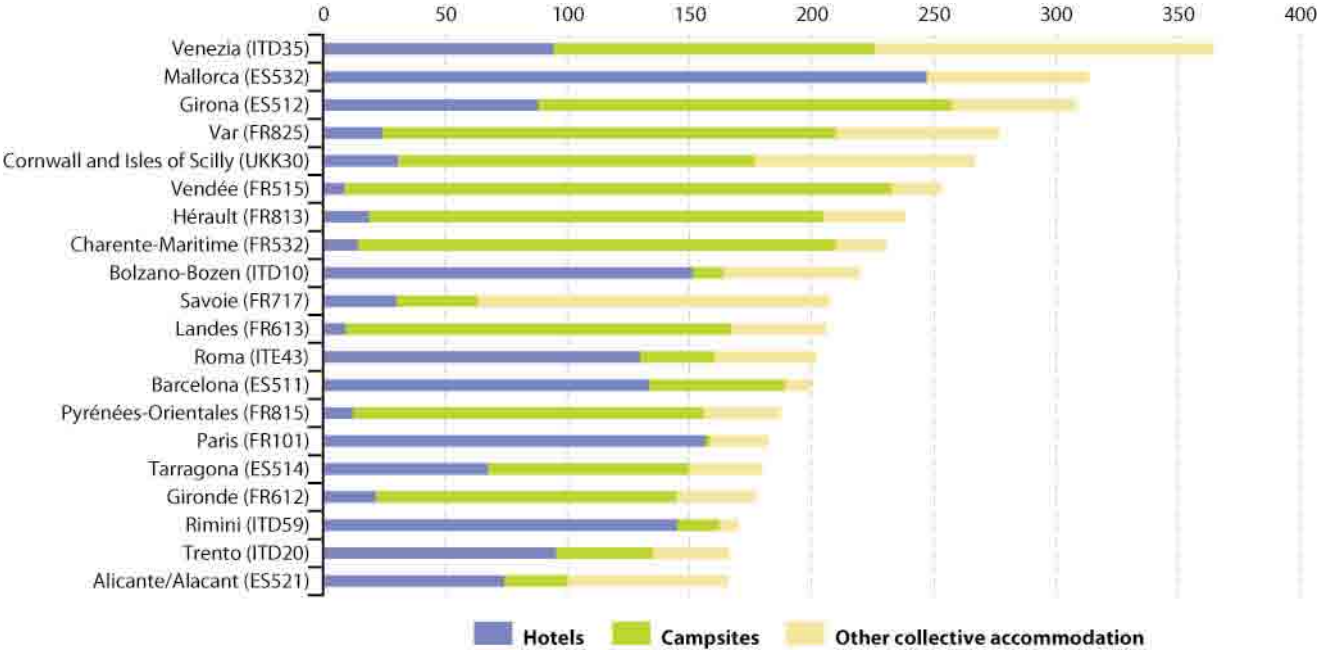
(1) Nord-Est (ITD), Centro (ITE) and Hungary, provisional; France, Luxembourg and Northern Ireland (UKN0), 2009; London (UKI), by NUTS 1 region.
Source: Eurostat (online data codes: tour_occ_nin2 and tour_occ_arn2)

Map 7.8: Number of bed places in hotels, by NUTS 3 regions, 2010
(1 000 bed places)



Source: Eurostat (online data code: tour_cap_nuts3)

Figure 7.3: EU-27 top 20 regions by accommodation capacity, number of bed places, by NUTS 3 regions, 2010 (1)
(1 000 bed places)



(1) Based on available information, data for some regions are missing or only available for a previous reference period; France, 2009.
Source: Eurostat (online data code: tour_cap_nuts3)

They both make significant demands on transport, accommodation and restaurant services. To providers of these services, it is of secondary interest whether their customers are private tourists or on business. Tourism promotion departments are keen to combine both aspects by emphasising the attractiveness of conference locations as tourist destinations in their own right and feature these services in marketing activities.

Previous editions of this publication focused on hotels and campsites; recent improvements in data availability have made it possible to extend the coverage in this year's publication so as to include other collective accommodation establishments too.

Further information

For further information about tourism statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/tourism/introduction.

Context

The ongoing enlargement process within the EU has enriched tourism potential by the increased cultural diversity. Tourism is particularly significant in remote regions which are far from the economic centres of their country, where tourism-related services are often a prominent factor in securing employment and are one of the main sources of income for the local population. This applies especially to Europe's island states and regions, to many coastal regions (see also Chapter 13), particularly in southern Europe, and to the whole of the Alpine region.

Tourism is an important activity with social, cultural and environmental implications, involving large numbers of small and medium-sized enterprises. Its contribution to growth and employment varies widely from one region of the EU to another.

Tourism cuts across many activities: services to tourists include hotels and other accommodation, gastronomy (for example, restaurants or cafés), transport operators and a wide range of cultural and recreational facilities (for example, theatres, museums, leisure parks or swimming pools). In many regions geared to tourism, retail and other services sectors also benefit considerably from the additional demand generated by tourists.

Inbound tourism is of particular interest to analyses of tourism in a given region. The statistically important factor here is the usual place of residence of the visitors, not their nationality. Foreign visitors, particularly from far-away countries, usually spend more per day than domestic visitors during their trips and thus generate greater demand in the host economy. This

expenditure also contributes to the balance of payments of the country visited, and so impacts on the trade deficit or surplus.

Tourism policy

The role that tourism plays in generating growth and jobs and its impact on other policy areas ranging from regional policy, diversification of rural economies, maritime policy, sustainability and competitiveness to social policy and inclusion (tourism for all) are widely acknowledged. Tourism is reflected in national and EU policies: the Lisbon Treaty acknowledged the importance of tourism, outlining a specific competence for the EU in this field. The communication 'Europe, the world's No 1 tourist destination — a new political framework for tourism in Europe' (COM(2010) 352) was adopted In June 2010. Through this, the European Commission encouraged a coordinated approach for initiatives linked to tourism and defined a new framework for action to increase the competitiveness of tourism and its capacity for sustainable growth. It proposed a number of European or multinational initiatives — including a consolidation of the socioeconomic knowledge base for tourism. Globalisation of tourism opens up new opportunities, with tourists from new markets able to afford high-value vacations. The European Commission works together with the Member States and other tourism stakeholders on projects such as the European tourist destinations portal and European destinations of excellence (EDEN) in order to improve the visibility and sustainability of tourism. Another initiative concerns promoting tourism at times of the year that are traditionally regarded as the low season. This pilot initiative, called the 50 000 tourists initiative, aims to make use of spare capacity in transport networks and tourist infrastructure.

8

Information society

The widespread use of the Internet and the World Wide Web has led the development of what is often referred to as the information society. These related developments have created new dimensions of economic, social and political participation for individuals and groups. Online activities have become ubiquitous, meaning that the actual geographic location where they are performed usually does not matter, as long as there is a connection to the Internet.

The term digital divide has been coined to distinguish between those who have access to the Internet and are able to make use of the services offered on the World Wide Web and those who are excluded from these developments. This chapter emphasises the geographic aspects of the digital divide within the European Union (EU).

Main statistical findings

The maps in this chapter show the level of Internet access and usage, including use for online purchasing, in 2010. Regional data are available for all EU Member States, as well as Iceland, Norway, Montenegro, Croatia and the former Yugoslav Republic of Macedonia, while national data are included for Turkey.

Access to information and communication technologies

Access to information and communication technologies (ICT) is at the heart of the digital divide, and geographic location is just one aspect of this divide. Statistics on Internet connections and broadband access are closely related, as broadband is a type of Internet connection; efforts have been made across the EU to foster broadband Internet access. In 2011, more than seven out of 10 (73 %) households had access to the Internet at home and more than two thirds (68 % of households) accessed the Internet via broadband. These shares have grown rapidly in recent years, with average annual growth between 2006 and 2011 of 8.3 % for Internet access and 17.8 % for broadband access.

Maps 8.1 and 8.2 show the take-up of Internet and broadband connections by households: these regional data are available for the 2010 reference year, when 70 % of households had access to the Internet at home and 61 % had a broadband connection. The regional differences in Internet access within the EU were quite large, from 26 % of households in Severoiztochen and Severozapaden (both Bulgaria) to 95 % or more in Flevoland and Overijssel (both in the Netherlands); in other words, a factor of 3.7 to 1. Overall there were 35 regions where more than 85 % of households had Internet access, while 43 regions recorded access rates of 55 % or lower — of these there were 16 regions where 45 % or less of households had access. Among regions in Iceland and Norway, Internet access rates were generally very high, the lowest penetration rate being 86 % in Trøndelag (Norway), while rates in candidate countries were generally below the EU-27 average, ranging from 42 % of households in Turkey (no regional data available) to 61 % in Središnja i Istočna (Panonska) Hrvatska (Croatia).

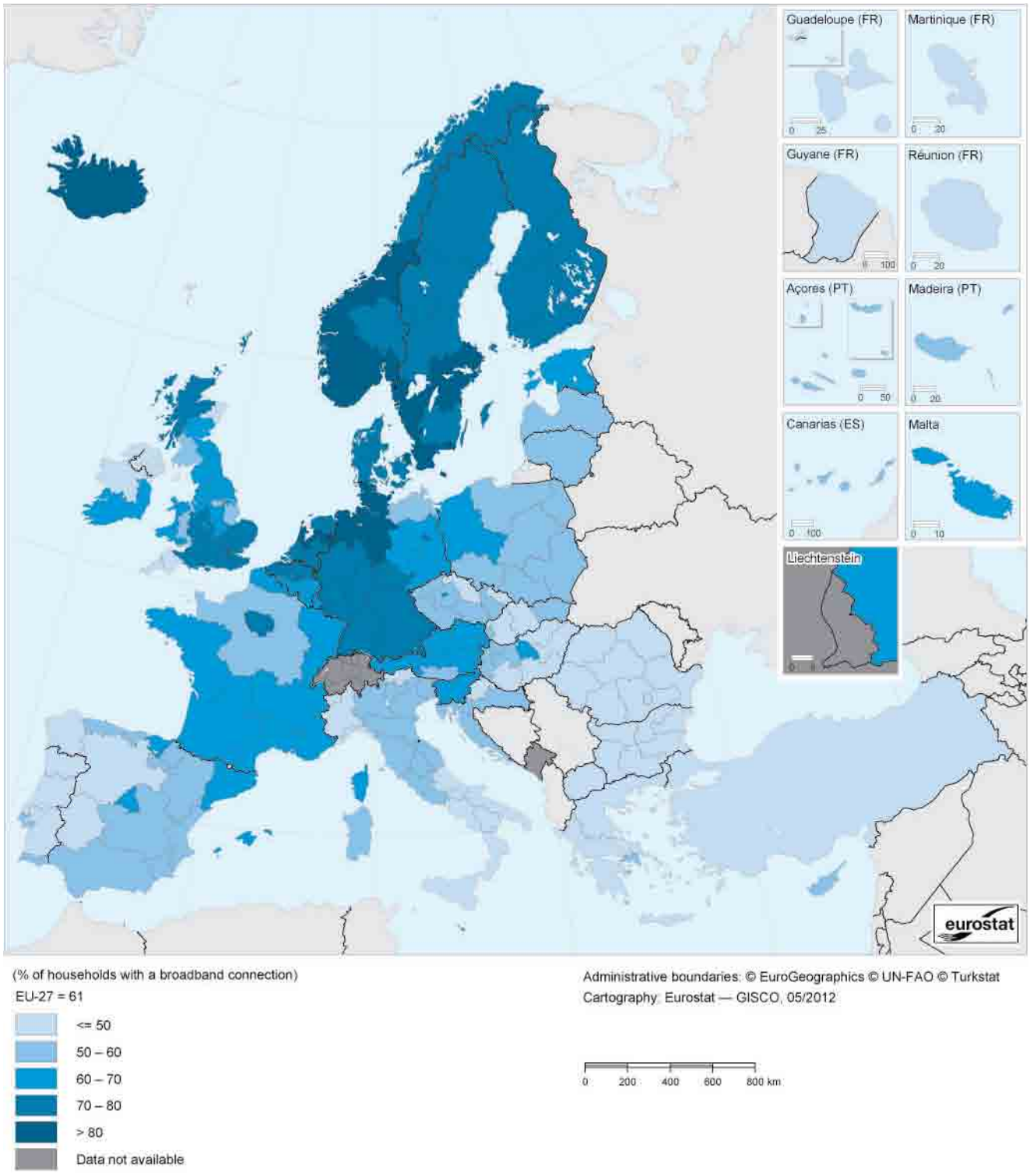
Growth between 2008 and 2010 in the proportion of households with Internet access was generally high in most regions of Greece, Bulgaria, Romania and the Czech Republic. Overall, 12 regions within the EU averaged increases of more than 20 % per annum, as did the former Yugoslav Republic of Macedonia. Internet access rates appear to have stabilised in many regions, with 14 regions recording annual average rates of change below 2 %; while six regions in the Netherlands, Austria and the United Kingdom saw their respective shares of households with Internet access stagnate between 2008 and 2010. When interpreting growth rates it should be borne in mind that it is easier to achieve high growth rates when starting from a lower level, whereas those regions approaching saturation are more likely to display a slowing down of growth rates, stagnation or even a slight reversal (a reduced proportion of households with Internet access).

The situation for broadband access was to some extent comparable with that for Internet access, although the regional differences tended to be somewhat larger in relative terms. In Stockholm (Sweden) around 87 % of households had broadband connections in 2010, whereas in Sud-Vest Oltenia (Romania) the share was 15 %, a factor of 5.8 to 1 between the highest and the lowest shares. There were 12 regions in the EU where more than 80 % of households had broadband connections: four each in Sweden and the Netherlands, two in Germany (NUTS level 1 regions) and one each in Denmark and the United Kingdom. A total of 48 regions in the EU recorded broadband connection rates of 50 % or lower — of these, there were 20 regions where 40 % or less of households had connections, and 12 of these had broadband connection rates of 30 % or lower. For EFTA countries data are available for Norway and Iceland: broadband connection rates were above the EU-27 average, ranging from 75 % in Hedmark og Oppland (Norway) to 87 % in Iceland. Broadband connection rates in candidate countries were below the EU-27 average, ranging from 34 % in Turkey (no regional data available) to 55 % in Središnja i Istočna (Panonska) Hrvatska (Croatia).

Within the EU, 21 of the Member States have multiple (more than one) regions at NUTS level 2. An analysis of the different levels of broadband connections between regions in the same Member State can be carried out using measures of dispersion. This shows that Denmark, Finland, Austria, Sweden and Poland had a relatively even level of connectivity across all of their regions; whereas Bulgaria, Romania and Greece reported a much wider range in connectivity rates between regions, mainly due to the capital city region having a much higher rate than other regions.

The regions with the highest increase in broadband connection rates between 2008 and 2010 were located in Greece (Kentriki

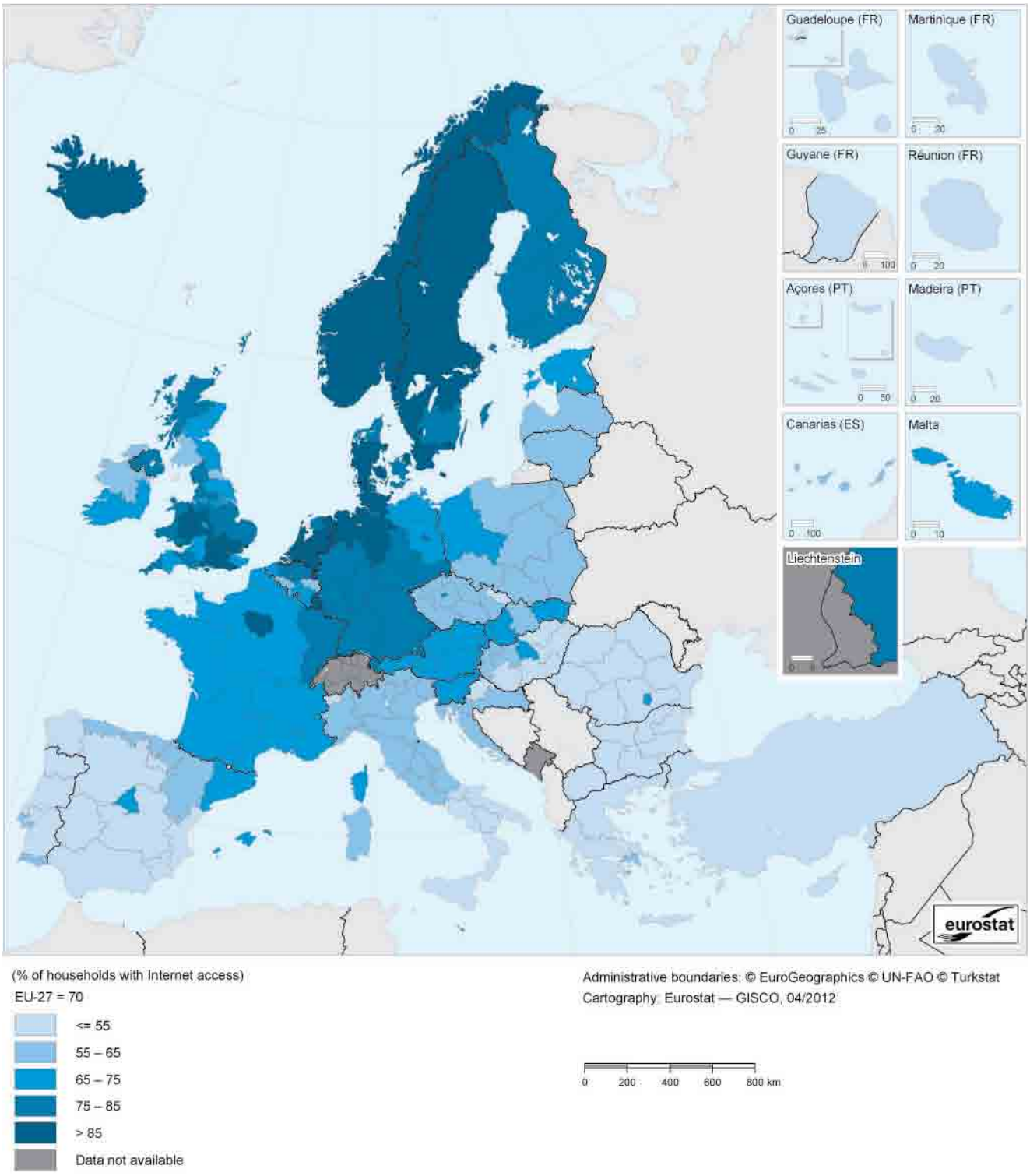
Map 8.1: Broadband connections in households, by NUTS 2 regions, 2010 (1)
(% of households with a broadband connection)



(1) The United Kingdom, 2009 except for: North Yorkshire (UKE2), Herefordshire, Worcestershire and Warwickshire (UKG1), Highlands and Islands (UKM6) and Northern Ireland (UKN0), 2008; East Wales (UKL2), 2007; Cumbria (UKD1), Lincolnshire (UKF3), Cornwall and Isles of Scilly (UKK3), Devon (UKK4) and North Eastern Scotland (UKM5), 2006; Germany, Greece, France and Poland, by NUTS 1 regions; Slovenia and Turkey, national level; Länsi-Suomi (FI19) and Åland (FI20) are combined.

Source: Eurostat (online data code: isoc_r_broad_h)

Map 8.2: Internet access in households, by NUTS 2 regions, 2010 ([1])
(% of households with Internet access)



([1]) Devon (UKK4) and Highlands and Islands (UKM6), 2008; Lincolnshire (UKF3), 2007; North Eastern Scotland (UKM5), 2006; Germany, Greece, France and Poland, by NUTS 1 regions; Slovenia and Turkey, national level; Länsi-Suomi (FI19) and Åland (FI20) are combined.
Source: Eurostat (online data code: isoc_r_iacc_h)

Ellada, Voreia Ellada, Nisia Aigaiou and Kriti), Italy (Calabria, and Sardegna), Romania (Vest and Nord-Vest), the United Kingdom (Shropshire and Staffordshire), the Czech Republic (Severozápad) and Bulgaria (Severozapaden); all of these regions had an average annual growth of at least 40 %. Only two regions in the EU recorded a fall in their respective level of broadband connections between 2008 and 2010, they were Groningen (Netherlands) and Severoiztochen (Bulgaria).

Regular use of the Internet

Over 70 % of individuals in the EU-27 used the Internet in 2011 and more than two thirds (68 %) were regular Internet users, in other words, they used the Internet at least once a week; the latter share rose from around 45 % in 2006. There is a relation between regular use of the Internet and broadband connectivity: regions with a higher share of broadband connections can be expected to have a higher share of regular Internet users — see Map 8.3 which presents regional data for 2010 when an average of 65 % of individuals used the Internet on a regular basis.

One of the aims of the 'Digital agenda for Europe' is to increase the regular use of the Internet to 75 % of the total population by 2015. This indicator ranged among the EU regions from 94 % of individuals in Flevoland (Netherlands) to 28 % in Sud-Vest Oltenia (Romania); in other words, a factor of 3.4 to 1, which was relatively close to the range observed for Internet access.

Overall there were 70 regions in the EU where more than 75 % of individuals were regular users of the Internet, among which were 24 regions where more than 85 % of individuals were regular users. In contrast, there were 62 regions where 55 % or fewer individuals were regular users of the Internet, among which were 27 regions (in Bulgaria, Greece, Italy, Portugal and Romania) where 45 % or fewer individuals were regular Internet users. Among regions within the EFTA countries, regular Internet use was widespread: the region with the lowest share was Sør-Østlandet (Norway), where an 86 % share was 21 percentage points above the EU-27 average. The incidence of regular Internet use in candidate country regions was consistently below the EU-27 average, ranging from 33 % of individuals in Turkey (no regional data available) to 57 % in Središnja i Istočna (Panonska) Hrvatska (Croatia).

Measures of regional dispersion (at NUTS level 2) indicate that the incidence of regular Internet use in Finland, Slovakia and Sweden was relatively evenly spread across regions; whereas in Romania, Greece (NUTS level 1 data) and Bulgaria there was a less regular regional pattern, again due to large differences between capital city regions and other regions.

E-commerce by individuals

In 2011, 43 % of individuals in the EU-27 reported that they had made online purchases (within the 12 months prior to the survey date); this figure had grown from 40 % in 2010 and from 26 % in 2006. In 2010 the proportion of individuals making online purchases ranged across EU regions from 81 % in Cumbria (United Kingdom) to 2 % in the Nord-Vest and Sud - Muntenia regions of Romania and Yuzhen tsentralen in Bulgaria.

There were 87 regions where more than 50 % of individuals made online purchases, among which there were 31 regions where more than 65 % of individuals made online purchases, the majority (20 regions) of which were in the United Kingdom, with several in the Netherlands, Denmark and Sweden, as well as one (NUTS level 1 region) in France. In contrast, there were 35 regions where 15 % or fewer of individuals made online purchases — these were mainly in Italy (nine regions), Romania (eight regions), Bulgaria (six regions) and Portugal (five regions), Greece (three NUTS level 1 regions), Hungary (three regions) and Lithuania (which is just one region).

Online purchases were relatively widespread in Norway, as the lowest regional share of online purchasing was 63 % in Hedmark og Oppland, but this activity was notably less common (45 %) in Iceland. People in candidate countries were less likely to have made online purchases, with only 4 % having done so in the former Yugoslav Republic of Macedonia and 5 % in Turkey (no regional data available); the highest share of online purchases among the candidate country regions for which data are available was 17 % in Jadranska Hrvatska (Croatia).

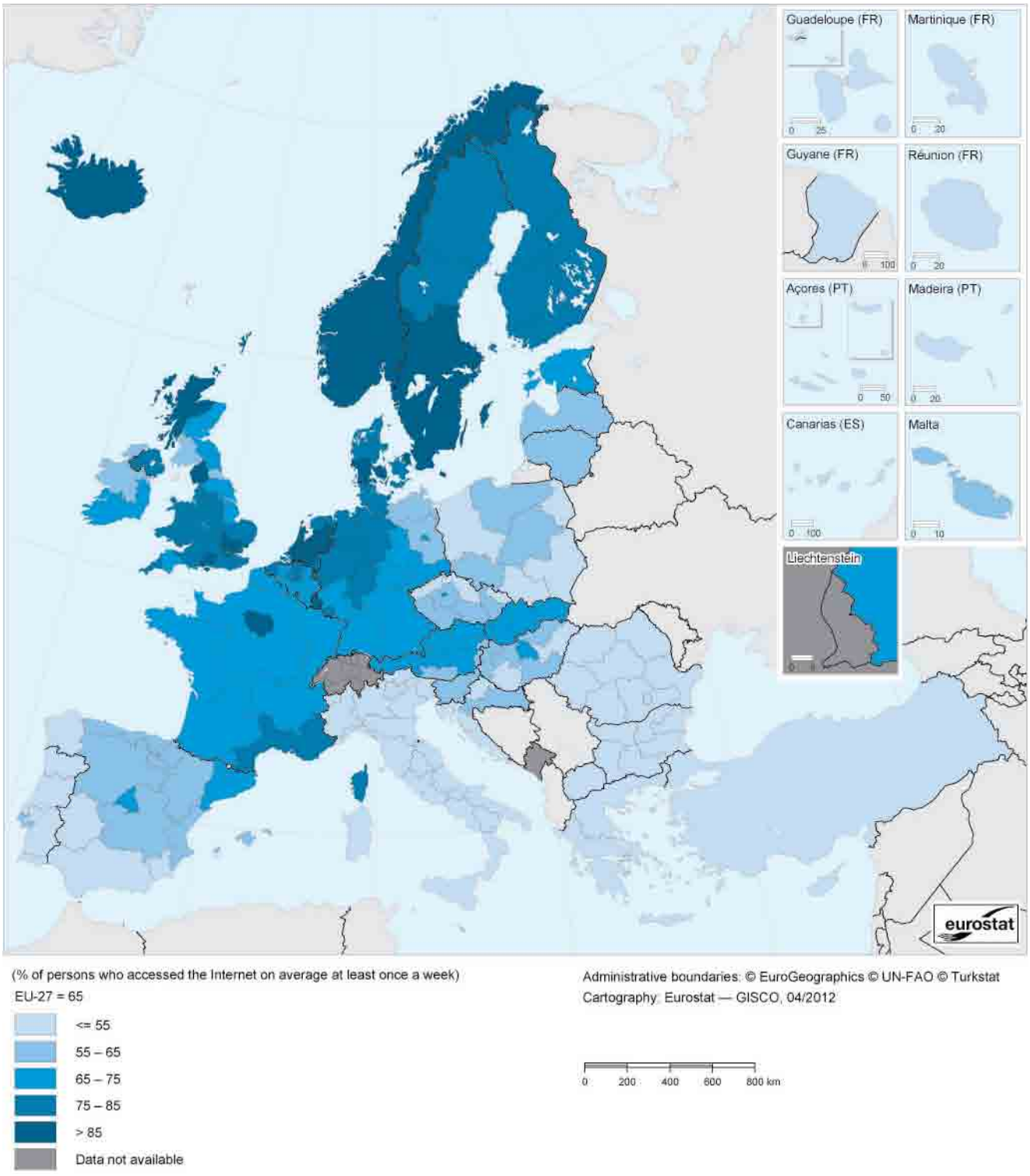
Measures of dispersion indicate that the incidence of online purchasing in Sweden, Finland, Austria and Denmark was relatively evenly spread across the regions (at NUTS level 2), whereas in Romania and Bulgaria, and to a lesser extent Italy and Greece (NUTS level 1 regions), there was a less regular regional pattern.

Data sources and availability

EU statistics on the use of ICT are based on a regulation concerning Community statistics on the information society. The regulation concerns statistics on the use of ICT in enterprises and statistics on ICT use in households and by individuals — only the latter are presented in this chapter.

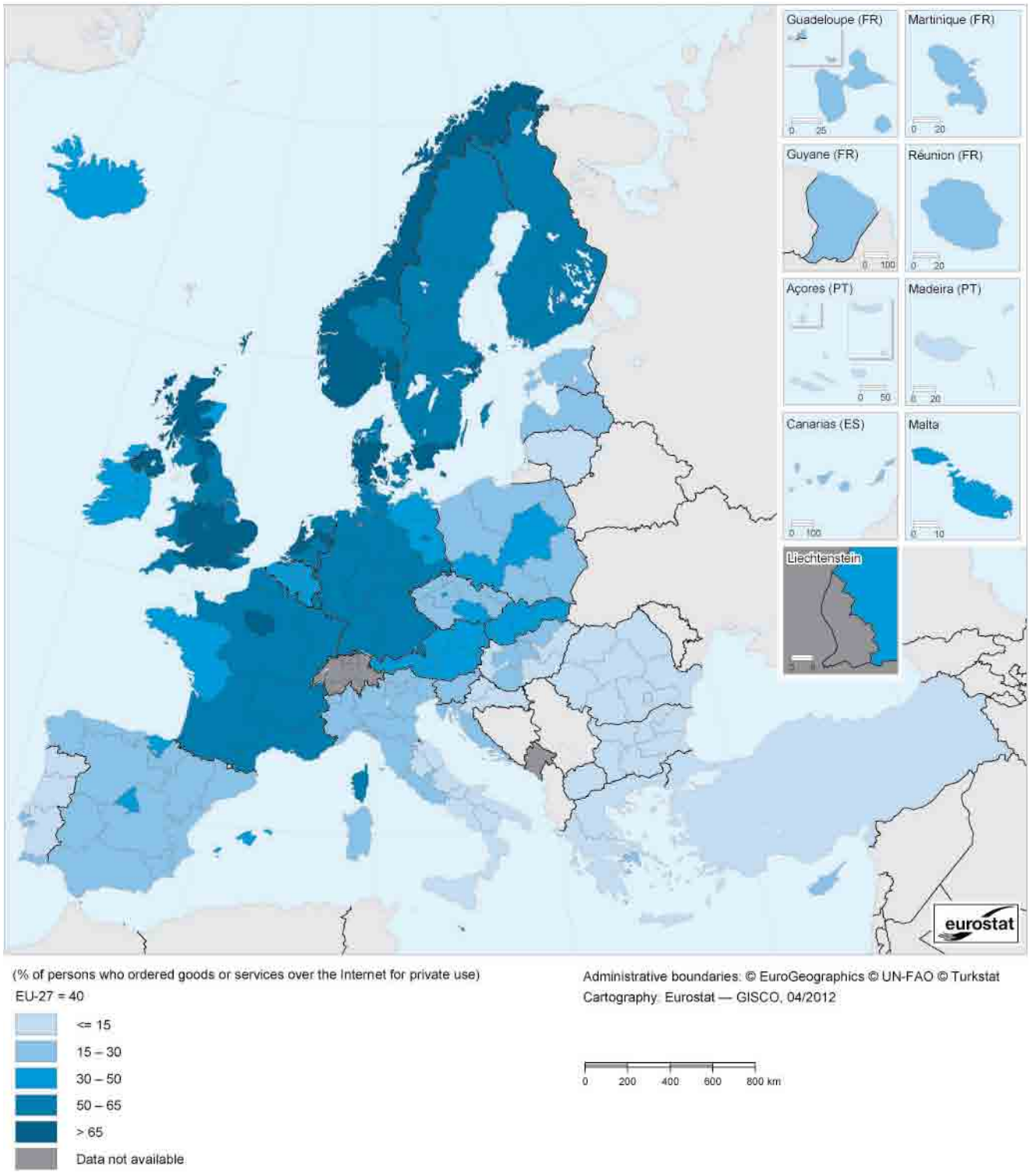
Regional ICT data for a limited list of indicators have been available at the NUTS level 1 since 2006 as a voluntary contribution by the EU Member States and since 2008 on a mandatory basis. Some Member States provide regional data at NUTS level 2 on a voluntary basis. For the household/individual survey, questions on access to ICT are addressed to households, while questions on the use of ICT are answered by individuals within the household. As well as a core part, the model questionnaire includes a special focus which is changed each year. The scope of the household/individual survey comprises individuals aged between 16 and 74 years and households

Map 8.3: Regular use of the Internet, by NUTS 2 regions, 2010 (1)
(% of persons who accessed the Internet on average at least once a week)



(1) Devon (UKK4) and Highlands and Islands (UKM6), 2008; Lincolnshire (UKF3), 2007; North Eastern Scotland (UKM5), 2006; Germany, Greece, France and Poland, by NUTS 1 regions; Slovenia and Turkey, national level; Länsi-Suomi (FI19) and Åland (FI20) are combined.
Source: Eurostat (online data code: isoc_r_iuse_i)

Map 8.4: Online purchases, by NUTS 2 regions, 2010 ([1])
(% of persons who ordered goods or services over the Internet for private use)



([1]) East Yorkshire and Northern Lincolnshire (UKE1), 2009; Devon (UKK4) and Highlands and Islands (UKM6), 2008; Tees Valley and Durham (UKC1) and Lincolnshire (UKF3), 2007; North Eastern Scotland (UKM5), 2006; Germany, Greece, France and Poland, by NUTS 1 regions; Slovenia and Turkey, national level; Länsi-Suomi (FI19) and Åland (FI20) are combined.
Source: Eurostat (online data code: isoc_r_blt12_i)

Table 8.1: Top 10 EU-27 regions in terms of increasing use of the Internet, 2008–10 ([1])

Top 10 regions	2008	2009	2010	Average rate of change, 2008–10 (% per annum)	Value for 2010 compared with national average (national average = 100)
Broadband connections in households (% of households with a broadband connection)					
Kentriki Ellada (GR2)	13	20	34	62	56
Calabria (ITF6)	19	26	42	49	69
Vest (RO42)	10	:	22	48	36
Nord-Vest (RO11)	13	:	28	47	46
Shropshire and Staffordshire (UKG2)	51	78	:	43	128
Severozápad (CZ04)	26	:	53	43	87
Severozapaden (BG31)	63	72	73	41	39
Voreia Ellada (GR1)	16	27	32	41	52
Nisia Aigaiou, Kriti (GR4)	18	29	36	41	59
Sardegna (ITG2)	27	36	54	41	89
Internet connections in households (% of households with Internet access)					
Kentriki Ellada (GR2)	19	25	38	41	54
Nisia Aigaiou, Kriti (GR4)	22	31	43	40	61
Voreia Ellada (GR1)	23	32	37	27	53
Yugoiztochen (BG34)	21	27	33	25	47
Nord-Est (RO21)	23	:	36	25	51
Centru (RO12)	26	:	40	24	57
Severozapaden (BG31)	17	25	26	24	37
Střední Morava (CZ07)	40	:	61	23	87
Vest (RO42)	31	:	47	23	67
Severozápad (CZ04)	39	:	59	23	84
Regular use of the Internet (% of persons who accessed the Internet on average at least once a week)					
Latvia (LV00)	40	40	62	24	95
Centru (RO12)	22	25	34	24	52
Severozapaden (BG31)	24	34	36	22	55
Kentriki Ellada (GR2)	22	28	33	22	51
Nord-Est (RO21)	22	30	33	22	51
Puglia (ITF4)	27	31	39	20	60
Nisia Aigaiou, Kriti (GR4)	25	31	36	20	55
Sicilia (ITG1)	28	35	40	20	62
Shropshire and Staffordshire (UKG2)	57	75	80	18	123
Campania (ITF3)	28	35	39	18	60
Online purchases (% of persons who ordered goods or services over the Internet for private use)					
Yugoiztochen (BG34)	1	3	4	100	10
Severozapaden (BG31)	1	3	3	73	8
Severen tsentralen (BG32)	1	2	3	73	8
Severoiztochen (BG33)	2	6	6	73	15
Centru (RO12)	2	1	5	58	13
Prov. Namur (BE35)	19	32	43	50	108
Prov. West-Vlaanderen (BE25)	15	32	33	48	83
Região Autónoma da Madeira (PT30)	6	9	13	48	33
Prov. Antwerpen (BE21)	20	40	41	47	103
Prov. Hainaut (BE32)	17	32	34	46	85

([1]) For broadband connections: the United Kingdom, 2007–09; for online purchases: France, not available; Germany, Greece, France and Poland, by NUTS 1 regions; Slovenia and Turkey, national level; Länsi-Suomi (FI19) and Åland (FI20) are combined.

Source: Eurostat (online data codes: isoc_r_broad_h, isoc_r_iacc_h, isoc_r_iuse_i and isoc_r_blt12_i)

with at least one member within this age range. The reference period is the first 3 months of the calendar year.

The term broadband connection refers to the speed of data transfer for uploading and downloading data. Broadband requires a data transfer speed of at least 144 kbit/s. The technologies most widely used for broadband access to the Internet include digital subscriber lines (DSL) and cable modems.

Internet users are persons who have used the Internet within the 3 months prior to the survey being conducted. Regular Internet users have used the Internet at least once a week within the 3-month reference period.

E-commerce via the Internet is defined as placing orders for goods or services via the Internet. Purchases of financial investments, for example shares, confirmed reservations for accommodation and travel, participation in lotteries and betting and obtaining payable information services from the Internet or purchases via online auctions are included in the definition. Orders placed by manually typed e-mails are not counted. Delivery or payment by electronic means is not a requirement for an e-commerce transaction.

Further information

For further information about information society statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/information_society/introduction.

Context

During the course of recent decades, ICTs have penetrated all areas of economic and social life; they are credited with transforming societies in a profound and unprecedented way. With access to the Internet, it is very easy to obtain information about almost any topic, as search engines provide rapid and easy access to websites and information sources. Many other activities, such as communicating, consuming media and buying or selling goods and services, can be performed online. For example, it is possible to maintain contact with family members or friends via social networking sites, share holiday pictures on the web or have a video call with a friend via the Internet, while a growing share of retail sales are accounted for by online transactions. ICTs also facilitate working from home or other remote locations, delivering greater flexibility in work organisation. These developments have created new dimensions of economic, social or political participation for individuals and groups and the ubiquitous presence of ICTs has the potential to create completely new ways of participating in the economy and society.

As a basic condition, the participation of citizens and businesses in the information society depends on access to ICTs, for example the presence of electronic devices, such as computers, and fast connections to the Internet. The term digital divide has been coined to distinguish between those who have access to the Internet and are able to make use of services offered on the World Wide Web and those who are excluded. The term explicitly includes access to ICTs as well as the related skills needed to participate in the information society. The digital divide can be classified according to criteria that describe the difference in participation according to sex, age, education, income, social group or geographic location. For example, regular use of the Internet and, in particular, online purchases are often found to be less common in rural/remote regions.

Policies within the EU, both nationally and for the EU as a whole, have acknowledged the importance of bridging the digital divide to give all citizens equal access to ICTs and to enable them to participate in the information society. In 2010 the European Commission adopted its communication 'A Digital Agenda for Europe' (COM(2010) 245 final/2), a strategy for a flourishing digital economy by 2020. The 'Digital Agenda for Europe' is one of the seven flagship initiatives under the Europe 2020 strategy for smart, sustainable and inclusive growth. It outlines policies and actions aimed at maximising the benefit of the digital era to all sections of society and the economy. The agenda focuses on seven priority areas for action: creating a digital single market, greater interoperability, boosting Internet trust and security, providing much faster Internet access, encouraging investment in research and development, enhancing digital literacy skills and inclusion, and applying ICT to address challenges facing society like climate change and the ageing population. Examples of expected benefits include easier electronic payments and invoicing, rapid deployment of telemedicine and energy-efficient lighting.

The digital agenda emphasises the quality of services in its targets: all households should have broadband subscriptions at a minimum speed of 30 Mbps by 2020 and 50 % of households should have subscriptions at a speed of at least 100 Mbps. A set of key benchmarking indicators are defined in the European Commission's framework for benchmarking digital Europe 2011–15 ([1]), which is used to monitor the development of the European information society and achievements with respect to policy objectives set out in the digital agenda.

The digital agenda also puts emphasis on online shopping, with a focus on achieving a digital single European market. Policy measures aim to lower national barriers for online markets by opening access to content, such as buying and downloading digital media content, simplifying cross-border transactions and payments, and building trust in cross-border e-commerce.

([1]) http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/benchmarking_digital_europe_2011-2015.pdf.

9

Agriculture

Eurostat's coverage of regional agricultural statistics for the European Union (EU) comprises three main fields: land use and crops, agricultural accounts, and livestock. At the time of drafting, the data from the agricultural census for 2010 were not available with sufficient coverage to present preliminary results. As such, this chapter starts with an analysis of data from the economic accounts for agriculture (EAA), which provide statistics on agricultural activity and the income generated by it. These accounts integrate a wide range of statistics and administrative information about agriculture. One of the principal objectives of the common agricultural policy (CAP) is to provide farmers with a reasonable standard of living. Although this concept is not defined explicitly, one of the measures tracked within the policy is income development from farming activities, which may be analysed using economic accounts for agriculture.

The chapter then moves on to look at recent livestock statistics, first in terms of grazing livestock and then more specifically in relation to dairy farming and output. Recent and ongoing reforms of the CAP are expected to change the geographical pattern of animal production over the coming years.

The analysis within this chapter concludes with a presentation of crop production, covering cereals, potatoes and the output from vineyards.

Main statistical findings

Economic significance of agriculture

In 2009 agriculture in the EU-27 generated around EUR 130 600 million of value added, around 1.2 % of the added value for the whole economy: the contribution of agriculture fell from 1.4 % a year earlier (2008), from 1.8 % 5 years earlier (2004) and from 1.9 % at the turn of the decade (2000).

The economic importance of agriculture, in value added terms, was generally much greater in the east and south of Europe than in the west and north. The relative economic weight of agriculture was highest in the Bulgarian regions of Severozapaden and Severen tsentralen, where it reached 14.1 % and 11.9 % respectively of total value added.

Agriculture's contribution to the whole economy was above 3.5 % in 36 out of the 241 regions in the EU shown in Map 9.1. These included eight regions in Greece (in central and northern Greece as well as Kriti), all regions in Romania except for the capital city region, five regions in Poland (mainly in the east), four regions in northern and eastern Bulgaria, four regions in the east and the south of Hungary, including the Great Plain, and two regions in each of France (Champagne-Ardenne and the overseas region of Guyane), Italy (Provincia Autonoma Bolzano/Bozen and Calabria), the Netherlands (Friesland and Flevoland) and Portugal (Alentejo and the island region of the Açores). Agriculture's contribution was also above 3.5 % in the former Yugoslav Republic of Macedonia (which is just one region) and Croatia (no regional data available).

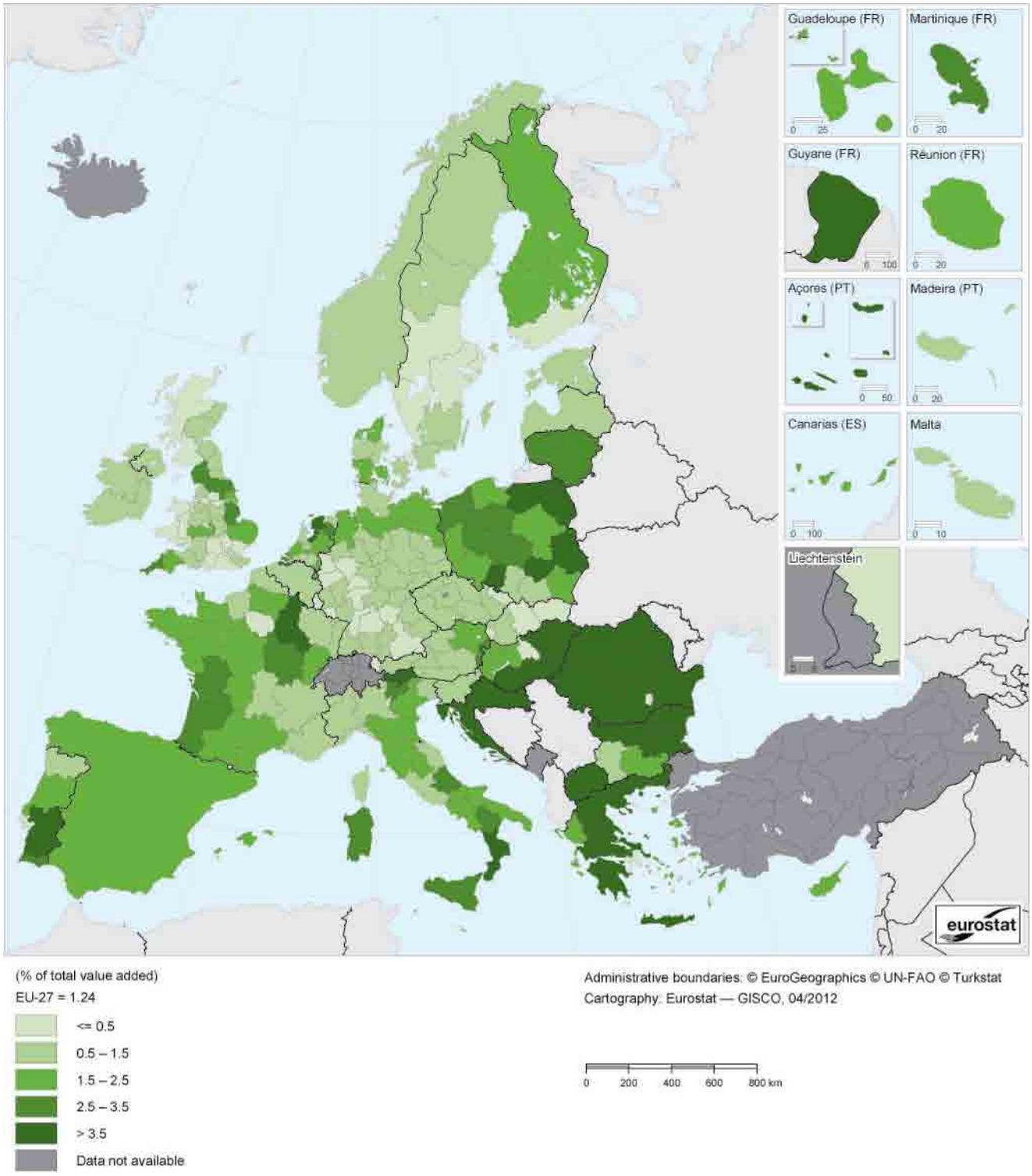
The regions with the lowest contribution from agriculture included many capital city regions, or regions around capital cities, and those with other large urban areas. There were 47 regions in 2009 where agriculture accounted for 0.5 % or less of value added in the local, regional economy and these included 13 capital city regions. Among the other 34 regions (those beyond the capital city regions) where agriculture accounted for 0.5 % or less of value added were 15 regions in the United Kingdom (for example, several regions surrounding London, as well as regions around Greater Manchester and Liverpool, in Wales and in the west of Scotland), 12 regions in Germany (for example, in the regions around Stuttgart, Karlsruhe, Bremen, Hamburg, Düsseldorf and Köln), three regions in central Sweden, two in central and eastern Slovakia and one each in the Czech Republic (Moravskoslezsko) and Austria (Vorarlberg).

Agricultural labour productivity

Agriculture is a highly labour-intensive sector and so it can be revealing to compile a partial productivity indicator from the gross value added for agriculture and the corresponding agricultural labour input data. To take account of part-time and seasonal work, agricultural labour is measured in annual work units (AWU): one such unit corresponds to the input, measured in working time, of one person engaged in agricultural activities in an agricultural unit on a full-time basis over an entire year. The structure of production may influence the comparability of productivity figures: for example, the production of fruit and vegetables requires more labour than the production of arable crops, while capital costs are generally lower. It should be remembered that labour productivity is only a particle productivity indicator, as it does not take account of all factors.

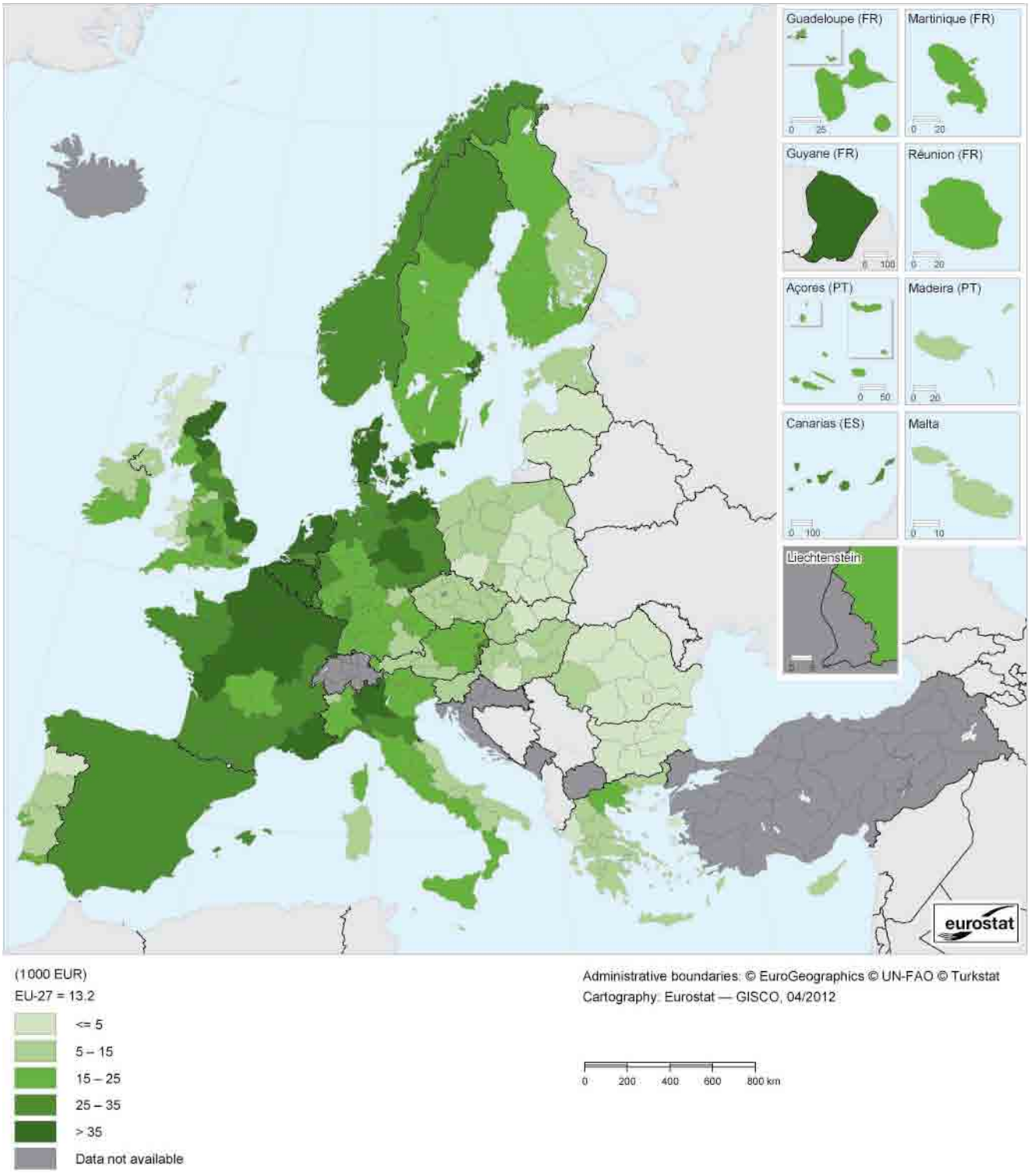
EU-27 agricultural gross value added per annual work unit was estimated at EUR 13 200 in 2010. This was the same level as in 2007, which is the latest year for which regional information exists (see Map 9.2). There is clearly a big difference between the western and eastern parts of Europe in terms of this productivity ratio for NUTS level 2 regions. In 40 regions, mainly in France (12 regions), the Netherlands (11 regions), the United Kingdom (5 regions), Denmark and Germany (4 regions each), gross value added per annual work unit was above EUR 35 000 in 2007, which was also the case in Belgium (no regional data available). The highest levels of agricultural labour productivity were recorded in the Dutch regions of Flevoland and Zuid-Holland, both over EUR 80 000 per annual work unit. In contrast, 32 regions within the EU recorded agricultural labour productivity of EUR 5 000 or less. These regions were mainly in

Map 9.1: Share of agriculture in the economy, gross value added at basic prices, by NUTS 2 regions, 2009 (1)
(% of total value added)



(1) Cyprus, Latvia, Lithuania, Luxembourg, Malta and Poland, 2008; Belgium, Spain, Slovenia, Norway and Croatia, national level.
Source: Eurostat (online data codes: agr_r_accts and nama_r_e3vab95r2)

Map 9.2: Gross value added at basic prices in agriculture, per annual work unit, by NUTS 2 regions, 2007 ([1]) (1 000 EUR)



([1]) Belgium, Spain, Slovenia and Norway, national level.
Source: Eurostat (online data codes: agr_r_accts and ef_r_nuts)

Poland (8 regions), Romania (7 regions) and Bulgaria (6 regions). The lowest level of productivity, by this measure, was in Podkarpackie (Poland) where value added averaged EUR 1 100 per annual work unit.

Agricultural labour productivity is strongly influenced by farm structures. In most of the eastern (and also in some southern) Member States, average farm sizes are small, the level of mechanisation is low, and a significant part of production is for on-farm consumption. The influence of farm structures on labour productivity can, for example, be noted in the Czech Republic, a Member State with many large cooperatives. Two regions in the Czech Republic (Střední Čechy and Severozápad) reported value added above EUR 10 000 per annual work unit; the only other regions within the Member States that joined the EU in 2004 or 2007 that reached this level were Malta and Cyprus (both of these Member States are composed of a single region).

Livestock density

Regions with high levels of animal production are to be found in many parts of Europe, depending on local conditions and traditions. Grazing livestock include cattle, sheep, goats and equidae (for example, horses and donkeys). Grazing livestock density (see Map 9.3) measures the stock of grazing animals per hectare of fodder area. High stocking densities generally involve a risk of nutrient pollution and overgrazing, and a need to import animal feedstuffs. The highest densities of grazing livestock across EU regions in 2007 were recorded in the Portuguese island region of Madeira, the Greek region of Anatoliki Makedonia, Thraki, and the Spanish region of Murcia, all with an average of more than 5 livestock units (LSU) per hectare of fodder area. In total there were 40 regions in the EU where grazing livestock density exceeded 2.0 LSU per hectare of fodder area: nine of these were in Belgium and the same number in the Netherlands, five each in Bulgaria and Greece and four in France. At the other end of the scale, some 23 regions had 0.5 LSU or less per hectare of fodder area: several of these were capital city regions (such as Inner London, Stockholm, Comunidad de Madrid, Praha and Wien) characterised by very low levels of agriculture. These aside, there were several regions with low livestock densities in relatively mountainous regions, such as the Tirol (Austria), Provence-Alpes-Côte d'Azur (France) and the Highlands and Islands (United Kingdom).

Cows and cows' milk production

Cows' milk production is often linked to large areas of rich grassland, as found, for example, in Northern Ireland, Scotland and the South West (all in the United Kingdom), Ireland, the Netherlands, western and some central parts of France, Lithuania and north eastern Poland. Cows' milk production can also be relatively important in those regions that are characterised by a combination of grassland with fodder crops. On the other hand, in those areas where grassland is rarer (for example, in northern regions or in Mediterranean areas) cows' milk production tends to be lower. With less favourable climatic conditions and a relatively low area of grassland, cows' milk production in some of these regions is replaced by milk production from ewes and goats; this is especially the case in Mediterranean regions.

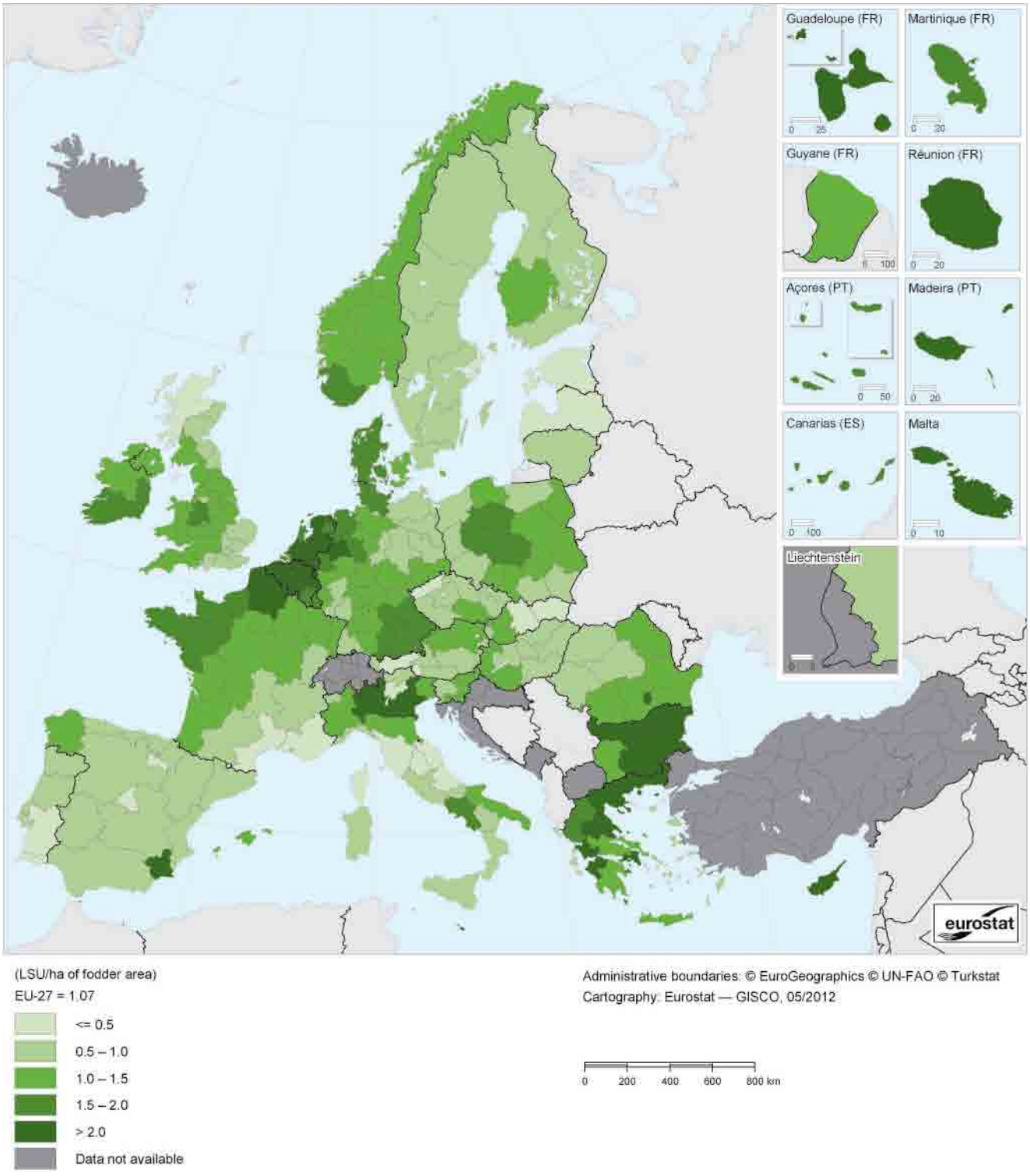
Bovine animals include animals for fattening or renewal and breeding animals. Some of these animals are used for dairy production and some for meat production. Therefore, one measure for analysing the potential production of cows' milk is the proportion of dairy cows in the total number of cows. Map 9.4 shows the number of cows per square kilometre (km^2) in each NUTS level 2 region in 2010, a density that averaged eight cows per km^2 in the EU-27. In total there were 38 regions in the EU with more than 20 cows per km^2, mainly in the north-west of the EU: 10 out of 12 regions in the Netherlands, nine out of 11 regions in Belgium, six regions in France, three NUTS level 1 regions in the United Kingdom, two out of five regions in Denmark, both Irish regions, Luxembourg and Malta (both just one region), and one region each in Germany (NUTS level 1), Italy, Poland and Portugal.

In those regions where it is more difficult to grow fodder crops, cattle farming is more likely to be orientated towards a more extensive form of meat production. Dairy cows accounted for a large proportion of all cows in most regions with particularly high numbers of cows in German, Italian, Dutch, Polish and British (apart from Scotland) regions; non-dairy cow farming was more prominent in most of the Spanish regions that had large numbers of cows, as well as in Scotland and Alentejo (Portugal). France and Ireland were evenly split, with some of their regions with a large number of cows concentrated on dairy farming (such as Bretagne in France and the Southern and Eastern region of Ireland) and others more specialised in non-dairy cow farming (such as Limousin and Bourgogne in France and the Border, Midland and Western region in Ireland).

The average production of cows' milk per km^2 (of land area) in the EU-27 was 33.7 tonnes in 2008. Table 9.1 presents more information concerning the 10 regions with the highest level of cows' milk production per km^2, which was dominated by eight regions from the Netherlands.

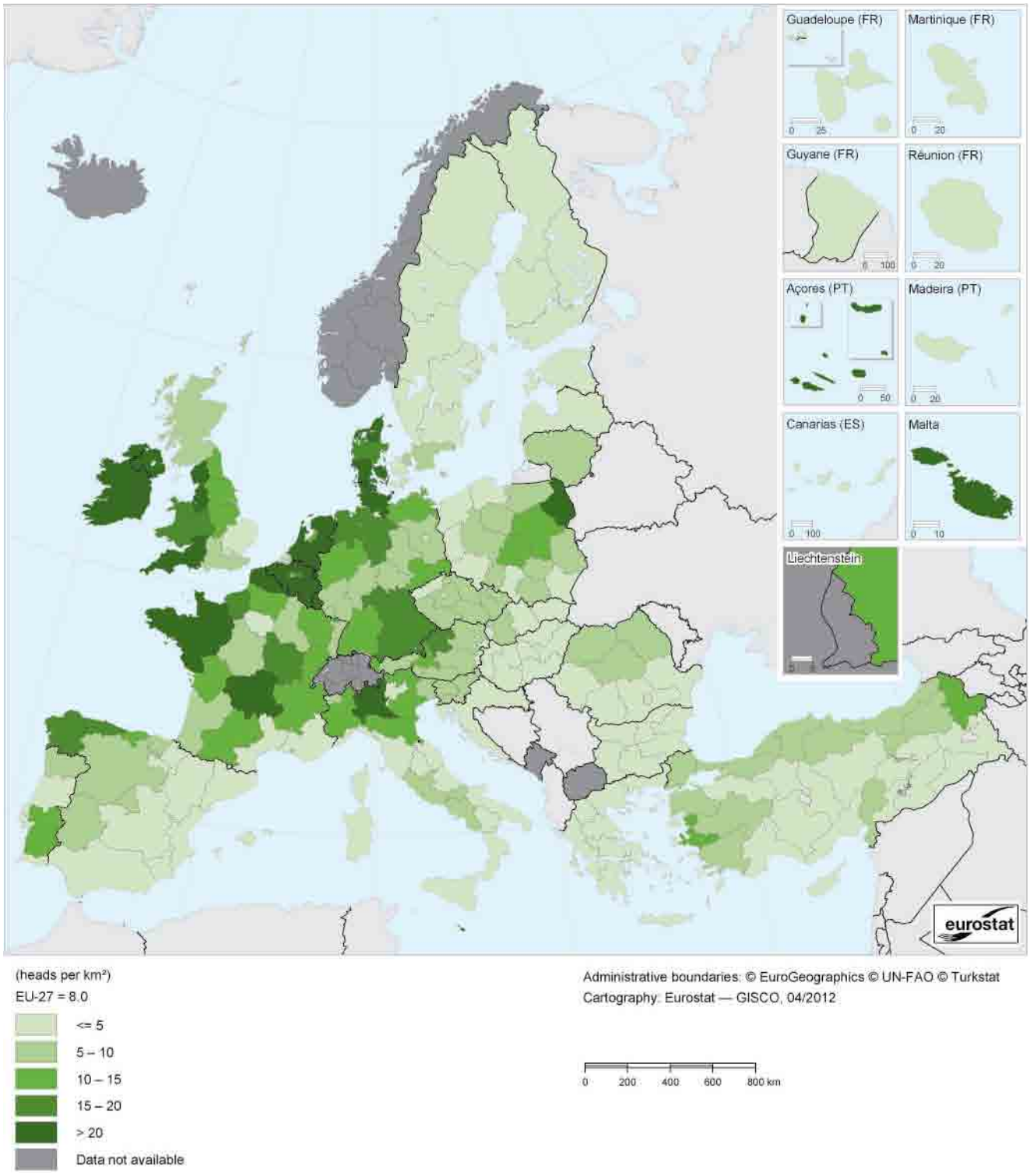
A total of 49 EU regions (out of 258 for which data are available) produced more than 100 tonnes of cows' milk per km^2, with these regions spread across 12 Member States. Collectively these 49 regions produced just under half (47.6 %) of all of the cows' milk produced in the EU-27. Eleven of these regions were in Germany, 10 in the Netherlands (all but two of the Dutch regions), eight in the United Kingdom, six in Belgium and four in France — including Bretagne, which had the highest production level among NUTS level 2 regions at 5.1 million tonnes. The second largest level of production was 4.3 million tonnes in the Southern and Eastern Irish

Map 9.3: Grazing livestock density, by NUTS 2 regions, 2007
(LSU/ha of fodder area)



Source: Eurostat (online data code: aei_ps_ld)

Map 9.4: Cows, by NUTS 2 regions, December 2010 (1)
(heads per km²)



(1) EU-27, provisional; the Czech Republic, Latvia, Lithuania, the Netherlands, Poland, Romania and Finland, December 2011; Greece, Départements d'outre-mer (FR9) and Slovenia, December 2008; Turkey, December 2004; Germany, Départements d'outre-mer (FR9) and the United Kingdom, by NUTS 1 regions; Croatia, national level.
Source: Eurostat (online data code: agr_r_animal and demo_r_d3area)

Table 9.1: Top 10 regions for dairy cow farming, by NUTS 2 regions, December 2010 (1)

	Cows' milk production		Cumulative share of EU-27 cows' milk production (%)	Cumulative share of EU-27 land area (%)	Cumulative share of EU-27 dairy cows (%)	Share of dairy cows in the total number of cows (%)	Apparent milk yield (tonnes of milk per cow)
	(tonnes per km²)	(1 000 tonnes)					
Overijssel	554.8	1 898.0	1.3	0.1	1.1	92.8	7.7
Utrecht	449.9	652.0	1.7	0.1	1.4	91.2	7.9
Friesland (NL)	363.6	2 090.0	3.1	0.2	2.6	95.7	7.8
Gelderland	346.5	1 780.0	4.3	0.4	3.6	88.4	7.8
Noord-Brabant	326.1	1 657.0	5.4	0.5	4.5	91.9	7.7
Cheshire	305.2	715.0	5.9	0.5	:	:	:
Drenthe	273.5	733.0	6.4	0.6	4.9	92.2	7.7
Groningen	238.5	706.0	6.9	0.7	5.3	94.8	7.7
Região Autónoma dos Açores (PT)	237.8	552.1	7.3	0.7	5.7	76.4	6.1
Prov. West-Vlaanderen	232.7	731.7	7.8	0.8	6.1	44.6	9.5

(1) Střední Čechy (CZ02), the Netherlands, Poland, Romania, Slovenia and Finland, December 2011; Greece and Départements d'outre-mer (FR9), December 2008; Germany, Départements d'outre-mer (FR9), Slovenia and the United Kingdom, by NUTS 1 regions.
Source: Eurostat (online data code: agr_r_animal)

region and the third highest level of output was the 4.2 million tonnes of milk produced in Lombardia (Italy, 2009 data).

Cereals

Cereals are herbaceous plants cultivated mainly for their grain. Whole cereals are used primarily for animal feed and human consumption. They are also used to produce drinks and industrial products (for example, starch). Cereals (including rice) are the largest group of growing crops in the world and are also one of the most important outputs of EU agriculture.

In 2010, the EU-27 produced 282.9 million tonnes of cereals. Cereal production exceeded 4 million tonnes in the NUTS level 2 regions of Champagne-Ardenne, Picardie, Centre and Poitou-Charentes (France, 2007 data), Castilla y León (Spain) and Wielkopolskie (Poland, 2009 data), as well as NUTS level 1 regions in Germany (Bayern, Niedersachsen, Nordrhein-Westfalen and Sachsen-Anhalt) and the United Kingdom (East of England).

Map 9.6 shows the regional level of harvested production, standardised by dividing production by the region's area, to take account of the different size of regions in general and the availability of data at different levels of NUTS. The highest levels of cereals production relative to the region's area were recorded in Sjælland (Denmark) and Picardie, both over 260 tonnes per km². Four out of the five Danish regions recorded cereals production in excess of 130 tonnes per km², as did four of the seven Hungarian regions and eight of the 22 French regions (with data available). Such an intensity of cereals production relative to land area was also recorded in several regions in Belgium, Germany, Italy, Poland and the United Kingdom.

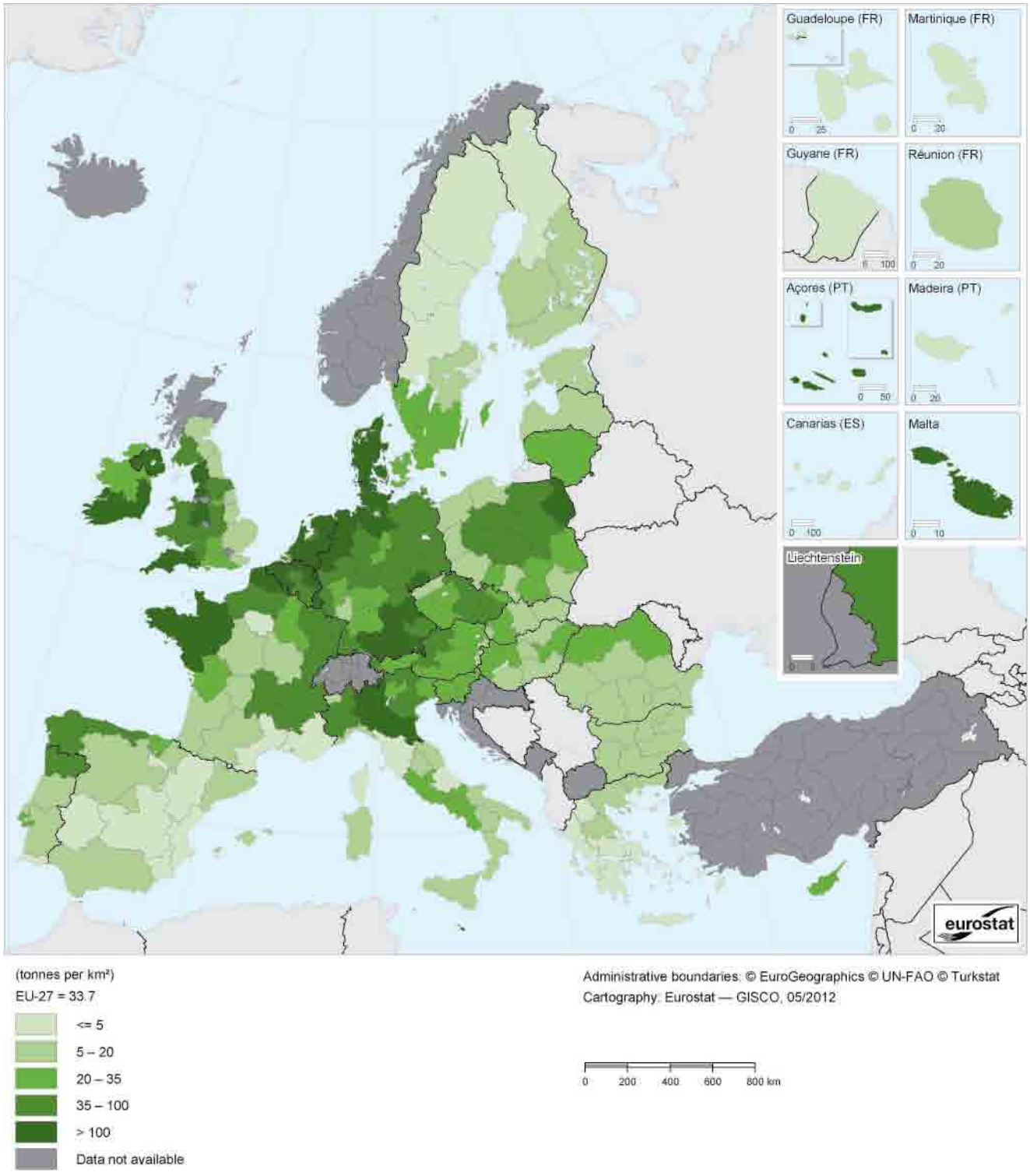
In contrast, the lowest levels of cereals production relative to land area (10 tonnes per km² or less) were recorded mainly in coastal or mountainous area. These included five of the seven Portuguese regions, Cyprus, four northern Swedish regions, three Alpine regions in western Austria, eight coastal regions in Spain (including the Spanish territories of Ceuta and Melilla, which had no significant cereals production), two northern Finnish regions, several Alpine or coastal regions in Italy, the Alpine and coastal region of Zahodna Slovenija, the French island of Corse and the mountainous Bulgarian capital city region of Yugozapaden. Malta is not a producer of cereals, while the French overseas regions of Guadeloupe and Martinique also had no substantial production of cereals.

Potatoes

Another major crop within the EU is potatoes, which are grown primarily for human consumption but are also used to feed cattle and produce alcohol and potato flour (starch). Potato growing has been steadily falling in the EU-27 for many years. In 2009, potato production in the EU-27 was estimated to be in excess of 60 million tonnes with an average production of just over 14.2 tonnes per km² of land area.

The greatest production of potatoes in 2010 among the NUTS level 2 regions in the EU was 2.2 million tonnes in the Picardie and Nord - Pas-de-Calais regions of France (2007 data). Production of over 1 million tonnes was also recorded in the Dutch regions of Drenthe and Groningen, the Polish regions of Mazowieckie and Łódzkie (2009 data), as well as the Romanian region of Centru (2009 data). For Germany, data are

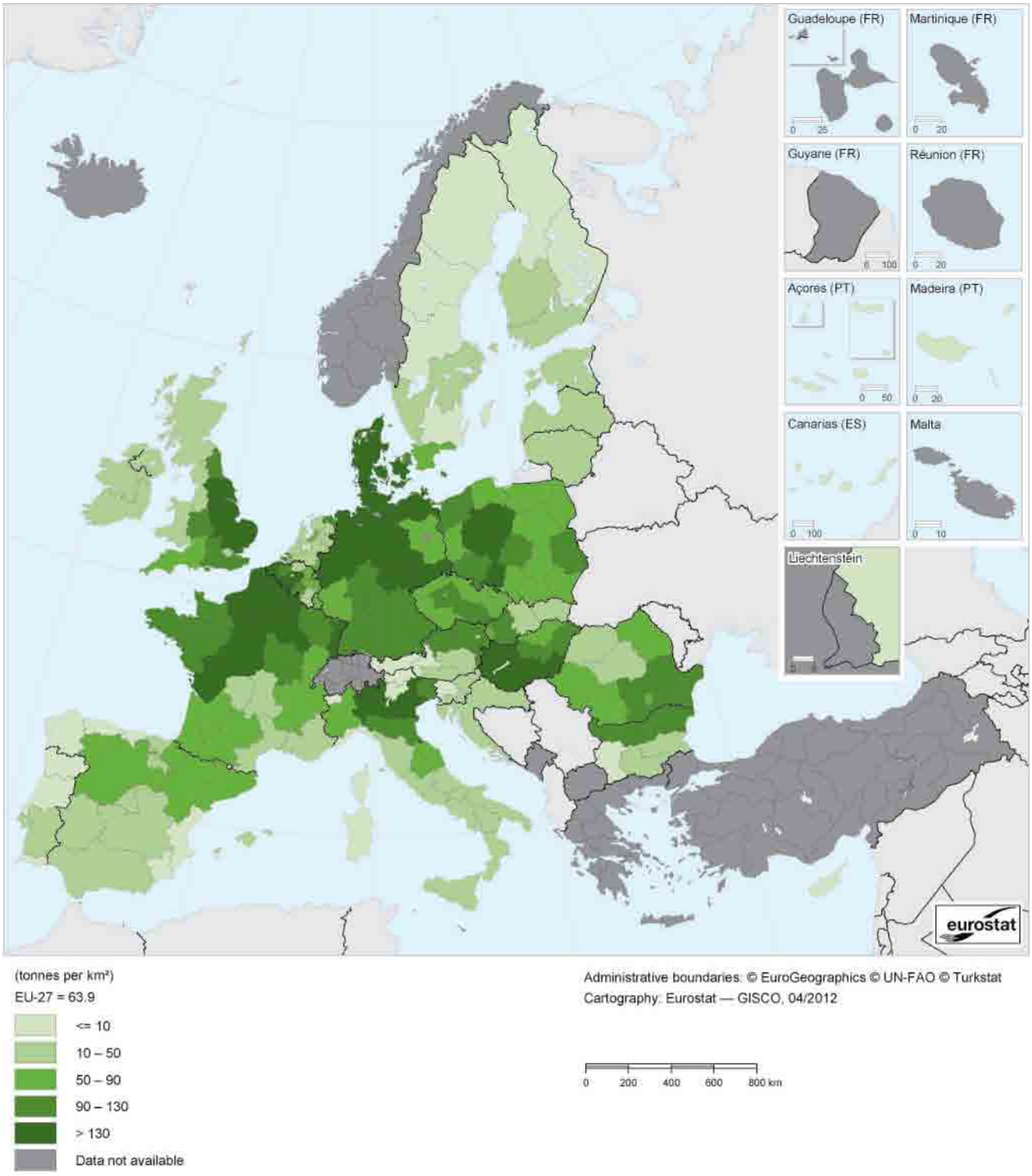
Map 9.5: Production of cows' milk on farms, by NUTS 2 regions, 2010 (1)
(tonnes per km²)



(1) Rheinland-Pfalz (DEB), Italy, Lithuania, Luxembourg, Slovenia and Shropshire and Staffordshire (UKG2), 2009; EU-27, Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE10) and Malta, 2008; Croatia, 2007; North East (UKC) and East of England (UKH), by NUTS 1 regions.

Source: Eurostat (online data code: agr_r_milkpr and demo_r_d3area)

Map 9.6: Harvested production of cereals (including rice), by NUTS 2 regions, 2010 (1)
(tonnes per km²)



(1) Ireland, Poland, Portugal and Åland (FI20), 2009; France, 2007; Comunidad de Madrid (ES30) and Canarias (ES70), 2006; Germany, the United Kingdom and Croatia, by NUTS 1 regions.
Source: Eurostat (online data codes: agr_r_crops and demo_r_d3area)

only available for the NUTS level 1 regions, and several of these had large scale potato farming, notably Niedersachsen, where 4.6 million tonnes were harvested.

As for cereal production, the data presented for potato production in Map 9.7 have been related to the total land area, which adjusts to some extent for the use of different NUTS levels. The greatest quantities of potatoes harvested relative to land area were in the Dutch regions of Drenthe, Flevoland and Groningen, all over 300 tonnes per km². Overall, there were 22 regions in the EU with potato production levels over 50 tonnes per km², of which 10 were in the Netherlands (out of a total of 12 Dutch regions), six in Belgium (out of a total of 11 regions), two in France, and one each in Denmark, Germany, Poland and Portugal. Many mountainous regions in France, Italy, Austria and Sweden had very low potato production, as did capital city regions in the Czech Republic and Sweden, the sparsely inhabited north and east of Finland and most of Bulgaria. The lowest levels of potato production relative to land area were recorded in French and Spanish overseas regions and the French island of Corse.

Vineyards

For climatic reasons, the harvested production from vineyards within the EU is largely concentrated in the southern and central (from north to south) regions of the EU. In fact the level of production was between 0 and 1 000 tonnes in nine of the Member States: Belgium, Denmark, Estonia, Ireland, Latvia, Lithuania, the Netherlands, Finland and Sweden. Production was also relatively low in Poland and the United Kingdom.

The total harvested production from vineyards in the EU-27 in 2009 was around 23.1 million tonnes. The largest production among all NUTS level 2 regions in the EU was 3.3 million tonnes in the Spanish region of Castilla-La Mancha (2006 data), and there were four other regions with production above 1 million tonnes: Puglia, Sicilia and Veneto in Italy and Languedoc-Roussillon in France (all 2007 data).

Map 9.8 shows the production from vineyards per km² of land area: note that no recent regional data are available for Greece, although annual Greek production was around 1 million tonnes in 2010. Relating the level of production to the land area, there were nine regions with more than 30 tonnes of output per km², including all five regions with production levels over 1 million tonnes, as well as a fourth region in Italy (Emilia-Romagna), a second region each in France (Poitou-Charentes) and Spain (La Rioja) and the German NUTS level 1 region of Rheinland-Pfalz.

Data sources and availability

The agricultural accounts data at regional level are compiled in the same context as the EAA at national level. Gross value added (GVA) is the difference in basic prices between the value of output and the value of intermediate consumption. The regional data are for output items which are often building blocks for the result at national level, while the regional data for intermediate consumption (direct input of goods and services in production) are often broken down from national results using other information, using a top-down approach. The regional results are, therefore, often less accurate than data at national level. Eurostat has been collecting, processing and publishing data on the EAA in the form of a regional analysis for more than 15 years.

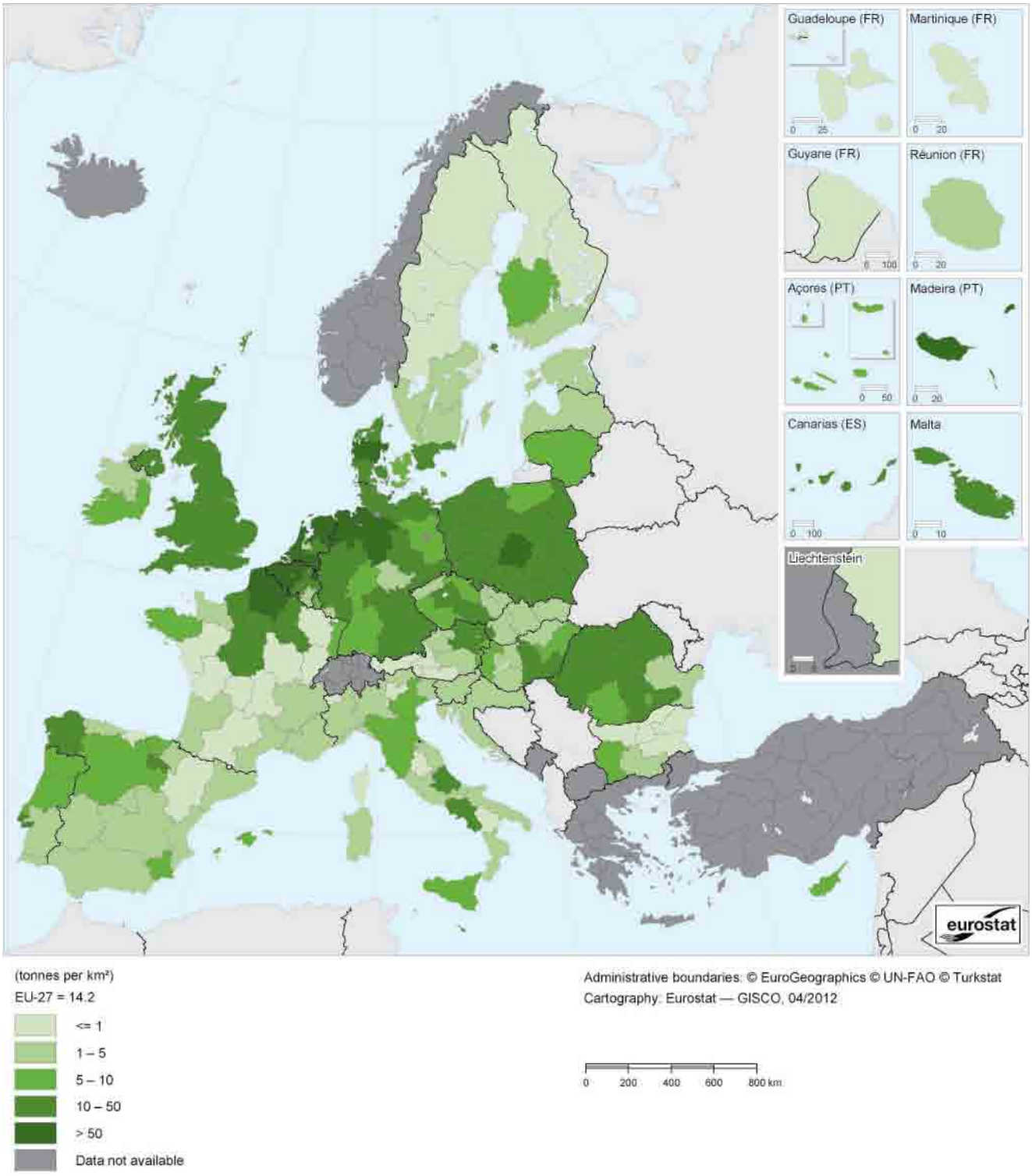
The farm structure survey (FSS) is another major source of agricultural statistics. The basic statistical unit underlying the FSS is the agricultural holding. The FSS covers all agricultural holdings with a utilised agricultural area (UAA) of at least 1 hectare (ha) and those holdings with a UAA of less than 1 ha if their market production exceeds certain natural thresholds or if a certain part of their production is for sale. As such, its coverage is slightly less than the EAA as it excludes the smallest farms. The fodder area used in Map 9.3 for livestock grazing density is based on FSS data.

For livestock numbers there are specific agreements with Member States to provide data to Eurostat. Grazing livestock include cattle, sheep, goats and equidae. In order to combine data for different types of livestock, all animals are converted into a common measurement unit, named livestock units (LU or LSU), a measure that is related to the feed requirements of each individual animal category; for example, 1 LSU corresponds to one dairy cow or 10 sheep. Grazing livestock density is calculated relative to the fodder area (consisting of fodder crops grown on arable land as well as permanent grassland).

This publication also presents more detailed data on cows, dairy cows and dairy farming. Among other classifications, bovines (cattle) can be distinguished by age and sex: female bovines that have calved are cows, while those that have not are heifers (if aged 2 or over), young cattle or calves. Dairy cows are a subgroup of cows that are kept exclusively or principally for the production of milk for human consumption and/or dairy produce, including cows for slaughter (fattened or not between last lactation and slaughter).

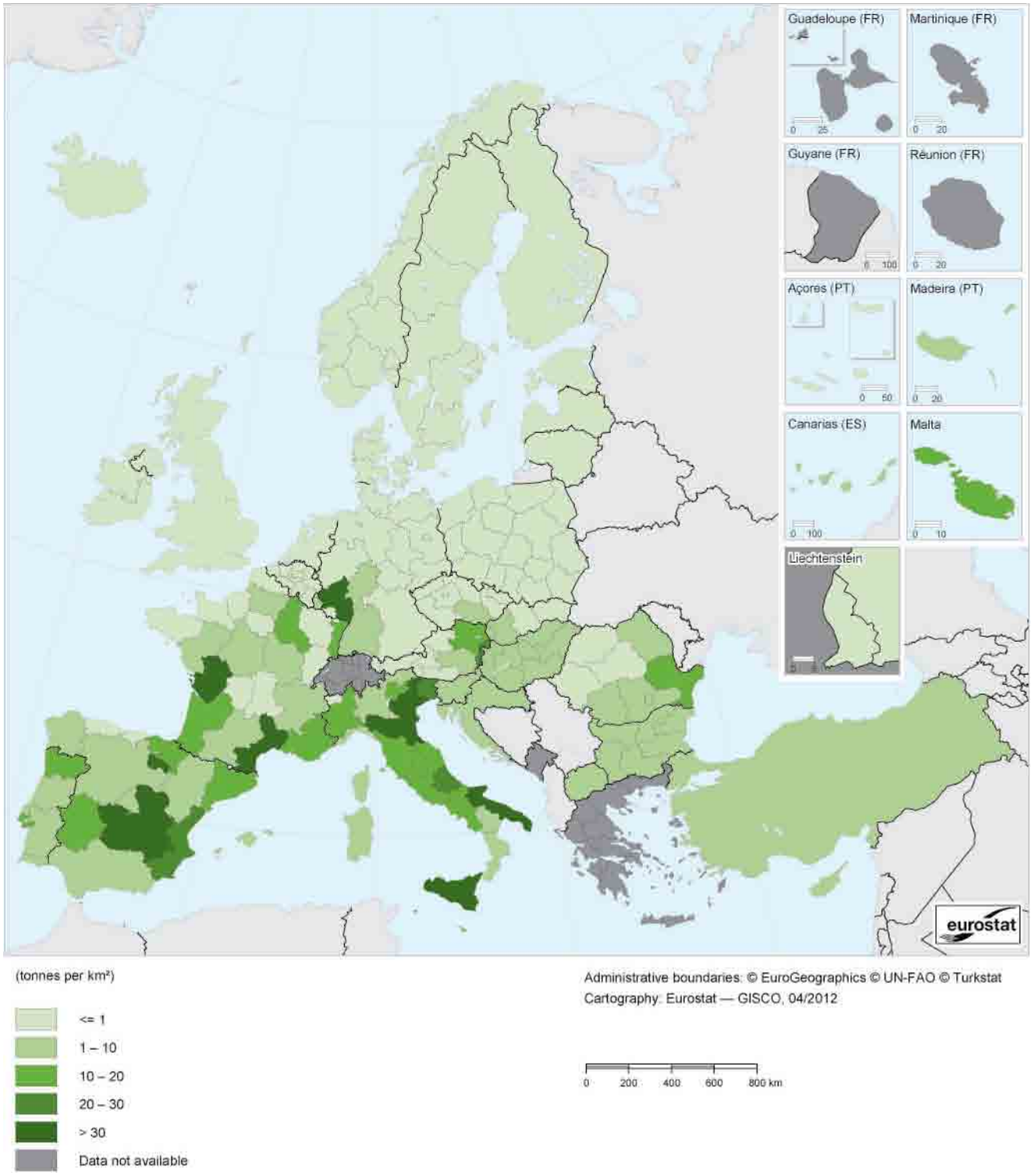
Statistics on the production of animal products are compiled according to EU legislation, for example for milk, eggs and

Map 9.7: Harvested production of potatoes, by NUTS 2 regions, 2010 (1)
(tonnes per km²)



(1) EU-27, Bulgaria, the Czech Republic, Denmark, Ireland, Hungary, Poland, Portugal, Romania and Finland, 2009; France (except Départements d'outre-mer (FR9)), 2007; Comunidad de Madrid (ES30), Canarias (ES70) and Départements d'outre-mer (FR9), 2006; Germany, by NUTS 1 regions; Slovenia, the United Kingdom and Croatia, national level.
Source: Eurostat (online data codes: agr_r_crops and demo_r_d3area)

Map 9.8: Harvested production in vineyards, by NUTS 2 regions, 2010 (1)
(tonnes per km²)



(1) Bulgaria, the Czech Republic, Germany, Hungary, Austria, Poland, Portugal, Romania, Slovakia and Turkey, 2009; France and Italy, 2007; Belgium and Spain, 2006; Germany, by NUTS 1 regions; the Netherlands, Slovenia, Finland, the United Kingdom, Croatia and Turkey, national level.
Source: Eurostat (online data codes: agr_r_crops, apro_cpp_crop and demo_r_d3area)

meat products. Milk production covers farm production of milk from cows, sheep, goats and buffaloes. A distinction is made between milk collected by dairies and milk production on the farm. Milk collection is only a part of the total use of milk production on the farm; the remainder generally includes own consumption, direct sale and cattle feed.

Annual statistics on the production of a range of specific crops are also covered by regulations, with 2010 being the reference year when data for fresh fruit and vegetables were collected under a regulation (previously they were collected under various informal agreements). Agricultural production of crops is synonymous with harvested production and includes marketed quantities, as well as quantities consumed directly on the farm, losses and waste on the holding and losses during transport, storage and packaging. The main cereals harvested within the EU are wheat, barley, grain maize, rye and maslin; in this publication the production of cereals also includes rice. The data are obtained from sample surveys supplemented by estimates based on expert observations and administrative data.

When presenting additive variables on a map using shaded colours there is a bias linked to the area of each region (the bigger the region, the more the value of the variable will increase). In order to limit this bias, variables can be normalised by dividing their value by the region's area in km^2. The resulting indicator is intended to show a given variable on a map but is not necessarily suitable for interpretation. In this article, this method was used for presenting production data in Maps 4, 5, 6, 7 and 8 .

Further information

For further information about agriculture statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/agriculture/introduction.

Context

Europe has a great diversity in terms of natural environments, climates and farming practices that feed through into a wide array of agricultural products (food and drink products for human consumption and animal feed, and inputs for non-food processes). Indeed, agricultural products form a major part of the cultural identity of Europe's people and regions.

Some regions have terrains and land cover that permit almost all the land surface to be used for agriculture; in others, a harsh climate, dense forest cover or altitude may mean that only a fraction of the land area can be used in this way. Climate and geography have a major influence on the agricultural use of the land and, as a result, the choice of animal and plant production varies from region to region across Europe.

As a major user of the soil, agriculture shapes the rural landscape. Half of the surface area of the EU is used for agricultural purposes, hence the importance of agriculture to the EU's natural environment. The quality (or balance between intensive and extensive farming practices) of grasslands can be roughly assessed by studying livestock densities. Higher livestock densities are likely to contribute more greenhouse gas emissions, as a result of manure production and enteric fermentation, and may also result in nutrient leaching into the water and air. In contrast, a low level of livestock density may increase the need for industrial fertilisers to be used on agricultural land or lead to the risk of land abandonment, which may also result in an elimination of environmental diversity.

Production quality and agricultural intensity are not the only factors influencing the development of the agricultural sector. Other criteria, such as rural development, the environment and food safety have become increasingly important, and could yet alter the current face of agriculture in Europe's regions.

Significant reforms of the CAP have taken place in recent years, most notably in 2003 and 2008, with the aim of making the agricultural sector more market oriented. The 2003 reform introduced a new system of direct payments, known as the single payment scheme, under which aid is no longer linked to production (decoupling); this single payment scheme aims to guarantee farmers more stable incomes. Farmers can decide what to produce in the knowledge that they will receive the same amount of aid, allowing them to adjust production to suit demand. In 2008, further changes were made to the CAP, building on the reform package from 2003, such that all aid to the agricultural sector will be decoupled by 2012.

The Europe 2020 strategy offers a new perspective on economic, social, environmental, climate-related and technological challenges, and future agricultural reform is likely to be made in relation to the goals of developing intelligent, sustainable and inclusive growth, while taking account of the wealth and diversity of the agricultural sector within the EU Member States. As part of this process, the European Commission launched a public debate on the future of the CAP during 2010. The outcome of the debate, coupled with input from the European Council and Parliament led the Commission to present a communication 'The CAP towards 2020: meeting the food, natural resources and territorial challenges of the future' (COM(2010) 672 final) in November 2010.

10 Transport

Transport policy is at the heart of efforts to reduce regional inequality and improve cohesion within the European Union (EU). The aim of regional transport statistics is to quantify the flows of goods and passengers between, within and through regions. Regional transport statistics show patterns of variation across regions, where transport-related variables are often closely related to levels of economic activity.

This chapter is divided into three main sections. The first deals with passenger transport by road, studying the motorisation rate (passenger cars per inhabitant) and the role played by public transport vehicles (such as buses, trolleybuses and motor coaches). The second examines the stock of freight vehicles and their equipment rates (number of vehicles per inhabitant). The third section reviews the top 20 regions in terms of passenger and freight transport by air.

Coastal regions are very important for transport in many EU Member States, and a specific focus on maritime transport in these regions is included in Chapter 13, which provides a focus on coastal regions.

Main statistical findings

Motorway networks

The motorway network in the EU-27 exceeded 67 000 km in 2008, which gave a density around 15.7 km per 1 000 km² of land area. From the regional perspective, an extensive network of road, motorway and railway links is a prerequisite for economic development and interregional competitiveness. In absolute terms, the longest motorway networks at the NUTS level 2 were recorded in three Spanish regions: Andalucía (2 379 km), Castilla y León (2 158 km) and Castilla-La Mancha (1 636 km).

Map 10.1 shows the density of the motorway network in 2009. In general, this was closely related to population density and, thus, with the degree of urbanisation. The densest motorway networks were therefore found around capital cities and other big cities, in large industrial conurbations and around major seaports. The motorway infrastructure in these regions may be the result of regional development or could have facilitated such development. Major urban, industrial and port areas with a high motorway density include:

- the German city-state regions of Bremen, Hamburg and Berlin (186 km, 107 km and 86 km per 1 000 km² respectively) and Düsseldorf (121 km per 1 000 km²);
- the north-western part of England (138 km per 1 000 km² in Greater Manchester and 100 km per 1 000 km² in Merseyside) and the West Midlands (90 km per 1 000 km²);
- the Randstad of West-Nederland (reaching 128 km and 125 km per 1 000 km² in Utrecht and Zuid-Holland) as well as Limburg and Noord-Brabant (102 km and 98 km per 1 000 km² respectively) in Zuid-Nederland.

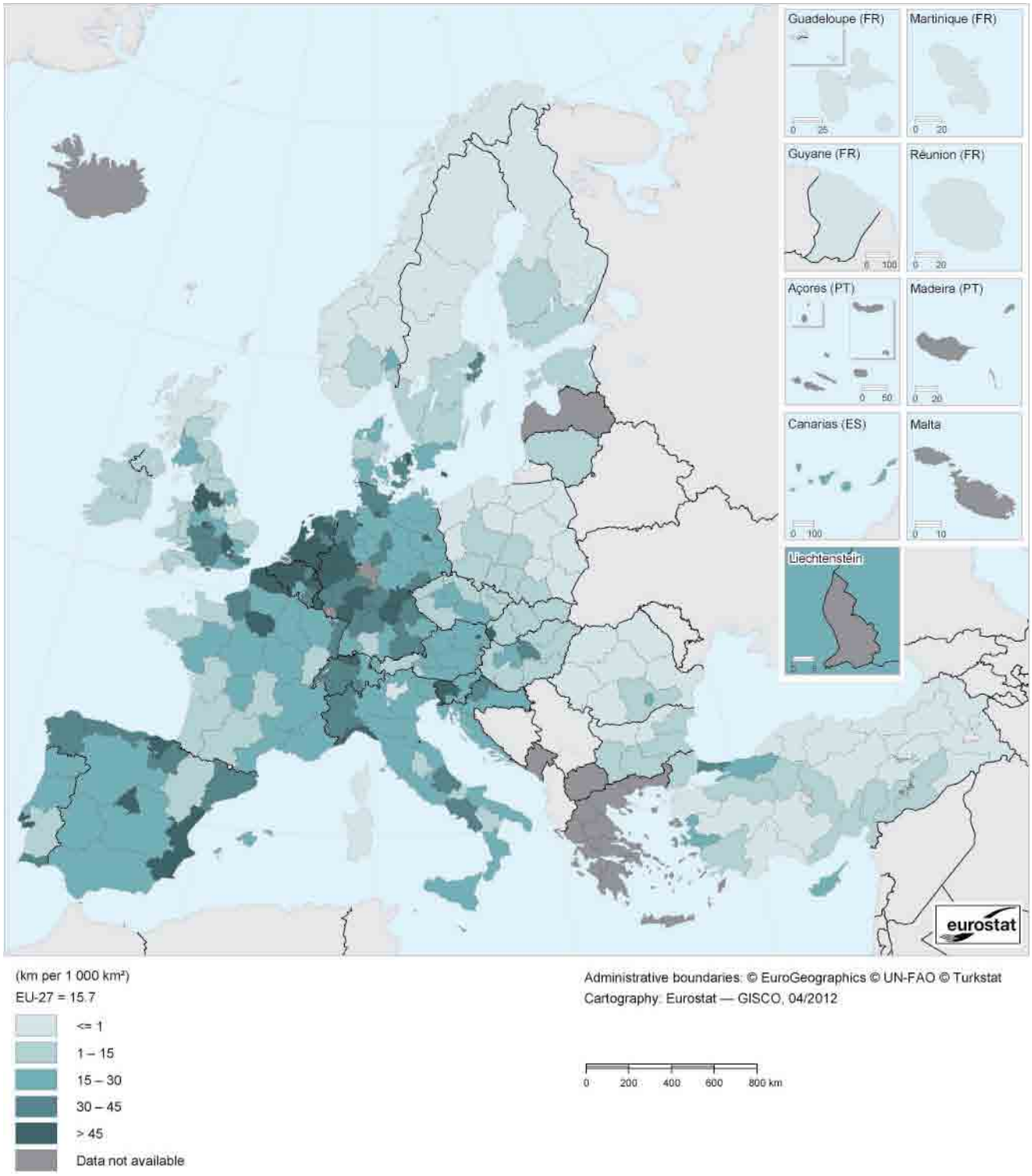
Many capital cities are surrounded by a ring of motorways in order to meet the high demand for road transport in these metropolitan areas; for example, Lisboa (222 km per 1 000 km², note data are from 2004), Wien (109 km per 1 000 km²), and the Comunidad de Madrid (95 km per 1 000 km²). Since motorways close to capital cities are often concentrated in a ring the reported density may be influenced by the overall size of the region: in very small capital city regions the motorway ring may be concentrated in surrounding regions rather than the capital city region itself (for example, there are no motorways in Inner London (United Kingdom)); conversely, in capital city regions that have a considerable area of land outside the confines of the city, the density of the motorway network may be low — even when there is an extensive motorway network — simply because of the large area.

In southern Europe a small number of regions (other than capital city regions) were among the regions with the densest motorway networks, and these can often be attributed to seaports or coastal tourism. For example, this was the case for the País Vasco in Spain (73 km per 1 000 km²) and for Liguria in Italy (70 km per 1 000 km²), the two peripheral coastal regions with the densest motorway networks. Unsurprisingly, the density of motorways on island regions was generally low, since most islands cannot be reached directly by road but rely on sea or air for access. Nevertheless, the motorway density of the Canarias (Spain), Cyprus and Sicilia (Italy) were still relatively high at 29 km, 28 km and 26 km per 1 000 km² respectively.

Stock of passenger cars, buses and coaches

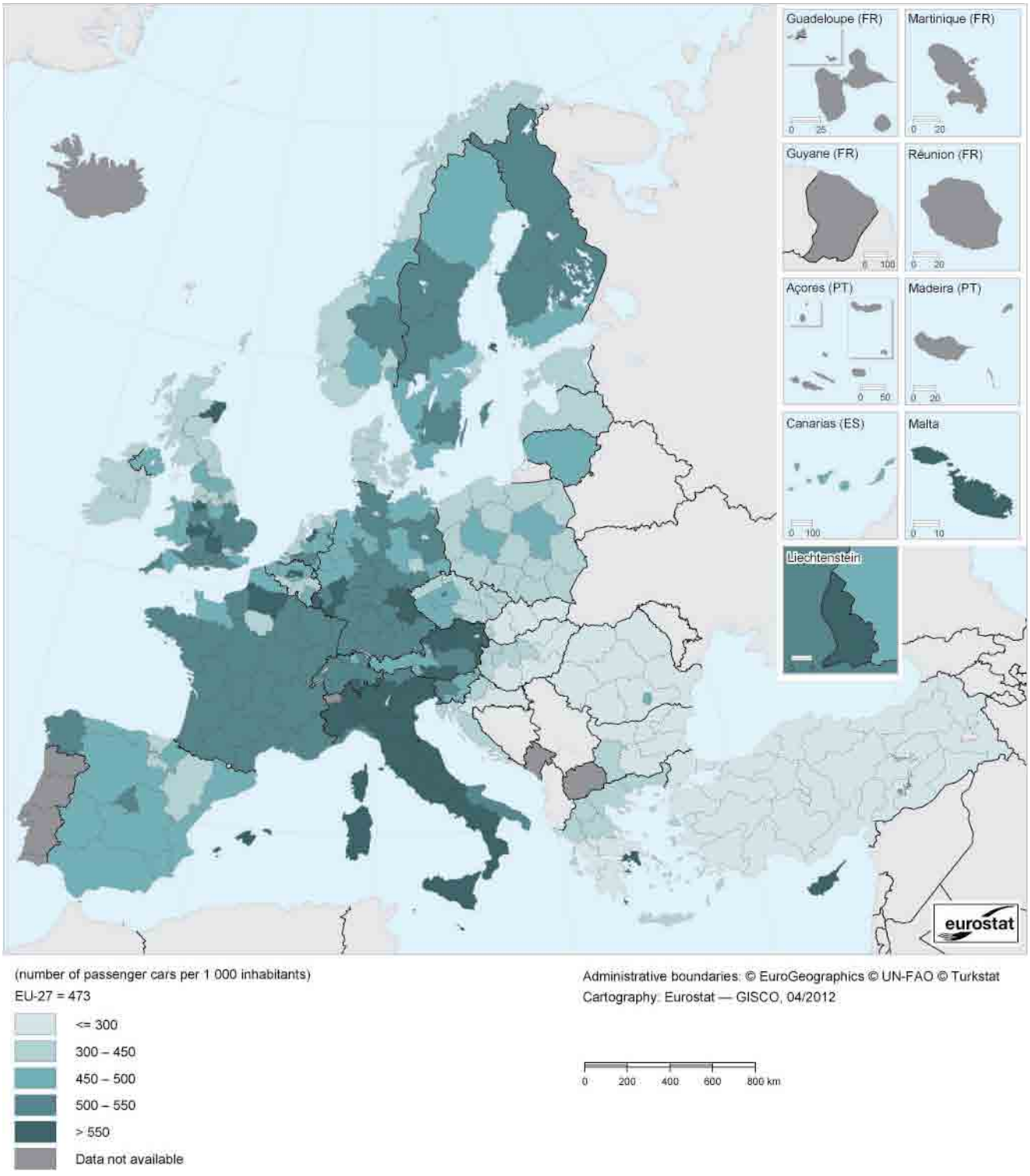
There are clear differences in the number of passenger cars per inhabitant (known as the motorisation rate) within the regions of the EU. Generally, the figures show an east–west divide, with more passenger cars per inhabitant registered in western European regions than in the regions of central and eastern Europe — see Map 10.2. Overall, the EU-27 motorisation rate in 2009 was estimated at 473 passenger cars per 1 000 inhabitants. Among the regions of the EU-15 Member States there were several Greek regions with relatively low motorisation rates, most notably the Peloponnisos, Sterea Ellada and Dytiki Ellada which, along with Inner London, were the only regions within the EU-15 Member States with a rate under 300 passenger cars per 1 000 inhabitants. Within the western part of Europe the capital city regions of Germany (Berlin) and Denmark (Hovedstaden) also had relatively low motorisation rates, both under 350 vehicles per 1 000 inhabitants. The Nord-Est region of Romania had the lowest motorisation rate in the whole of the EU-27, with 109 passenger cars per 1 000 inhabitants. Furthermore, Romanian regions accounted for the seven lowest motorisation rates across the EU-27 regions, with each of these regions reporting rates under 200 passenger cars per 1 000 inhabitants.

Map 10.1: Density of motorway networks, by NUTS 2 regions, 2009 (1)
(km per 1 000 km²)



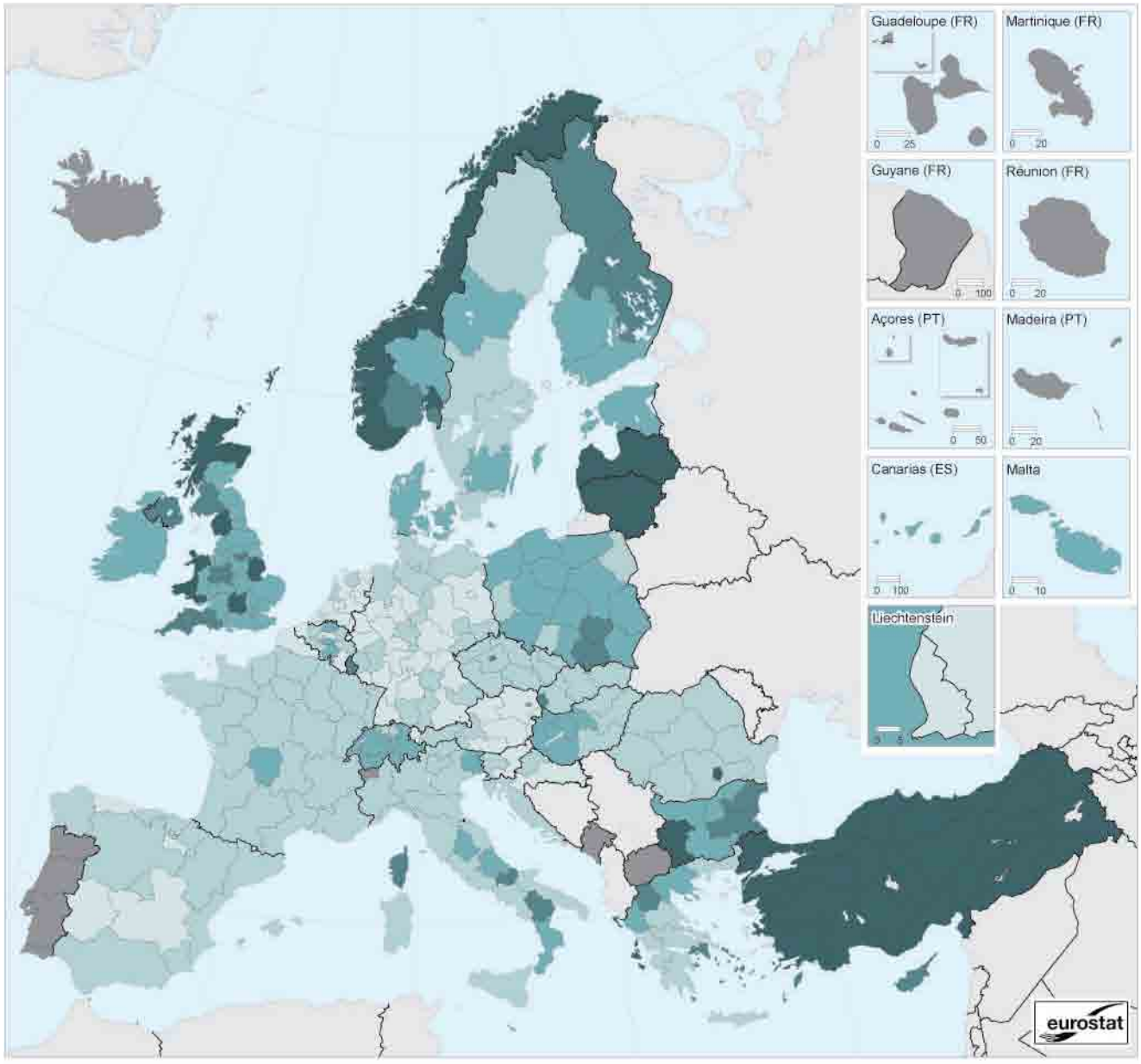
(1) EU-27, Denmark, Germany, Ireland, France, Italy, Hungary, Romania, Slovenia, the United Kingdom and Norway, 2008; Bulgaria, 2007; Cyprus and Poland, 2006; Portugal, 2004.
Source: Eurostat (online data code: tran_r_net)

Map 10.2: Motorisation rate, by NUTS 2 regions, 2008 ([1])
(number of passenger cars per 1 000 inhabitants)



([1]) EU-27, Ireland, France (except Île de France (FR10)) and Italy, 2009; the United Kingdom, 2007; Greece, provisional; Brandenburg (DE4), by NUTS 1 region.
Source: Eurostat (online data code: tran_r_vehst)

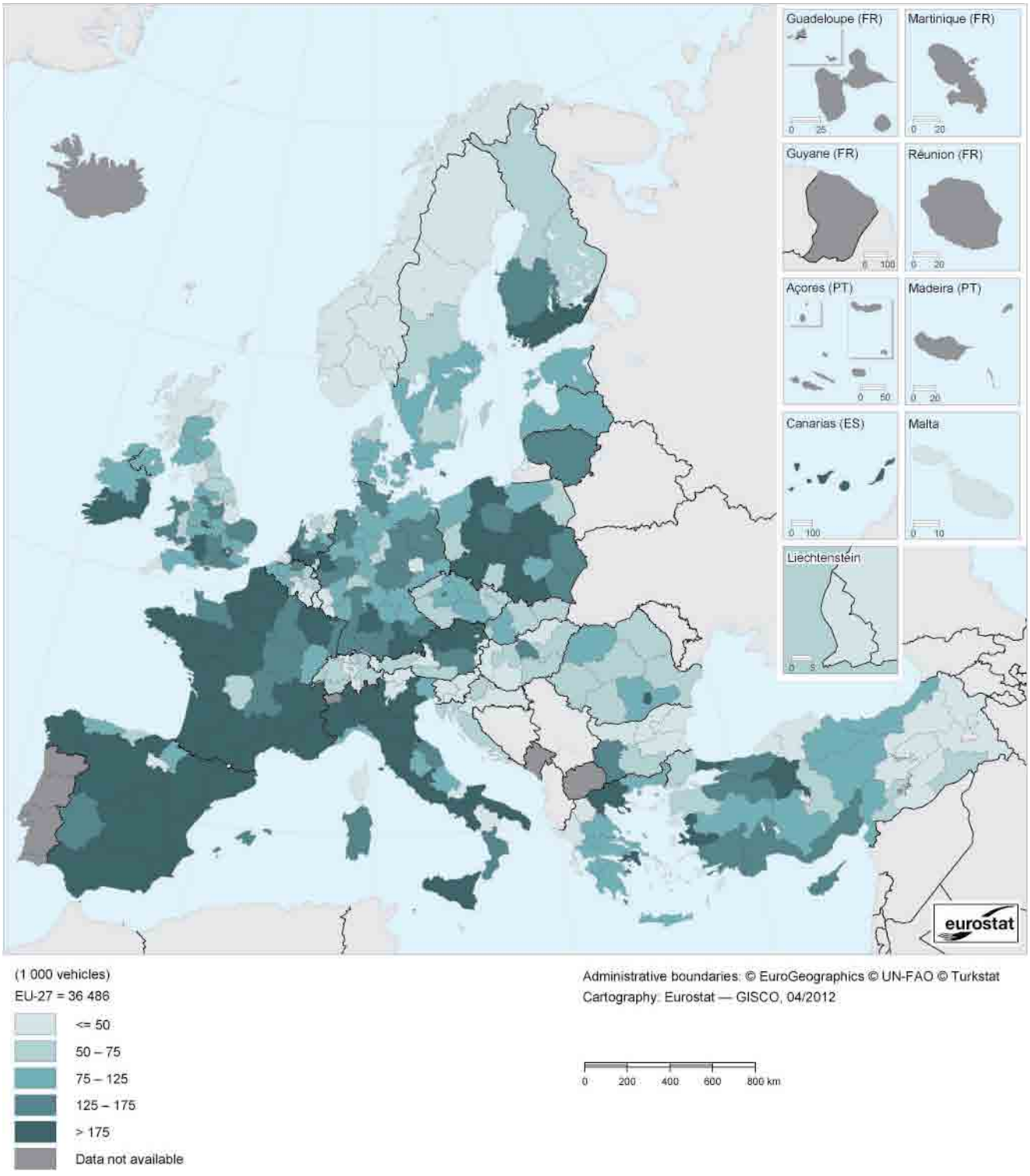
Map 10.3: Equipment rate for public transport vehicles (motor coaches, buses and trolleybuses), by NUTS 2 regions, 31 December 2009 (1)
(number of public transport vehicles per 1 000 inhabitants)



(1) Denmark, 31 December 2008; Northern Ireland (UKN0), 31 December 2007; Switzerland, 31 December 2006; Greece, provisional; Brandenburg (DE4), by NUTS 1 region; Denmark and Ireland, national level.

Source: Eurostat (online data code: tran_r_vehst and demo_r_d2jan)

Map 10.4: Number of road freight vehicles, by NUTS 2 regions, 31 December 2009 ([1])
(1 000 vehicles)



([1]) Denmark, 31 December 2008; Northern Ireland (UKN0), 31 December 2005; Brandenburg (DE4), by NUTS 1 region.
Source: Eurostat (online data code: tran_r_vehst)

The highest regional motorisation rate within the whole of the EU-27 was in the Flevoland region of the Netherlands, 783 passenger cars per 1 000 inhabitants — this was approximately seven times as high as in the Nord-Est region of Romania.

Twelve of the top 20 regions with the highest motorisation rates in 2008 or 2009 were in Italy. A number of regions close to larger cities also reported high motorisation rates, suggesting a larger number of commuters. Examples of this included Flevoland in the Netherlands, Cheshire in the United Kingdom, Lazio in Italy and Attiki in Greece. Several island regions also have high motorisation rates, including Åland in Finland, the Illes Balears in Spain, Sicilia and Sardegna in Italy and Corse in France, as well as Malta and Cyprus, which had the highest motorisation rates of any regions within the Member States that joined the EU in 2004 or 2007. These relatively high figures for islands may in part be explained by a lack of alternative means for travelling within the island; for example, most of these islands have a relatively underdeveloped rail infrastructure or no rail services at all.

To a large extent the figures for public transport vehicles such as buses, trolleybuses and motor coaches are in contrast to those for passenger cars, with a relatively clear difference between regions in western Member States and those in more central and eastern Member States. Of the 51 regions in the EU-27 with one or fewer public transport vehicles per 1 000 inhabitants, all except one were located within EU-15 Member States: the one exception was in Slovenia. The 11 EU regions with more than four public transport vehicles per 1 000 inhabitants included the capital city regions in Romania and Bulgaria, the island region of Ionia Nisia in Greece, Latvia and Lithuania and six regions in the United Kingdom. The highest ratio was 4.9 public transport vehicles per 1 0000 inhabitants in București - Ilfov (Romania).

Among the EFTA countries, the Norwegian regions all had a high ratio of public transport vehicles to the size of the population, exceeding four vehicles per 1 000 inhabitants in five regions and reaching as high as 6.0 in Vestlandet. In the two candidate countries for which regional data are available, namely Croatia and Turkey, contrasting situations were observed. In Croatia, the number of public transport vehicles per inhabitant was highest in Jadranska Hrvatska at 1.4 and lowest in Središnja i Istočna (Panonska) Hrvatska at 0.8. In contrast, this ratio ranged in Turkey from 4.1 vehicles per 1 000 inhabitants in Mardin, Batman, Şırnak, Siirt to 12.7 in Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane; in fact, in 24 of the 26 Turkish regions this ratio for the density of public transport vehicles was higher than in the region with the highest ratio in the EU.

Stock of road freight vehicles

For road freight vehicles, no systematic differences can be seen between western and eastern regions of the EU. In total, 56 regions in the EU-27 had more than 175 000 road freight vehicles, and among these there were 23 regions with more than 300 000 such vehicles: eight of these regions were in Italy, seven in Spain, six in France and two in Poland. The distribution of freight transport vehicles reflects, at least to some degree, the size of each Member State and the distance between major cities and other transport hubs.

The two regions with by far the highest number of registered freight vehicles were both located in Spain, on the Mediterranean coast: Andalucía and Cataluña. These two regions play a key role in freight transport in the western Mediterranean, with direct ferry connections not only to the Spanish islands and Ceuta and Melilla, but also from Andalucía to Morocco and Algeria, and between Cataluña and Italy. The region with the third highest number of freight vehicles was the French capital city region of Île de France, while the fourth highest number of freight vehicles was recorded in the Italian region of Lombardia, which contains Milan and also lies at the heart of international freight corridors between Italy, France, Switzerland and Austria. The other regions registering more than half a million freight vehicles were also economic centres containing capital cities or other major cities: Rhône-Alpes (Lyon in France); Comunidad de Madrid and Comunidad Valenciana (both in Spain); and Mazowieckie (Warszawa in Poland).

Regional equipment rates for road freight vehicles (number of vehicles per inhabitant) depend on a number of different factors. These include the regional transport system and its infrastructure for different modes of freight transport, such as the capacity of motorways, railway lines, ports and airports. They also include the economic characteristics of the region, for example, whether the regional economy is driven by manufacturing or services, and whether the region is located on key European transport corridors.

Reflecting these fundamental differences, there are huge disparities in the regional freight vehicle equipment rates. The highest regional rates in 2009 were found in the Greek region of Kriti, where there were 201.1 road freight vehicles per 1 000 inhabitants. The 20 EU regions with the highest freight vehicle equipment rates were mainly registered in Greece, Spain and Austria, along with Cyprus and the island region of Åland (in Finland). Mirroring the rankings for passenger cars, the lowest ratio of road freight vehicles to population were generally recorded in Romanian regions and the capital city regions of the United Kingdom and Germany. In 41 EU regions there were less than 50 road freight vehicles per 1 000 inhabitants: 22 of these regions were in Member States that joined the EU in 2004 or 2007, 13 were in Germany, five were in the United Kingdom and one was in Austria (Wien).

Reflecting its mountainous terrain and reliance on short sea shipping, the equipment rate for freight vehicles was generally low in Norwegian regions. All seven Norwegian regions recorded rates lower than 24 vehicles per 1 000 inhabitants, ranking each of them below the third lowest rate recorded

among the EU regions; in fact, four Norwegian regions had equipment rates below the lowest ratio recorded in the EU. In Switzerland, the equipment rate was also generally low, below 50 vehicles per 1 000 inhabitants in all regions except for Ticino. Equally, most Turkish regions had low equipment rates, with only four out of 26 regions recording a rate above 50 vehicles per 1 000 inhabitants, and three (Van, Muş, Bitlis, Hakkari; Ağrı, Kars, Iğdır, Ardahan; and Şanlıurfa, Diyarbakır) recording rates below the lowest rate in any EU region. All three Croatian regions recorded equipment rates below 50 vehicles per 1 000 inhabitants.

Air transport

The rapid growth of air transport has been one of the most significant developments in the transport sector in recent years, both in the EU and all over the world. The liberalisation of the air transport market in the EU contributed to this development, most apparent in the expansion of low-cost airlines. This led to the rapid growth of several smaller regional airports, which are generally less congested and charge lower landing fees than large airports in the capital city regions. However, from 2008 to 2009 many airports experienced a sharp decline in passenger and freight transport, reflecting the fall in economic activity and international trade during the worldwide economic slowdown. In 2009, the total number of air transport passengers carried (including passengers on domestic flights as well as international flights) fell by 5.9 %. In 2010, the number of passengers carried increased 3.4 % to reach 776.9 million passengers, around 2.7 % below its level from 2008.

Tables 10.2 and 10.3 show the top 20 regions with the highest number of air passengers in 2010, and the highest volume of air freight and mail in 2009: for each region the main airports for scheduled and/or charter airlines and for regular freight/mail flights are included.

The top-ranking regions in terms of the total number of air passengers tend to be capital city regions in western Europe. The list is headed by Île-de-France, with a total of 82.8 million passengers for Paris-Charles de Gaulle and Paris-Orly airports, followed by Outer London (Heathrow) with 65.9 million passengers, Darmstadt with Frankfurt airport (52.6 million), Comunidad de Madrid (47.9 million), Noord-Holland (Schiphol Amsterdam: 43.5 million) and Lazio with Roma Fiumicino and Roma Ciampino airports (38.2 million). The big airports in and around western Europe's capitals also serve as central hubs for intercontinental air traffic. This is especially true for Heathrow, Paris-Charles de Gaulle, Frankfurt and Schiphol airports.

All of the top 20 regions for air passenger transport recorded a fall in passenger numbers between 2008 and 2009: note that the data for German regions presented in Table 10.2 are for 2010, and in that year these regions recorded an increase in passenger numbers. Several of the top 20 regions for air passenger transport faced losses of more than 10 % in passenger numbers between 2008 and 2009, with the largest losses in Southern and Eastern Ireland (– 12.6 %) and the Canarias (– 12.0 %). Although not visible from Table 10.2, a significant number of smaller regional airports are among the fastest growing (in terms of passenger numbers), due to their use as destinations or hubs by low-cost carriers.

While the total quantity of air freight and mail is limited compared with the much higher quantities of freight transported by road, rail, inland waterways and especially sea, air freight is important and growing steadily for articles with high added value, perishable goods (especially food) and express parcels. Table 10.3 shows a ranking of airports based on their quantity of air freight and mail in 2009. Darmstadt was at the head of the top 20 European regions with 2.27 million tonnes (2010 data), followed in 2009 by Outer London (1.35 million tonnes), Noord-Holland (1.32 million tonnes) and Île-de-France (1.27 million tonnes). Quantities at other airports within the EU were significantly lower, indicating that the biggest airports serve as the main hubs within the EU for air freight and mail. Quantities of half a million tonnes or more were also observed in 2010 for Luxembourg (0.71 million tonnes), Köln (0.64 million tonnes) and Leipzig (0.64 million tonnes).

Air freight quantities fell even further than the number of air passengers from 2008 to 2009, down 12.2 % in the EU-27. However, the quantity of freight rebounded 15.9 % in 2010 to reach 13.4 million tonnes, which was 1.8 % above the level for 2008. As for passenger transport, nearly all of the regions with high volumes of air freight recorded a decrease in their air freight traffic in 2009. Data for 2010 are available for the Finnish and German regions in the top 20, and each of these recorded increased freight in 2010; for example, there was 57.1 % growth in the region of Koblenz (Germany). Note that the very high growth rate between 2007 and 2009 that is reported for the Danish region of Hovedstaden results from København/Kastrup airport not being covered by air freight statistics in 2007.

Data sources and availability

Regional data on road and railway infrastructure, inland waterways, vehicle stocks and road accidents are currently collected by Member States and candidate countries on a voluntary basis. Data on road transport of goods, as well as air (and maritime) transport for passengers and goods, are derived directly from data collected under legal acts. Data on journeys made by vehicles are derived from a specific study of road transport data.

A motorway is a road that is especially designed and built for motor traffic, which does not serve properties bordering on it, and which: is provided, except at special points or

Table 10.1: Transport equipment rates, by NUTS 2 regions, 31 December 2009
(number of vehicles per 1 000 inhabitants)

	Region with highest motorisation rate (1)		Region with highest public equipment rate (2)		Region with highest freight equipment rate (3)	
Belgium	Province/Provincie Vlaams-Brabant (BE24)	569	Province/Provincie Brabant Wallon (BE31)	2.6	Province/Provincie West-Vlaanderen (BE25)	91.4
Bulgaria	Yugozapaden (BG41)	400	Yugozapaden (BG41)	4.3	Yugozapaden (BG41)	63.4
Czech Republic	Praha (CZ01)	514	Praha (CZ01)	3.2	Praha (CZ01)	104.1
Denmark	Sjælland (DK02)	400	:	:	Nordjylland (DK05)	103.5
Germany (4)	Saarland (DEC0)	557	Trier (DEB2)	1.9	Niederbayern (DE22)	115.2
Estonia	-	412	-	3.0	-	64.9
Ireland	Southern and Eastern (IE02)	433	:	:	Border, Midland and Western (IE01)	92.2
Greece	Attiki (GR30)	*647*	Ionia Nisia (GR22)	*4.3*	Kriti (GR43)	201.1
Spain	Illes Balears (ES53)	609	Canarias (ES) (ES70)	2.9	Canarias (ES) (ES70)	182.0
France	Corse (FR83)	612	Corse (FR83)	3.2	Corse (FR83)	126.1
Italy	Lazio (ITE4)	673	Basilicata (ITF5)	3.4	Molise (ITF2)	99.9
Cyprus	-	557	-	3.7	-	180.5
Latvia	-	412	-	4.4	-	54.3
Lithuania	-	499	-	4.2	-	48.4
Luxembourg	-	664	-	4.0	-	73.7
Hungary	Közép-Magyarország (HU10)	350	Közép-Dunántúl (HU21)	2.7	Közép-Magyarország (HU10)	51.5
Malta	-	564	-	2.4	-	108.6
Netherlands	Flevoland (NL23)	783	Friesland (NL) (NL12)	1.5	Flevoland (NL23)	123.7
Austria	Burgenland (AT11)	587	Wien (AT13)	2.4	Burgenland (AT11)	169.0
Poland	Mazowieckie (PL12)	484	Świętokrzyskie (PL33)	3.1	Mazowieckie (PL12)	101.5
Portugal	:	:	:	:	:	:
Romania	Bucureşti - Ilfov (RO32)	465	Bucureşti - Ilfov (RO32)	4.9	Bucureşti - Ilfov (RO32)	89.8
Slovenia	Zahodna Slovenija (SI02)	536	Zahodna Slovenija (SI02)	1.0	Zahodna Slovenija (SI02)	50.9
Slovakia	Bratislavský kraj (SK01)	434	Bratislavský kraj (SK01)	3.2	Bratislavský kraj (SK01)	114.0
Finland	Åland (FI20)	645	Pohjois-Suomi (FI1A)	3.1	Åland (FI20)	144.2
Sweden	Norra Mellansverige (SE31)	522	Mellersta Norrland (SE32)	2.7	Mellersta Norrland (SE32)	78.4
United Kingdom	Cheshire (UKD2)	657	Highlands and Islands (UKM6)	4.5	Cheshire (UKD2)	90.3
Liechtenstein	-	717	-	0.0	-	83.6
Norway	Hedmark og Oppland (NO02)	517	Vestlandet (NO05)	6.0	Hedmark og Oppland (NO02)	23.9
Switzerland	Ticino (CH07)	601	Ticino (CH07)	2.8	Ticino (CH07)	53.6
Croatia	Sjeverozapadna Hrvatska (HR01)	376	Jadranska Hrvatska (HR03)	1.4	Sjeverozapadna Hrvatska (HR01)	44.2
Turkey	Ankara (TR51)	188	Trabzon (TR90)	12.7	Antalya (TR61)	60.2

(1) Ireland, France (except Île de France (FR10)) and Italy, 2009; the United Kingdom, 2007; all other countries, 2008.
(2) Northern Ireland (UKN0), 31 December 2007; Switzerland, 31 December 2006.
(3) Denmark, 31 December 2008; Northern Ireland (UKN0), 31 December 2005.
(4) Brandenburg (DE4), by NUTS 1 region.
Source: Eurostat (online data codes: tran_r_vehst and demo_r_d2jan)

Table 10.2: EU-27 regions with highest number of air passengers

Region	Main airports	Passengers, 2009 (1 000)	Rate of change, 2008–09 (%)	Average annual rate of change, 2007–09 (%)
Île de France (FR10)	Paris-Charles De Gaulle; Paris-Orly	82 776	– 4.5	– 1.9
Outer London (UKI2)	Heathrow	65 904	– 1.5	– 1.4
Darmstadt (DE71) (1)	Frankfurt	52 646	4.1	– 0.8
Comunidad de Madrid (ES30)	Madrid-Barajas	47 944	– 4.8	– 3.2
Noord-Holland (NL32)	Schiphol (Amsterdam)	43 532	– 8.2	– 4.5
Lazio (ITE4)	Leonardo da Vinci (Roma Fiumicino); Giovan Battista Pastine (Roma Ciampino)	38 172	– 3.5	0.6
Oberbayern (DE21) (1)	München	34 520	6.0	0.7
Cataluña (ES51)	Barcelona El-Prat; Girona-Costa Brava; Reus	34 234	– 7.8	– 6.0
Lombardia (ITC4)	Malpensa; Orio Al Serio; Linate; Gabriele D'Annunzio (Brescia)	32 984	– 5.6	– 8.5
Surrey, East and West Sussex (UKJ2)	Gatwick	32 360	– 5.3	– 4.1
Illes Balears (ES53)	Palma De Mallorca; Ibiza; Menorca	27 515	– 6.2	– 4.2
Canarias (ES70)	Gran Canaria; Tenerife Sur; Lanzarote; Fuerteventura; Tenerife Norte; La Palma; El Hierro	26 223	– 12.0	– 6.9
Southern and Eastern (IE02)	Dublin; Cork; Shannon; Kerry	25 540	– 12.6	– 6.5
Düsseldorf (DEA1) (1)	Düsseldorf; Weeze (Niederrhein)	21 789	8.3	5.4
Essex (UKH3)	Stansted; Southend	19 953	– 10.9	– 8.5
Hovedstaden (DK01)	København; Bornholm	19 609	– 9.6	– 4.1
Greater Manchester (UKD3)	Manchester	18 630	– 11.5	– 7.7
Andalucía (ES61)	Málaga-Cosa del Sol; Sevilla; Jerez; Federico García Lorca Granada-Jaén; Almería	18 592	– 10.4	– 8.5
Niederösterreich (AT12)	Wien-Schwechat	18 045	– 8.3	– 1.8
Stockholm (SE11)	Stockholm Arlanda; Bromma Stockholm	18 031	– 9.8	– 4.4

(1) Latest data relate to 2010; rate of change to 2009-2010 and average annual rate of change to 2007-2010.
Source: Eurostat (online data code: tran_r_avpa_nm)

Table 10.3: EU-27 regions with the highest quantity of air freight and mail

Region	Main airports	Freight and mail, 2009 (1 000 tonnes)	Rate of change, 2008–09 (%)	Average annual rate of change, 2007–09 (%)
Darmstadt (DE71) (1)	Frankfurt	2 270	20.6	1.6
Outer London (UKI2)	Heathrow	1 349	– 9.0	– 1.6
Noord-Holland (NL32)	Schiphol (Amsterdam)	1 317	– 17.3	– 10.7
Île de France (FR10)	Paris-Charles De Gaulle; Paris-Orly	1 266	– 13.5	– 8.5
Luxembourg (LU00) (1)	Luxembourg	706	12.6	0.1
Köln (DEA2) (1)	Köln Bonn	638	16.2	– 3.5
Leipzig (DED3) (1)	Leipzig Halle	638	25.3	95.0
Lombardia (ITC4)	Malpensa; Orio Al Serio; Linate; Gabriele D'Annunzio (Brescia)	496	– 15.2	– 14.7
Province/Provincie Liège (BE33)	Liège	402	5.2	5.1
Province/Provincie Vlaams-Brabant (BE24)	Brussels	364	– 40.7	– 29.6
Comunidad de Madrid (ES30)	Madrid-Barajas	330	– 7.0	– 1.8
Oberbayern (DE21) (1)	München	291	24.4	3.2
Leicestershire, Rutland and North-amptonshire (UKF2)	East Midlands	287	– 1.7	– 5.0
Essex (UKH3)	Stansted; Southend	213	– 7.4	– 2.7
Niederösterreich (AT12)	Wien-Schwechat	198	– 1.5	– 1.7
Koblenz (DEB1) (1)	Frankfurt-Hahn	165	57.1	13.8
Etelä-Suomi (FI18) (1)	Helsinki-Vantaa; Turku; Lappeenranta	164	30.2	4.2
Lazio (ITE4)	Leonardo da Vinci (Roma Fiumicino); Giovan Battista Pastine (Roma Ciampino)	156	– 9.8	– 5.9
Hovedstaden (DK01)	København; Bornholm	152	– 38.5	1 132.9
Southern and Eastern (IE02)	Dublin; Cork; Shannon; Kerry	112	– 11.8	– 8.2

(1) Latest data relate to 2010; rate of change to 2009–10 and average annual rate of change to 2007–10.
Source: Eurostat (online data code: tran_r_avgo_nm)

temporarily, with separate carriageways for traffic in two directions, separated from each other, either by a dividing strip not intended for traffic, or exceptionally by other means; has no crossings at the same level with any road, railway or tramway track, or footpath; is especially signposted as a motorway and is reserved for specific categories of road motor vehicles. Entry and exit lanes of motorways are included in the statistics on the length of motorways irrespective of the location of the signposts. Urban motorways are also included.

Passenger cars are road motor vehicles other than mopeds or motorcycles intended for the carriage of passengers and designed to seat no more than nine persons (including the driver). Included are: passenger cars, vans designed and used primarily for transport of passengers, taxis, hire cars, ambulances and motor homes. The number of passenger cars per inhabitant is calculated on the basis of the stock of vehicles as of 31 December and population figures as of 1 January of the following year. The equipment rate for public transport vehicles is calculated in the same manner, based on the stock of vehicles as of 31 December.

Regional air transport statistics show passenger and freight movements by NUTS level 2 region, measured in relation to the number of passengers and the quantity of freight in tonnes. Passenger data are divided into passengers embarking, disembarking and in transit, while freight statistics are divided into tonnes of freight and mail loaded and unloaded. The data are collected at the airport level and are aggregated to NUTS level 2 regions.

Further information

For further information about transport statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/transport/introduction.

Precise definitions of all the variables used can be found in the *Illustrated glossary for transport statistics* (fourth edition) (http://ec.europa.eu/eurostat/product?code=KS-RA-10-028&mode=view).

Context

An efficient and well-functioning passenger and freight transport system is vital for enterprises and inhabitants. The EU's transport policy aims to foster clean, safe and efficient travel throughout Europe, underpinning the internal market for goods (transferring them between their place of production and their place of consumption) and the right of citizens to travel freely throughout the EU (for both work and pleasure).

The European Commission's Directorate-General for Mobility and Transport is responsible for developing transport policy within the EU. Its remit is to ensure mobility in a single European transport area, integrating the needs of the population, environmental policy and competitiveness. It aims to do so by:

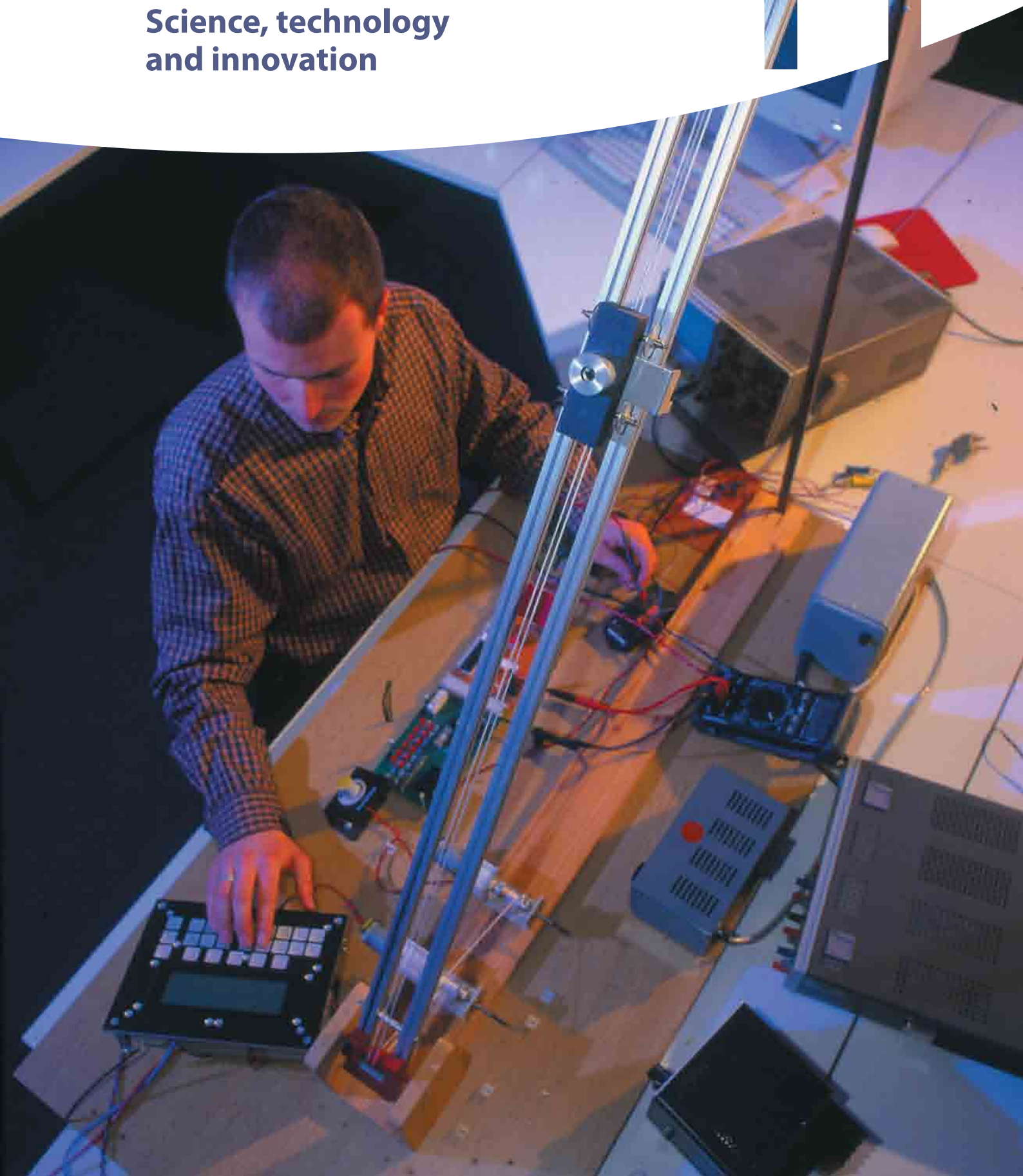
- completing the European internal market: so as to ensure the seamless integration of all modes of transport into a single, competitive transport system, while protecting safety and security and improving the rights of passengers;
- developing an agenda for innovation: promoting the development of a new generation of sustainable transport technologies, in particular for integrated traffic management systems and low-carbon vehicles;
- building a trans-European network as the backbone of a multimodal, sustainable transport system capable of delivering fast, affordable and reliable transport solutions;
- projecting these mobility and transport objectives and defending EU political and industrial interests on the world stage, within international organisations and with strategic partners.

In March 2011 the European Commission adopted a White Paper 'Roadmap to a single European transport area — Towards a competitive and resource efficient transport system' (COM(2011) 144 final). This comprehensive strategy contains 40 specific initiatives for the next decade to build a competitive transport system that aims to increase mobility, remove major barriers in key areas and fuel growth and employment. The proposals also seek to reduce dramatically Europe's dependence on imported oil and to cut carbon emissions, with a set of goals to be achieved for 2050, including:

- no more conventionally-fuelled cars in cities;
- 40 % of the fuel being used in the aviation sector to come from sustainable low-carbon fuels;
- at least a 40 % reduction in shipping emissions;
- a 50 % shift in medium-distance inter-city passenger and freight journeys away from roads to either rail or waterborne transport;
- all of which should contribute to a 60 % cut in transport emissions by the middle of the century.

11

Science, technology and innovation



This chapter presents statistical information that illustrates regional developments for science and technology indicators within the European Union (EU). The domains covered are research and development (R & D), the number of researchers, human resources in science and technology (HRST), employment in high technology sectors and patent applications.

Main statistical findings

Research and development intensity

The EU-27 had an R & D intensity ratio of 2.01 % in 2009, in other words, expenditure on R & D was equivalent to 2.01 % of GDP. A total of 35 of the 266 EU regions shown in Map 11.1 had an R & D intensity above 3 % in 2009. As such, they exceeded the 3 % R & D intensity target set by the Barcelona Council in 2002 and maintained in the Europe 2020 strategy. Among these 35 regions, 11 were in Germany, eight in the United Kingdom, four in Sweden, three each in Denmark and Finland and two each in Belgium, France and Austria. Together these 35 regions accounted for 45.0 % of all R & D expenditure in the EU.

The German regions included a cluster of regions in south-western and south-eastern Germany: Rheinhessen-Pfalz, Stuttgart, Karlsruhe, Tübingen, Oberbayern, Mittelfranken and Darmstadt. These regions were also very important in absolute terms (the level rather than the intensity of R & D), as together they accounted for 13.4 % of total R & D expenditure in the EU in 2009. The four other German regions with R & D intensity above 3 %, from west to east, were Köln, Braunschweig (7.93 % R & D intensity — the most R & D-intensive region on the map), Berlin and Dresden; these four regions together contributed 5.2 % of total R & D expenditure in the EU.

The two Belgian regions were the Province/Provincie du Brabant Wallon, which was the second most R & D intensive region on the map, with a ratio equivalent to 7.6 % of GDP, and the neighbouring Province/Provincie Vlaams-Brabant; as well as a large industrial area around the Belgian capital, these regions include the university towns of Louvain-la-Neuve (which has a science park) and Leuven.

Ten of the most R & D-intensive regions in 2009 were located in the Nordic Member States, including the capital city regions of Denmark and Sweden; the third highest R & D intensity of all EU regions was recorded in the Finnish region of Pohjois-Suomi (6.58 %). The 10 regions in Nordic Member States with an R & D intensity above 3 % collectively contributed 9.3 % of total R & D expenditure in the EU.

The two most R & D-intensive regions in the United Kingdom in 2009 were Cheshire, in North West England (6.51 %), and East Anglia (5.59 % — this region includes the area around Cambridge). Together these two regions contributed around 2.0 % of total R & D expenditure in the EU. Apart from North Eastern Scotland (which is the main British region that supports the North Sea extraction of oil and gas), the other R & D-intensive regions in the United Kingdom were generally in southern England; together these contributed 3.9 % to total R & D expenditure in the EU. In France the highest R & D intensity was in Midi-Pyrénées (4.38 % — this region includes a cluster of R & D-intensive enterprises related to aerospace manufacturing, centred on Toulouse) ahead of the capital city region of Île de France (3.01 %). The level of R & D expenditure in these two regions was high, particularly in the Île de France region, which had the highest level of R & D expenditure among any of the NUTS level 2 regions in the EU; as a result these two French regions together contributed 8.5 % to total R & D expenditure in the EU. In Austria the most R & D-intensive regions were Steiermark (3.88 %) and Wien (3.95 %), with a combined contribution of 1.8 % to total R & D expenditure in the EU.

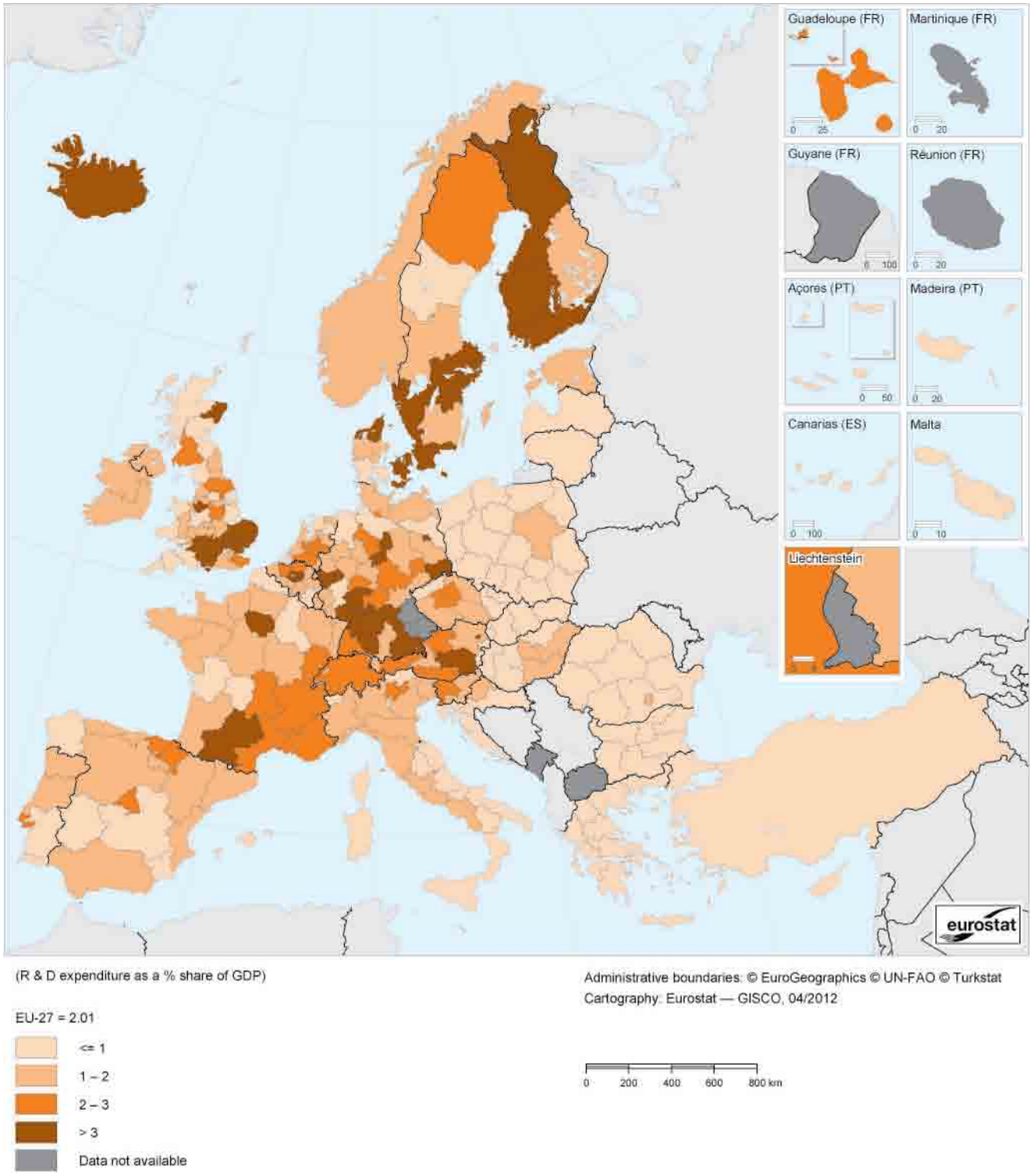
Among EFTA countries (no regional analysis is available) Iceland had an R & D intensity of 3.11 % and Norway of 1.80 % in 2009, while the rate in Switzerland was 2.99 % in 2008. Turkey (no regional analysis available) had an R & D intensity of 0.85 % in 2009, while the Croatian region of Sjeverozapadna Hrvatska had an R & D intensity of 1.54 %, far above the intensity recorded in the two other Croatian regions (also 2009).

Researchers

Map 11.2 provides an overview of the regional distribution of the share of researchers in total employment (measured as a headcount); the EU-27 average for this indicator was estimated to be 1.1 % in 2009. Researchers are directly employed on R & D activities and are defined as 'professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems and in the management of the projects concerned'.

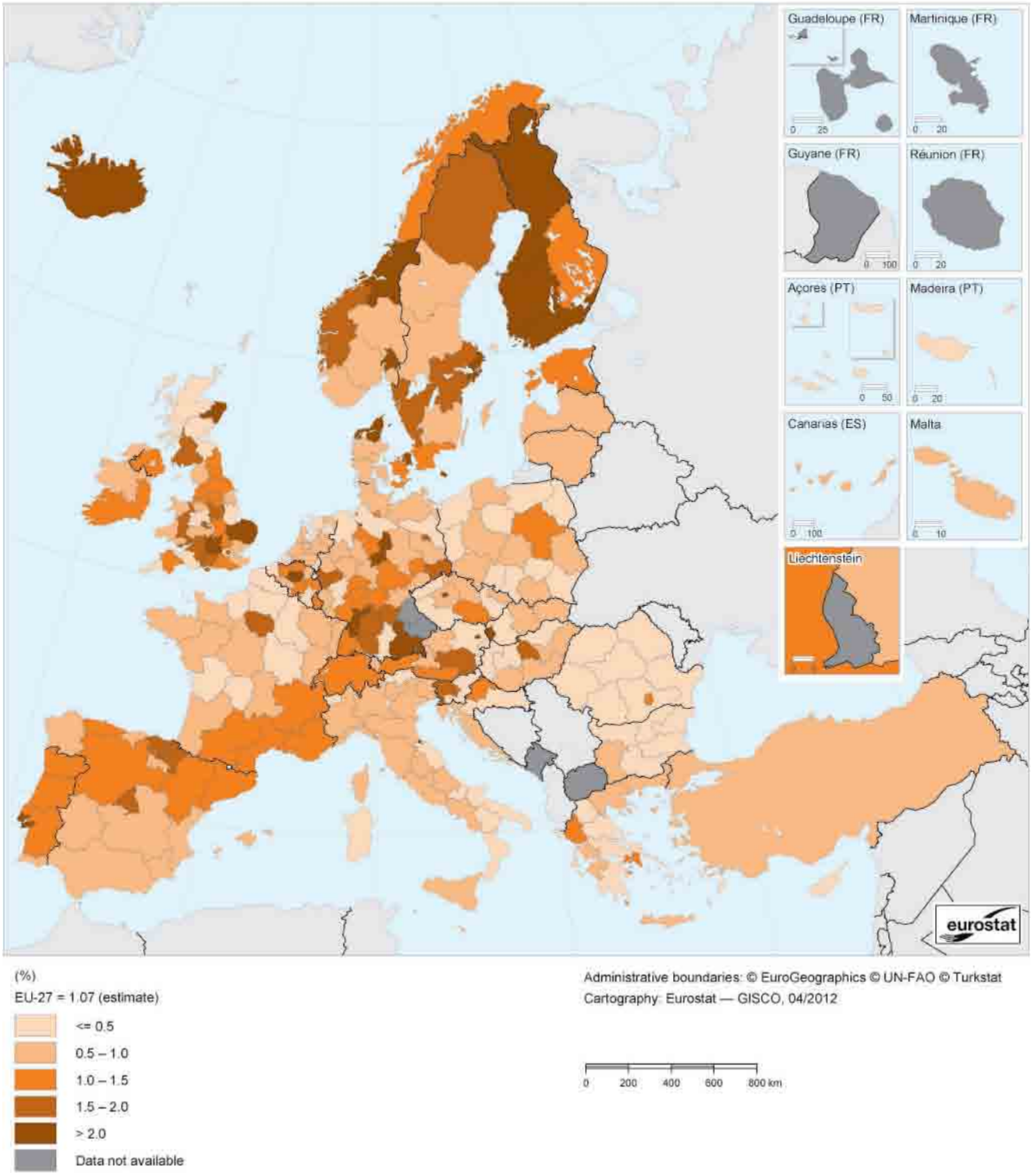
In many Member States the location of researchers was relatively concentrated, with a small number of regions recording a relatively high share of researchers in total employment far above the national average. The share of researchers among all persons employed was more than 2.0 % in 21 of the EU regions shown in Map 11.2. The Member States with several regions above this level included: Germany and the United Kingdom with four each, Belgium and Finland with three each and Denmark with two. Around two thirds of these regions with a high proportion of researchers also had high R & D intensity. Nevertheless, there were five regions where researchers accounted for more than 2.0 % of the workforce but where R & D intensity did not exceed 3 %: the capital city regions of Belgium, the Czech Republic, Portugal, Slovakia and the United Kingdom. More than 2.0 % of the workforce in Iceland and the Norwegian regions of Trøndelag and Oslo

Map 11.1: R & D intensity, by NUTS 2 regions, 2009 (1)
(R & D expenditure as a % share of GDP)



(1) Switzerland, 2008; Greece, 2005; Norway, Switzerland and Turkey, national level.
Source: Eurostat (online data codes: rd_e_gerdreg and nama_r_e2gdp)

Map 11.2: Proportion of researchers in the total number of persons employed, all sectors, by NUTS 2 regions, 2009 ([1])
(%)



([1]) Switzerland, 2008; Greece, 2005; France, 2001; EU-27, Ireland, the Netherlands and the United Kingdom, estimates; Switzerland and Turkey, national level.
Source: Eurostat (online data code: rd_p_persreg)

og Akershus were researchers. The share of researchers exceeded 1.5 %, but was 2.0 % or less, in a further 22 regions within the EU, six each of which were in the United Kingdom and Germany; several of the other 10 regions were in Sweden and Spain (three regions each), while the remainder were the capital city regions of France (note that the data for France relate to 2001), Hungary and Slovenia, as well as the Steiermark region of Austria. In 77 regions, the share of researchers was 0.5 % or less of all persons employed and these regions were distributed across 19 of the EU Member States.

Human resources in science and technology

Investment in research, development, education and skills are key policy areas for the EU, as they may be considered essential to economic growth and to the development of a knowledge-based and so-called 'smarter' economy. This has led to an increased interest in the role and measurement of skills of people with science and technology-related education or work. One way to measure the concentration of highly qualified people is to look at human resources in science and technology (HRST): the stock of HRST can be used as an indicator to determine how developed the knowledge-based economy is. HRST includes persons who have completed tertiary education (HRSTE) — for example, university degrees — and/or are employed in a science and technology occupation (HRSTO); the group of persons who meet both criteria are referred to as core HRST.

Map 11.3 focuses on the number of persons having completed a tertiary education that are employed in a science and technology (S & T) occupation; in other words, core HRST. The map shows the level of core HRST relative to the size of the labour force (the economically active population). In 2010, 15 of the 33 EU-27 regions with the highest shares of core HRST in the labour force (those exceeding 22 %) were capital city regions, while the remainder were generally other urban regions. Among all of the regions in the EU, the highest share was reported in Inner London (United Kingdom) where 33.4 % of the labour force was considered to be core HRST.

Beyond this concentration in capital cities, there were also relatively high shares of core HRST in the German regions which included the major cities of München and Hamburg, as well as in one region bordering Berlin and in Tübingen, while in Sweden the regions with a high share covered the major cities of Malmö and Göteborg. Other regions outside of capital city regions with over 22 % of their respective labour forces considered to be core HRST included the País Vasco (which includes Bilbao) in Spain, and Alsace and Midi-Pyrénées (including Strasbourg and Toulouse respectively) in France. Finally, there was a cluster of regions with high shares of core HRST that stretched from Luxembourg, through south-eastern Belgium up to Oost-Vlaanderen in the north of Belgium, with two more regions in the west and north of the Netherlands around the cities of Groningen and Utrecht.

Among the EFTA countries, the highest share (36.1 %) of the labour force classified as core HRST was recorded in the Norwegian capital city region of Oslo og Akershus, a higher share than in any region in the EU; five other Norwegian regions had shares over 22 %. Three Swiss regions recorded shares of core HRST above 22 % of the labour force, namely the Région lémanique (including the city of Genève), Nordwestschweiz (including Basel) and Zürich. Like Belgium, Switzerland was unusual in that several regions had particularly high shares of core HRST (over 22 %), but not the capital city region itself, as the Espace Mittelland (including Bern) recorded a share of 18.4 %.

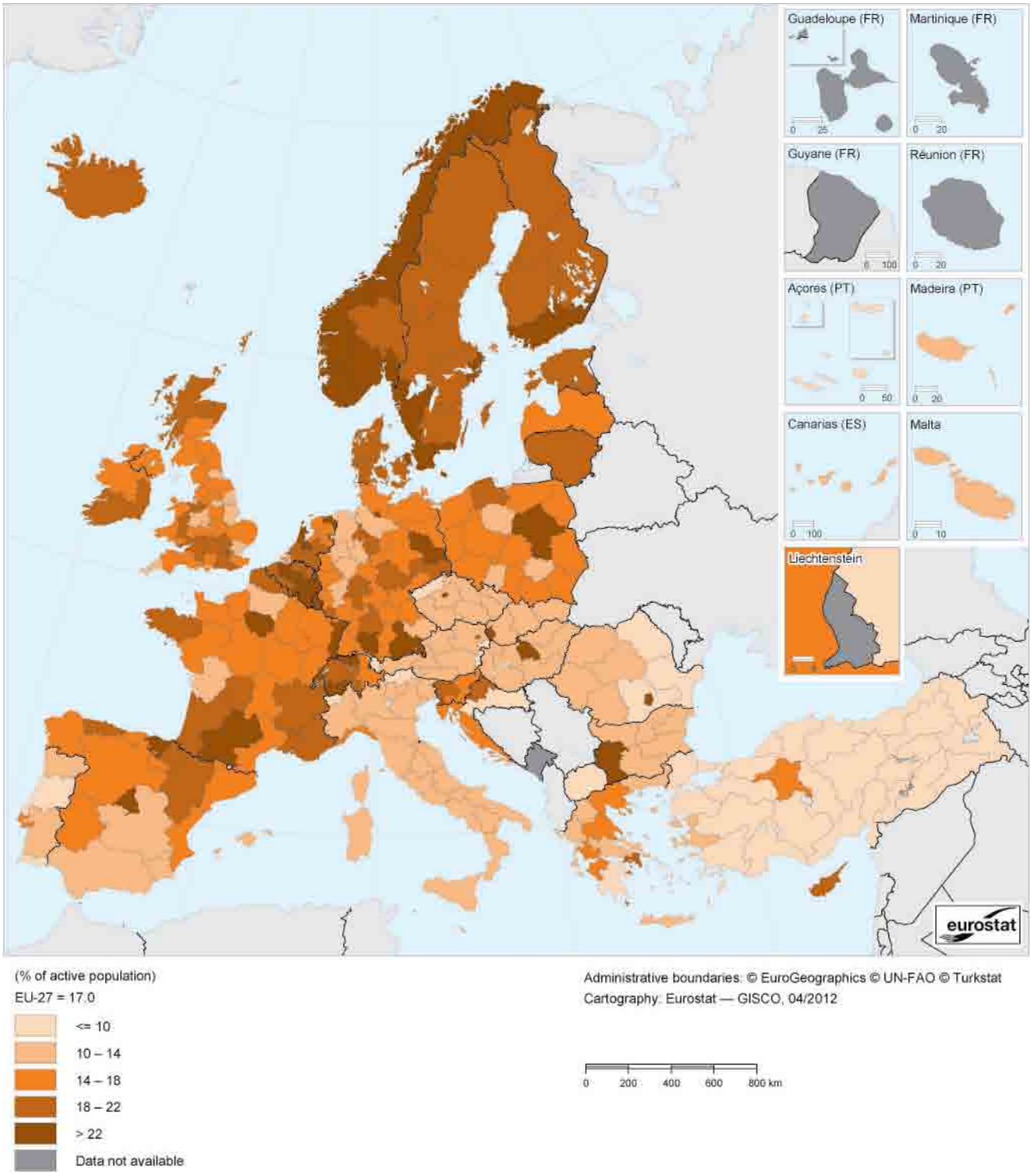
Employment in high-tech sectors

High-tech sectors include high-tech manufacturing and high-tech knowledge-intensive services, based on the activity classification NACE. The distinction between manufacturing and services is made due to the existence of two different methodologies. While R & D intensities are used to distinguish between high, medium-high, medium-low and low technology manufacturing industries, for services the proportion of the workforce that has followed a tertiary education is used to distinguish between knowledge-intensive services and less knowledge-intensive services. The service sector as a whole accounted for 69.0 % of employment in the EU-27 in 2010, but only 2.7 % of the total was employed in high-tech knowledge-intensive services. Around 15.9 % of the persons employed in the EU-27 worked in manufacturing, although the proportion that worked in high-tech manufacturing was around 1.1 %. When combined, these high-tech sectors accounted for 3.7 % of all employment in the EU-27.

Figure 11.1 shows the regional disparities in the high-tech sectors' share of total employment. This figure plots the highest and lowest shares of employment in high-tech sectors, as well as the national average and the share for the capital city region. Among those countries that have more than one NUTS level 2 region, it is clear that the share of high-tech sectors in employment varied quite substantially between regions. Urban regions, especially capital city regions or regions situated close to capitals, often exhibited the highest shares of employment in high-tech sectors. In fact, in all of the 25 multi-region countries shown in Figure 11.1 the employment share of high-tech sectors in the capital city region was above the national average and, in 20 of these, the capital city region had the highest share; the exceptions were Belgium, Germany, the Netherlands, the United Kingdom and Switzerland.

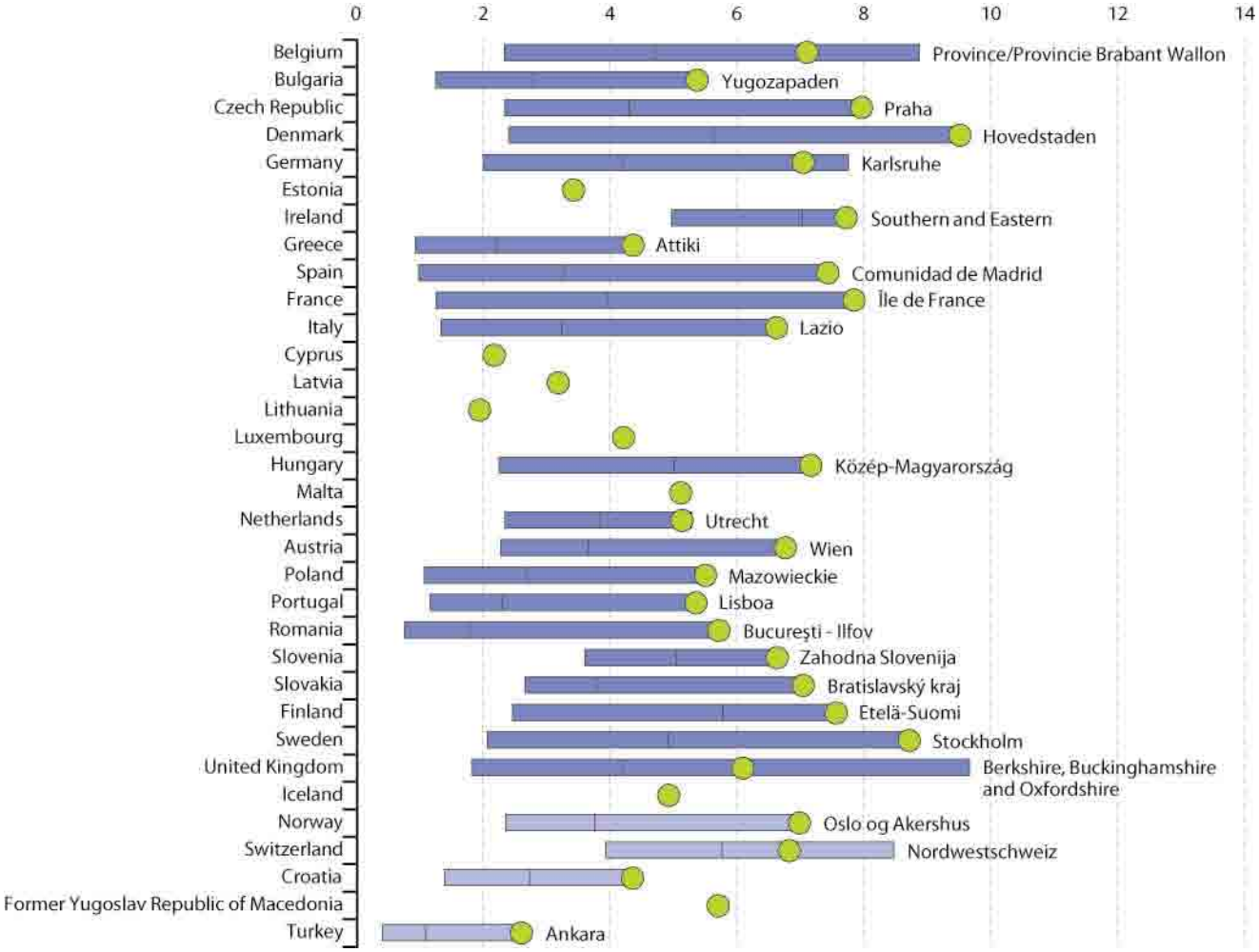
Considering all regions in the EU-27, the share of employment in high-tech sectors was highest in Berkshire, Buckinghamshire and Oxfordshire (United Kingdom), which

Map 11.3: Human resources in science and technology core (HRSTC), by NUTS 2 regions, 2010 (1)
(% of active population)



(1) Switzerland, 2009; Ciudad Autónoma de Melilla (ES63), Corse (FR83), Valle d'Aosta/Vallée d'Aoste (ITC2) and Åland (FI20), data lack reliability due to reduced sample size, but publishable.
Source: Eurostat (online data code: hrst_st_rcat)

Figure 11.1: Employment in high-tech sectors as a share of total employment, highest and lowest NUTS 2 region within each country, 2010 ([1])
(%)



([1]) High-tech sectors = high-technology manufacturing plus high-tech knowledge-intensive services (KIS); the graph 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; the name of the region with the highest value is also included; the graph is based on available information (some regions are unreliable or not available); Switzerland, 2009; the former Yugoslav Republic of Macedonia, 2008.
Source: Eurostat (online data code: htec_emp_reg2)

is situated within close proximity of London, followed by Hovedstaden (Denmark), Province/Provincie Brabant Wallon (Belgium) and Stockholm (Sweden) — these were the only regions where more than 8 % of total employment was in high-tech sectors. Unlike the other indicators analysed in this chapter, this indicator did not show many clusters of regions within the same Member State near the top of the ranking: in fact, the 10 regions with the highest shares of employment in high-tech sectors were all from different Member States. The three lowest shares among the EU regions were registered in Romania (1.0 % or less of employment was in high-tech sectors), as was the case in one Spanish (Región de Murcia) and one Greek region (Dytiki Ellada).

Patents

Patent counts can provide a measure of invention and innovation and a time series of data is available with an analysis by region. However, care should be taken interpreting the data as not all inventions are patented and patent propensities vary across activities and enterprises; furthermore, patented inventions vary in technical and economic value.

Regional patent statistics for European Patent Office (EPO) patent applications build on information from addresses of inventors; this is not always the place (region) of invention as inventors do not necessarily live in the same region as the one in which they work; this discrepancy is likely to

be higher when smaller geographical units are used. Patent applications tend to be clustered geographically in a limited number of regions and this is especially true for high-tech activities. Map 11.4 shows that technological activity (based on patent applications) was very much concentrated in the centre of the EU. There were 91 NUTS level 3 regions in the EU (out of a total of 1 211 regions with data available) that had more than 250 patent applications per million inhabitants in 2008. Among these were 83 German regions, two regions in Austria, France and the Netherlands, and one each in Belgium and Italy. The highest number of patents relative to inhabitants was 1 251 in Erlangen, Kreisfreie Stadt, followed by 793 in the neighbouring region of Erlangen-Höchstadt; Erlangen is home to a number of research institutes, a university and various offices of the engineering group Siemens.

In the field of information and communication technology (ICT) patents (see Map 11.5) information is available for NUTS level 2 regions. Five regions within the EU had more than 100 ICT patent applications per million inhabitants in 2008, of which three were in southern Germany (Mittelfranken, Oberbayern and Freiburg) and two in Sweden (Sydsverige and Stockholm).

Figure 11.2 shows large differences between the top regions of each Member State in terms of the number of patents relative to the number of inhabitants in the field of high technology. Among the 21 EU Member States with more than one region at the NUTS level 2, the highest ratio of high-tech patents to the number of inhabitants was recorded in 12 of the capital city regions. As such, high-tech patent applications were less concentrated in capital city regions than employment in high-tech sectors (see Figure 11.1). Furthermore, in Belgium and the Netherlands, the capital city region recorded a ratio of high-tech patents to inhabitants that was lower than the national average. Considering all EU regions together, the region of Sydsverige in Sweden had the highest number of high-tech patent applications relative to population size, 85 per million inhabitants. Two German regions (Oberbayern and Mittelfranken) and the Swedish capital city region of Stockholm followed, each with around 75 high-tech patents per million inhabitants. Nord-Brabant in the Netherlands, Oberpfalz in Germany and the capital city region of Etelä-Suomi in Finland were the only other regions in the EU with 50 or more high-tech patent applicants per million inhabitants in 2008.

Data sources and availability

Eurostat collects statistics on research and development (R & D) under the legal requirements of Commission Regulation (EC) No 753/2004, which determines the dataset, breakdowns, frequency and transmission delays. The methodology for national R & D statistics is laid down in the *Frascati manual*: *proposed standard practice for surveys on research and experimental development* (OECD, 2002), which is also used by many non-member countries.

Statistics on human resources in science and technology (HRST) are compiled annually, based on microdata extracted from the EU labour force survey (EU LFS). The basic methodology for these statistics is laid down in the *Canberra manual* (OECD, 1995), which lists all the HRST concepts.

Data on high-technology manufacturing industries and knowledge-intensive services are compiled annually, based on data collected from a number of official sources (such as EU LFS and structural business statistics (SBS)). The high-technology manufacturing aggregates are defined in terms of R & D intensity, calculated as the ratio of R & D expenditure for an economic activity relative to its value added. For manufacturing, four groups have been identified, depending on the level of R & D intensity: high, medium-high, medium-low and low technology sectors. Services are classified into knowledge-intensive services (KIS) and less knowledge-intensive services. High-tech knowledge-intensive services include motion picture, video and television programme production, sound recording and music publishing activities, programming and broadcasting, telecommunications, computer programming and related activities, information service activities and research and development. High-tech manufacturing covers the manufacture of pharmaceutical products and pharmaceutical preparations and of computers and electronic and optical products.

Data on patent applications to the European Patent Office (EPO) are compiled on the basis of microdata from the EPO. The patent data reported include patent applications filed at the EPO during the reference year, classified by the inventor's region of residence and in accordance with the international patents classification of applications (IPC). Patent data are regionalised using procedures linking postcodes and/or place names to NUTS level 2 and 3 regions. Patent statistics published by Eurostat are almost exclusively based on the EPO worldwide statistical patent database, Patstat, developed by the EPO in 2005, using its patent data collection and its knowledge of patent data.

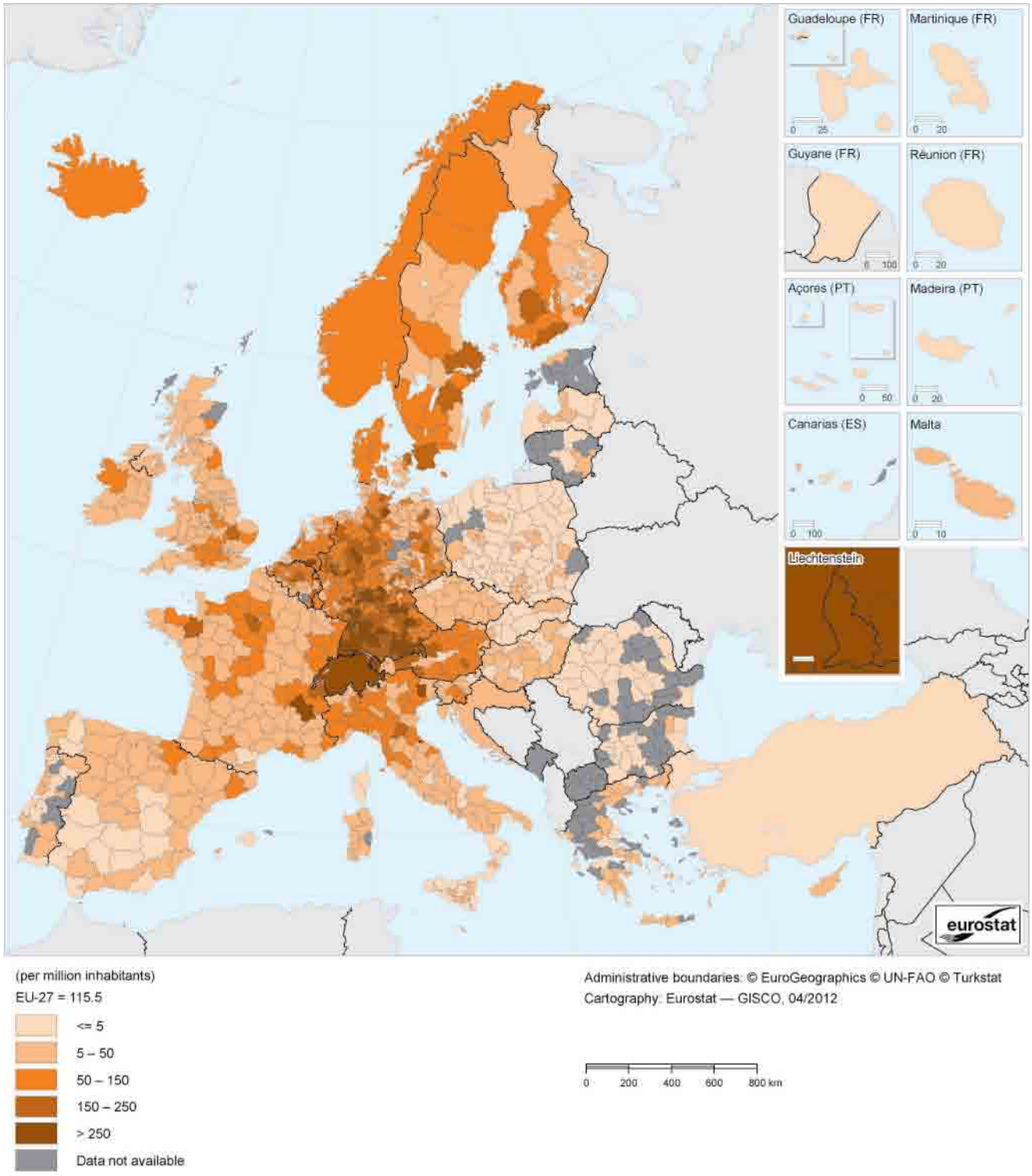
Further information

For further information about science, technology and innovation statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/science_technology_innovation/introduction.

Context

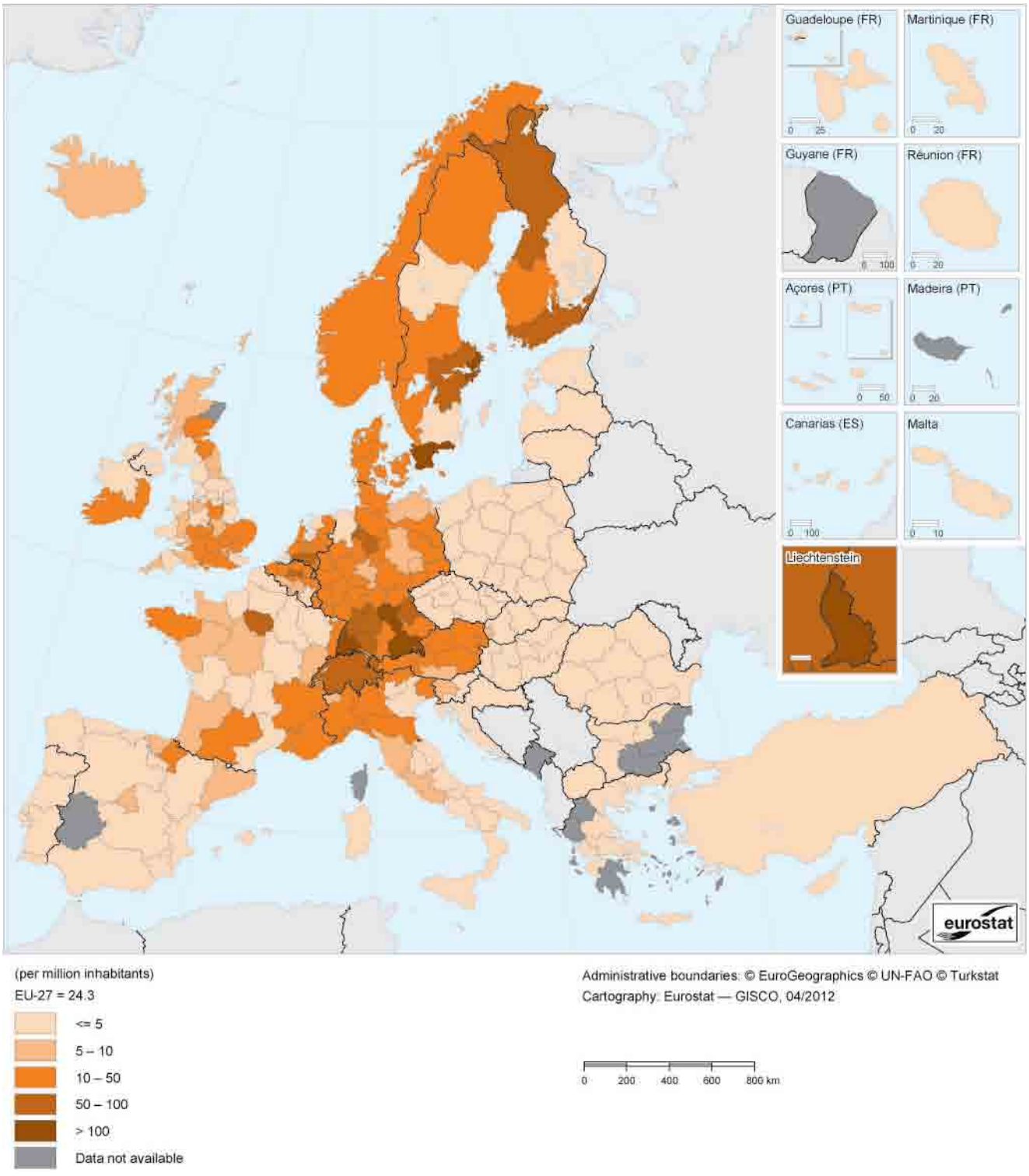
R & D is often considered as one of the driving forces behind growth and job creation. However, its influence extends well beyond the economic sphere, as it can potentially resolve

Map 11.4: Patent applications to the EPO, by NUTS 3 regions, 2008 (1)
(per million inhabitants)



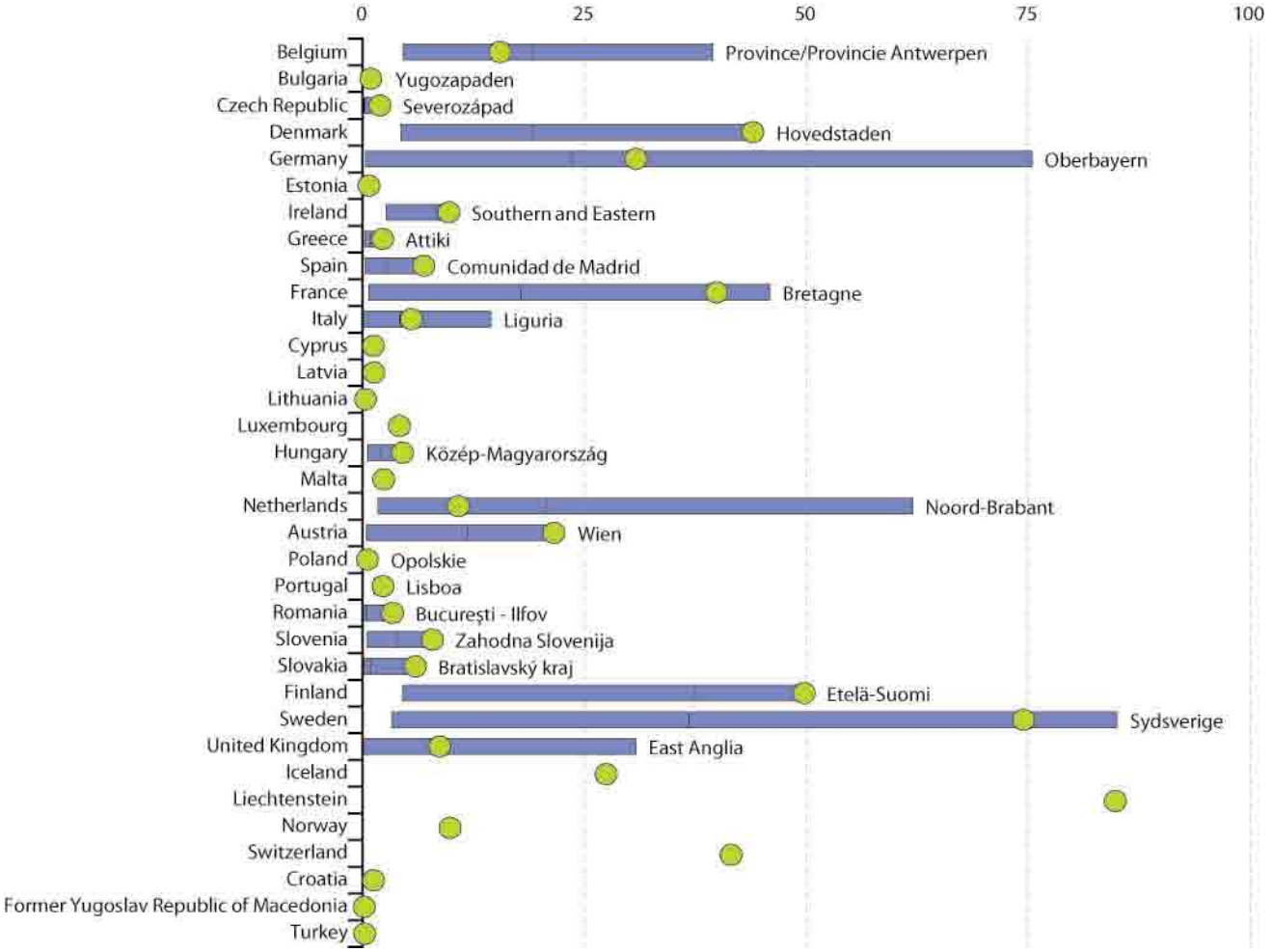
(1) Provisional; for a limited number of regions the latest data are for 2007 or 2006; Iceland, Norway, Switzerland, Croatia and Turkey, national level.
Source: Eurostat (online data code: pat_ep_rtot)

Map 11.5: ICT patent applications to the EPO, by NUTS 2 regions, 2008 ([1])
(per million inhabitants)



([1]) Provisional; for a limited number of regions the latest data are for 2007 or 2006; Norway, Switzerland, Croatia and Turkey, national level.
Source: Eurostat (online data code: pat_ep_rict)

Figure 11.2: High-technology patent applications to the EPO, highest and lowest NUTS 2 region within each country, 2008 (1)
(per million inhabitants)



(1) The graph 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 region; the name of the region with the highest value is also included; provisional; for a limited number of regions the latest data are for 2007 or 2006.
Source: Eurostat (online data code: pat_ep_rtec)

environmental or international security threats, ensure safer food or lead to the development of new medicines to fight illness and disease.

Since their launch in 1984, the EU's framework programmes for research have played a leading role in multidisciplinary research activities. The seventh framework programme for research and technological development (FP7) is the EU's main instrument for funding research in Europe; it runs from 2007 to 2013 and has a total budget of EUR 50 521 million, with an additional EUR 2 751 for 2007–11 for nuclear research and training activities to be carried out under the Euratom Treaty. FP7 aims to create European 'poles of excellence' across a wide array of scientific themes, such as information technologies, energy and climate change, health, food and social sciences.

The European research area (ERA) was launched at the Lisbon European Council in March 2000. The ERA aims to ensure open and transparent trade in scientific and technical skills, ideas and know-how. Europe's research efforts are often described as being fragmented along national and institutional lines. The ERA was given new impetus in April 2007 with the European Commission's Green Paper 'The European research area: new perspectives'. In May 2008, the ERA was re-launched as part of what has become known as the Ljubljana process, which included specific initiatives for five different areas: researchers' careers and mobility; research infrastructures; knowledge sharing; research programmes; and international science and technology cooperation. As a result, in the years through to 2020 the ERA will aim to establish a single European labour market for researchers, as well

as single markets for knowledge and for innovative goods and services.

In October 2010, the European Commission launched a Europe 2020 flagship initiative, titled the 'Innovation union' (COM(2010) 546 final); this sets out a strategic approach to a range of challenges like climate change, energy and food security, health and an ageing population. The proposals seek to use public sector intervention to stimulate the private sector and to remove bottlenecks which stop ideas reaching the market (such as access to finance, fragmented research systems and markets, under-use of public procurement for innovation and speeding-up harmonised standards and technical specifications). European innovation partnerships (EIPs) form part of the innovation union and are designed to act as a framework to address major societal challenges, bringing together activities and policies from basic research through to market-oriented solutions.

Horizon 2020 is planned as the framework programme for research and innovation after 2013, building upon FP7, the competitiveness and innovation framework programme (CIP) and the European Institute of Innovation and Technology (EIT). A Green Paper 'From challenges to opportunities: towards a common strategic framework for EU research and innovation funding' (COM(2011) 48) was adopted by the European Commission in February 2011 and proposed major changes to EU research and innovation funding to make participation easier, increase scientific and economic impact and provide better value for money.

12 Focus on European cities

One crucial aspect of the Europe 2020 strategy is a greater focus on sustainable and socially inclusive growth in cities and urban areas, which are often major centres of economic activity as well as transport network hubs. As well as their importance for production, cities are also focal points for the consumption of energy and other materials, and are responsible for most greenhouse gas emissions. Furthermore, cities and urban regions often face a range of social difficulties, such as crime, poverty and social exclusion. The Urban Audit assesses the current situation and monitors developments across the cities of the European Union (EU), as well as Norway, Switzerland, Croatia and Turkey.

Main statistical findings

Cities are the home of most workplaces, businesses and tertiary education institutions. This chapter presents a few indicators reflecting some of the challenges cities and urban areas face, like the age structure of the population, students in tertiary education, unemployment and air pollution, as well as documenting perceptions in relation to the ease of finding a good job or difficulties faced when paying bills at the end of the month. The indicators presented are just a few examples, as these are but a few of the challenges.

Cities and urban areas

Based on an urban–rural typology (see Chapter 14), 40 % of the EU's population lived in predominantly urban regions, and a further 36 % in intermediate regions. The two most populous cities in the EU were London and Paris. Apart from these two megapolises, the EU has a polycentric structure of large, medium and small cities: Map 12.1 illustrates the distribution of city dwellers across a range of different-sized cities in Europe. Each circle on the map represents an Urban Audit city and the size of the circle reflects the number of inhabitants in the core city.

The latest Urban Audit data set includes 323 cities in the EU, of which only four capital cities had more than 3 million inhabitants, namely London (United Kingdom), Paris (France), Berlin (Germany) and Madrid (Spain), and another two had more than 2 million inhabitants, namely Athina (Greece) and Roma (Italy). Another 20 cities, of which 11 were capital cities, had a population of between 1 million and 2 million inhabitants. Apart from capital cities, the largest cities in the EU were Hamburg in Germany with 1.8 million inhabitants and Barcelona in Spain with 1.6 million inhabitants, while there were three other large French cities with over 1 million inhabitants (Lyon, Lille and Marseille), two more in Germany (München and Köln) and one each in Italy (Milano) and the United Kingdom (Birmingham).

There were 36 cities with a population of between half a million and 1 million inhabitants, including the following capital cities: Amsterdam (Netherlands), Rīga (Latvia), Vilnius (Lithuania) and København (Denmark). A further 72 cities were in the next tier, with populations ranging between a quarter of a million and half a million, including Bratislava, Tallinn and Ljubljana, the capital cities of Slovakia, Estonia and Slovenia. The Urban Audit also provides results from a further 189 smaller EU cities with fewer than 250 000 inhabitants. While the data set does not include every city in the EU, the capital cities of Lefkosia (Cyprus), Valletta (Malta) and Luxembourg all figured in this final category.

Within each size category mentioned (more than 2 million inhabitants, between 1 and 2 million, between half a million and one million, between a quarter and half a million and less than a quarter of a million) the aggregated population of all the cities covered by the Urban Audit was about the same, between 22.7 million and 27.4 million for each category. The entire population of the 323 Urban Audit cities was 127.6 million persons: Urban Audit information for 2008 is available for most of these.

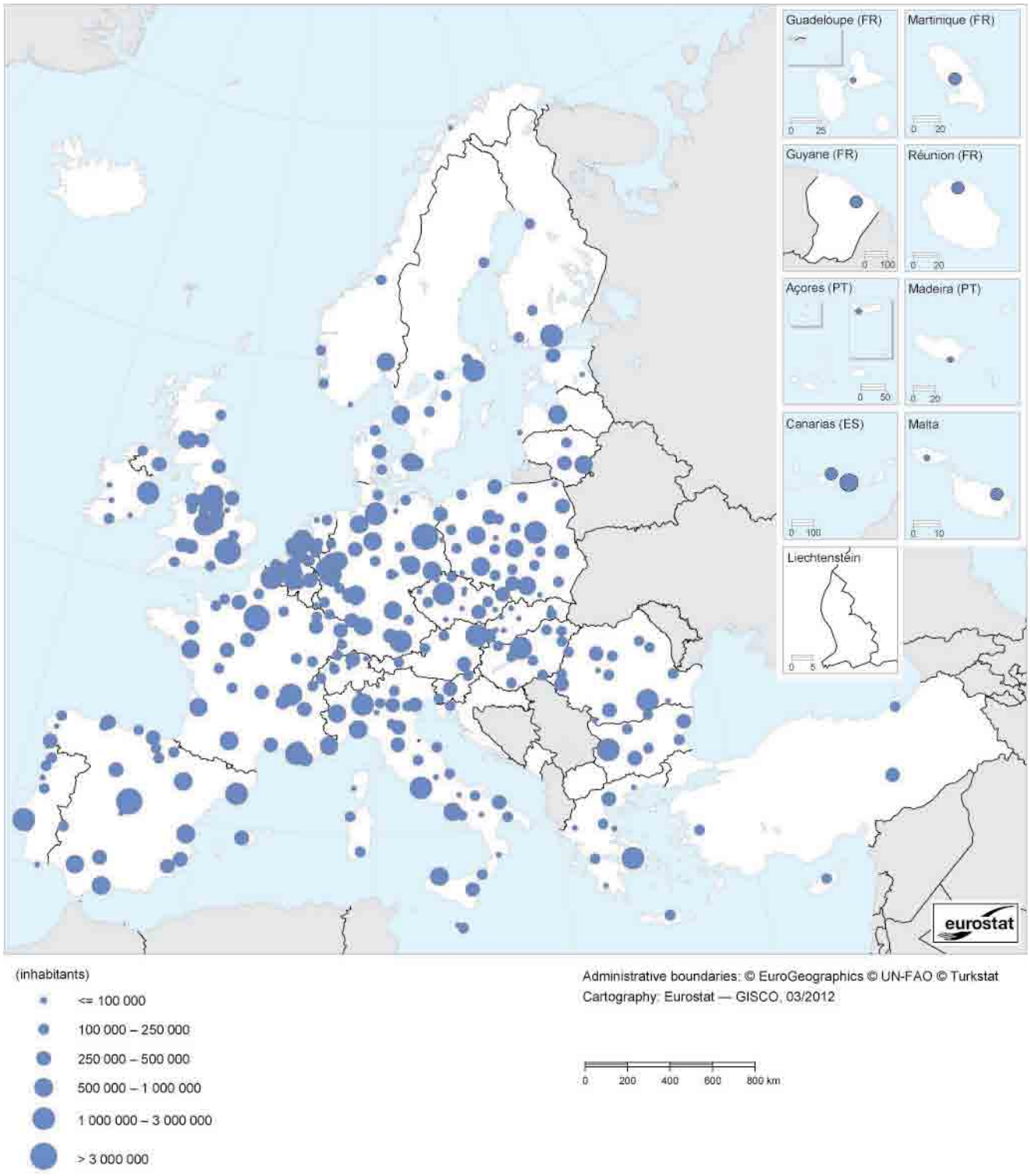
In Norway and Switzerland, the largest cities were Oslo with 560 000 persons and Zürich with 377 000, and there were no other cities with more than 250 000 persons.

Figure 12.1 analyses the capital cities in terms of their size relative to the national population. Valetta was the second smallest of all capital cities in the EU, but accounted for nearly half of the Maltese population (note that information on neighbouring localities has been added to the data for the administrative city of Valetta in agreement with the national statistical institute of Malta and the Directorate-General for Regional Policy). Five other capital cities accounted for more than one quarter of their national population: they were Rīga, Tallinn, Lefkosia, Dublin (Ireland) and Athina. The largest cities in absolute terms, namely London and Paris, accounted for 12.5 % and 10.3 % of the population of the United Kingdom and France respectively. In four Member States the capital city had less than 5 % of the national population: this was the case in Roma, Warszawa (Poland), Berlin and Amsterdam.

Old-age dependency

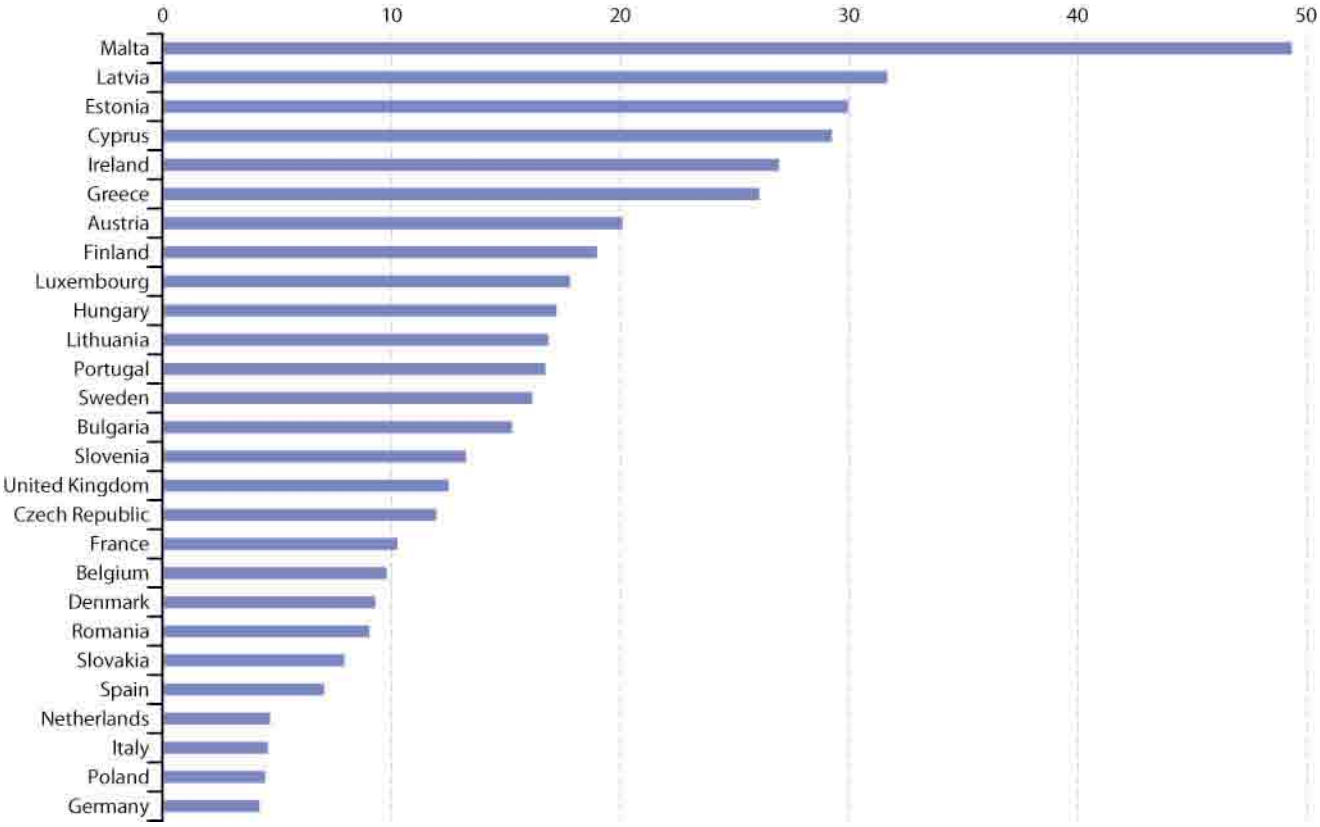
Figure 12.2 shows two examples of how the age structure has changed over time in a capital city and a Member State as a whole. The example for Belgium and Bruxelles/Brussel shows how the developments have diverged: over time (moving from the inner rings to the outer rings) there is a greater share of younger persons (aged less than 20) and of working age persons (aged 20 to 64) in the capital city and a smaller share of older persons (aged 65 and over); whereas in the Belgian population as a whole the opposite developments can be observed for younger and older persons,

Map 12.1: Total resident population in Urban Audit core cities, 2008 (1)
(inhabitants)



(1) The Czech Republic, Germany, Italy, Lithuania, Hungary, the Netherlands, Portugal, Romania and Sweden (except Stockholm), 2011; France, 2006; Denmark, Ireland, Athina (EL), Rijeka (HR), Malatya (TR), Manisa (TR) and Trabzon (TR), 2004; Athina (EL), Paris (FR), Lisboa (PT), Helsinki (FI) and Stockholm (SE), kernel city.
Source: Eurostat (online data code: urb_icity)

Figure 12.1: Relative importance of the capital city in relation to national population, 2008 (1)
(% share of total population)



(1) The Czech Republic, Germany, Lithuania, Hungary, the Netherlands and Portugal, 2011; France, 2006; Ireland, 2005; Denmark and Greece, 2004; Dublin (IE), Athina (EL), Paris (FR), Lisboa (PT), Helsinki (FI) and Stockholm (SE), kernel city.
Source: Eurostat (online data code: urb_icity)

with a more stable share for persons of working age. The second example, namely for Roma and Italy, shows how the developments in the capital city reflect the overall developments in the country as a whole, with a steadily increasing share of older persons in the population, and increasing and then decreasing share of working age persons; the share of younger persons fell in Roma and in Italy over most of the time period presented, but increased in Roma in the latest period (2008).

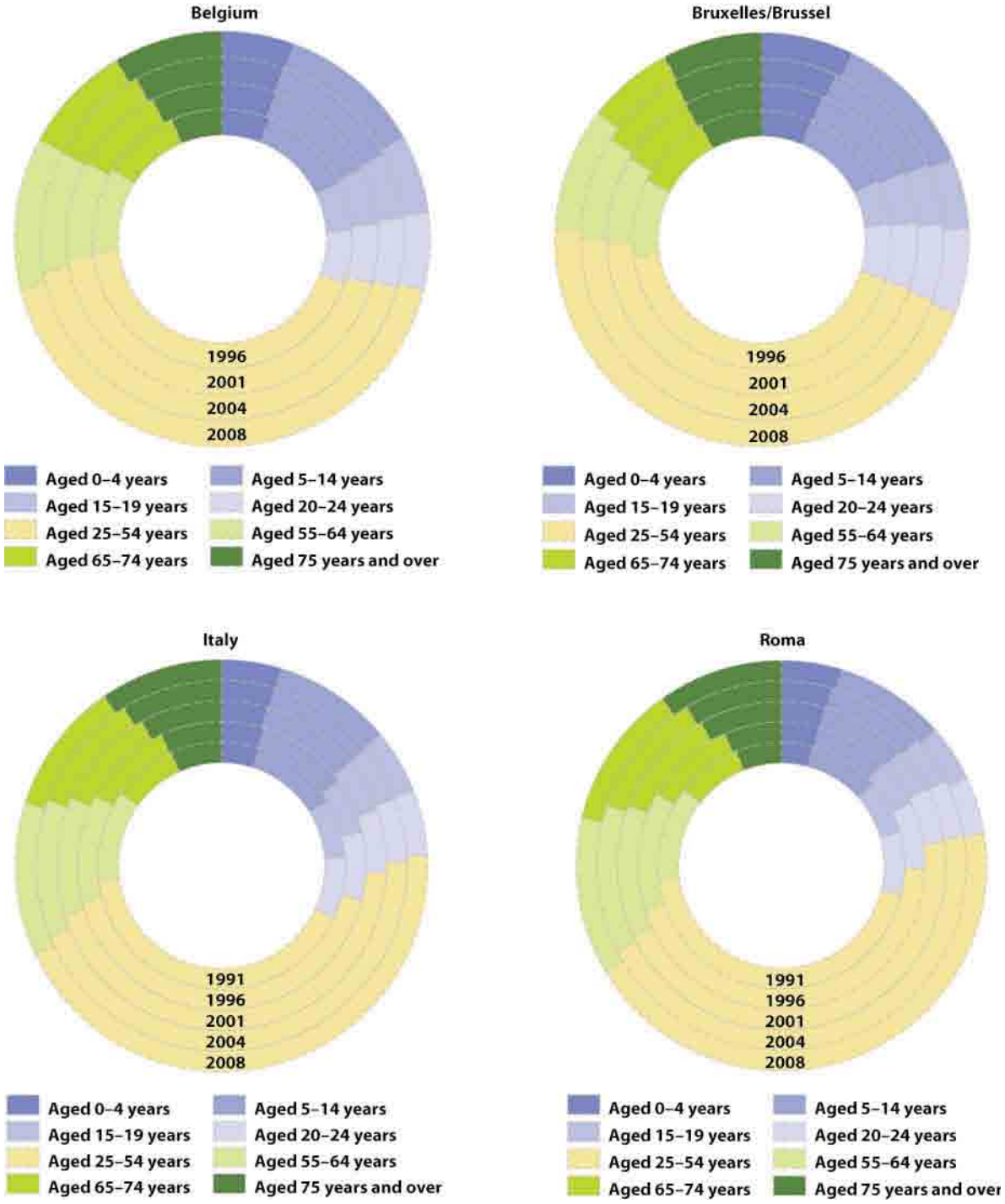
The ratio between the number of older persons and those of working age is referred to as the old-age dependency ratio, and this is shown in Map 12.2 for 323 Urban Audit cities in the EU and 18 cities in Norway, Switzerland and Turkey: note that the data are generally for the year 2008 or 2011, but for some cities the data are from 2006 or 2004. Cities with an old-age dependency rate in excess of 35 % were mainly located in Italy (18 cities including Roma and Milano) and Germany (11 cities), with two cities in France and one in Greece. Among the 10 cities with a rate above 40 % all except Mülheim an der Ruhr (Germany) were in Italy, with Trieste (49.8 %) and Genova (46.5 %) at the top of the ranking.

The lowest rate was 9.3 % in Cayenne, Guyane (France). In total there were 61 cities with an old-age dependency rate of 20 % or less: 12 were in Romania, 10 in Poland, between five and seven each were in Slovakia, the United Kingdom, Bulgaria and the Netherlands and the remaining 14 were spread across nine different Member States. In among these cities with relatively low old-age dependency rates were eight capital cities, including the largest city (London) and two others with more than 1 million inhabitants (Helsinki and Dublin).

Students in tertiary education

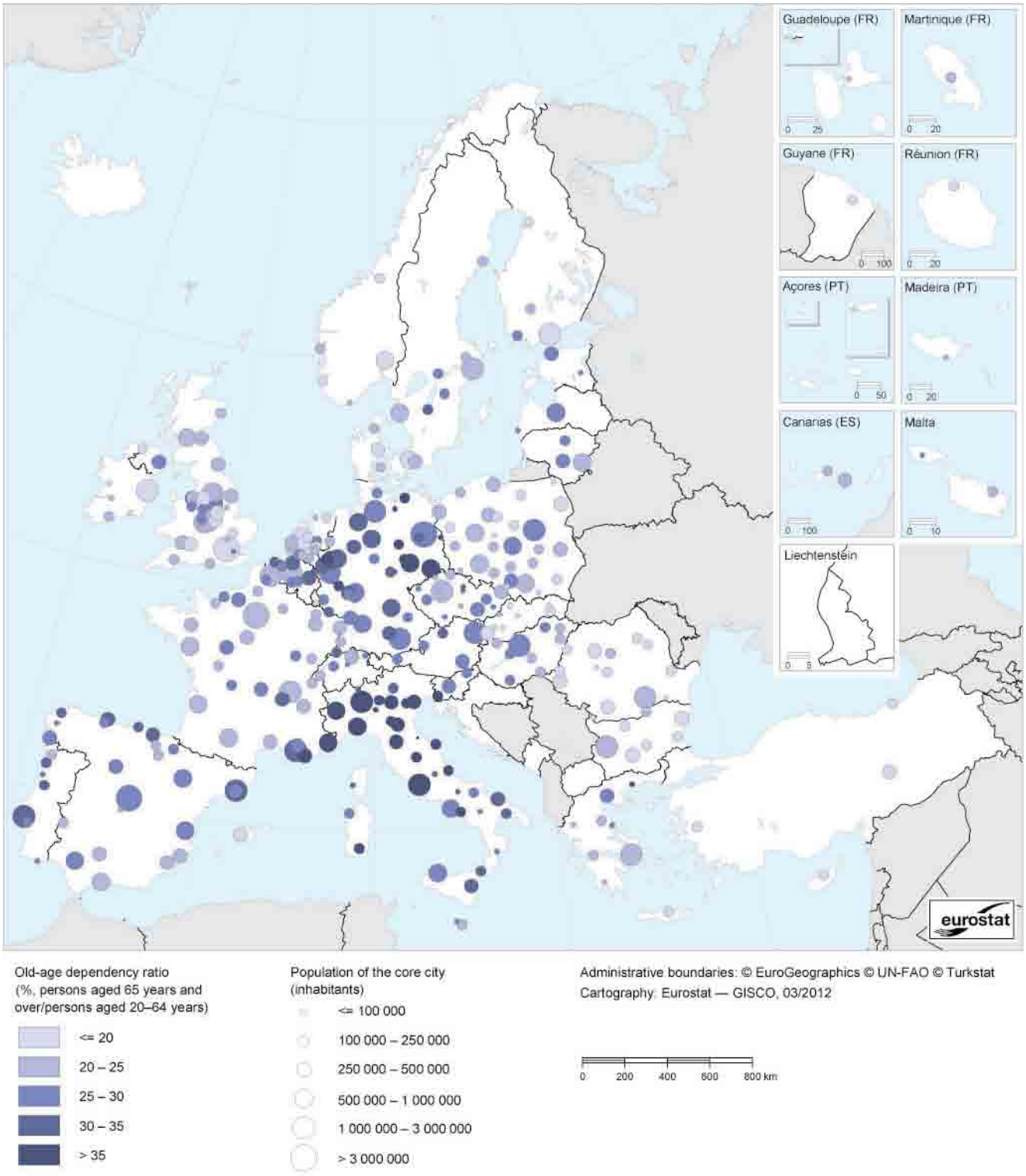
Whether cities experience a so-called 'brain drain' or a 'brain gain' depends on a number of factors, including their ability to attract students to their colleges and universities. Retaining university and college graduates in the city is the next step to establishing a skilled workforce. Map 12.3 shows the number of students in universities and other tertiary education establishments per 1 000 resident population. Generally, large cities tended to have a relatively low value for this ratio, although many host prestigious and large universities. Almost all participating countries have so-called 'university cities'.

Figure 12.2: Age structure of the population for Bruxelles/Brussel and Roma compared with Belgium and Italy
(% share of total population)



Source: Eurostat (online data code: urb_icity)

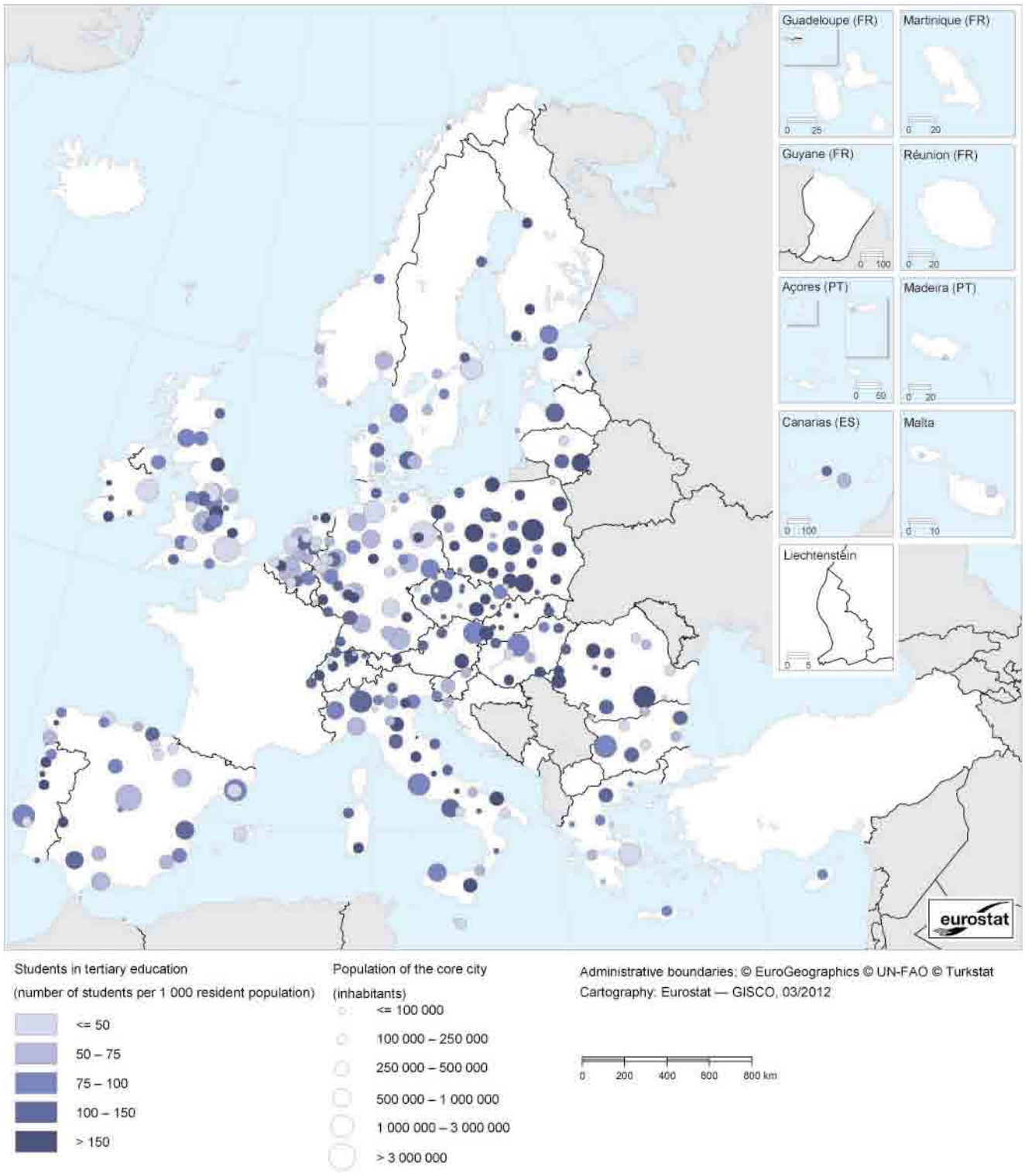
Map 12.2: Old-age dependency ratio in Urban Audit core cities, 2008 (1)
(%, persons aged 65 years and over/persons aged 20–64 years)



(1) The Czech Republic, Germany, Italy, Lithuania, Hungary, the Netherlands, Portugal (except Lisboa), Romania and Sweden (except Stockholm), 2011; France, 2006; Denmark, Ireland, Athina (EL) and Turkey, 2004; Lefkosia (CY), old-age dependency ratio, 2004; Athina (EL), Paris (FR), Lisboa (PT), Helsinki (FI) and Stockholm (SE), kernel city.

Source: Eurostat (online data code: urb_icity)

Map 12.3: Students in tertiary education (ISCED levels 5 and 6) in Urban Audit core cities, 2008 (1)
(number of students per 1 000 resident population)



(1) Lithuania, Portugal, Romania and Sweden, 2011; Denmark, Ireland, Greece, Cyprus, Liepaja (LV), Luxembourg and Rijeka (HR), 2004; Malta, 2003; Dublin (IE), Athina (EL), Lisboa (PT), Helsinki (FI) and Stockholm (SE), kernel city.

Source: Eurostat (online data code: urb_icity)

A total of 65 cities in the EU had more than 150 students enrolled in tertiary education per 1 000 inhabitants. These were widely dispersed across the EU, and only four were capital cities, namely Bratislava, Warszawa, Vilnius and Bucureşti, with the Polish and Romanian capitals the only cities with a population of more than 1 million persons to have more than 150 tertiary education students per 1 000 inhabitants. In total, 16 of these cities with a high ratio of students in tertiary education were in Poland, eight were in Italy and seven were in Slovakia. Among all EU cities in the Urban Audit, the highest ratio of students in tertiary education to the number of inhabitants was 353 in Rzeszow (Poland), and the next highest 315 in Santiago de Compostela (Spain).

Among the capital cities with over 2 million inhabitants, Roma had 82 tertiary education students for every 1 000 inhabitants, ahead of Madrid (56); London, Berlin and Athina all had less than 50 tertiary education students for every 1 000 inhabitants (no data available for Paris).

The ratio of tertiary education students to population was relatively evenly spread across the Norwegian cities in the Urban Audit, ranging from 54 in Kristiansand to 79 in Trondheim. The range in Switzerland was much greater, from 33 in Biel/Bienne to more than 150 in Bern and Zürich, peaking at 191 in Lausanne.

The labour market: perception of job hunting

The image of a city has its roots in associations, memories and feelings linked to the city. Therefore, in addition to hard facts, the perception of a city's residents is important. The Urban Audit perception survey was undertaken in November 2009 in 75 cities to find out how citizens feel and think about their city. Figure 12.3 summarises the proportion of respondents that agreed (strongly or somewhat) that finding a good job in their city was easy. When analysing the results it is important to bear in mind that the survey was carried out when the effects of the financial and economic crisis were still being felt: GDP fell in 2009 by 4.3 % in the EU-27 and Poland was the only EU Member State which recorded an increase in GDP in real terms (1.8 %) in 2009, while the largest contraction in economic activity was in Latvia (– 17.7 %).

The proportion of the population that expressed the view that finding a good job was easy exceeded 50 % in seven cities: München and six capital cities, namely Stockholm (Sweden), København, Praha (Czech Republic), Amsterdam, Warszawa and Lefkosia. At the other end of the ranking, there were five cities in the EU where less than 10 % of respondents agreed that it was easy to find a good job, namely Málaga (Spain), Rīga, Miskolc (Hungary), Napoli and Palermo (both Italy); this was also the case in Şanlıurfa, Diyarbakır (Turkey). It should be noted, however, that in several cities a large proportion of respondents — mostly retired persons — did not express an opinion on the ease of finding a good job, for example 27 % in Liège (Belgium) and Rotterdam (Netherlands), 28 % in Bruxelles/Brussel and 44 % in Antwerpen (Belgium).

The labour market: unemployment

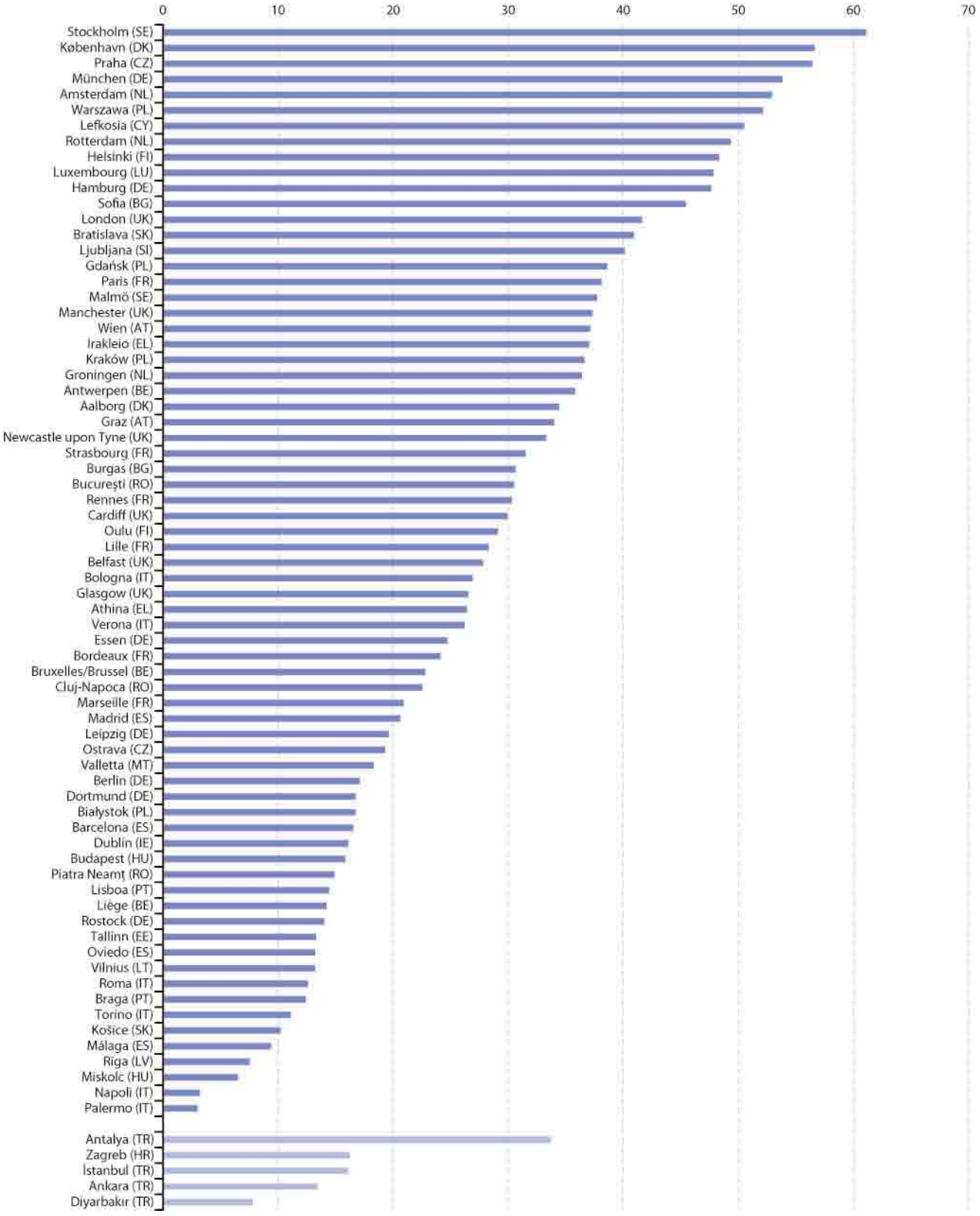
While there are large differences in unemployment rates between Member States and regions (see Chapter 5 for more details on the labour market), the range across the cities is considerably wider. As the reference year of the last available data for unemployment differs, the analysis below is divided accordingly as the years covered concern the period leading up to the financial and economic crisis (when unemployment was generally falling) and the crisis years themselves (when unemployment rates were generally on the rise). As an illustration, the average unemployment rate across the EU-27 in 2004 was 9.2 %, falling to 8.3 % in 2006 and 7.1 % in 2008, before rising to 9.6 % by 2011.

In 2011 (data for Lithuania, Finland and Sweden) all three Lithuania cities in Map 12.4 had unemployment rates over 12 % and therefore above the EU-27 average, while rates in three cities in Finland were well below the average, at less than 7 % (as was the case for Helsinki in 2008). In Sweden, unemployment rates ranged from 7.5 % in Uppsala to 15.5 % in Malmö in 2011 (no data available for Stockholm).

Turning to 2008, a year when EU-27 unemployment was at a historic low, unemployment data are available for 137 cities. Unemployment rates over 15 % were recorded in the German cities of Halle an der Saale, Leipzig and Berlin, followed by three more cities in eastern Germany with unemployment rates just under 15 %, namely Rostock, Schwerin and Magdeburg. Apart from Berlin, the only other city in Map 12.4 with a population of more than 1 million inhabitants and an unemployment rate above 10 % in 2008 was Birmingham (United Kingdom). In total, there were 27 cities shown in Map 12.4 which had unemployment rates below 5 % in 2008, of which 11 were in the Netherlands, with Breda recording the lowest rate (2.2 %) for the Dutch cities. Particularly low unemployment rates were recorded in the Bulgarian cities of Sofia (1.1 %), Burgas (2.4 %) and Varna (2.6 %), and there were three other Bulgarian cities with rates below 5 %. Five British cities had rates below 5 %: three in the South West region of England and two in Scotland, and this group was completed by two more cities from each of Estonia and Slovakia and one from Spain. Data for 2008 are also available for six Norwegian cities, all of which had very low unemployment rates, below 2 %.

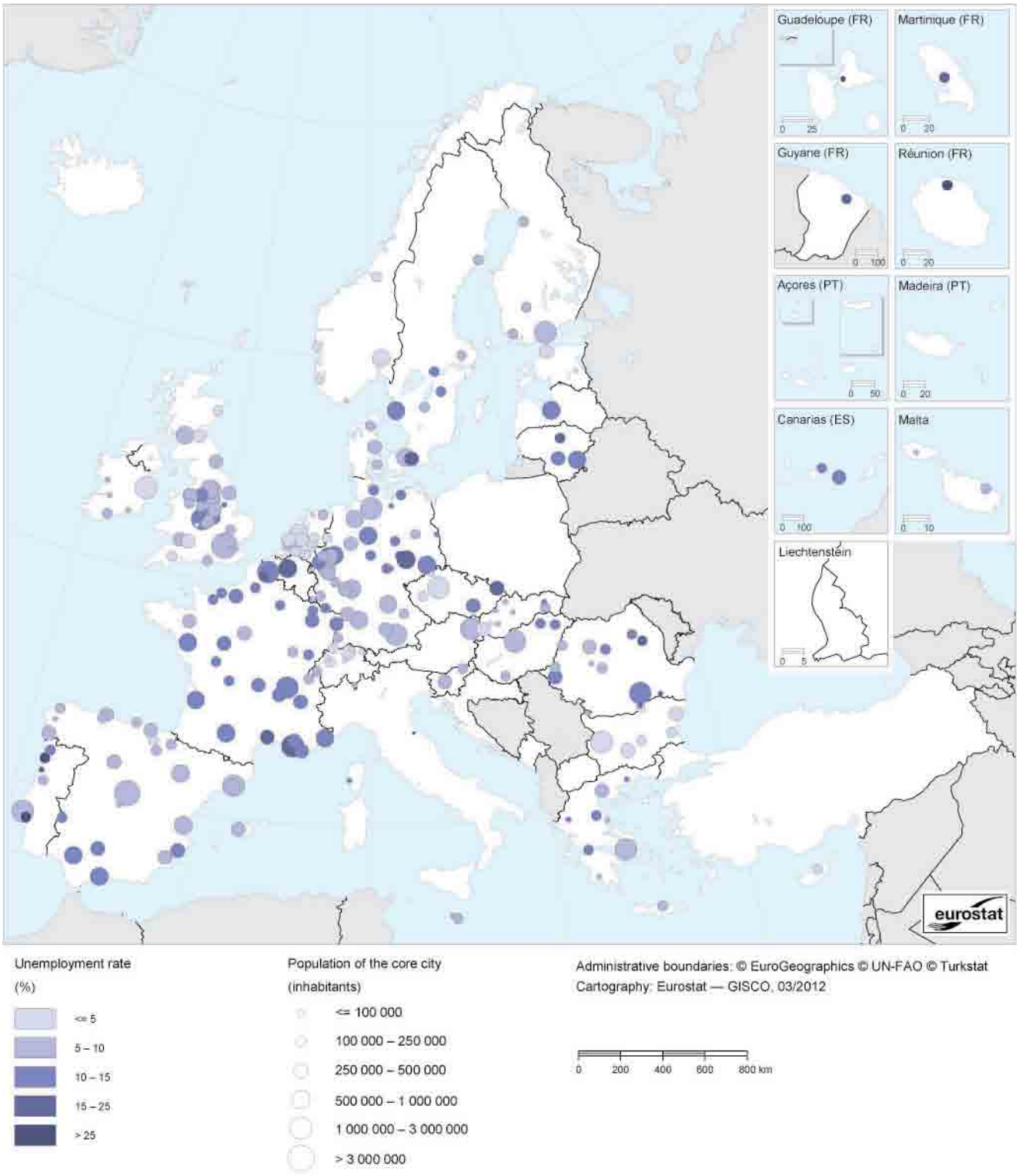
In 2006, the unemployment rate was above the EU-27 average in all 34 French cities for which data are available. Rates ranged from 8.8 % in Rennes to more than 15.0 % in seven cities including Marseille (a city of more than 1 million inhabitants): the highest rate was 28.3 % in Pointe-à-Pitre (Guadeloupe).

Figure 12.3: Perception regarding the ease of finding a good job in Urban Audit cities, 2009
(% of respondents that strongly or somewhat agreed)



Source: Eurostat (online data code: urb_percep)

Map 12.4: Unemployment rate in Urban Audit core cities, 2008 ([1])
(%)



([1]) Lithuania, Finland (other than Helsinki) and Sweden, 2011; France, 2006; Dublin (IE), 2005; Belgium, the Czech Republic, Denmark, Ireland (other than Dublin), Athina (EL), Cyprus, Latvia, Hungary, Austria, Portugal, Romania and Slovenia, 2004; Dublin (IE), Athina (EL), Lisboa (PT) and Helsinki (FI), kernel city.

Source: Eurostat (online data code: urb_icity)

Turning to the oldest data (2004), the unemployment rate exceeded 15 % in three Portuguese and three Romanian cities, and one city each in Belgium and the Czech Republic. The highest rates were in the Portuguese cities of Porto (29.1 %) and Setúbal (26.0 %). In contrast, four cities shown in Map 12.4 reported unemployment rates below 5 % in 2004; three of these cities were in the Czech Republic and one in Cyprus, while Dublin also reported an unemployment rate below 5 % in 2005.

An analysis of the dispersion of unemployment rates between different cities within an individual Member State is less influenced by the variety of different reference years that are presented. The largest disparities were recorded in the Czech Republic (2004 data), where rates ranged from 2.8 % in Usti nad Labem to 17.4 % in Ostrava. Bulgaria (2008 data) also recorded a high level of dispersion due to an unemployment rate of 9.5 % in Vidin which was out of line with the generally low rates recorded in other Bulgarian cities. Apart from Estonia and Malta (with data available for only two cities in each case), the lowest levels of dispersion in unemployment rates between the cities covered by the Urban Audit were recorded in Ireland (2004/05), the Netherlands (2008) and Greece (2008, other than data for Athina which are for 2004), while unemployment rates were also relatively similar across the Norwegian cities (2008).

Perception of financial difficulties

The data presented in Figure 12.4 concern perceptions about financial difficulties assessed through a question about the difficulty of paying bills at the end of each month. These data come from the same November 2009 survey as the analysis of the perception of the ease of finding employment presented earlier in this chapter, and again it is worth remembering that the effects of the financial and economic crisis were still being strongly felt in many parts of the EU at this time.

More than half of the respondents in Napoli (Italy) and Rīga always or sometimes had problems paying their bills; a situation that was repeated in all four Turkish cities surveyed. Between 40 % and 50 % of respondents in Valletta, Irakleio (Greece), Sofia, Athina and Palermo (Italy) also reported always or sometimes having problems paying their bills. On the other hand, less than one in 10 respondents in Malmö, Graz (Austria), Stockholm and Aalborg (Denmark) reported such financial problems. These same four cities, as well as Luxembourg and København, were the only ones where three in every four respondents said that they never had such financial difficulties.

Air pollution — ozone

Air pollution is perceived as a problem in many cities. Map 12.5 presents an analysis of the frequency (number of days per year) that the ozone level exceeded 120 µg/m³: the analysis is presented for 187 cities within the EU, one in Norway and nine in Switzerland.

By far the highest frequency of ozone exceeding this threshold in 2008 was recorded in Italian cities: Torino recorded 77 days above this level and was the first of eight Italian cities at the top of the ranking, followed by Murcia (Spain, data for 2004) and then another four Italian cities, all of which recorded at least 40 days of ozone concentration above 120 µg/m³. A further 21 cities reported more than 25 days but less than 40 days above this threshold, and one third of these were in Germany.

Among all 34 cities where ozone levels exceeded 120 µg/m³ for more than 25 days were four cities with 1 million or more inhabitants, namely Milano, Budapest (Hungary), Wien and București, as well as one other capital city, namely Bratislava. In Switzerland, Lugano, Zürich and Lausanne all recorded more than 25 days of ozone concentration above 120 µg/m³, with the frequency in Lugano (64 days) close to the highest frequencies seen in the EU.

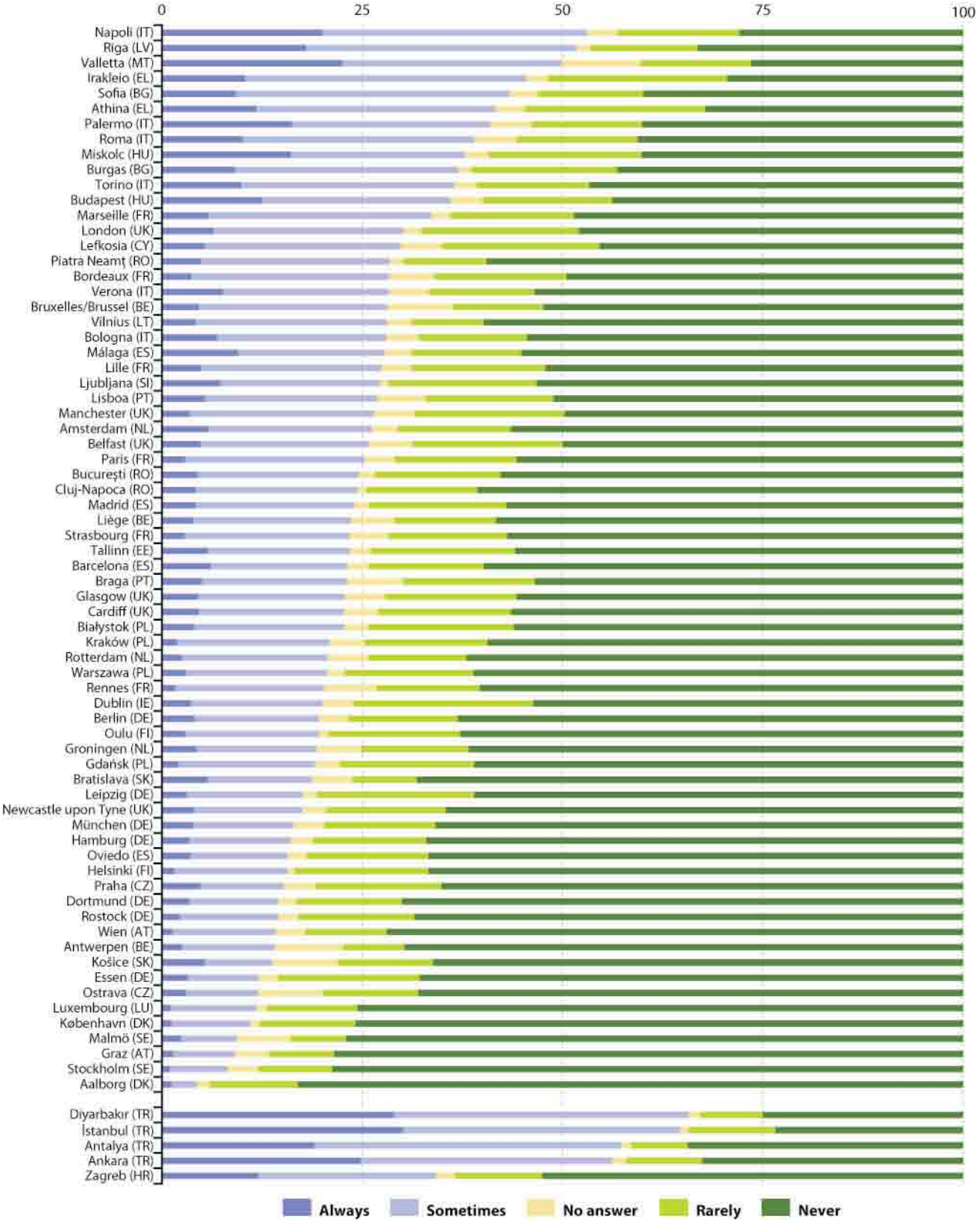
Some 24 surveyed cities in the EU reported that the level of ozone concentration never (0 days) rose above 120 µg/m³ and a further nine cities reported just 1 day above this level of concentration. These 33 cities were found in 10 different Member States: 10 of the regions were in the United Kingdom, six in Spain, five in Ireland, four in Germany, three in Poland and the remainder (one each) in Bulgaria, Italy, Latvia, Portugal and Slovenia. The largest of these cities, and the only one with a population of 1 million inhabitants or more, was Dublin (data are for 2005); Rīga was the only other capital city to report no days of high ozone concentration. The only Norwegian city for which these data are available is Bergen and here too there were no days with an ozone concentration in excess of 120 µg/m³.

Data sources and availability

The Urban Audit is the result of joint work by participating cities, the national statistical offices belonging to the European Statistical System (ESS) and the European Commission's Directorate-General for Regional Policy. Data collection currently includes more than 350 cities.

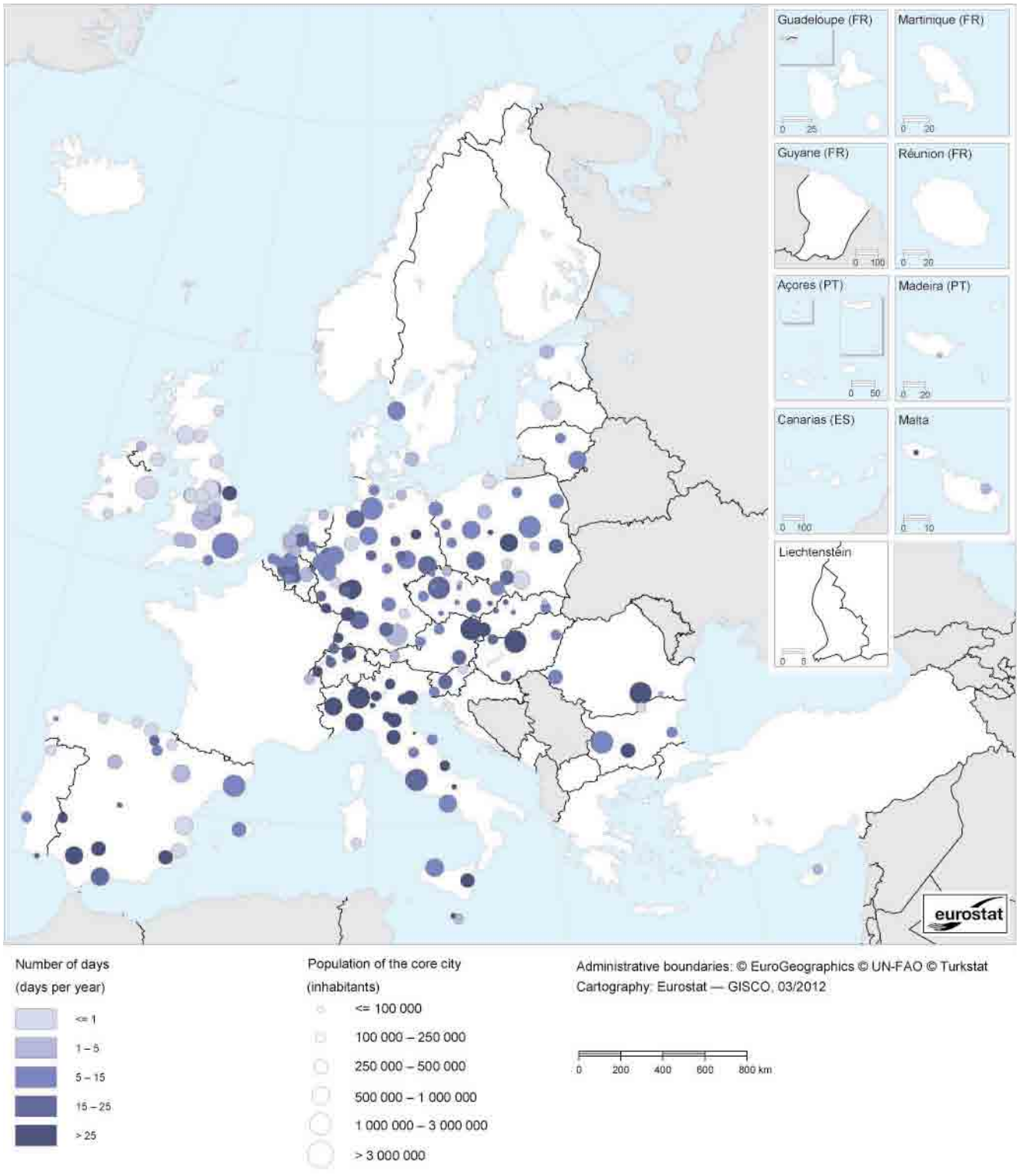
A city can be designated as an urban settlement (morphological concept) or as a legal entity (administrative concept). The Urban Audit uses the latter concept and defines a core city according to political and administrative boundaries. Data used to produce the maps in this chapter reflect this definition. However, economic activity, the labour force, air pollution and other issues clearly cross the administrative boundaries of a city. To capture information at this extended level, a larger urban zone was defined for some cities based on commuter flows. These zones include the core city and the so-called 'commuter belt' around it. The selection of Urban

Figure 12.4: Perception regarding the difficulty of paying bills at the end of the month in Urban Audit cities, 2009 (% of respondents)



Source: Eurostat (online data code: urb_percep)

Map 12.5: Number of days ozone concentration exceeded 120 µg/m^3 in Urban Audit cities, 2008 (1)
(days per year)



(1) An alternative reference year (the latest information available) has been used for many cities; Dublin (IE), kernel city.
Source: Eurostat (online data code: urb_icity)

Audit cities was based on several criteria and agreed bilaterally with each national statistical office.

Six reference periods have been defined so far for the Urban Audit and for each period a reference year was set: 1991, 1996, 2001, 2004, 2008 and 2011. At the time of writing, 2011 data were only available for a relatively limited number of cities. More than 300 indicators have been defined and calculated, covering most aspects relating to the quality of life in a city, including: demography, housing, health, crime, the labour market, income disparity, local administration, educational qualifications, the environment, climate, travel patterns, the information society and cultural infrastructure. Data availability differs from domain to domain. Data on demography are available for more than 90 % of the cities, whereas data on the environment are available for fewer than half.

The Urban Audit perception survey is a complement to the regular Urban Audit data. The last survey took place in 2009 and included 75 cities in the EU, Croatia and Turkey. Survey data were collected through telephone interviews for samples of 500 people per city.

Further information

For further information about city statistics please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/portal/page/portal/region_cities/city_urban.

Context

Suburbanisation, congestion and the risks of poverty, social exclusion and unemployment are challenges faced by many cities. Complex issues such as these require integrated answers in terms of urban planning, infrastructure, transport services, housing, training and employment. Urban development issues have been integrated to a large extent in all regional and national programmes supported by structural and cohesion funds. Furthermore, the exchange of best practice and networking between urban planners and other local experts is facilitated by the Urbact II programme. The joint European support for sustainable investment in city areas (Jessica) initiative of the European Commission promotes financial engineering for sustainable investment, economic growth and employment in Europe's urban areas, in cooperation with the European Investment Bank and the Council of Europe Development Bank.

Urban development — future cohesion policy

In October 2011 the European Commission published proposals for cohesion policy between 2014 and 2020 (COM(2011) 615 final). Among other issues, these proposals put an increased emphasis on investing in urban environments and in urban transport. For example, they proposed that: at least 5 % of resources from the European Regional Development Fund should be focused on sustainable urban development; that innovative actions for sustainable urban development should be supported; and that an urban development platform should be established to develop networks between cities and to introduce exchanges on urban policy.

One element of this policy is the European Commission's intention to seek direct, long-term, interaction with mayors, aiming to identify future urban challenges and how they can be tackled successfully. The Urban Forum has been designed as an opportunity to discuss new proposals for policy developments with mayors, with a particular focus on the role of cities in promoting sustainable growth. The first forum was held on 16 February 2012 and focused on:

- the challenge of coordinating thematic investments in cities and promoting integrated urban development;
- innovative actions for sustainable urban development;
- integrated territorial investment: how may it work for fostering the urban dimension of cohesion policy?

13

Focus on coastal regions

The following chapter depicts two key issues for coastal regions in the European Union (EU), maritime transport and tourism: note that Chapter 7 presents regional statistics on tourism in a more general context, while Chapter 10 presents regional statistics for other transport modes. This chapter emphasises the characteristics of coastal regions, taking into account the Member State to which they belong and the maritime basins they border.

Main statistical findings

EU coastal regions and their maritime basins

Coastal regions are statistical regions defined at NUTS level 3 with a coastline or with more than half of their population living less than 50 km from the sea (for more information see the definitions in data sources and availability below). As Map 13.1 shows, EU coastal regions border several main maritime basins: the Baltic Sea, the North Sea, the North-East Atlantic Ocean, the Mediterranean Sea, the Black Sea and outermost regions. Naturally, these regions are generally distributed along oceans and seas bordering the EU coastline: an important characteristic of the outermost coastal regions, which include the island regions of Canarias (Spain), Madeira and the Açores (both Portugal) in the Atlantic Ocean as well as the French overseas territories of Guadeloupe, Martinique, Guyane and Réunion, is their distance from the European mainland.

EU coastal regions are located in 22 of the Member States that have a coastline; the Czech Republic, Luxembourg, Hungary, Austria and Slovakia are landlocked countries and are not presented in this analysis. There is currently no agreed typology for non-member countries, so the analysis does not include any statistics on EFTA or candidate countries either.

All NUTS level 3 regions within the island Member States of Cyprus (one region) and Malta (two regions) are coastal regions, as are all the regions in Denmark (11 regions); in Estonia and Ireland all regions except one are coastal regions.

Seven of the 22 Member States with a coastline have coastal regions in more than one maritime basin. These include not only France, Spain and Portugal with outermost coastal regions, but also: Spain and France, which have regions on the coasts of the North-East Atlantic Ocean and the Mediterranean Sea; Denmark, Germany and Sweden, which have regions on the coasts of the North Sea and the Baltic Sea; and the United Kingdom, which has regions on the coasts of the North-East Atlantic Ocean and the North Sea.

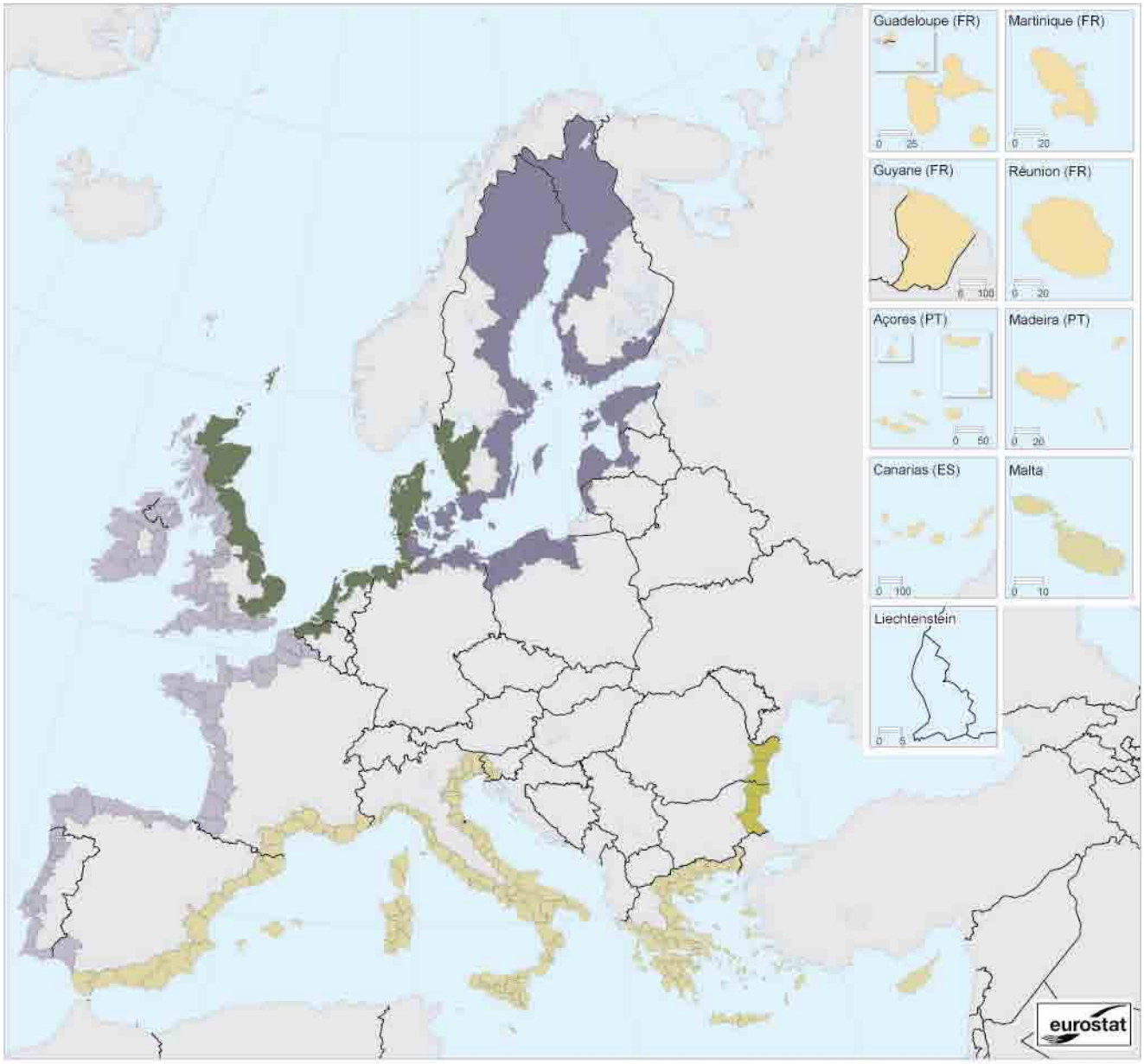
Maritime freight transport

The total quantity of freight handled in EU ports in 2010 was 3 641 million tonnes, indicating the important role maritime freight transport plays, particularly in extra-EU trade. The geographical spread of the main seaports within the EU (see Map 13.2) illustrates the spread of maritime freight transport, allowing large volumes of goods to be loaded and unloaded close to their main recipients and producers. Figure 13.1 provides a summary of the distribution of maritime freight by basin, clearly showing the dominance of ports in North Sea regions, and the relatively low share of freight handled in ports in regions along the Black Sea or in the outermost regions.

The region of Groot-Rijnmond in the Netherlands, with the port of Rotterdam, handled by far the largest quantity of maritime freight: 405 million tonnes in 2010, more than two and a half times the quantity of the second-ranked region, Antwerpen in Belgium (160 million tonnes), and nearly four times the quantity of freight that was handled in the German region of Hamburg (105 million tonnes); all three of these regions were on the North Sea. Six other coastal regions recorded maritime freight in excess of 50 million tonnes, including the French regions of Seine-Maritime (including the ports of Le Havre and Rouen), which handled the largest quantity of maritime freight on the North-East Atlantic coast, and Bouches-du-Rhône (Marseille), which handled the largest quantity of maritime freight on the Mediterranean coast. For the other basins the largest quantities of maritime freight handled in EU coastal regions were: 39 million tonnes in Trojmiejski (Poland, including Gdansk and Gdynia) on the Baltic coast, 35 million tonnes in Constanta (Romania) on the Black Sea and 16 million tonnes in Gran Canaria (Spain) among the outermost regions.

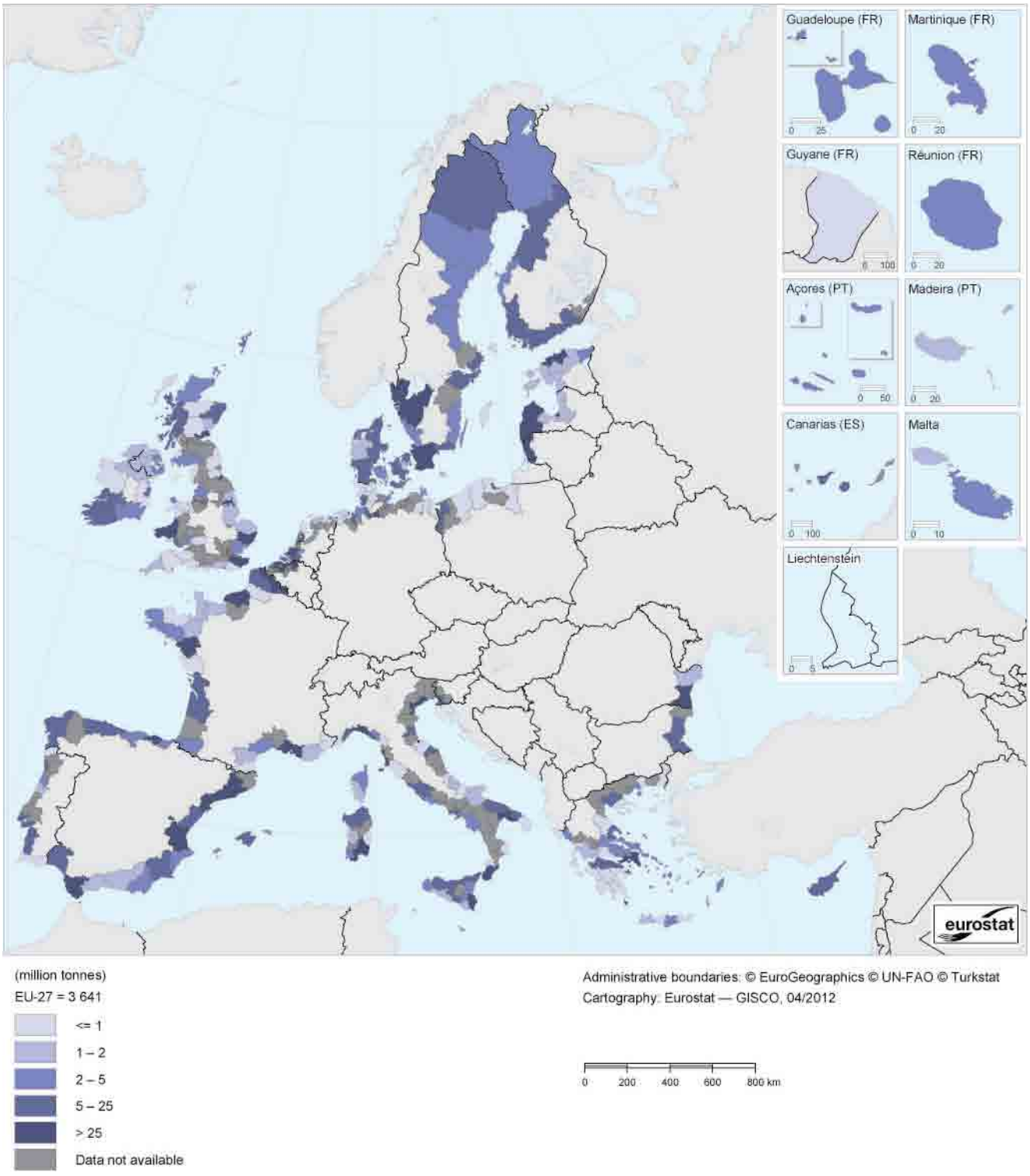
Table 13.1 shows which coastal region at NUTS level 3 and which port handled the largest amount of maritime freight in 2010 for the coastal Member States. In most Member States the coastal region with the most maritime freight contained the largest freight port, but this was not the case in Greece, France or Italy: Agii Theodori was the largest freight port in Greece and is located in the region of Korinthia; Marseille was the largest freight port in France (in the region of the Bouches-du-Rhône); and Genova was the largest freight port in Italy (in the region of the same name). Table 13.1 also provides an overview of the quantity of freight handled and recent developments for each of the EU's coastal Member States. The three Member States with the largest quantity of maritime freight in 2010 were the Netherlands, the United Kingdom and Italy, followed at some distance by Spain and France. Between 2007 and 2010 the quantity of maritime freight handled within the EU-27 fell by 7.5 %, illustrating

Map 13.1: Coastal regions in the EU, by sea basin and by NUTS 3 regions



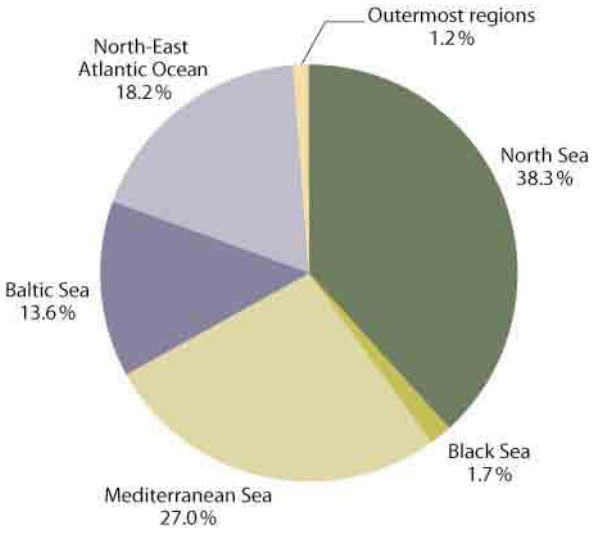
Source: Eurostat

Map 13.2: Total gross weight of maritime goods handled in EU coastal regions, by NUTS 3 regions, 2010 (1)
(million tonnes)



(1) Ireland, Spain, France and the United Kingdom, 2009.
Source: Eurostat (online data code: mar_go_aa)

Figure 13.1: Maritime goods handled in EU coastal regions, by basin, 2010 (1)
(% share of total, in terms of gross weight)



(1) Ireland, Spain, France and the United Kingdom, 2009.
Source: Eurostat (online data code: mar_go_aa)

the impact of the financial and economic crisis. For most of the Member States shown in Table 13.1 the rate of change is shown between 2007 and 2010, and therefore reflects the beginnings of the recovery after the crisis. Nevertheless, Lithuania, Malta, Poland, the Netherlands and Estonia were the only Member States to record higher levels of maritime freight in 2010 than in 2007, while Greece, Romania and Denmark reported maritime freight transport was at least 20 % lower in 2010 than 3 years earlier (a similar decline was recorded in Ireland from 2007 to 2009).

Figures 13.2 and 13.3 provide an analysis of maritime trade in each Member State's coastal regions, separating inward and outward freight transport. The important role of the Netherlands as a point of entry into the EU for maritime trade can be seen clearly, as it ranked first in terms of inward maritime freight transport, but third in terms of outward transport; the reverse situation was observed for the United Kingdom. Among the smaller Member States, the position of Latvia was remarkable, having the ninth largest outward maritime transport of freight, whereas it ranked in position 21 for inward transport. There were also relatively large differences in the rankings between inward and outward maritime freight transport for Ireland and Estonia. In the vast majority of Member States, the quantity of inward maritime freight transport handled in its coastal regions exceeded the quantity of freight moving in the opposite direction: only in the Baltic Member States, Poland and Romania were the quantities of outward maritime freight transport greater than inward maritime freight.

Maritime passenger transport

The total number of maritime passengers in or out of EU-27 ports in 2010 was 395.6 million. The number of passengers embarking or disembarking in EU ports fell relatively strongly in 2009 (– 2.2 %) and 2010 (– 2.0 %) following on from a smaller fall (– 0.3 %) in 2008.

Figure 13.4 summarises the distribution of maritime passengers, based on sea basins, and can be contrasted with Figure 13.1 which provided a similar analysis for maritime freight transport. The Mediterranean Sea basin dominated maritime passenger transport, accounting for more than half (52.2 %) of all passengers along the EU's coast. The next largest share was for the Baltic Sea, followed by the North-East Atlantic Ocean and then the North Sea — the latter therefore had a substantially lower share of maritime passenger transport than maritime freight transport. There is practically no maritime passenger transport in the EU coastal regions of the Black Sea: neither of the NUTS level 3 regions in Romania reported any passenger transport, while only one of the Bulgarian regions (Varna) reported a minimum number of passengers (1 000).

By far the largest number of passengers transported by sea in 2010 was recorded by the Attiki region of Greece (43.8 million), where the port of Piraeus is the main gateway for passengers to the Greek islands. The second highest number of passengers was recorded in Napoli with 23.4 million. Six more regions recorded more than 10 million maritime

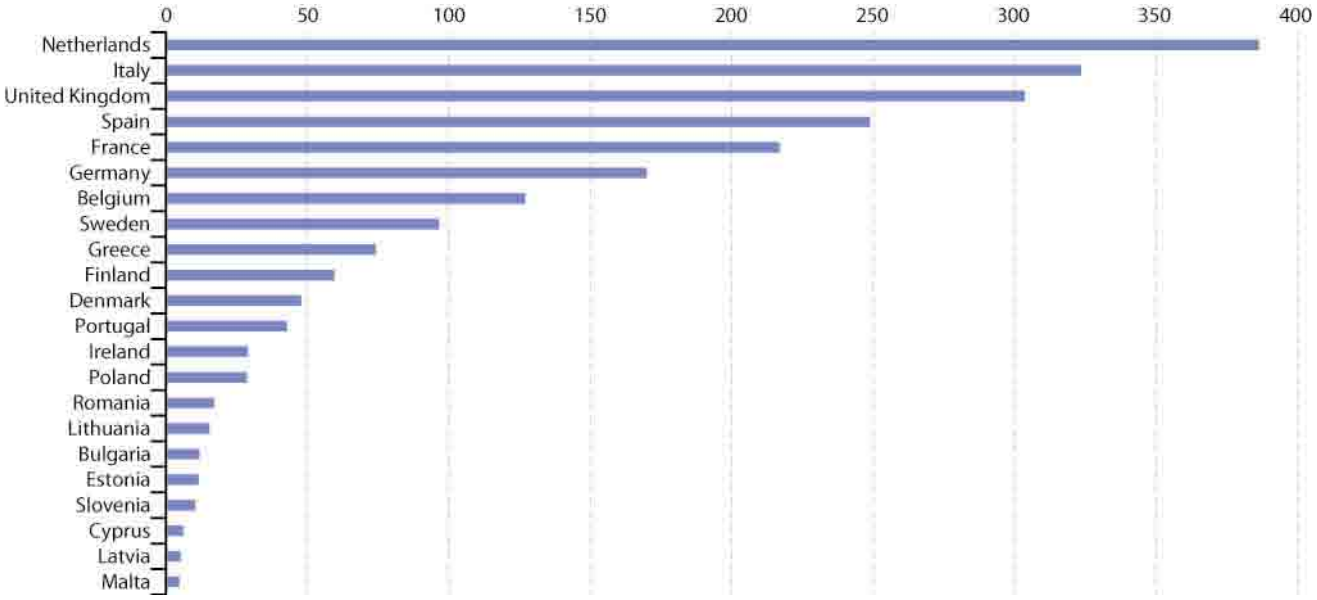
Table 13.1: Maritime goods handled in EU coastal regions (1)

	Gross weight of goods handled, 2010 (million tonnes)	Change in gross weight of goods handled, 2007–10 (%)	Coastal region (NUTS 3 regions) with the highest gross weight of goods handled, 2010	Port with the highest gross weight of goods handled, 2010
EU-27	3 641.0	– 7.5	Groot-Rijnmond (NL335)	Rotterdam
Coastal regions:				
EU-27 coastal regions	3 544.8	– 9.4	Groot-Rijnmond (NL335)	Rotterdam
Belgium	226.6	– 3.2	Arr. Antwerpen (BE211)	Antwerpen
Bulgaria	22.9	– 7.8	Burgas (BG341)	Burgas
Denmark	87.1	– 20.6	Sydjylland (DK032)	Fredericia (og Shell-Havnen)
Germany	272.0	– 12.5	Hamburg (DE600)	Hamburg
Estonia	44.1	5.9	Põhja-Eesti (EE001)	Tallinn
Ireland	41.8	– 22.7	Dublin (IE021)	Dublin
Greece	122.9	– 24.5	Attiki (GR300)	Agii Theodori
Spain	359.4	– 14.9	Cádiz (ES612)	Algeciras
France	315.5	– 8.9	Seine-Maritime (FR232)	Marseille
Italy	487.1	– 9.1	Reggio di Calabria (ITF65)	Genova
Cyprus	7.0	– 7.5	Kýpros (CY000)	Limassol
Latvia	58.7	– 1.7	Riga (LV006)	Riga
Lithuania	37.9	29.4	Klaipėdos apskritis (LT003)	Klaipeda
Malta	6.0	14.3	Malta (MT001)	Marsaxlokk
Netherlands	538.7	6.2	Groot-Rijnmond (NL335)	Rotterdam
Poland	59.5	13.5	Trójmiejski (PL633)	Gdańsk
Portugal	65.9	– 3.4	Alentejo Litoral (PT181)	Sines
Romania	37.3	– 23.4	Constanța (RO223)	Constanța
Slovenia	14.6	– 8.0	Obalno-kraška (SI024)	Koper
Finland	105.9	– 5.9	Itä-Uusimaa (FI182)	Skoeldvik
Sweden	133.3	– 26.2	Västra Götalands län (SE232)	Göteborg
United Kingdom	500.8	– 13.9	North and North East Lincolnshire (UKE13)	Grimsby and Immingham

(1) Ireland, Spain, France and the United Kingdom, data for 2009 and growth rates for 2007–09; EU-27 coastal regions, latest period calculated using the information available for each Member State (either 2009 or 2010), with the growth rate (2007–10) also based on this aggregate.

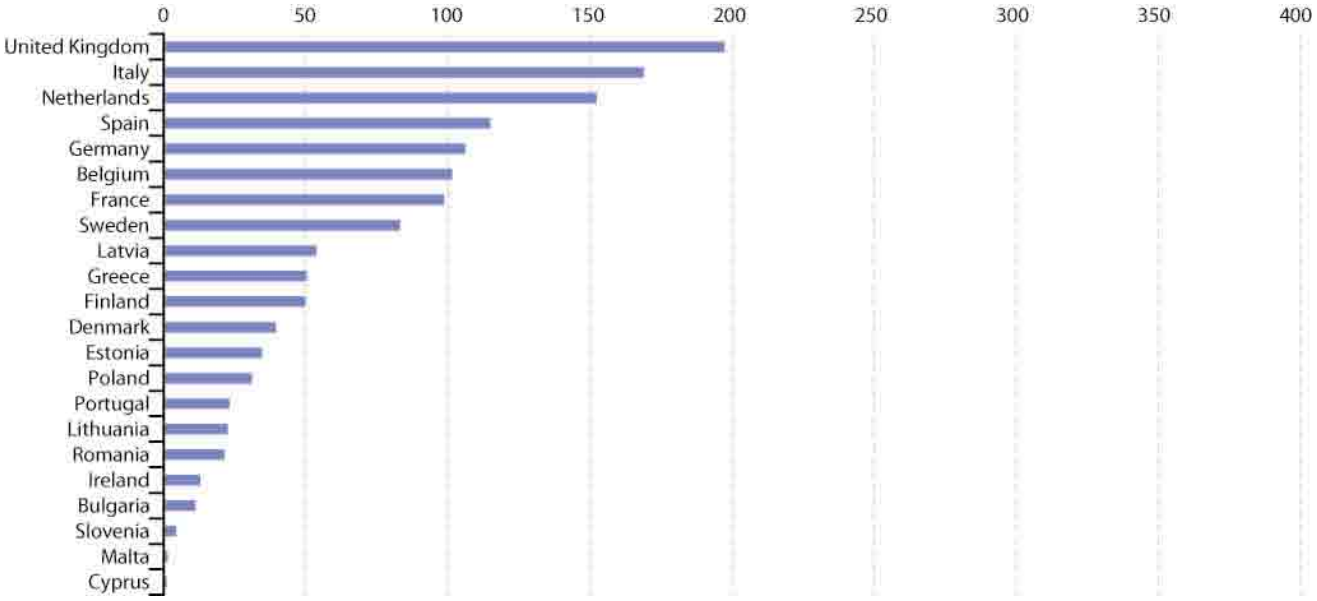
Source: Eurostat (online data code: mar_go_aa)

Figure 13.2: Gross weight of maritime goods handled in EU coastal regions, inwards, 2010 (1)
(million tonnes)



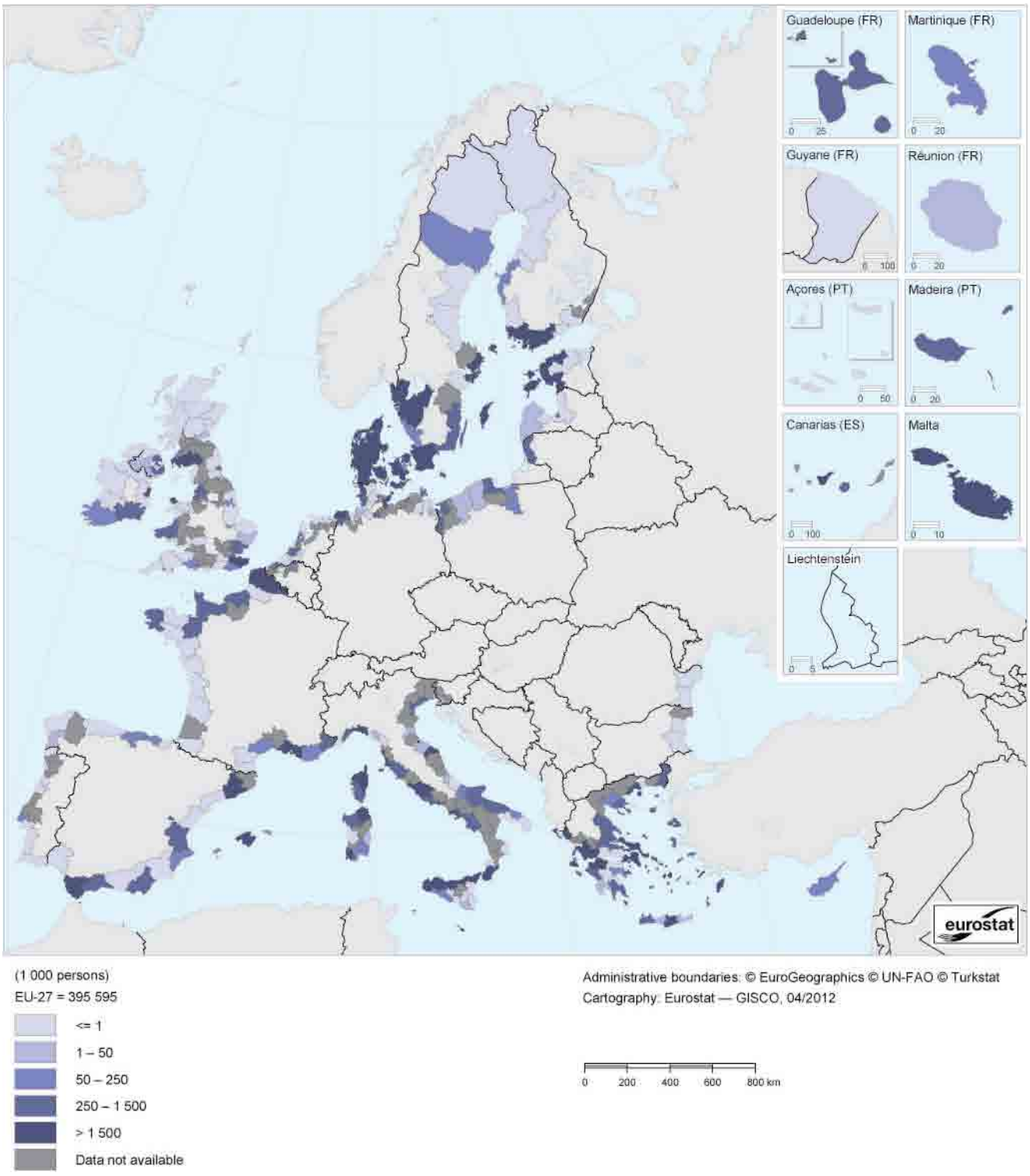
(1) Ireland, Spain, France and the United Kingdom, 2009.
Source: Eurostat (online data code: mar_go_aa)

Figure 13.3: Gross weight of maritime goods handled in EU coastal regions, outwards, 2010 (1)
(million tonnes)



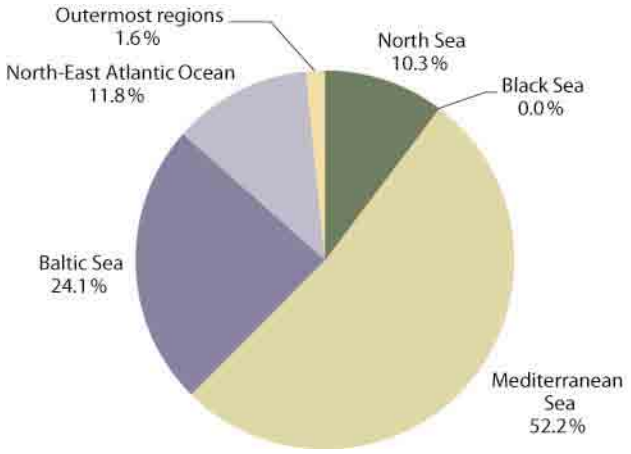
(1) Ireland, Spain, France and the United Kingdom, 2009.
Source: Eurostat (online data code: mar_go_aa)

Map 13.3: Maritime passengers in EU coastal regions, by NUTS 3 regions, 2010 ([1])
(1 000 persons)



([1]) Ireland, Spain, France, Malta and the United Kingdom, 2009.
Source: Eurostat (online data code: mar_pa_aa)

Figure 13.4: Maritime passengers in the EU, by basin, 2010 (1)
(% share of total)



(1) Ireland, Spain, France, Malta and the United Kingdom, 2009.
Source: Eurostat (online data code: mar_pa_aa)

passengers in 2010 including Kent (13.4 million, 2009) and Pas-de-Calais (10.5 million, 2009) reflecting services across the English Channel principally between the ports of Dover on the English side and Calais on the French side. The other regions over 10 million passengers were: Messina (Sicily, Italy) which services several ferry connections to the mainland of Italy as well as ferry routes to Malta and Tunisia; the Swedish regions of Skåne län and Stockholms län, servicing a large number of ferry connections to the other countries around the Baltic Sea; the Danish region of Vest- og Sydsjælland, with ferry connections to other parts of Denmark and to neighbouring Germany.

Figure 13.5 provides an analysis of the regional dispersion of maritime passenger transport for all of the EU coastal Member States. Maritime passenger transport tends to be concentrated in particular coastal regions within each Member State. Among the Member States with significant maritime passenger transport in multiple coastal regions, at least one coastal region had no significant maritime passenger transport and the coastal region with the highest level of maritime passenger transport normally had a value that was at least double the national average. The most notable levels of concentration in individual regions were in the United Kingdom, Greece, Italy and France, where the number of passengers in the region with the highest level of maritime passenger transport was at least 10 times above the national average for all coastal regions. The one Member State that was an exception to these two general observations was Malta, where maritime passenger transport is dominated by the domestic service between its two regions, the islands of Malta and Gozo, and which therefore have very similar numbers of maritime passengers. Note that Cyprus and Lithuania have only one coastal region, Slovenia has three regions meeting the criteria as a coastal region but only one actually has a coastline, while Romania and Bulgaria have very low levels of maritime passenger transport and so no regional concentration can be observed.

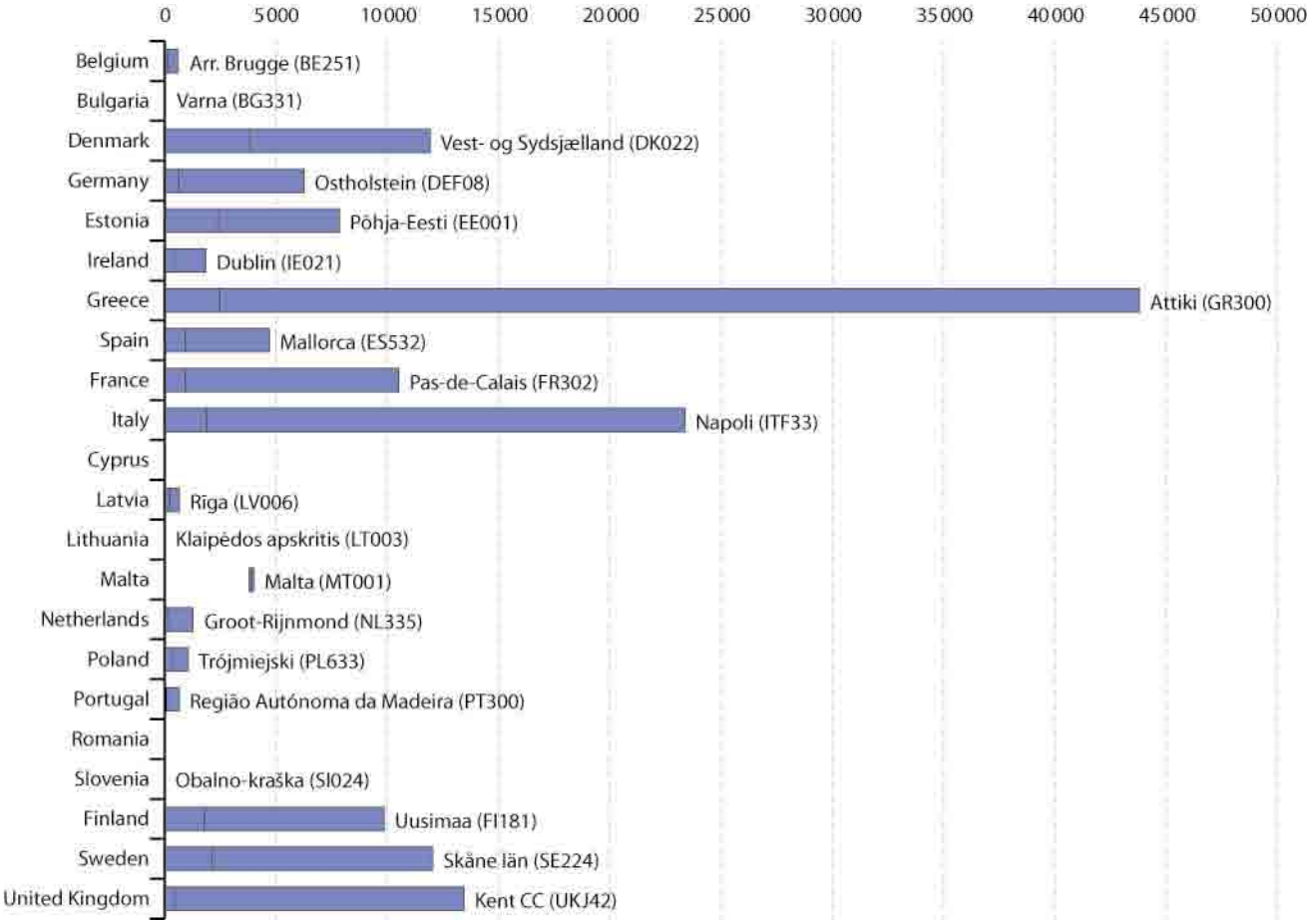
Cruise passengers

Cruise passengers accounted for around 2 % to 3 % of all maritime passengers in the EU-27. The total number of passengers starting or ending a cruise in EU-27 ports in 2009 was in excess of 10.5 million, and this figure was nearly 40 % above the level in 2007. Early estimates suggest that the number of cruise passengers in the EU-27 fell by around 7 % between 2009 and 2010.

Figure 13.6 summarises the distribution of cruise passengers, based on sea basins, and can be contrasted with Figure 13.4, which provided a similar analysis for all maritime passenger transport. The dominance of the Mediterranean Sea basin, which was apparent for all maritime passenger transport, was even greater when restricted to cruise passengers, accounting for approximately two thirds (66.5 %) of all cruise passengers in the EU. The North-East Atlantic Ocean also had a larger share of cruise passengers (13.8 % compared with 11.8 % for all maritime passengers), as did the outermost regions (2.3 % compared with 1.6 % for all maritime passengers). The share of the Baltic Sea was just 10.2 % for cruise passengers, less than half its share of all maritime passengers.

The largest number of cruise passengers was reported for the coastal region of Barcelona, with 1.3 million passengers in 2009. While Barcelona was the only NUTS level 3 coastal region in the EU-27 where the number of cruise passengers exceeded 1 million, there were six other regions with more than half a million passengers, four of them in Italy (Venezia, Savona, Genova and Napoli) and one in Spain (Mallorca),

Figure 13.5: Maritime passengers in EU coastal regions, by NUTS 3 regions, 2010 (1)
(1 000 persons)



(1) The graph shows the range of the highest to lowest region for each country; the black vertical line is the average (mean); the name of the region with the highest value is also included. Ireland, Spain, France, Malta and the United Kingdom, 2009.
Source: Eurostat (online data code: mar_pa_aa)

while Southampton (classified to the North-East Atlantic Ocean) in the United Kingdom was the only region with more than half a million cruise passengers that was not on the Mediterranean coast. The next largest cruise passenger numbers were in the Danish capital city region of Byen København and the German region of Kiel, Kreisfreie Stadt, both classified to the Baltic Sea region and having just over 300 000 cruise passengers each in 2010. Hamburg (Germany) completed the top 10 and had the largest number of cruise passengers (216 000) of any coastal region on the North Sea. The largest number of cruise passengers among the outermost coastal regions was 122 000 in Tenerife (Spain). Varna in Bulgaria was the only Black Sea region in the EU to record any cruise passengers (1 000 in 2010).

Tourism in coastal regions

In the EU-27 as a whole there were around 28.1 million bed places in hotels, campsites and other collective tourist accommodation in 2009, of which nearly three fifths were in coastal regions. Table 13.3 shows the availability of tourist accommodation in the coastal regions of each of the Member States, while Figure 13.7 summarises this across the various sea basins. EU coastal regions around the Mediterranean Sea offered 7.1 million bed places in 2010, some 43.2 % of the total among all coastal regions in the EU-27. The second largest amount of tourist accommodation available was along the coast of the North-East Atlantic Ocean, with 4.9 million bed places. At a national level, the coastal regions of France, Italy, the United Kingdom and Spain had by far the greatest number of bed places available for tourist accommodation, collectively accounting for 71.9 % of the total in EU coastal regions. The type of accommodation offered varied greatly between Member States, with the proportion of bed places in hotels over 80 % in Latvia, Ireland, Greece, Bulgaria, Cyprus and Malta, but below 25 % in the Netherlands, Poland, Denmark and France (where campsites and other collective tourist accommodation dominated).

The single largest number of bed places available in any coastal region in the EU in 2010 was 364 500 in Venezia (Italy), followed by Mallorca and Girona (Spain), Var and Vendée (France) and Cornwall and the Isles of Scilly (United Kingdom), all with more than 250 000 bed places in tourist accommodation. In total, there were 36 coastal regions in the EU-27 that had more than 100 000 bed places available for tourist accommodation, of which 12 were in France, eight in Spain, six in the United Kingdom, five in Italy and one each in Bulgaria, Greece, Portugal, Romania and Sweden.

The density of tourist accommodation can be measured in terms of the number of bed places per square kilometre (km²). As well as climatic conditions attracting tourists, visits to coastal regions may also be on account of the attraction of the coast itself, or for cultural or professional reasons. While a lower density of tourism capacity in a region may reflect a relatively less developed tourism infrastructure, it may also simply result from a region having a vast area relative to the length of its coastline, which consequently reduces the density — this explains in part the relatively low tourism density in some regions along the coast of the Baltic Sea, for example, in several Finnish and Swedish regions. As Map 13.5 shows, the density of tourism capacity was high in several regions around the coast of England, peaking at close to 2 000 bed places per km² in the region of Blackpool on the coast of the North-East Atlantic Ocean. Several NUTS level 3 regions in or around capital cities were among the coastal regions with highest densities of tourist accommodation, including capital city regions in the United Kingdom, Denmark, Malta and the Netherlands. Around the Mediterranean coast the Italian region of Rimini had the highest density of tourist accommodation, 329 bed places per km², followed by Venezia and Malta.

Data sources and availability

Coastal regions

A coastal region of the EU is a statistical region defined at NUTS level 3 of the geographical classification that has a coastline or more than half of its population living less than 50 km from the sea. The EU-27 has 446 such regions, belonging to the 22 Member States which have a coastline. Of these 446 coastal regions, 372 have a coastline, while 73 meet the second criterion. Lastly, given the strong influence of the sea, the German region of Hamburg has been added to the list.

The 22 Member States which have a coastline are: Belgium, Bulgaria, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Finland, Sweden and the United Kingdom.

Maritime transport

Eurostat's regional transport statistics show passenger and freight movements measured in terms of passengers and tonnes. Freight statistics are divided into tonnes of freight loaded and unloaded. Passenger data are divided into passengers embarking and disembarking.

Currently, data on maritime transport are collected under Directive 2009/42/EC on statistical returns in respect of carriage of goods and passengers by sea. This directive provides detailed quarterly data for ports handling more than 1 million tonnes of goods or recording more than 200 000 passenger movements a year. The data collected at port level are then aggregated to NUTS regions.

Tourism

A system of tourism statistics was established in Council Directive 95/57/EC of 23 November 1995 on the collection of statistical information in the field of tourism. This was amended in 2004 and 2006 and again in July 2011 (although these latest changes will only enter into force for data for the 2012 reference year). More information relating to the data collection exercise is provided in Chapter 7 on tourism.

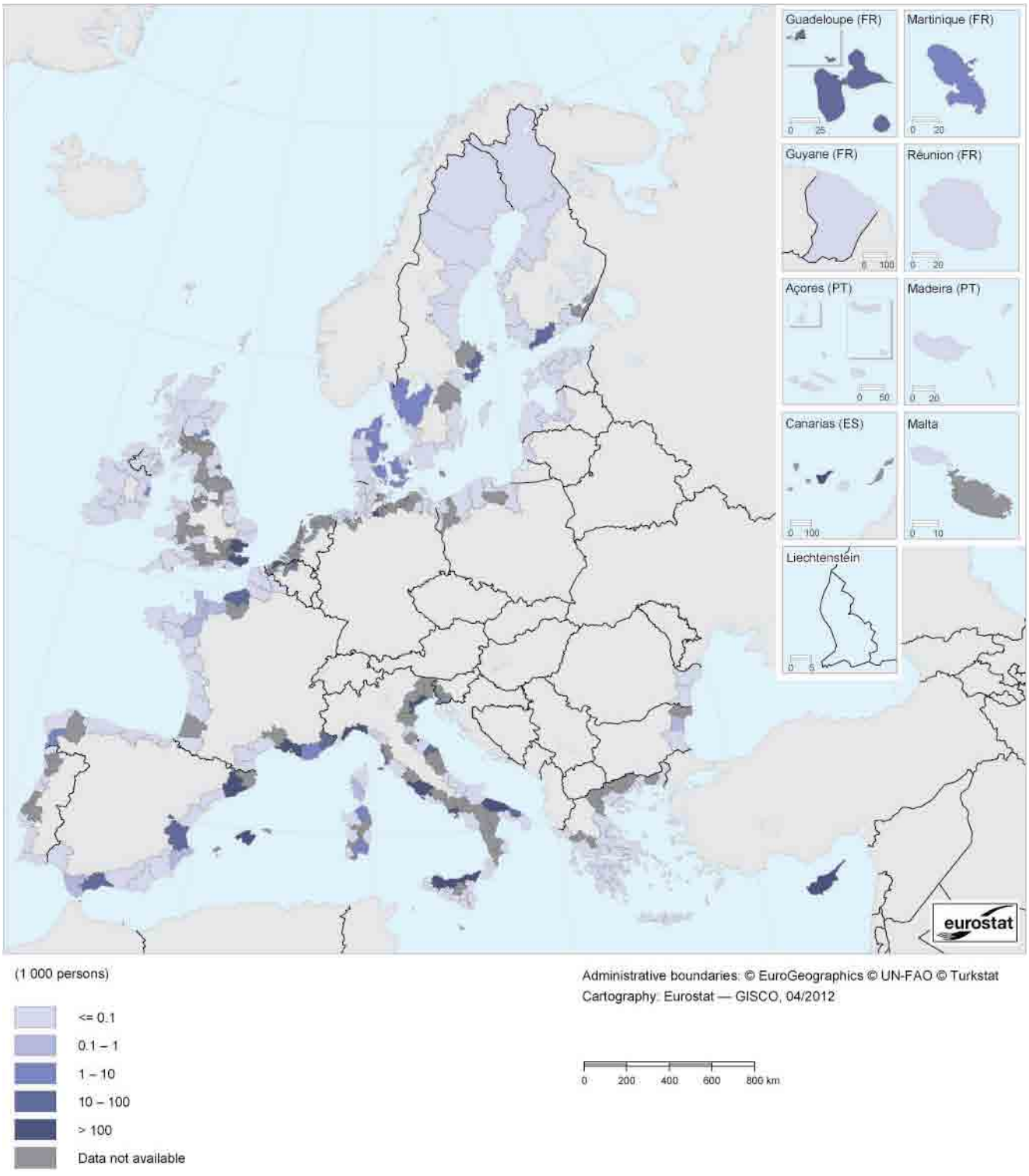
Tourism statistics in the EU consist of two main components: statistics relating to capacity and occupancy in tourist accommodation, and statistics relating to tourism demand: this chapter presents data on tourism supply and focuses on data for coastal regions. In most Member States, tourism supply data are collected via surveys filled in by accommodation establishments.

Context

The EU and EFTA countries have an enormous coastline along the Atlantic and Arctic Oceans and several sea basins: the Baltic Sea, the North Sea, the Mediterranean Sea and the Black Sea. The Atlantic Ocean coastal regions border the Celtic seas on one hand and the Bay of Biscay and the Iberian coast on the other. None of the EU Member States have a coastal region classified to the Arctic Ocean basin. The European Commission's Directorate-General for Maritime Affairs and Fisheries provides more information about each of these sea basins in the European Atlas of the Seas, as well as information about strategies for each area.

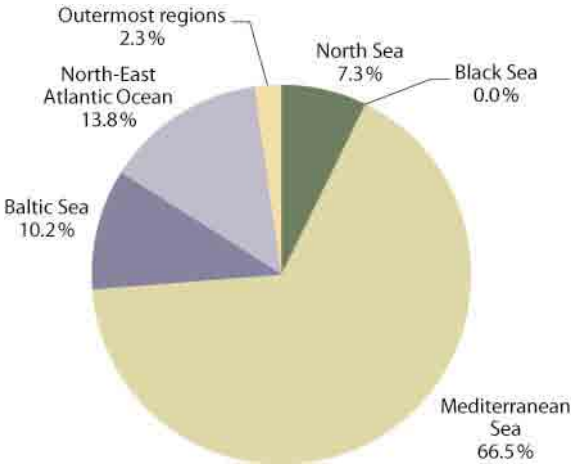
Fishing, shipbuilding, maritime transport, ports and offshore energy-related activities (such as the extraction of fossil fuels and electricity generation) are major coastal and maritime economic activities; furthermore, tourism plays an important role in many coastal economies, while the oceans and seas have important recreational, cultural and ecological functions.

Map 13.4: Cruise passengers in EU coastal regions, by NUTS 3 regions, 2010 (1)
(1 000 persons)



(1) Ireland, Spain, France, Malta and the United Kingdom, 2009.
Source: Eurostat (online data code: mar_pa_aa)

Figure 13.6: Cruise passengers in the EU, by basin, 2010 (1)
(% share of total)



(1) Ireland, Spain, France, Malta and the United Kingdom, 2009; figures do not sum to 100 % due to rounding.
Source: Eurostat (online data code: mar_pa_aa)

Table 13.2: Cruise passengers in the EU, by basin (1)

	Cruise passengers, 2010 (1 000)	Change in the number of cruise passengers, 2007–10 (%)	Coastal region (NUTS 3 regions) with the highest number of cruise passengers, 2010
EU-27	10530	39.4	Barcelona (ES511)
Coastal regions:			
EU-27 coastal regions	9043	20.0	Barcelona (ES511)
North Sea	659	74.3	Hamburg (DE600)
Black Sea	1	-	Varna (BG331)
Mediterranean Sea	6010	22.9	Barcelona (ES511)
Baltic Sea	924	27.4	Byen København (DK011)
North-East Atlantic Ocean	1244	11.1	Southampton (UKJ32)
Outermost regions	205	–51.4	Tenerife (ES709)

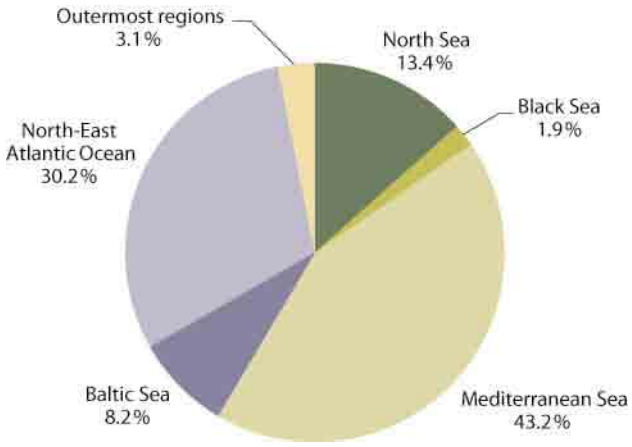
(1) Excluding Estonia, Latvia, Lithuania, the Netherlands and Portugal; EU-27, data for 2009 and growth rates for 2007–09; EU-27 coastal regions, latest period calculated using the information available for each Member State (either 2009 or 2010), with the growth rate (2007–10) also based on this aggregate.
Source: Eurostat (online data code: mar_pa_aa)

Table 13.3: Tourist accommodation in hotels, campsites and other collective tourist accommodation in EU coastal regions (1)

	Number of bed places, 2010 (1 000)	Change in the number of bed places, 2007–10 (%)	Share of hotels in the total number of bed places, 2010 (%)	Coastal region (NUTS 3 regions) with the highest number of bed places, 2010
EU-27	28077.5	2.6	43.8	Venezia (ITD35)
Coastal regions:				
EU-27 coastal regions	16437.7	3.6	41.3	Venezia (ITD35)
Belgium	117.0	1.9	41.1	Arr. Oostende (BE255)
Bulgaria	180.5	–3.7	89.9	Burgas (BG341)
Denmark	393.4	4.0	20.7	Sydjylland (DK032)
Germany	636.4	10.8	32.4	Ostholstein (DEF08)
Estonia	39.8	11.7	63.6	Põhja-Eesti (EE001)
Ireland	176.7	–16.2	82.6	Dublin (IE021)
Greece	831.2	10.5	89.7	Dodekanisos (GR421)
Spain	2646.7	4.8	53.4	Mallorca (ES532)
France	3226.7	1.1	13.4	Var (FR825)
Italy	3073.9	3.7	45.9	Venezia (ITD35)
Cyprus	88.2	–4.7	95.1	Kýpros (CY000)
Latvia	27.3	32.0	80.5	Rīga (LV006)
Lithuania	10.9	–5.6	50.7	Klaipėdos apskritis (LT003)
Malta	40.2	–1.6	97.4	Malta (MT001)
Netherlands	595.1	0.0	23.1	Overig Zeeland (NL342)
Poland	194.2	–4.2	21.1	Koszaliński (PL422)
Portugal	411.1	2.0	60.3	Algarve (PT150)
Romania	128.9	3.0	72.6	Constanța (RO223)
Slovenia	29.8	25.1	43.6	Obalno-kraška (SI024)
Finland	130.4	–1.0	57.1	Uusimaa (FI181)
Sweden	591.9	6.3	30.2	Västra Götalands län (SE232)
United Kingdom	2867.2	5.1	41.1	Cornwall and Isles of Scilly (UKK30)

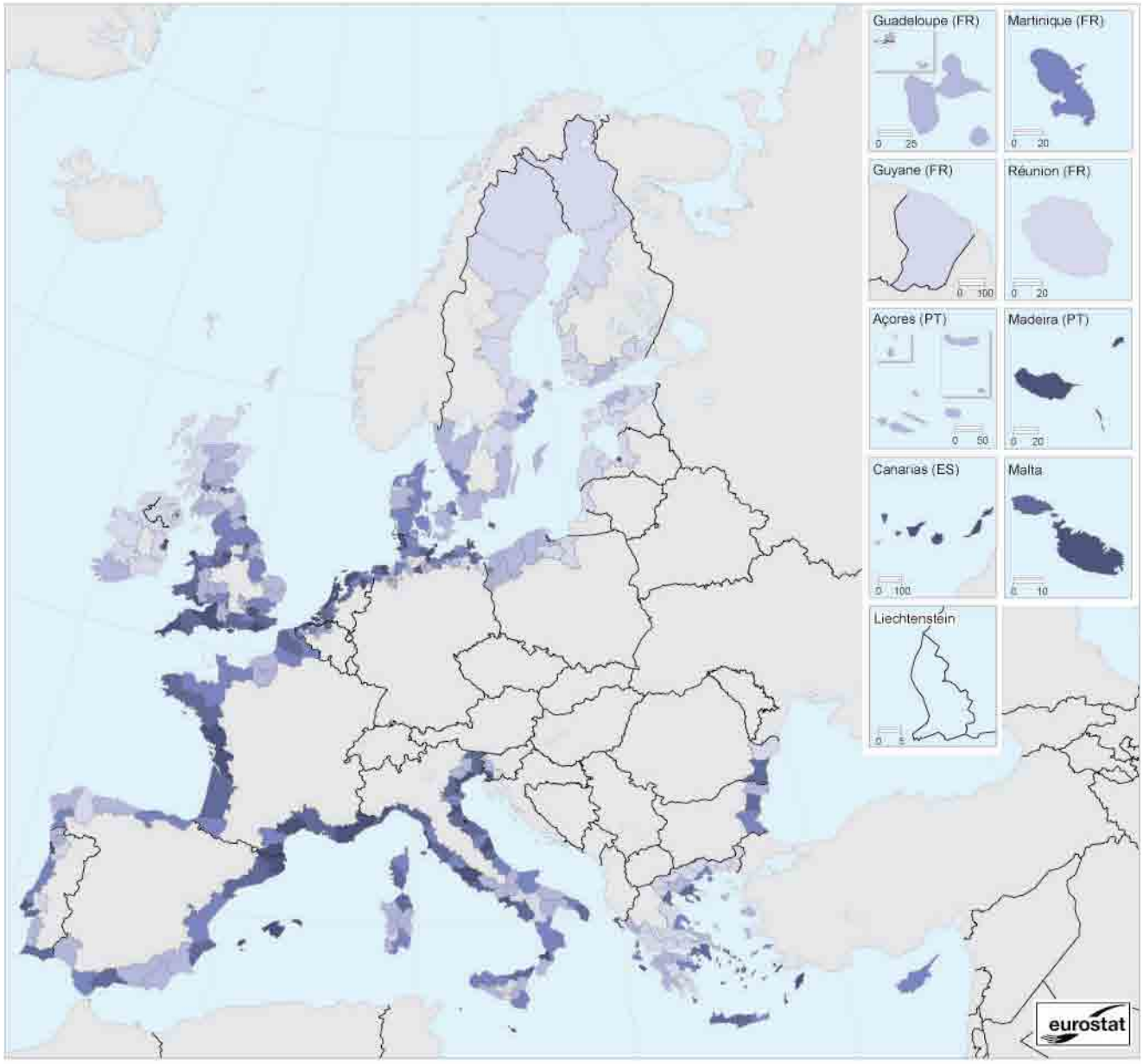
(1) EU-27 and France, data for 2009 and growth rates for 2007–09; EU-27 coastal regions, latest period calculated using the information available for each Member State (either 2009 or 2010), with the growth rate (2007–10) also based on this aggregate.
Source: Eurostat (online data code: tour_cap_nuts3)

Figure 13.7: Bed places in hotels, campsites and other tourist accommodation in EU coastal regions, by basin, 2010 (1)
(% share of total)



(1) Includes data for 2009 for France.
Source: Eurostat (online data code: tour_cap_nuts3)

Map 13.5: Density of tourist accommodation in hotels, campsites and other tourist accommodation in EU coastal regions, by NUTS 3 regions, 2010 (1)
(bed places per km²)



(1) Kiel, Kreisfreie Stadt (DEF02), Stormarn (DEF0F), France and Malta, 2009.
Source: Eurostat (online data codes: tour_cap_nuts3 and demo_r_d3area)

Maritime and coastal policies

Competition for marine space and the cumulative impact of human activities on marine ecosystems require a collaborative and integrated approach to the wide range of policy areas affecting maritime issues. In October 2007, the Commission adopted the Blue Paper launching 'An integrated maritime policy for the European Union' (COM(2007) 574 final). The aims of this policy are to maximise the sustainable use of oceans and seas, enhance Europe's knowledge and innovation potential in maritime affairs, ensure development and sustainable growth in coastal regions, strengthen Europe's maritime leadership and raise the profile of maritime Europe. This policy stresses the importance of coastal regions due to their geographic location and aims to develop sea basin strategies.

The marine strategy framework directive was adopted in 2008 within the overall context of the integrated maritime policy and aims to protect the marine environment and natural resources and create a framework for the sustainable use of marine waters.

Recommendation 2002/413/EC of the European Parliament and of the Council concerning the implementation of integrated coastal zone management in Europe defines the principles of sound coastal planning and management and dates from 2002; in other words before the integrated maritime policy. The recommendation was established in response to the perception that coastal planning activities or development decisions were often taken in a sectoral, fragmented way, leading to inefficient use of resources, conflicting claims on space and missed opportunities for more sustainable coastal development. Given the need for coherent planning of coastal and maritime areas, a proposal for a follow-up to the 2002 recommendation is, at the time of writing, being prepared.

Maritime transport and ports

Maritime transport provides the main mode for EU imports and exports to the rest of the world: around two fifths of the EU's external freight trade is seaborne; short sea shipping also plays a significant role in intra-EU trade. The quality of life on islands and in peripheral maritime regions depends on maritime transport services.

The EU's maritime transport policies aim to prevent substandard shipping, reducing the risk of serious maritime accidents and minimising the environmental impact of maritime transport. EU legislation also concerns working conditions within the maritime transport sector and the protection of consumers' rights.

In 2009, the European Commission updated its 'Strategic goals and recommendations for the EU's maritime transport policy until 2018' (COM(2009) 8). The two main recommendations concerned:

- the ability of the maritime transport sector to provide cost-efficient maritime transport services adapted to the needs of sustainable economic growth of the EU and world economies;
- the long-term competitiveness of the EU shipping sector, enhancing its capacity to generate value and employment in the EU, both directly and indirectly, through the whole cluster of maritime industries.

In October 2007, the European Commission adopted a 'Communication on a European ports policy' (COM(2007) 616), focusing on capacity, freedom of access, competition, flexible employment and the environment. It aims to help concentrate efforts so that the EU's ports can face future challenges, attract new investment and fully contribute to the development of intermodal transport.

Coastal tourism

Tourism in coastal regions can provide employment opportunities and also contribute to regional development and economic and social integration. In its 2010 communication on tourism (see Chapter 7 for more information) the European Commission recognised the importance of maritime and coastal tourism as a catalyst for economic development and indicated its intention to carry out actions to encourage tourism development as part of an integrated maritime policy.

14

Focus on territorial typologies

Traditionally, typologies of territory were determined by population size and density of local administrative units at level 2 (LAU level 2), such as communes, municipalities or local authorities. The new typologies that are described here use a population grid, which is a more accurate basis to characterise areas and regions. This article provides a short overview of the typologies, including definitions, terminology and some basic statistical data.

These typologies start by classifying grid cells of 1 km² to a typology of clusters according to their similarities in terms of population size and density: each grid cell is classified to one type of cluster only. Areas (LAU level 2) or regions (NUTS level 3) can then be classified to area or regional typologies based on the population share in different types of clusters: again, each LAU level 2 area or NUTS level 3 region is classified to one type only. In each of these various typologies (of clusters, areas or regions) the whole geographical territory of the European Union (EU) is covered without any overlaps or omission.

The area typology applied to LAU level 2 is primarily used in surveys such as the labour force survey (LFS) and the survey on income and living conditions (SILC); the regional typology applied to the NUTS level 3 regions is mainly used to monitor rural development.

Typologies

Cluster types

The typology of clusters classifies 1 km² grid cells (and clusters thereof), splitting them into three types. The criteria used are the population density in the individual grid cells and the combined population level of clusters, where clusters are made up of contiguous cells (in other words, neighbouring or adjoining cells); see later for a more detailed explanation of contiguous cells and the so-called gap-filling technique used for high-density clusters. The three types of grid cells or clusters in the typology are the following.

- High-density clusters/city centres/urban centres: clusters of contiguous grid cells of 1 km² with a density of at least 1 500 inhabitants per km² and a minimum population of 50 000 after gap-filling.
- Urban clusters: clusters of contiguous grid cells of 1 km² with a density of at least 300 inhabitants per km² and a minimum population of 5 000.
- Rural grid cells: grid cells outside high-density clusters and urban clusters.

Contiguous cells and filling gaps in the cluster typology

To determine population size, the grid cells need to be grouped in clusters. The methods presented here use three different rules for contiguity to create clusters. These three rules are explained below.

- Contiguous including diagonals — used for urban clusters. If the central square (grid cell) in Figure 14.1 is above the density threshold, it will be grouped with each of the other surrounding eight grid cells that exceed the density threshold.
- Contiguous excluding diagonals — used for high-density clusters. If the central square in Figure 14.1 is above the density threshold, it will be grouped with each of the four cells directly above, below or next to the central square that also exceed the density threshold. This means that cells numbered 2, 4, 5 and 7 can be included in the same cluster. Cells with number 1, 3, 6 and 8 cannot as they have a diagonal connection.
- The majority rule or gap-filling — used for high-density clusters. The goal for the high-density clusters is to identify urban centres without any gaps. Therefore, enclaves need to be filled. If the central square in Figure 14.1 is not, in its own right, a part of a high-density cluster, it will be added to a high-density cluster if five or more of the eight surrounding cells (therefore including diagonals) belong to a single high-density cluster. This rule is applied iteratively until no more cells can be added.

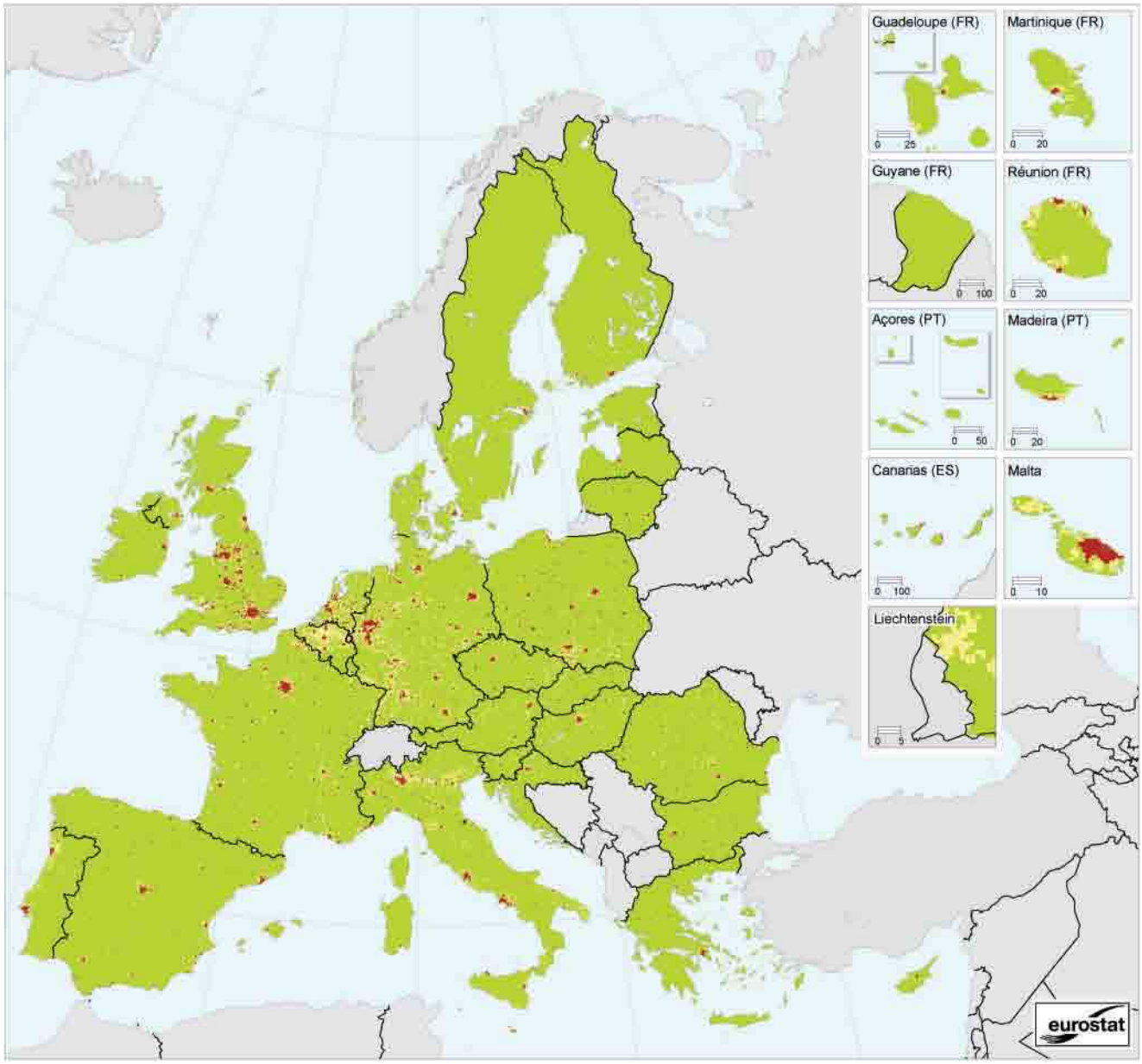
Degree of urbanisation typology for LAU level 2 areas — an area typology

Depending on the share of the population living in the different types of cluster, LAU level 2 areas are classified into three degrees of urbanisation.

- Densely-populated areas/cities/large urban areas: at least 50 % of the population lives in high-density clusters ([1]).
- Intermediate density areas/towns and suburbs/small urban areas: less than 50 % of the population lives in rural grid cells and less than 50 % lives in high-density clusters.
- Thinly-populated areas/rural areas: more than 50 % of the population lives in rural grid cells.

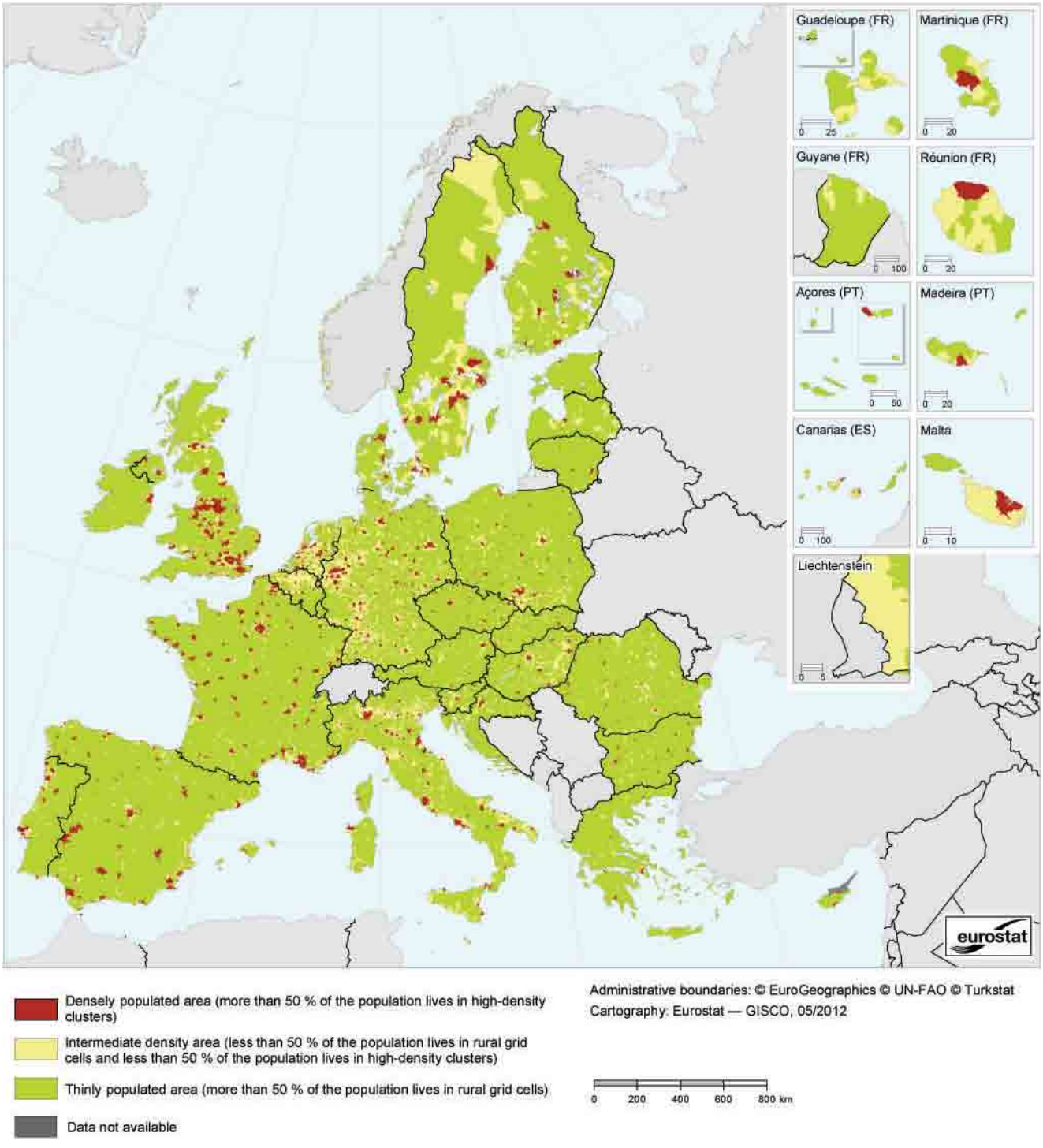
([1]) In addition, each high-density cluster should have at least 75 % of its population in densely populated LAU level 2 areas. This also ensures that all high-density clusters are represented by at least one densely populated LAU level 2, even when this high-density cluster represents less than 50 % of the population of that LAU level 2.

Map 14.1: Types of clusters



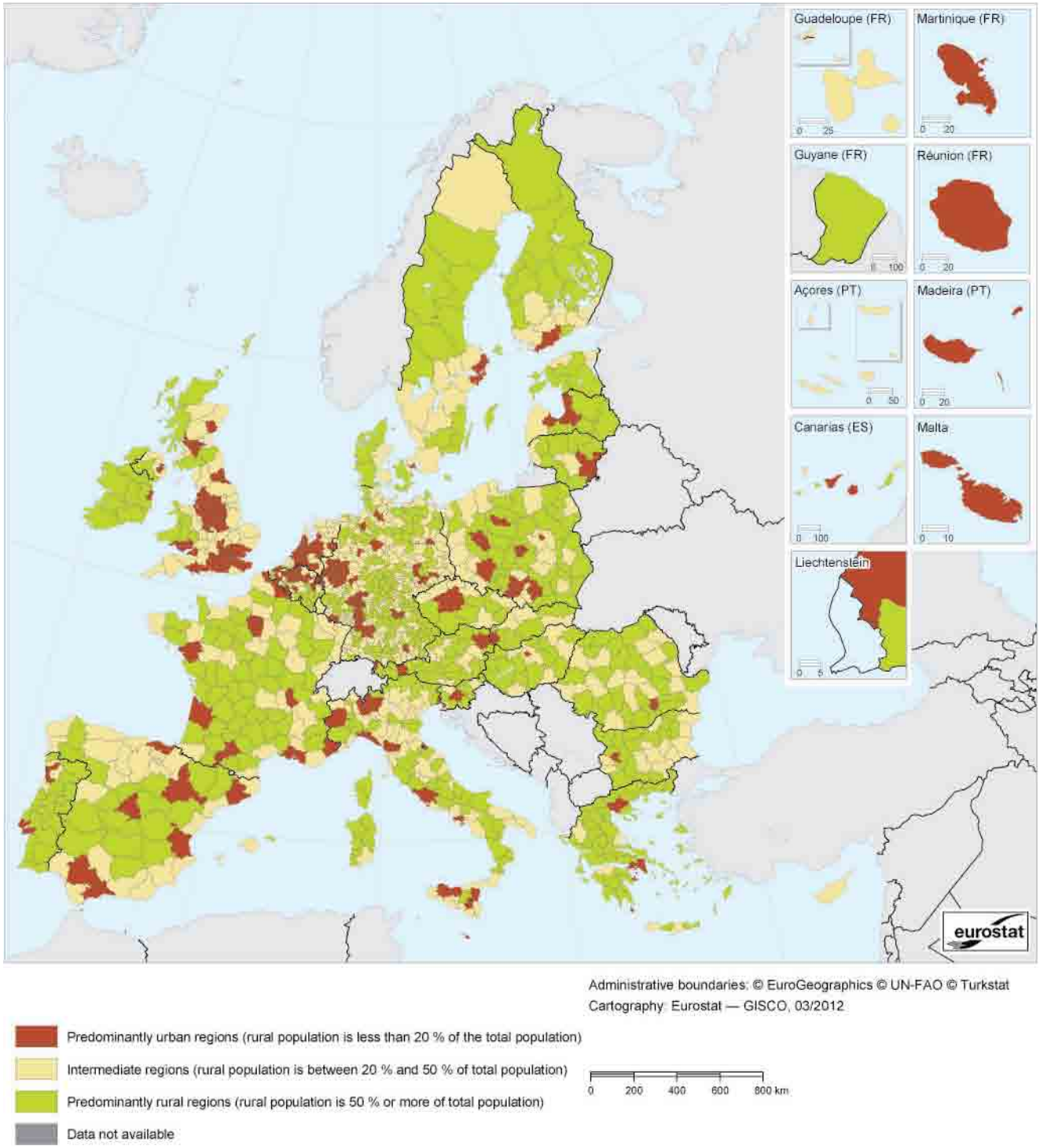
Source: Eurostat, JRC, EFGS, REGIO-GIS

Map 14.2: Degree of urbanisation for local administrative units level 2 (LAU2) ([1])



([1]) The degree of urbanisation is based on the share of population living in a specific type of cluster (contiguous grid cells of 1 km^2).
Source: Eurostat, JRC, EFGS, REGIO-GIS

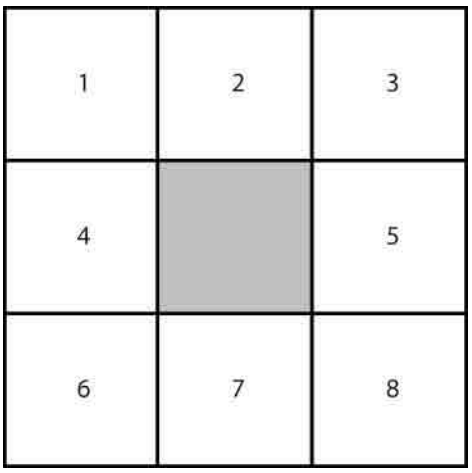
Map 14.3: Urban–rural typology for NUTS level 3 regions (1)



(1) This typology is based on a definition of urban and rural 1 km² grid cells; urban grid cells fulfil two conditions: (1) a population density of at least 300 inhabitants per km² and (2) a minimum population of 5 000 inhabitants in contiguous grid cells above the density threshold; the other grid cells are considered rural; for Madeira, Açores and the French outermost regions, the population grid is not available, as a result, the typology uses the OECD classification for these regions.

Source: Eurostat, JRC, EFGS, REGIO-GIS

Figure 14.1: Contiguous grid cells



Urban–rural typology for NUTS level 3 regions — a regional typology

Depending on the share of the rural population (in other words, the share of the population living in rural grid cells), the NUTS level 3 regions are classified into the following three groups.

- Predominantly urban regions/urban regions: the rural population is less than 20 % of the total population.
- Intermediate regions: the rural population is between 20 % and 50 % of the total population.
- Predominantly rural regions/rural regions: the rural population is 50 % or more of the total population.

In a last step, the size of the cities in the region is considered.

- A region classified as predominantly rural by the criteria above becomes intermediate if it contains a city of more than 200 000 inhabitants representing at least 25 % of the regional population.
- A region classified as intermediate by the criteria above becomes predominantly urban if it contains a city of more than 500 000 inhabitants representing at least 25 % of the regional population.

Summary table: names and alternative names

The names of typologies and items may differ according to context, users or means of dissemination. Table 14.1 gives a summary of the vocabulary used as well as the geographical scale.

Main statistical findings

Share of population by type of territory

Although these typologies show similar patterns, the use of different typologies may produce rather different figures. Thus, as Table 14.1 shows, around 34 % of the EU-27 population lived in rural grid cells, 29 % in thinly populated areas and 24 % in predominantly rural regions.

Moreover, the variability between the figures is more pronounced at the national level than for the EU as a whole. As Table 14.2 illustrates, 35 % of the Bulgarian population lived in high-density clusters, 43 % in densely populated areas and 15 % in predominantly urban regions.

Share of land area by type of territory

The data produced using these different typologies present a broader range in terms of surface area than in terms of the population. As Table 14.3 shows, 3 % of the EU-27's land area was covered by urban clusters, 13 % by intermediate density areas and 35 % by intermediate regions. Again, there is greater variability at the national level than for the EU as a whole, as Table 14.3 clearly shows.

Table 14.1: Summary regarding the names of the different typologies and items

Geographic scale	Name of the typology	Alternative name of typology	Items	Alternative name of items
1 km² grid cells	Type of clusters		High-density clusters Urban clusters Rural grid cells	Urban centres or city centres
Local administrative units, level 2 (LAU level 2 areas)	Degree of urbanisation	Area typology	Densely populated areas Intermediate density areas Thinly populated areas	City or large urban areas Towns and suburbs or small urban areas Rural areas
NUTS level 3 regions	Urban-rural typology	Regional typology	Predominantly urban regions Intermediate regions Predominantly rural regions	Urban regions Intermediate regions Rural regions

Source: Eurostat, JRC, EFGS, REGIO-GIS

Table 14.2: Share of population using different typologies (1)
(% of population)

	Type of cluster (contiguous grid cells of 1 km²)			Degree of urbanisation (LAU level 2 areas)			Urban–rural typology (NUTS level 3 regions)		
	High-density clusters	Urban clusters	Rural grid cells	Densely populated areas	Intermediate density areas	Thinly populated areas	Predominantly urban regions	Intermediate regions	Predominantly rural regions
EU-27	35	32	33	40	32	28	40	36	24
Belgium	25	53	22	27	57	16	67	24	9
Bulgaria	35	26	39	43	23	34	15	45	40
Czech Republic	22	36	42	30	33	37	22	44	34
Denmark	24	31	45	34	21	45	21	36	43
Germany	31	41	28	34	42	24	42	40	18
Estonia	32	29	39	40	17	43	0	52	48
Ireland	27	20	53	35	21	44	30	0	70
Greece	46	15	39	38	25	37	46	10	44
Spain	43	25	32	48	25	27	48	38	14
France	35	27	38	46	21	33	35	36	29
Italy	31	38	31	33	42	25	35	44	21
Cyprus	44	27	29	52	22	26	0	100	0
Latvia	35	25	40	42	20	38	47	14	39
Lithuania	32	12	56	41	5	54	25	31	44
Luxembourg	16	44	40	18	37	45	0	100	0
Hungary	24	33	43	29	35	36	17	35	48
Malta	64	25	11	50	43	7	100	0	0
Netherlands	42	36	22	43	42	15	71	28	1
Austria	29	28	43	30	29	41	33	27	40
Poland	28	28	44	34	25	41	28	34	38
Portugal	28	33	39	44	30	26	48	13	39
Romania	30	21	49	33	22	45	10	44	46
Slovenia	15	25	60	18	32	50	25	31	44
Slovakia	17	35	48	21	36	43	12	38	50
Finland	17	35	48	33	31	36	25	31	44
Sweden	23	30	47	38	31	31	21	56	23
United Kingdom	54	30	16	57	30	13	71	26	3

(1) Estimation based on 2006 density grid.
Source: Eurostat, JRC, EFGS, REGIO-GIS

Table 14.3: Share of land area using different typologies (1)
(% of land area)

	Type of cluster (contiguous grid cells of 1 km²)			Degree of urbanisation (LAU level 2 areas)			Urban–rural typology (NUTS level 3 regions)		
	High-density clusters	Urban clusters	Rural grid cells	Densely populated areas	Intermediate density areas	Thinly populated areas	Predominantly urban regions	Intermediate regions	Predominantly rural regions
EU-27	1	3	96	4	13	83	9	35	56
Belgium	3	23	74	5	41	54	35	32	33
Bulgaria	1	1	98	2	6	92	1	45	54
Czech Republic	1	4	95	3	12	85	15	37	48
Denmark	1	4	95	6	14	80	1	27	72
Germany	2	8	90	5	28	67	12	48	40
Estonia	0	1	99	1	1	98	0	18	82
Ireland	0	1	99	2	3	95	1	0	99
Greece	0	1	99	1	5	94	6	12	82
Spain	1	1	98	4	6	90	14	40	46
France	1	3	96	4	7	89	9	31	60
Italy	1	6	93	5	23	72	12	42	46
Cyprus	1	2	97	5	4	91	0	100	0
Latvia	0	1	99	1	13	86	16	21	63
Lithuania	0	1	99	1	2	97	15	20	65
Luxembourg	1	7	92	2	10	88	0	100	0
Hungary	1	3	96	3	20	77	1	33	66
Malta	22	27	51	16	62	22	100	0	0
Netherlands	5	11	84	13	42	45	47	51	2
Austria	1	3	96	1	11	88	9	19	72
Poland	1	3	96	2	10	88	9	35	56
Portugal	1	3	96	5	9	86	7	6	87
Romania	0	2	98	1	10	89	1	39	60
Slovenia	1	3	96	2	20	78	13	26	61
Slovakia	0	3	97	2	13	85	4	37	59
Finland	0	1	99	1	11	88	2	15	83
Sweden	0	1	99	4	26	70	1	46	53
United Kingdom	4	5	91	11	13	76	25	47	28

(1) Estimation based on 2006 density grid.
Source: Eurostat, JRC, EFGS, REGIO-GIS

Data sources and availability

These typologies classify different territories, defined at different geographical scales, namely grid cells, LAU 2 areas or NUTS level 3 regions. However, the analysis of the statistical data using these typologies may be disseminated at a higher geographical level. Hence, the proportion of EU-27 land area classified as composed of intermediate regions is an indicator for the EU based on a regional typology. A similar indicator could also be disseminated at national, NUTS level 1, NUTS level 2 and NUTS level 3 levels. However, in some cases statistical data using these typologies can only be calculated and disseminated for the EU as a whole or at the national level. This is mainly to do with representativeness, confidentiality and reliability of the indicator. Some surveys, for example SILC, can provide reliable statistics by degree of urbanisation for thinly populated areas at the national level, but not at NUTS level 3.

Further information

For further information about regional typologies please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Regional_typologies_overview.

For further information specifically on urban-rural typologies please consult Eurostat's website at http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Urban-rural_typology.

Context

The European Commission has introduced typologies based on population size and density to monitor situations and trends in urban and rural areas and regions. The Treaty on European Union (also called the Treaty of Maastricht) specifically mentions that particular attention should be paid to rural areas and rural regions.

The Lisbon Treaty has included territorial cohesion alongside economic and social cohesion as an objective for the EU. This new concept was presented in a 'Green Paper on territorial cohesion — Turning territorial diversity into strength' (COM(2008) 616) and the debate has been summarised in the 'Sixth progress report on economic and social cohesion' (COM(2009) 295 final) in 2009. The publication Investing in Europe — Fifth cohesion report on economic, social and territorial cohesion explains the main issues related to territorial cohesion and how these could be transposed into policy proposals. One of the main issues related to territorial cohesion is the need for data on different territorial levels, particularly for lower geographical levels. The classification of the degree of urbanisation provides a unique insight into trends at the local level, and highlights the differences between urban and rural areas.

Annex 1 — Classification of territorial units for statistics

European Union: NUTS level 2 regions

Belgium

BE10 Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest
BE21 Province/Provincie Antwerpen
BE22 Province/Provincie Limburg
BE23 Province/Provincie Oost-Vlaanderen
BE24 Province/Provincie Vlaams-Brabant
BE25 Province/Provincie West-Vlaanderen
BE31 Province/Provincie Brabant Wallon
BE32 Province/Provincie Hainaut
BE33 Province/Provincie Liège
BE34 Province/Provincie Luxembourg
BE35 Province/Provincie Namur

Bulgaria

BG31 Severozapaden
BG32 Severen tsentralen
BG33 Severoiztochen
BG34 Yugoiztochen
BG41 Yugozapaden
BG42 Yuzhen tsentralen

Czech Republic

CZ01 Praha
CZ02 Střední Čechy
CZ03 Jihozápad
CZ04 Severozápad
CZ05 Severovýchod
CZ06 Jihovýchod
CZ07 Střední Morava
CZ08 Moravskoslezsko

Denmark

DK01 Hovedstaden
DK02 Sjælland
DK03 Syddanmark
DK04 Midtjylland
DK05 Nordjylland

Germany

DE11 Stuttgart
DE12 Karlsruhe
DE13 Freiburg
DE14 Tübingen
DE21 Oberbayern
DE22 Niederbayern
DE23 Oberpfalz
DE24 Oberfranken
DE25 Mittelfranken
DE26 Unterfranken
DE27 Schwaben
DE30 Berlin
DE41 Brandenburg - Nordost
DE42 Brandenburg - Südwest
DE50 Bremen
DE60 Hamburg
DE71 Darmstadt
DE72 Gießen
DE73 Kassel
DE80 Mecklenburg-Vorpommern
DE91 Braunschweig
DE92 Hannover
DE93 Lüneburg
DE94 Weser-Ems
DEA1 Düsseldorf
DEA2 Köln
DEA3 Münster
DEA4 Detmold
DEA5 Arnsberg
DEB1 Koblenz
DEB2 Trier
DEB3 Rheinhessen-Pfalz
DEC0 Saarland
DED1 Chemnitz
DED2 Dresden
DED3 Leipzig
DEE0 Sachsen-Anhalt
DEF0 Schleswig-Holstein
DEG0 Thüringen

Estonia

EE00 Eesti

Ireland

IE01 Border, Midland and Western
IE02 Southern and Eastern

Greece

GR11 Anatoliki Makedonia, Thraki
GR12 Kentriki Makedonia
GR13 Dytiki Makedonia
GR14 Thessalia
GR21 Ipeiros
GR22 Ionia Nisia
GR23 Dytiki Ellada
GR24 Sterea Ellada
GR25 Peloponnisos
GR30 Attiki
GR41 Voreio Aigaio

GR42 Notio Aigaio
GR43 Kriti

Spain

ES11 Galicia
ES12 Principado de Asturias
ES13 Cantabria
ES21 País Vasco
ES22 Comunidad Foral de Navarra
ES23 La Rioja
ES24 Aragón
ES30 Comunidad de Madrid
ES41 Castilla y León
ES42 Castilla-La Mancha
ES43 Extremadura
ES51 Cataluña
ES52 Comunidad Valenciana
ES53 Illes Balears
ES61 Andalucía
ES62 Región de Murcia
ES63 Ciudad Autónoma de Ceuta
ES64 Ciudad Autónoma de Melilla
ES70 Canarias

France

FR10 Île-de-France
FR21 Champagne-Ardenne
FR22 Picardie
FR23 Haute-Normandie
FR24 Centre
FR25 Basse-Normandie
FR26 Bourgogne
FR30 Nord - Pas-de-Calais
FR41 Lorraine
FR42 Alsace
FR43 Franche-Comté
FR51 Pays de la Loire
FR52 Bretagne
FR53 Poitou-Charentes
FR61 Aquitaine
FR62 Midi-Pyrénées
FR63 Limousin
FR71 Rhône-Alpes
FR72 Auvergne
FR81 Languedoc-Roussillon
FR82 Provence-Alpes-Côte d'Azur
FR83 Corse
FR91 Guadeloupe
FR92 Martinique
FR93 Guyane
FR94 Réunion

Italy

ITC1 Piemonte
ITC2 Valle d'Aosta/Vallée d'Aoste
ITC3 Liguria
ITC4 Lombardia
ITD1 Provincia Autonoma Bolzano/ Bozen
ITD2 Provincia Autonoma Trento
ITD3 Veneto
ITD4 Friuli-Venezia Giulia
ITD5 Emilia-Romagna
ITE1 Toscana
ITE2 Umbria
ITE3 Marche
ITE4 Lazio
ITF1 Abruzzo
ITF2 Molise
ITF3 Campania
ITF4 Puglia
ITF5 Basilicata
ITF6 Calabria
ITG1 Sicilia
ITG2 Sardegna

Cyprus

CY00 Kýpros

Latvia

LV00 Latvija

Lithuania

LT00 Lietuva

Luxembourg

LU00 Luxembourg (Grand-Duché)

Hungary

HU10 Közép-Magyarország
HU21 Közép-Dunántúl
HU22 Nyugat-Dunántúl
HU23 Dél-Dunántúl
HU31 Észak-Magyarország
HU32 Észak-Alföld
HU33 Dél-Alföld

Malta

MT00 Malta

Netherlands

NL11 Groningen
NL12 Friesland
NL13 Drenthe
NL21 Overijssel
NL22 Gelderland
NL23 Flevoland
NL31 Utrecht
NL32 Noord-Holland
NL33 Zuid-Holland
NL34 Zeeland
NL41 Noord-Brabant
NL42 Limburg

Austria

AT11 Burgenland
AT12 Niederösterreich
AT13 Wien
AT21 Kärnten
AT22 Steiermark

AT31 Oberösterreich

AT32 Salzburg

AT33 Tirol

AT34 Vorarlberg

Poland

PL11 Łódzkie

PL12 Mazowieckie

PL21 Małopolskie

PL22 Śląskie

PL31 Lubelskie

PL32 Podkarpackie

PL33 Świętokrzyskie

PL34 Podlaskie

PL41 Wielkopolskie

PL42 Zachodniopomorskie

PL43 Lubuskie

PL51 Dolnośląskie

PL52 Opolskie

PL61 Kujawsko-pomorskie

PL62 Warmińsko-mazurskie

PL63 Pomorskie

Portugal

PT11 Norte

PT15 Algarve

PT16 Centro

PT17 Lisboa

PT18 Alentejo

PT20 Região Autónoma dos Açores

PT30 Região Autónoma da Madeira

Romania

RO11 Nord-Vest

RO12 Centru

RO21 Nord-Est

RO22 Sud-Est

RO31 Sud - Muntenia

RO32 Bucureşti - Ilfov

RO41 Sud-Vest Oltenia

RO42 Vest

Slovenia

SI01 Vzhodna Slovenija

SI02 Zahodna Slovenija

Slovakia

SK01 Bratislavský kraj

SK02 Západné Slovensko

SK03 Stredné Slovensko

SK04 Východné Slovensko

Finland

FI13 Itä-Suomi

FI18 Etelä-Suomi

FI19 Länsi-Suomi

FI1A Pohjois-Suomi

FI20 Åland

Sweden

SE11 Stockholm

SE12 Östra Mellansverige

SE21 Småland med öarna

SE22 Sydsverige

SE23 Västsverige

SE31 Norra Mellansverige

SE32 Mellersta Norrland

SE33 Övre Norrland

United Kingdom

UKC1 Tees Valley and Durham

UKC2 Northumberland and Tyne and Wear

UKD1 Cumbria

UKD2 Cheshire

UKD3 Greater Manchester

UKD4 Lancashire

UKD5 Merseyside

UKE1 East Yorkshire and Northern Lincolnshire

UKE2 North Yorkshire

UKE3 South Yorkshire

UKE4 West Yorkshire

UKF1 Derbyshire and Nottinghamshire

UKF2 Leicestershire, Rutland and Northamptonshire

UKF3 Lincolnshire

UKG1 Herefordshire, Worcestershire and Warwickshire

UKG2 Shropshire and Staffordshire

UKG3 West Midlands

UKH1 East Anglia

UKH2 Bedfordshire and Hertfordshire

UKH3 Essex

UKI1 Inner London

UKI2 Outer London

UKJ1 Berkshire, Buckinghamshire and Oxfordshire

UKJ2 Surrey, East and West Sussex

UKJ3 Hampshire and Isle of Wight

UKJ4 Kent

UKK1 Gloucestershire, Wiltshire and Bristol/Bath area

UKK2 Dorset and Somerset

UKK3 Cornwall and Isles of Scilly

UKK4 Devon

UKL1 West Wales and The Valleys

UKL2 East Wales

UKM2 Eastern Scotland

UKM3 South Western Scotland

UKM5 North Eastern Scotland

UKM6 Highlands and Islands

UKN0 Northern Ireland

EFTA countries: statistical regions at level 2

Iceland

IS00 Ísland

Liechtenstein

LI00 Liechtenstein

Norway

NO01 Oslo og Akershus

NO02 Hedmark og Oppland

NO03 Sør-Østlandet

NO04 Agder og Rogaland

NO05 Vestlandet

NO06 Trøndelag

NO07 Nord-Norge

Switzerland

CH01 Région lémanique

CH02 Espace Mittelland

CH03 Nordwestschweiz

CH04 Zürich

CH05 Ostschweiz

CH06 Zentralschweiz

CH07 Ticino

Candidate countries: statistical regions at level 2

Montenegro

ME00 Crna Gora

Croatia

HR01 Sjeverozapadna Hrvatska

HR02 Središnja i Istočna (Panonska) Hrvatska

HR03 Jadranska Hrvatska

The former Yugoslav Republic of Macedonia

MK00 Poranešna jugoslovenska Republika Makedonija

Turkey

TR10 İstanbul

TR21 Tekirdağ, Edirne, Kırklareli

TR22 Balıkesir, Çanakkale

TR31 İzmir

TR32 Aydın, Denizli, Muğla

TR33 Manisa, Afyonkarahisar, Kütahya, Uşak

TR41 Bursa, Eskişehir, Bilecik

TR42 Kocaeli, Sakarya, Düzce, Bolu, Yalova

TR51 Ankara

TR52 Konya, Karaman

TR61 Antalya, Isparta, Burdur

TR62 Adana, Mersin

TR63 Hatay, Kahramanmaraş, Osmaniye

TR71 Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir

TR72 Kayseri, Sivas, Yozgat

TR81 Zonguldak, Karabük, Bartın

TR82 Kastamonu, Çankırı, Sinop

TR83 Samsun, Tokat, Çorum, Amasya

TR90 Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane

TRA1 Erzurum, Erzincan, Bayburt

TRA2 Ağrı, Kars, Iğdır, Ardahan

TRB1 Malatya, Elazığ, Bingöl, Tunceli

TRB2 Van, Muş, Bitlis, Hakkari

TRC1 Gaziantep, Adıyaman, Kilis

TRC2 Şanlıurfa, Diyarbakır

TRC3 Mardin, Batman, Şırnak, Siirt

Annex 2 — Cities participating in the Urban Audit data collection

Cities in **bold** are capital cities.

European Union: Urban Audit cities

Belgium

BE001C **Bruxelles/Brussel**
BE002C Antwerpen
BE003C Gent
BE004C Charleroi
BE005C Liège
BE006C Brugge
BE007C Namur

Bulgaria

BG001C **Sofia**
BG002C Plovdiv
BG003C Varna
BG004C Burgas
BG005C Pleven
BG006C Ruse
BG007C Vidin
BG008C Stara Zagora

Czech Republic

CZ001C **Praha**
CZ002C Brno
CZ003C Ostrava
CZ004C Plzeň
CZ005C Ústí nad Labem
CZ006C Olomouc
CZ007C Liberec
CZ008C České Budějovice
CZ009C Hradec Králové
CZ010C Pardubice
CZ011C Zlín
CZ012C Kladno
CZ013C Karlovy Vary
CZ014C Jihlava

Denmark

DK001C **København**
DK002C Aarhus
DK003C Odense
DK004C Aalborg

Germany

DE001C **Berlin**
DE002C Hamburg
DE003C München
DE004C Köln
DE005C Frankfurt am Main
DE006C Essen
DE007C Stuttgart
DE008C Leipzig
DE009C Dresden
DE010C Dortmund
DE011C Düsseldorf
DE012C Bremen
DE013C Hannover
DE014C Nürnberg
DE015C Bochum
DE017C Bielefeld
DE018C Halle an der Saale
DE019C Magdeburg
DE020C Wiesbaden
DE021C Göttingen
DE022C Mülheim an der Ruhr
DE023C Moers
DE025C Darmstadt
DE026C Trier
DE027C Freiburg im Breisgau
DE028C Regensburg
DE029C Frankfurt (Oder)
DE030C Weimar
DE031C Schwerin
DE032C Erfurt
DE033C Augsburg
DE034C Bonn
DE035C Karlsruhe
DE036C Mönchengladbach
DE037C Mainz
DE039C Kiel
DE040C Saarbrücken
DE041C Potsdam
DE042C Koblenz
DE043C Rostock

Estonia

EE001C **Tallinn**
EE002C Tartu

Ireland

IE001C **Dublin**
IE002C Cork
IE003C Limerick
IE004C Galway
IE005C Waterford

Greece

GR001C **Athina**
GR002C Thessaloniki
GR003C Patra

GR004C Irakleio
GR005C Larisa
GR006C Volos
GR007C Ioannina
GR008C Kavala
GR009C Kalamata

Spain

ES001C **Madrid**
ES002C Barcelona
ES003C Valencia
ES004C Sevilla
ES005C Zaragoza
ES006C Málaga
ES007C Murcia
ES008C Las Palmas
ES009C Valladolid
ES010C Palma de Mallorca
ES011C Santiago de Compostela
ES012C Vitoria/Gasteiz
ES013C Oviedo
ES014C Pamplona/Iruña
ES015C Santander
ES016C Toledo
ES017C Badajoz
ES018C Logroño
ES019C Bilbao
ES020C Córdoba
ES021C Alicante/Alacant
ES022C Vigo
ES023C Gijón
ES024C L'Hospitalet de Llobregat
ES025C Santa Cruz de Tenerife
ES026C A Coruña

France

FR001C **Paris**
FR203C Marseille
FR003C Lyon
FR004C Toulouse
FR205C Nice
FR006C Strasbourg
FR007C Bordeaux
FR008C Nantes
FR009C Lille
FR010C Montpellier
FR011C Saint-Etienne
FR012C Le Havre
FR013C Rennes
FR014C Amiens
FR015C Rouen
FR016C Nancy
FR017C Metz
FR018C Reims
FR019C Orléans
FR020C Dijon
FR021C Poitiers
FR022C Clermont-Ferrand
FR023C Caen
FR024C Limoges
FR025C Besançon
FR026C Grenoble
FR027C Ajaccio
FR028C Saint Denis
FR029C Pointe-à-Pitre
FR030C Fort-de-France
FR031C Cayenne
FR032C Toulon
FR035C Tours
FR202C Aix-en-Provence
FR207C Lens - Liévin

Italy

IT001C **Roma**
IT002C Milano
IT003C Napoli
IT004C Torino
IT005C Palermo
IT006C Genova
IT007C Firenze
IT008C Bari
IT009C Bologna
IT010C Catania
IT011C Venezia
IT012C Verona
IT013C Cremona
IT014C Trento
IT015C Trieste
IT016C Perugia
IT017C Ancona
IT018C l'Aquila
IT019C Pescara
IT020C Campobasso
IT021C Caserta
IT022C Taranto
IT023C Potenza
IT024C Catanzaro
IT025C Reggio di Calabria
IT026C Sassari
IT027C Cagliari
IT028C Padova
IT029C Brescia
IT030C Modena
IT031C Foggia
IT032C Salerno

Cyprus

CY001C **Lefkosia**

Latvia

LV001C **Rīga**
LV002C Liepāja

Lithuania

LT001C **Vilnius**
LT002C Kaunas
LT003C Panevėžys

Luxembourg

LU001C **Luxembourg**

Hungary

HU001C **Budapest**
HU002C Miskolc
HU003C Nyíregyháza
HU004C Pécs
HU005C Debrecen
HU006C Szeged
HU007C Győr
HU008C Kecskemét
HU009C Székesfehérvár

Malta

MT001C **Valletta**
MT002C Gozo

Netherlands

NL001C 's-Gravenhage
NL002C **Amsterdam**
NL003C Rotterdam
NL004C Utrecht
NL005C Eindhoven
NL006C Tilburg
NL007C Groningen
NL008C Enschede
NL009C Arnhem
NL010C Heerlen
NL011C Almere
NL012C Breda
NL013C Nijmegen
NL014C Apeldoorn
NL015C Leeuwarden

Austria

AT001C **Wien**
AT002C Graz
AT003C Linz
AT004C Salzburg
AT005C Innsbruck

Poland

PL001C **Warszawa**
PL002C Łódź
PL003C Kraków
PL004C Wrocław
PL005C Poznań
PL006C Gdańsk
PL007C Szczecin
PL008C Bydgoszcz
PL009C Lublin
PL010C Katowice
PL011C Białystok
PL012C Kielce
PL013C Toruń
PL014C Olsztyn
PL015C Rzeszów
PL016C Opole
PL017C Gorzów Wielkopolski
PL018C Zielona Góra
PL019C Jelenia Góra
PL020C Nowy Sącz
PL021C Suwałki
PL022C Konin
PL023C Żory
PL024C Częstochowa
PL025C Radom
PL026C Płock
PL027C Kalisz
PL028C Koszalin

Portugal

PT001C **Lisboa**
PT002C Porto
PT003C Braga
PT004C Funchal
PT005C Coimbra
PT006C Setúbal
PT007C Ponta Delgada
PT008C Aveiro
PT009C Faro

Romania

RO001C **Bucureşti**
RO002C Cluj-Napoca
RO003C Timişoara
RO004C Craiova
RO005C Brăila
RO006C Oradea
RO007C Bacău
RO008C Arad
RO009C Sibiu
RO010C Târgu Mureş
RO011C Piatra Neamţ
RO012C Călăraşi
RO013C Giurgiu
RO014C Alba Iulia

Slovenia

I001C **Ljubljana**
SI002C Maribor

Slovakia

SK001C **Bratislava**
SK002C Košice
SK003C Banská Bystrica
SK004C Nitra
SK005C Prešov
SK006C Žilina
SK007C Trnava
SK008C Trenčín

Finland

FI001C **Helsinki**
FI002C Tampere
FI003C Turku
FI004C Oulu

Sweden

SE001C **Stockholm**
SE002C Göteborg

SE003C Malmö

SE004C Jönköping

SE005C Umeå

SE006C Uppsala

SE007C Linköping

SE008C Örebro

United Kingdom

UK001C **London**

UK002C Birmingham

UK003C Leeds

UK004C Glasgow

UK005C Bradford

UK006C Liverpool

UK007C Edinburgh

UK008C Manchester

UK009C Cardiff

UK010C Sheffield

UK011C Bristol

UK012C Belfast

UK013C Newcastle upon Tyne

UK014C Leicester

UK015C Derry

UK016C Aberdeen

UK017C Cambridge

UK018C Exeter

UK019C Lincoln

UK020C Gravesham

UK021C Stevenage

UK022C Wrexham

UK023C Portsmouth

UK024C Worcester

UK025C Coventry

UK026C Kingston upon Hull

UK027C Stoke-on-Trent

UK028C Wolverhampton

UK029C Nottingham

UK030C Wirral

EFTA countries: Urban Audit cities

Norway

NO001C **Oslo**

NO002C Bergen

NO003C Trondheim

NO004C Stavanger

NO005C Kristiansand

NO006C Tromsø

Switzerland

CH001C Zürich

CH002C Genève

CH003C Basel

CH004C **Bern**

CH005C Lausanne

CH006C Winterthur

CH007C St. Gallen

CH008C Luzern

CH009C Lugano

CH010C Biel/Bienne

Candidate countries: Urban Audit cities

Croatia

HR001C **Zagreb**

HR002C Rijeka

HR003C Slavonski Brod

HR004C Osijek

HR005C Split

Turkey

TR001C **Ankara**

TR002C Adana

TR003C Antalya

TR004C Balıkesir

TR005C Bursa

TR006C Denizli

TR007C Diyarbakır

TR008C Edirne

TR009C Erzurum

TR010C Gaziantep

TR011C Hatay

TR012C İstanbul

TR013C İzmir

TR014C Kars

TR015C Kastamonu

TR016C Kayseri

TR017C Kocaeli

TR018C Konya

TR019C Malatya

TR020C Manisa

TR021C Nevşehir

TR022C Samsun

TR023C Siirt

TR024C Trabzon

TR025C Van

TR026C Zonguldak

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Statistical information is an important tool for understanding and quantifying the impact of political decisions in a specific territory or region. The *Eurostat regional yearbook 2012* gives a detailed picture relating to a broad range of statistical topics across the regions of the 27 Member States of the European Union (EU), as well as the regions of EFTA and candidate countries. Each chapter presents statistical information in maps, figures and tables, accompanied by a description of the main findings, data sources and policy context. These regional indicators are presented for the following 11 subjects: economy, population, health, education, the labour market, structural business statistics, tourism, the information society, agriculture, transport, and science, technology and innovation. In addition, three special focus chapters are included in this edition: these look at European cities and coastal regions, while the publication ends with a description of the methods used to identify rural and urban areas.

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