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Foreword

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

The *Eurostat regional yearbook* provides an overview of key statistics available for each of the 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 on national statistics for the European Union and its Member States.

Regional statistics 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.

While maintaining its focus on the most recent data available, the 2013 edition of the *Eurostat regional yearbook* emphasises comparisons of the regional situation over time. For economic issues, these comparisons generally focus on the situation from 2007 or 2008 onwards — in other words, from the onset of the global financial and economic crisis — while for other domains, such as population, health or education the analysis is more focused on changes over a lengthier period of 5 or 10 years — thereby analysing structural changes. Furthermore, the practice of previous editions to gradually enlarge 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 often be found.

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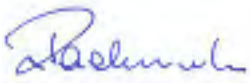

Walter Radermacher
Director-General, Eurostat
Chief Statistician of the European Union

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 2013* gives a detailed picture relating to a broad range of statistical topics across the regions of the Member States of the European Union (EU), as well as the regions of European Free Trade Association (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, four special focus chapters are included in this edition: these look at European cities, the definitions of city and metro regions, income and living conditions according to the degree of urbanisation, and rural development.

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Data extraction

Most data were extracted on 15 February 2013. Data relating to structural business statistics (Chapter 6) were extracted at the end of February 2013. Data relating to regional GDP and demographic data were extracted in the middle of March 2013 and have been included in several chapters: economy (Chapter 1), population (Chapter 2), agriculture (Chapter 9), science and technology (Chapter 11), and rural development (Chapter 15). Data relating to patents were also extracted in the middle of March 2013 and included in science and technology (Chapter 11).

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Contents

Introduction

Eurostat, the statistical office of the European Union (EU), is responsible for collecting and disseminating national and regional data, primarily for the Member States of the EU, but also for European Free Trade Assoication (EFTA), acceding and candidate countries. The aim of this publication 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.

EU statistics on regions and cities

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 420 000 inhabitants, or Luxembourg, which has around 540 000 inhabitants, with Germany, the most populous EU Member State at close to 82 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 Member States of the EU providing a harmonised hierarchy of regions: the NUTS classification subdivides 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 corresponding to 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 new Member States in 2004 and two more in 2008). The second regular amendment (Commission Regulation (EU) No 31/2011) was adopted in January 2011 and entered into force on 1 January 2012 and is referred to as NUTS 2010: the data presented in this publication are based exclusively on NUTS 2010. The next round of revisions to the NUTS (which is expected to lead to NUTS 2013) was opened in 2012 and a list of proposals for amendments was established by February 2013.

The main principles of the NUTS classification

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 1 regions	3 million	7 million
NUTS 2 regions	800 000	3 million
NUTS 3 regions	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 EU 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. These are normally more suitable for any given indicator than geographical units specific to certain fields of activity.

Regions have also been defined and agreed with the EFTA, acceding and candidate countries on a bilateral basis; 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. There is no agreement with Serbia.

It should be noted that some EU 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. According to the 2010 version of the NUTS classification, 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 or statistical region.

For more information about the NUTS classification, please refer to the dedicated NUTS section on the Eurostat website.

The use of NUTS in this publication

Most statistics in the *Eurostat regional yearbook* 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

([1]) The name of the former Yugoslav Republic of Macedonia is shown in tables and figures 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.

using a different NUTS level compared with the remainder of the regions in the same map — these changes are documented in the footnotes under each map and are generally made in order to improve the coverage of each map. In a few specific cases where little or no regional data exists for a particular country and indicator, use has been made of national data.

One difficulty with regional statistics is that the volume of data inevitably gets very large (there are as many as 1 294 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.

The paper version of the *Eurostat regional yearbook* contains a folding map inside the back cover. It shows all NUTS level 2 regions in the Member States of the EU and the corresponding level 2 statistical regions in the EFTA, acceding 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. For more information about the NUTS classification, please refer to the dedicated NUTS section on the Eurostat website.

Coverage and timeliness of statistics on regions and cities

The *Eurostat regional yearbook 2013* contains statistics on the Member States of the EU and, where available, data are also shown for the EFTA countries (Iceland, Liechtenstein, Norway and Switzerland) and the acceding and candidate countries (Montenegro, Croatia, the former Yugoslav Republic of Macedonia, Serbia and Turkey).

Following the ratification of the accession treaty, Croatia became the 28th EU Member State on 1 July 2013; at the time of writing Croatia was an acceding country and so analysis of Croatian regional data is presented alongside that of the candidate countries. Since 27 July 2010, Iceland has been both an EFTA country and a candidate country; in this publication it is grouped together with the other EFTA countries. Where available, national data are presented for Serbia as there is currently no agreement on regional boundaries, especially concerning Kosovo ([2]) — the latter is not covered in this publication.

Please note that the latest available reference year varies; each chapter aims to show the latest data available for its subject area. 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 developments. The following table gives an overview of the latest available reference year that is generally presented for each chapter.

Chapter number	Subject	Latest available reference year	NUTS version
1	Economy	2010	2010
2	Population	2011 or 1 January 2012	2010
3	Health	2010	2010
4	Education	2011	2010
5	Labour market	2011 for labour force; 2010 for earnings	2010
6	Structural business statistics	2010	2010
7	Tourism	2011	2010
8	Information society	2011	2010
9	Agriculture	2010 for regional accounts; 2010 for farm structure data; 2011 for livestock, arable farming and vineyards	2010
10	Transport	2011 (2010 for motorisation rate)	2010
11	Science and technology	2010 for R & D and researchers; 2011 for human resources; 2009 for patents	2010
12	Focus on European cities	2011 for Urban Audit (2008 for transport data); 2012 for perception surveys	2010
13	Focus on cities and metro regions	Not relevant	2010
14	Focus on income and living conditions	2011	2010
15	Focus on rural development	2011 or 1 January 2012 for population; 2010 for labour market; 2010 for regional accounts; 2010 for agriculture; 2011 for tourism	2010

([2]) This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ opinion on the Kosovo declaration of independence.

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). The regional datasets on Eurostat's website generally include national data alongside the regional analysis of information. As such, both regional and national data may be accessed through the online data code cited below each map, table or figure. In some exceptional cases, use has been made of national datasets on Eurostat's website in order to fill gaps in the regional data sets.

More information about statistics on regions and cities

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

It is also possible to download a set of MS 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 on the *Eurostat regional yearbook* product page.

More information about rural development statistics

Information about Eurostat's rural development statistics is provided in a chapter that focuses on rural development. More information is available in Eurostat's dedicated 'Rural development' section which describes the methodology used to define urban and rural regions and provides links to rural development policy. Databases with statistics related to demography, the economy and the labour market are available for urban and rural regions.

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 disparities, local administration, civic involvement, educational qualifications, cultural infrastructure and tourism.

More information about Eurostat's statistics on cities is provided in a chapter that focuses on European cities. For more information about the Urban Audit data collection in general, please refer to the dedicated 'Regions and cities' section.

Information about statistics on metropolitan regions

Information about Eurostat's statistics on metropolitan regions is available in the dedicated 'Regions and cities' section. Databases with statistics related to demography, the economy, the labour market and patents are available for metropolitan regions.

Eurobase — Eurostat's online database

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 in Eurobase, Eurostat's online database. A 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 ([3]). 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.

Statistics explained

All the chapters in the *Eurostat regional yearbook* are also included as articles in 'Statistics explained', Eurostat's user-friendly guide to European statistics, which is available 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.

([3]) There are two types of online data codes: (1) tables (accessed using the TGM interface) have 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; (2) databases (accessed using the Data Explorer interface) have codes that use an underscore '_' within the syntax of the code, for example nama_gdp_c.

In March 2013, 'Statistics explained' contained more than 530 statistical articles and more than 1 500 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 are 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 *Eurostat regional yearbook* are only available on 'Statistics explained', rather than as printed publications. Furthermore, since the 2012 edition, a small number of articles (on the economy, population and education) are available on 'Statistics explained' in a further 18 European languages. '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 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 within the *Eurostat regional yearbook*. 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 cities, 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 EU 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 partnerships 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 to a phase-out fund.

Future cohesion policy — alignment with the Europe 2020 strategy

In January 2011 the European Commission published a communication on 'Regional policy contributing to sustainable growth in Europe 2020' (COM(2011) 17). This encourages EU Member States to reinforce their regional development expenditure on education, research and innovation and to develop smart specialisation strategies for guiding their future investment.

Preparations for cohesion policy after 2013 (the end of the current funding period) are taking place within the broader discussions of the overall EU budget and the Europe 2020 strategy. In October 2011 the European Commission adopted proposals relating to cohesion policy for the period 2014–20 and it is anticipated that the related legislation will enter into force in 2014. The package includes several proposals:

- a set of common rules;
- regulations for the ERDF, the ESF and the Cohesion Fund;
- regulations for the European territorial cooperation goal and for the European grouping of territorial cooperation (EGTC);
- regulations on the European Globalisation Fund (EGF) and the programme for social change and innovation;
- a communication on the European Union Solidarity Fund (EUSF).

These initiatives are designed to boost growth and jobs across Europe. The proposals focus on fewer priorities in line with these objectives and these will be at the heart of the partnership agreements between EU Member States and the European Commission. It is foreseen that the funds will be rendered more coherent and their impact strengthened by simplifying and harmonising the rules of different funds.

The proposals also cover 'social investment', to help people face challenges in the labour market, through the Globalisation Adjustment Fund, a new programme for social change and innovation and a reinforced European Social Fund.

In December 2011 the European Commission published 'The urban and regional dimension of Europe 2020 — seventh progress report on economic, social and territorial cohesion', which looks at the growth potential and hurdles faced by regions and cities; this identifies the gap for each region between the current situation and national 2020 targets and is intended to assist the design, monitoring and evaluation of regional development strategies — it is not intended that all regions should reach the national 2020 targets. The report proposes that programmes should select investment priorities bearing in mind the current situation and so concentrate on actions where investment will make the biggest contribution to smart, sustainable and inclusive growth.

More information is available from the website of the Directorate-General for Regional and Urban Policy at: http://ec.europa.eu/regional_policy/what/future/index_en.cfm.

Rural development policy

Many rural areas face significant challenges, for example to improve competitiveness in agriculture and forestry. More generally, average income per head is lower in rural regions than in urban areas, while the skills base is narrower and the service sector is less developed. However, rural areas provide raw materials, opportunities for rest and recreation, and have a role to play in actions against climate change. The declared aim of the EU's rural development policy is to meet the challenges faced by rural areas and unlock their potential.

Rural development policy is part of the EU's common agricultural policy (CAP). The European Agricultural Fund for Rural Development (EAFRD) underlies rural development policy for the period 2007–13. It is focused on three themes:

- improving the competitiveness of agriculture and forestry;
- improving the environment and the countryside;
- improving the quality of life in rural areas and the management of economy activity in rural areas.

While funding of the rural development policy is centred on the EAFRD, it is complemented by the ERDF and the ESF. The following are the main areas in which the ERDF is active that are related to rural development:

- creation of jobs outside of agriculture;
- development of access and connections between cities and rural areas, especially in the context of the information society;
- support for small and medium-sized enterprises in agriculture (support for innovation and the development of new products), agro-food activities and forestry;
- risk control in agriculture and forestry;
- the development of basic village infrastructures, particularly in those Member States that joined the EU in 2004 or 2007.

More information on rural development policy is available at: http://ec.europa.eu/agriculture/rurdev/index_en.htm.

More information on the European Agricultural Fund for Rural Development is available at: http://europa.eu/legislation_summaries/agriculture/general_framework/l60032_en.htm.

Future rural development policy — alignment with the Europe 2020 strategy and the reform of the CAP

In October 2011, as part of a wider set of proposals for the reform of the CAP, the European Commission presented a proposal for a regulation on support for rural development (COM(2011) 627 final/3). In line with the Europe 2020 strategy, six EU-wide priorities were outlined:

- fostering knowledge transfer and innovation in agriculture, forestry and rural areas;
- enhancing competitiveness of all types of agriculture and enhancing farm viability;
- promoting food chain organisation and risk management in agriculture;
- restoring, preserving and enhancing ecosystems dependent on agriculture and forestry;
- promoting resource efficiency and supporting the shift towards a low-carbon and climate-resilient economy in agriculture, food and forestry;
- promoting social inclusion, poverty reduction and economic development in rural areas.

It is anticipated that this reformed support framework will be in place by January 2014.

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 EU 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 given to 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. The EU 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 EU 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.

Urban development — future cohesion policy

Among other issues, the European Commission's proposals for cohesion policy in the period 2014–20 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 ERDF should be focused on sustainable urban development; innovative actions for sustainable urban development should be supported; and 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 the cohesion policy?

1 Economy

Gross domestic product (GDP) is a key measure of economic development and growth. This chapter presents a regional analysis of European Union (EU) GDP, based upon the level of GDP per inhabitant (often used as an indicator of living standards), 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 EU's cohesion policy (see 'Regional policies' in the Introduction). 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).

Main statistical findings

GDP is initially calculated in national currencies, and then converted by purchasing power parities (PPPs) which take account of different price levels between EU Member States, allowing for a more accurate comparison. By using PPPs (rather than market exchange rates), these indicators are converted into an artificial common currency called a purchasing power standard (PPS). The use of a PPS makes it possible to compare purchasing power across the regions of EU 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 24 500 PPS in 2010, up from 23 500 PPS in 2009 but still slightly below the 2008 pre-financial and economic crisis level of 25 000 PPS. Among the NUTS level 2 regions in the EU, GDP per inhabitant ranged from 6 500 PPS (27 % of the EU-27 average) in Severozapaden in Bulgaria to 80 300 PPS (328 % 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 12.4 to 1. Luxembourg (266 % of the EU-27 average), the Belgian capital city region of Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (223 %) and the German region of Hamburg (202 %) occupied positions two to four in terms of a ranking of regions with the highest GDP per inhabitant. These were followed by the French capital city region, the Dutch city of Groningen and the capital city regions of Slovakia, the Czech Republic, Sweden and Austria all with GDP per inhabitant lying in a range equivalent to 164 % to 180 % of the EU-27 average. In general, many of the regions with a high GDP per inhabitant (equivalent to 125 % of the EU-27 average or higher) 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 at least 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, the Belgian region around Antwerpen, the island region of Åland (Finland), the far north of Sweden and North Eastern Scotland (in the United Kingdom). As such, the Slovakian and Czech capital city regions of Praha and Bratislavský kraj were the only regions in the Member States that joined the EU in 2004 or 2007 among the 41 regions where the average GDP per inhabitant was 25 % or more 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 Bucuresti - Ilfov in Romania at 111 % of the EU-27 average. The Hungarian, Polish and Slovenian capital city regions were the only other regions in the Member States that joined the EU in 2004 or 2007 that reported GDP per inhabitant (in PPS) equal to or above the EU-27 average.

Overall, there were 68 level 2 regions with an average GDP per inhabitant that was more than 25 % below the EU-27 average. A total of 25 regions were concentrated in six of the EU-15 Member States: Greece (seven regions), Italy (five southern regions), France and Portugal (three regions each), the United Kingdom (two regions) and Spain (the region of Extremadura). The remaining 43 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 less than 50 % of the EU-27 average, and these regions were found in Bulgaria, Hungary, Poland, Romania and Slovakia. Around 38.4 million people lived in the 22 regions whose GDP per inhabitant in PPS was less than 50 % of the EU-27 average, equivalent to 7.7 % of the EU-27 population.

In the EFTA countries (no regional data for Switzerland and no data for Liechtenstein), GDP per inhabitant was above the EU-27 average, ranging from 102 % of the EU-27 average in Hedmark og Oppland to 192 % in Oslo og Akershus (both Norway). There were two other Norwegian regions with GDP per inhabitant more than 25 % above the EU-27 average (Agder og Rogaland and Vestlandet), while Swiss GDP per inhabitant was equivalent to 154 % of the EU-27 average. Generally low averages for GDP per inhabitant were recorded in the former Yugoslav Republic of Macedonia (36 % of the EU-27 average), Turkey (50 %) and Croatia (59 %).

A more detailed regional analysis

Map 1.2 presents the same indicator as Map 1.1 but at the more detailed level 3 of the NUTS classification. 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 105 % for this indicator while the remaining four NUTS level 3 regions had values below 40 %. A similar situation occurred in the Polish capital city NUTS level 2 region of Mazowieckie where the NUTS level 3 regions of Ostrolęcko-siedlecki and Radomski recorded average GDP per inhabitant (in PPS) that was less than half that recorded 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 average GDP per inhabitant (in PPS) that was 76 % of the EU-27 average whereas München Landkreis recorded a ratio of 317 %. In a similar manner in Rheinhessen-Pfalz (NUTS level 2) the NUTS level 3 region Südwestpfalz recorded average GDP per inhabitant (in PPS) that was 52 % of the EU-27 average whereas Ludwigshafen am Rhein (Kreisfreie Stadt) recorded a value of 251 %. The German NUTS level 3 regions of Regensburg, Coburg, Schweinfurt, Wolfsburg, Koblenz and Ludwigshafen am Rhein (all Kreisfreie Städte) each recorded average GDP per inhabitant that was more than double the average for the NUTS level 2 regions of which they were part, namely Oberpfalz, Oberfranken, Unterfranken, Braunschweig, Koblenz and Rheinhessen-Pfalz respectively. In a similar vein, the NUTS level 3 region of Oost-Groningen in the Netherlands recorded average GDP per inhabitant (in PPS) that was 68 % of the EU-27 average, which was less than half the level (180 %) recorded in Groningen (NUTS level 2) as a whole.

Across the NUTS level 3 regions of the EU in 2010, GDP per inhabitant ranged from 5 000 PPS (20 % of the EU-27 average) in Vaslui in Romania to 143 800 PPS (587 %) in the capital city region of Inner London - West in the United Kingdom; between the two ends of the distribution there was a factor of 28.8 to 1. Along with Inner London - West five other NUTS level 3 regions, recorded GDP per inhabitant that was at least three times as high as the EU-27 average, four in Germany and one in France: Wolfsburg, Kreisfreie Stadt; München, Landkreis; Frankfurt am Main, Kreisfreie Stadt; and Schweinfurt, Kreisfreie Stadt in Germany; and Hauts-de-Seine in France. In a further 23 NUTS level 3 regions GDP per inhabitant was at least double the EU-27 average and these regions were mainly in Germany (18 regions), with two in the Netherlands and one each in Belgium, France and Luxembourg. At the other extreme, with GDP per inhabitant below 30 % of the EU-27 average, were 27 regions, including 17 in Bulgaria, eight in Romania and one each in Latvia and Hungary.

Among the level 3 regions in Norway, the capital city region of Oslo recorded a GDP per inhabitant equivalent to 248 % of the EU-27 average, while none of the other Norwegian regions saw their average GDP per inhabitant fall below the EU-27 average. Among the level 3 regions of Croatia and the former Yugoslav Republic of Macedonia, GDP per inhabitant ranged from less than 20 % of the EU-27 average in Severoistocen and Poloski (in the former Yugoslav Republic of Macedonia) to 76 % in Istarska zupanija (Croatia), with the Croatian capital city region of Grad Zagreb well above this range, at 109 %.

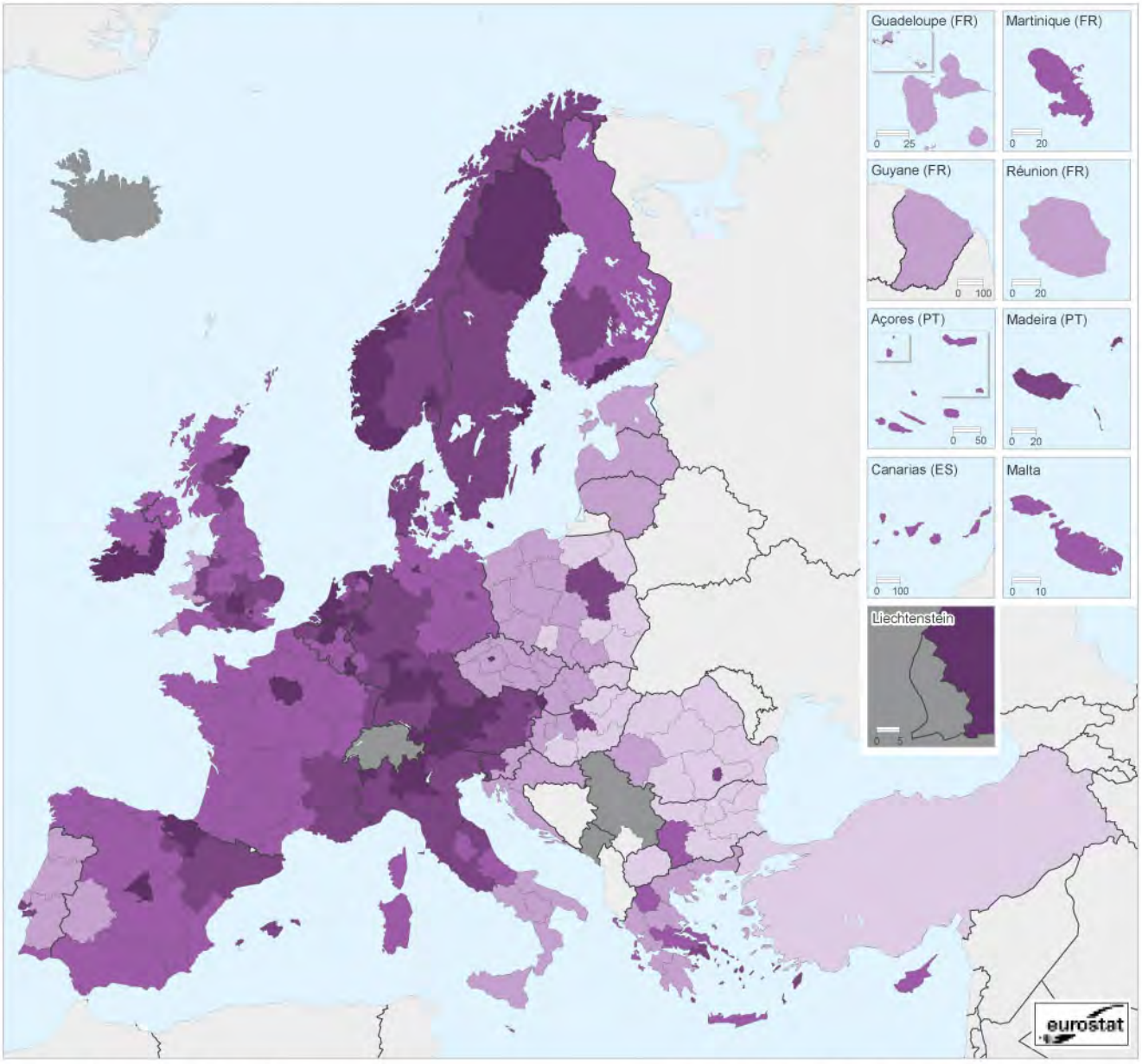
Changes over time

Map 1.3 shows the extent to which GDP per inhabitant changed between 2008 and 2010, compared with the EU-27 average (expressed in percentage points of the EU-27 average). The period studied covers the main years of the financial and economic crisis: GDP per inhabitant within the EU-27 dropped from 25 000 PPS in 2008 to 23 500 PPS in 2009 before partially recovering to 24 500 PPS in 2010. As the analysis is based on a comparison with the EU-27 average, a small positive increase for an individual region may still reflect an actual fall in average GDP per inhabitant, albeit by less than the EU-27 average (– 500 PPS per inhabitant) over the 2 years.

Regions that expanded relatively fast, whose GDP per inhabitant increased by more than 5.0 percentage points compared with the EU-27 average, are shown in the lightest sand shade. By contrast, regions which experienced the highest rates of contraction (those with a fall of 5.0 percentage points or more in GDP per inhabitant compared with the EU-27 average) are shown in the darkest shade of purple.

The highest growth rates relative to the EU-27 average were recorded in the Province/Provincie Brabant Wallon in Belgium (13.5 %) and the Polish capital city region of Mazowieckie (12.5 %). As well as these two regions, there were a further 20 regions where the change was more than 5.0 percentage points. Six Polish and six German regions recorded increases of more than 5.0 percentage points, accompanied by two each in Belgium, Sweden and the United Kingdom, as well as one region each in Denmark, France, Malta (one region only at NUTS level 2) and Slovakia.

Map 1.1: Gross domestic product (GDP) per inhabitant, in purchasing power standard (PPS), by NUTS 2 regions, 2010 (1)
(% of the EU-27 average, EU-27 = 100)



(% of the EU-27 average, EU-27 = 100)

EU-27 = 100

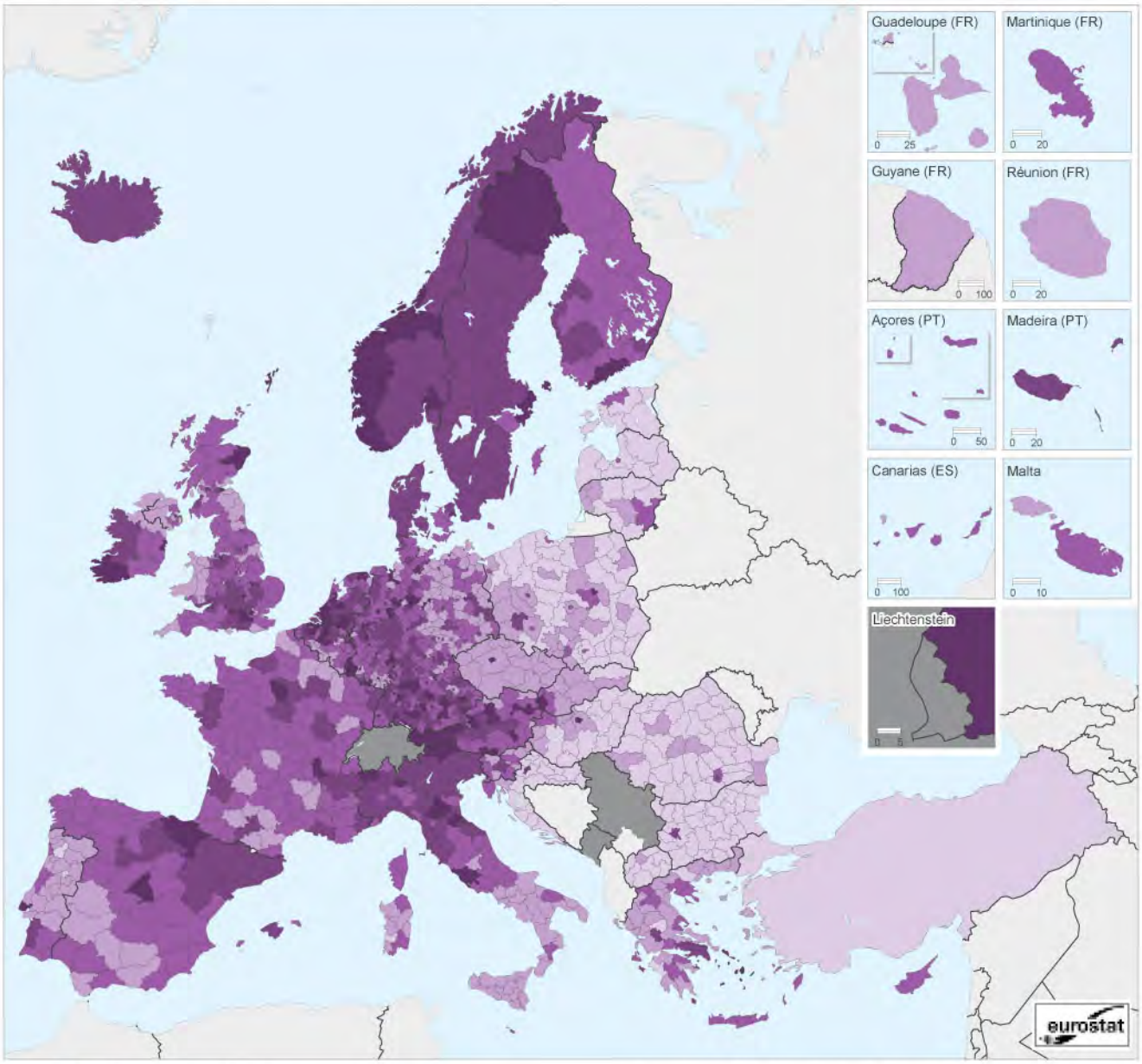
- < 50
- 50 – <75
- 75 – <100
- 100 – <125
- => 125
- Data not available

Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 06/2013

0 200 400 600 800 km

(1) Turkey, national level.
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, 2010 (1)
(% of the EU-27 average, EU-27 = 100))



(% of the EU-27 average, EU-27 = 100)

EU-27 = 100

- < 50
- 50 – <75
- 75 – <100
- 100 – <125
- => 125
- Data not available

Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 06/2013

0 200 400 600 800 km

(1) Turkey, national level.
Source: Eurostat (online data code: nama_r_e3gdp)

At the other end of the range, a total of 26 regions recorded a fall of at least 5.0 percentage points relative to the EU-27 average, with the largest reductions (10 percentage points or more) in Groningen (the Netherlands) and Ionia Nisia (Greece). These 26 regions were spread across 10 EU Member States: six regions in Greece, five regions in Spain, three regions each in Italy, the Netherlands and Finland, both Slovenian regions, and one region each in Estonia, Ireland, Romania and the United Kingdom. Among these regions were the capital city regions of Estonia (which is just one NUTS level 2 region), Greece, Spain, Romania and Slovenia.

In Denmark, Austria and Poland, every region achieved a change in GDP per inhabitant (in PPS) between 2008 and 2010 that was at least equal to the EU-27 average if not higher; this was also the case in Luxembourg and Malta which are both just one region at the NUTS level 2. The former Yugoslav Republic of Macedonia (one region at level 2) and Turkey (no regional data available) also both recorded an increase in GDP per inhabitant (in PPS) relative to the EU-27 average.

By contrast, every region in Ireland, Greece, Spain and Slovenia recorded a fall in GDP per inhabitant (in PPS) that was greater than the EU-27 average, as was the case for Estonia, Cyprus, Latvia and Lithuania (which are all just one NUTS level 2 region). Both Croatian regions and Iceland (a single region at level 2) also recorded falls between 2008 and 2010 relative to the EU-27 average.

Focus on longer-term changes in selected regions

The three parts of Figure 1.1 show GDP per inhabitant (in PPS) as a percentage relative to the EU-27 average (set at 100 %) for 15 selected regions. The first part shows the five regions with the highest GDP per inhabitant (in PPS) in 2010 and shows how their GDP per inhabitant developed over the previous 10 years, always with respect to the EU-27 average in each of those years (note that the first part of the figure has been rebased to 2000 = 100 to allow for the information to be interpreted more easily). Overall, four of these regions displayed relatively stable developments, the exception being Wolfsburg (Kreisfreie Stadt) in Germany which was more volatile; it is likely that shorter working hours — Kurzarbeit — at a major car plant in this region led to the significant reduction in GDP per inhabitant in 2009, while the subsequent rebound in 2010 may be associated with a return to longer working hours.

Comparing these five regions with the top five regions with the highest GDP per inhabitant (in PPS) in 2000, four regions were common to the ranking: the main change was that Paris (France) dropped out of the top five from 2000 and was replaced by the neighbouring region of Hauts-de-Seine in the 2010 ranking.

The second and third parts of Figure 1.1 show the regions with the strongest expansions and contractions of GDP per inhabitant (in PPS) over the 10 year period to 2010. The regions where this indicator increased most were all in Romania and Bulgaria, the Romanian region of Giurgiu increasing from 14 % of the EU-27 average in 2000 to 36 % in 2010. Among these five regions was also the Bulgarian capital city region, where average GDP per inhabitant (in PPS) increased from less than half (47 %) of the EU-27 average in 2000 to just over the EU-27 average by 2010 (105 %). Three of the five regions where GDP per inhabitant (in PPS) fell most strongly already had a lower GDP per inhabitant (in PPS) than the EU-27 average in 2000 and developments over the period 2000–10 saw these regions move further away from the EU-27 average; two of these regions were Greek and one was Belgian. The two other regions with the largest falls for this indicator were also Greek: in Korinthia, GDP per inhabitant fell from 23 % above the EU-27 average in 2000 to 16 % below it by 2010, while in Voiotia it remained above the EU-27 average but fell from 77 % above the average in 2000 to just 18 % above by 2010.

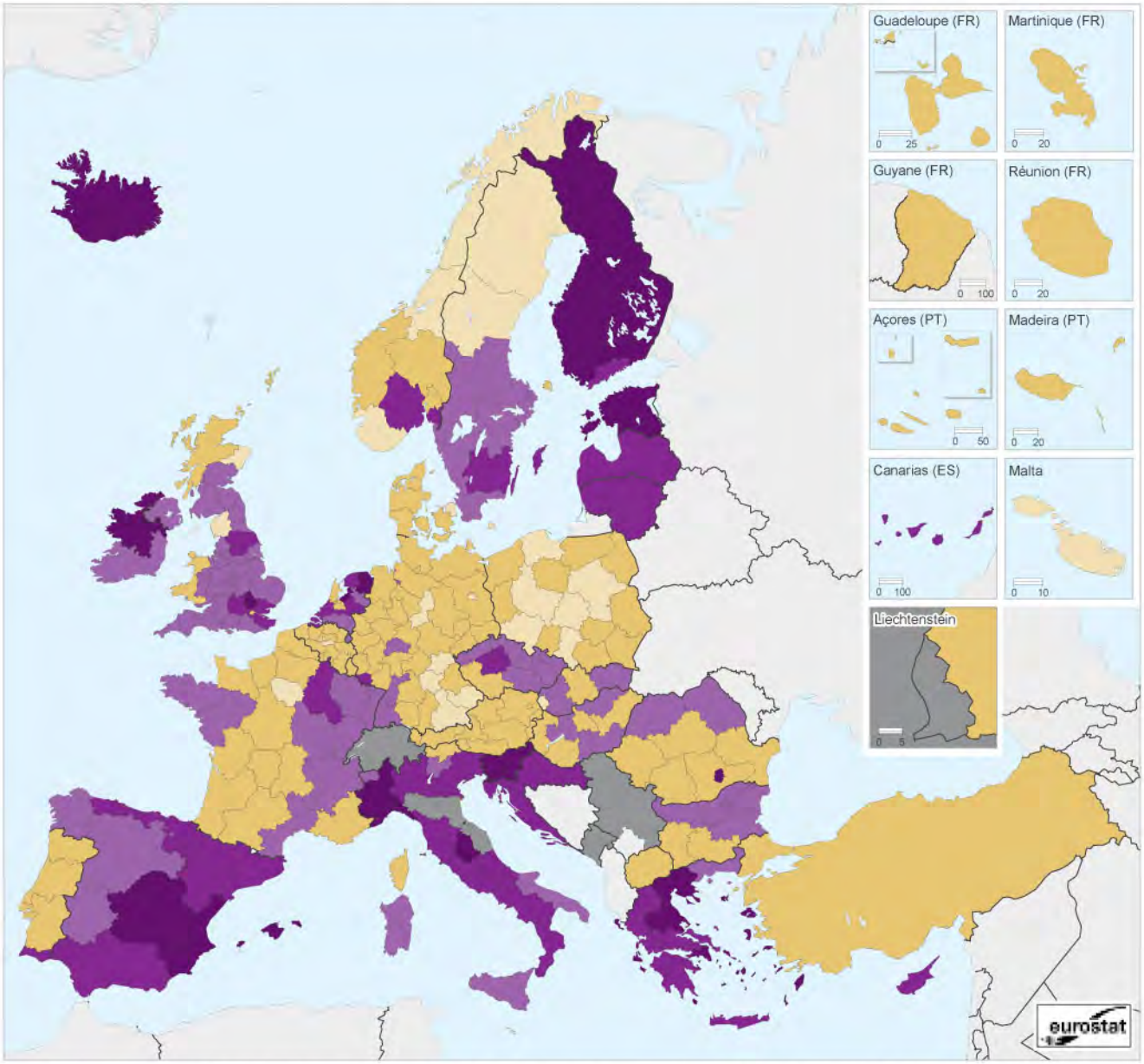
Around a quarter of the EU's population lived in regions where GDP was less than 75 % of the EU-27 average

Table 1.1 presents an analysis of the proportion of the population in 2010 living in regions that had an average GDP per inhabitant (in PPS) below 75 % of the EU-27 average and the proportion equal to or above 125 % of the average. The proportion of the population living in regions where the average GDP per inhabitant was less than 75 % of the EU-27 average was 24.2 %, while the proportion living in regions where this value was 125 % or more of the EU-27 average was 18.4 %; the proportion of the population in the mid-range (GDP per inhabitant ranging from 75 % to less than 125 %) was 57.4 %.

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 in 2010; this was also the case in Croatia (just two regions). In Romania, Slovakia, the Czech Republic, Poland, Bulgaria, Hungary, Portugal and Slovenia, more than half of the population lived in NUTS level 2 regions with an average GDP per inhabitant lower than 75 % of the EU-27 average. By contrast, Denmark, Germany, Ireland, Cyprus (one NUTS level 2 region), Luxembourg (one NUTS level 2 region), Malta (one NUTS level 2 region), the Netherlands, Austria, Finland and Sweden reported that none of their population lived in a NUTS level 2 region with an average GDP per inhabitant that fell below 75 % of the EU-27 average. Indeed, the entire population of Luxembourg (one NUTS level 2 region) lived in a region with an average GDP per inhabitant (in PPS) of 125 % or more of the EU-27 average; in Ireland, the Netherlands and Austria, more than half of the population lived in such regions, as was the case in Norway.

On the islands of Cyprus and Malta (each just one NUTS level 2 region) the entire population lived in regions with a

Map 1.3: Change of gross domestic product (GDP) per inhabitant, in purchasing power standard (PPS), by NUTS 2 regions, 2008–10 (1)
(percentage points difference between 2010 and 2008; in relation to the EU-27 average)



(percentage points difference between 2010 and 2008; in relation to the EU-27 average)

EU-27 = 0.0

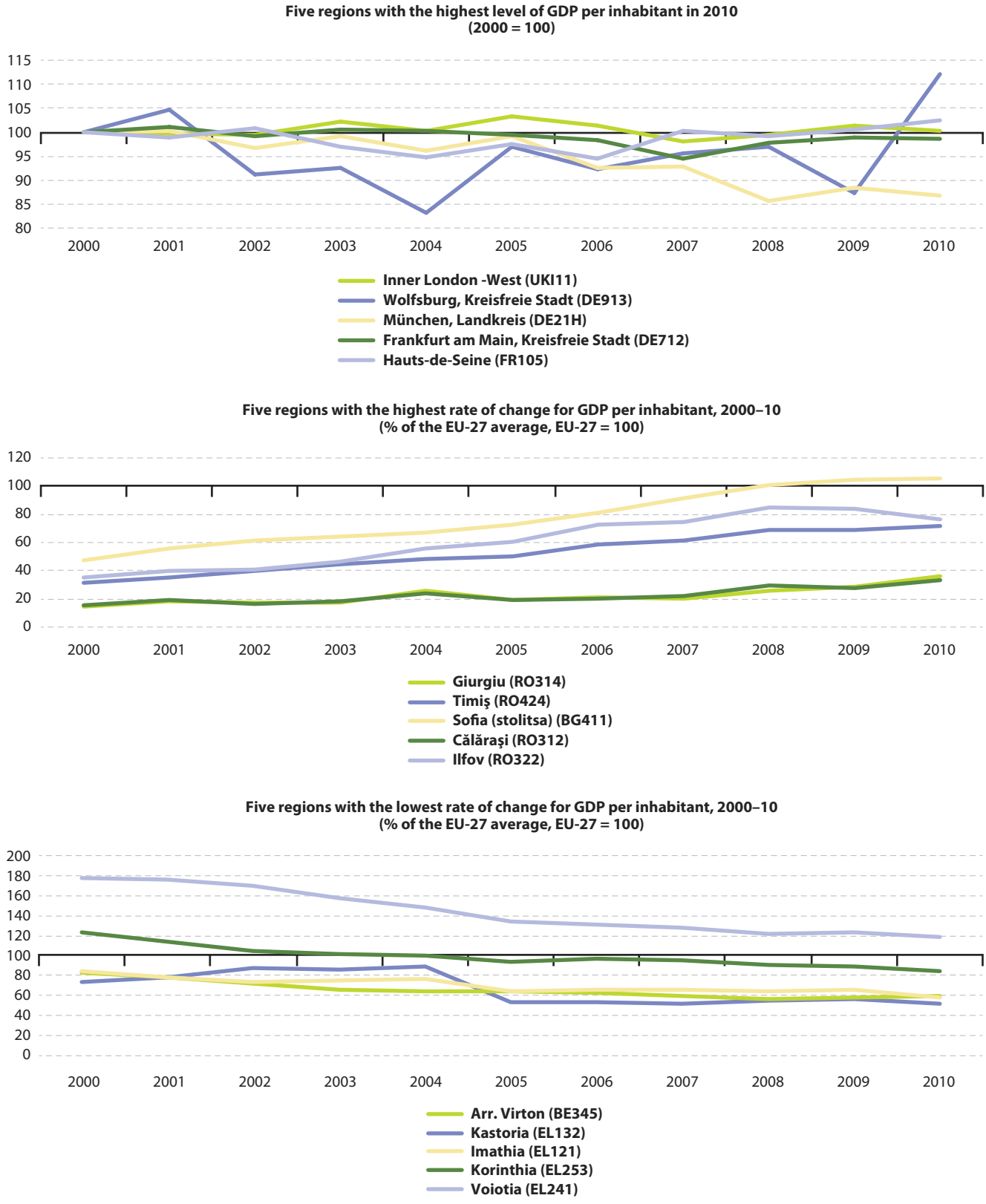
- <= -5.0
- -5.0 – -2.0
- -2.0 – 0.0
- 0.0 – 5.0
- > 5.0
- Data not available

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

0 200 400 600 800 km

(1) Turkey, national level.
Source: Eurostat (online data code: nama_r_e2gdp)

Figure 1.1: Gross domestic product (GDP) per inhabitant, in purchasing power standard (PPS), selected NUTS 3 regions, 2000–10 (1)



(1) Brandenburg (DE40), Dresden (DED2), Italy and Zuid-Holland (NL33), available at the NUTS level 2 only; Städteregion Aachen (DEA2D), Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5) and Marche (ITI3), not available.

Source: Eurostat (online data code: nama_r_e3gdp)

mid-range average GDP per inhabitant (from 75 % to less than 125 % of the EU-27 average), as did the majority of the population in the United Kingdom (86.8 %), France (79.5 %), Spain (77.9 %), Sweden (72.8 %), Finland (71.0 %), Germany (70.4 %), Denmark (69.5 %), Belgium (60.3 %), Greece (54.1 %) and Italy (53.6 %).

On the basis of this analysis, Italy was the EU Member State where there was the highest disparity in living standards between different regions — as 29.0 % of the Italian population lived in regions (principally in the south of the country) where average GDP per inhabitant (in PPS) was less than 75 % of the EU-27 average, 53.6 % of the population lived in regions where average GDP per inhabitant was in the mid-range, and 17.4 % of the population lived in regions (principally in the north of the country) where average GDP per inhabitant was 125 % or more of the EU-27 average.

In the Czech Republic, the capital city region of Praha (home to 11.9 % of the Czech population) had an average GDP per inhabitant (in PPS) that was 72 % higher than the EU-27 average in 2010, while the seven remaining NUTS level 2 regions in the Czech Republic (home to the remaining 88.1 % of the population) each reported average GDP per inhabitant that was below 75 % of the EU-27 average. The same pattern was observed in neighbouring Slovakia, where GDP per inhabitant in the capital city region of Bratislavský kraj (with 11.5 % of the population) was 77 % higher than the EU-27 average, while the remaining three NUTS level 2 regions (with 88.5 % of the population) each recorded GDP per inhabitant that was below 75 % of the EU-27 average.

Table 1.1: Proportion of the resident population, by NUTS 2 regions, 2010
(%)

	GDP per inhabitant is:	
	< 75 % of the EU-27 average	=> 125 % of the EU-27 average
EU-27	24.2	18.4
Belgium	0.0	39.7
Bulgaria	72.0	0.0
Czech Republic	88.1	11.9
Denmark	0.0	30.5
Germany	0.0	29.6
Estonia	100.0	0.0
Ireland	0.0	73.0
Greece	45.9	0.0
Spain	2.3	19.8
France	2.3	18.2
Italy	29.0	17.4
Cyprus	0.0	0.0
Latvia	100.0	0.0
Lithuania	100.0	0.0
Luxembourg	0.0	100.0
Hungary	70.4	0.0
Malta	0.0	0.0
Netherlands	0.0	62.9
Austria	0.0	56.3
Poland	86.3	0.0
Portugal	64.6	0.0
Romania	89.4	0.0
Slovenia	52.9	0.0
Slovakia	88.5	11.5
Finland	0.0	29.0
Sweden	0.0	27.2
United Kingdom	3.9	9.3
Norway	0.0	55.0
Croatia	100.0	0.0

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

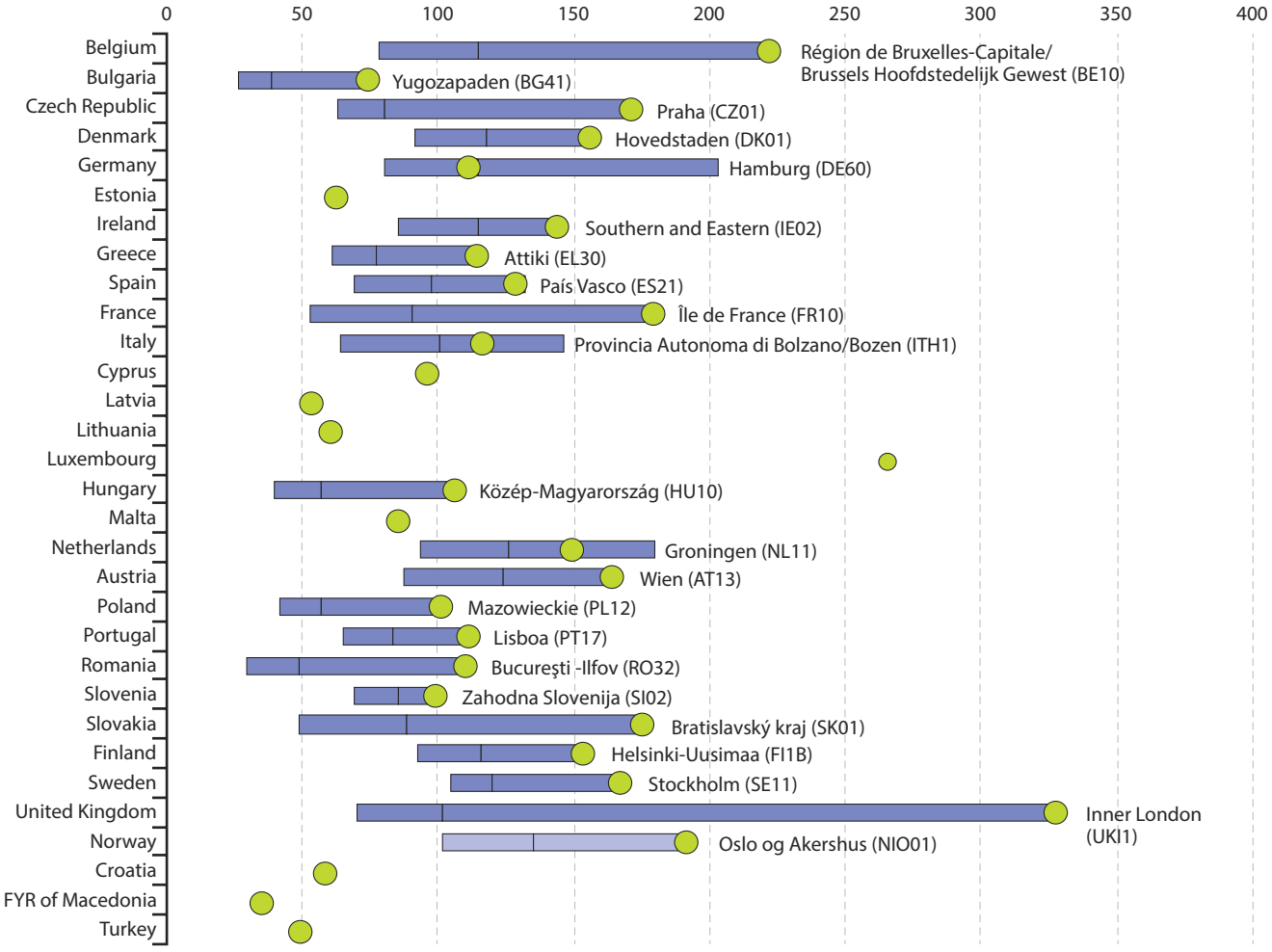
Major regional differences within countries

There were large differences in GDP per inhabitant between NUTS level 2 regions within the same Member State; Figure 1.2 provides an analysis of these substantial regional differences within countries. Note that Estonia, Cyprus, Latvia, Lithuania, Luxembourg and Malta consist of only one region at NUTS level 2.

In 2010, the highest level of regional average GDP per inhabitant was at least three times as high as the lowest level in the United Kingdom, Romania, Slovakia and France, whereas it was more than twice as high in Bulgaria, Belgium, the Czech Republic, Hungary, Germany, Poland and Italy. The difference was least in Slovenia (a factor of 1.4 to 1) and highest in the United Kingdom (reaching a factor of 4.7 to 1).

In many of the EU Member States, the capital city region (at the NUTS level 2) had the highest GDP per inhabitant (in PPS): this situation occurred in all of the Member States except for Germany, Spain, Italy and the Netherlands; and this was also the case in Croatia. Germany was the only Member State where the capital city region at NUTS level 2 had an average GDP per inhabitant below the national average. Aside from Germany, Italy and the Netherlands were the only other Member States where the capital city region did not record the highest level of GDP per inhabitant (in PPS).

Figure 1.2: Gross domestic product (GDP) per inhabitant, in purchasing power standard (PPS), by NUTS 2 regions, 2010 (1)
(% of the EU-27 average, EU-27=100)



(1) The figure shows the range of the highest to lowest region for each country; the black vertical line is the average (mean); the green circular marker is the capital city (for those countries where there is no regional breakdown, the national average is used as the value for the capital region); the name of the region with the highest value is also included.
Source: Eurostat (online data code: nama_r_e2gdp)

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 calculated using different approaches: the output approach; the expenditure approach; and the income approach. However, at the regional level the expenditure approach cannot be used, because it would require the measurement of regional exports and imports; this is not possible in the EU Member States.

Comparisons between where people work and where they live

A regional comparison of the level of economic activity 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 activity 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 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.

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 the EU).

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 2010, the Belgian region of the Province/Provincie Limburg was recorded as having a GDP per inhabitant of EUR 26 700, ranking above the German region of Schleswig-Holstein, with EUR 25 400. However, in PPS terms, Schleswig-Holstein, at 24 200 PPS per inhabitant, was above the Province/Provincie Limburg, at 23 800 PPS.

Context

Measuring economic development

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 to provide 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.

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 called '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.

Economic policies

The EU's regional policy seeks to help every region achieve its full potential, through improving competitiveness and raising living standards of the poorest regions towards the EU average. Regional economic policy seeks to stimulate investment in the regions by improving accessibility, providing quality services and preserving the environment, thereby encouraging innovation and entrepreneurship and the creation of jobs, while overcoming inequalities that may be manifest in social deprivation, poor housing, education and healthcare, higher unemployment or inadequate infrastructure provisions.

2 Population

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

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

Main statistical findings

Population size and density

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

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

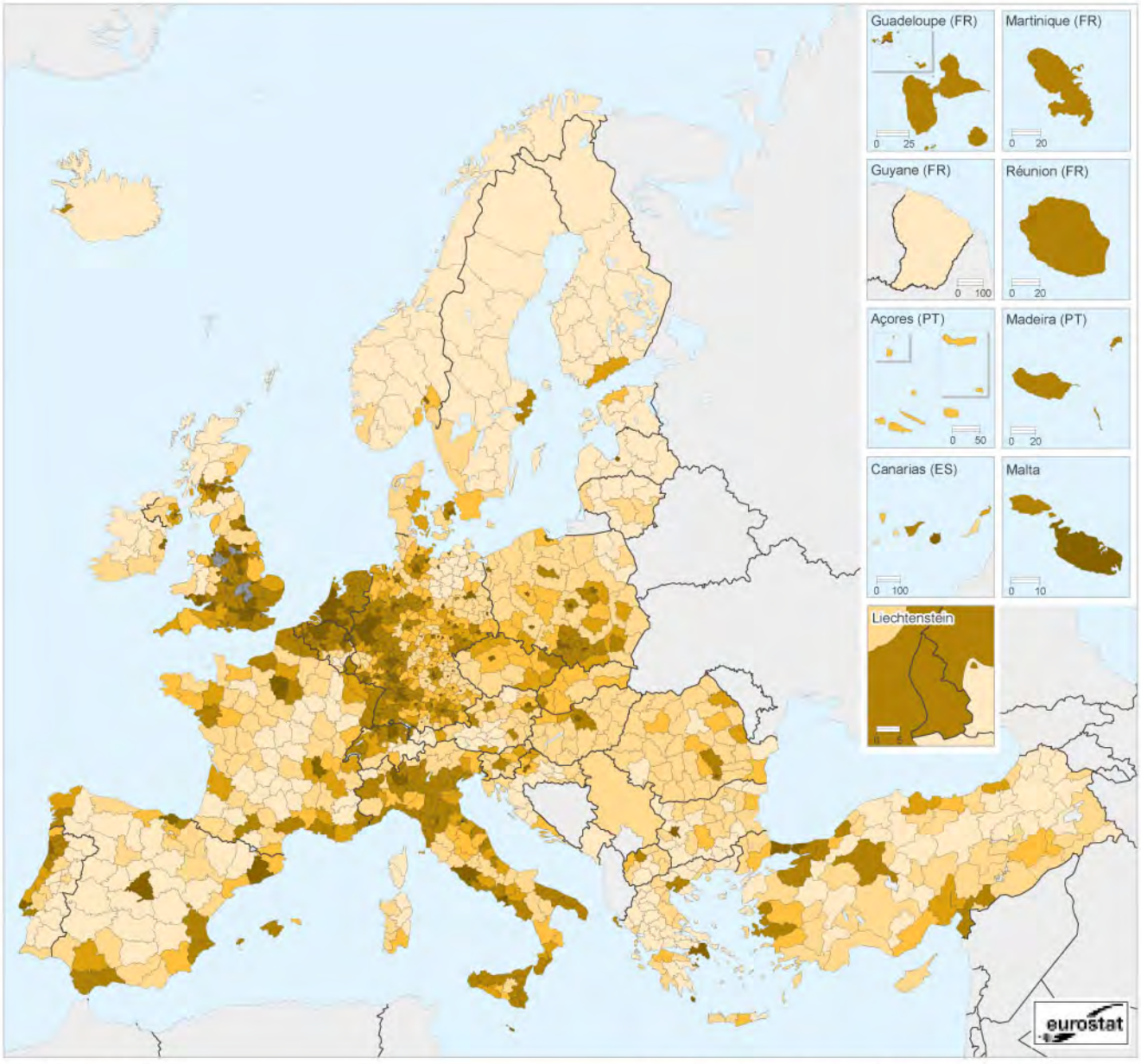
Generally, the capital city region reported the highest level of population density in each EU Member State. This pattern was broken in four countries, namely: Germany (where München, Kreisfreie Stadt had the highest density), Spain (the Ciudad Autónoma de Melilla), Italy (Napoli) and Portugal (Grande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

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

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

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

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



(inhabitants per km²)
EU-27 = 117

- <= 50
- 50 – 100
- 100 – 135
- 135 – 170
- 170 – 500
- > 500
- Data not available

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

0 200 400 600 800 km

(1) Population density is calculated as the ratio between (annual average) population and the surface (land) area; land area is a region's total area, excluding the area under inland water; Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7), Malta, the United Kingdom, Croatia and Turkey, 2010; Serbia, national level.
Source: Eurostat (online data codes: demo_r_d3dens, demo_pjan and cpc_agmain)

Population change

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

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

Although the EU-27 population continued to increase in 2011, overall population change was unevenly distributed across the Member States. The total number of inhabitants grew between 1 January 2011 and 1 January 2012 in 19 of the Member States. The highest growth in population numbers (in absolute terms) was recorded in the United Kingdom, where the population grew by 474 000 inhabitants, followed by France (333 000) and Italy (194 000) which were the only other Member States to record population growth in excess of 100 000. The highest crude rates of total population change were recorded by Cyprus (an increase of 26.2 per thousand inhabitants) and Luxembourg (24.7), while Belgium (8.5), the United Kingdom (7.6) and Sweden (7.1) followed.

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

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

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

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

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

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

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

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

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

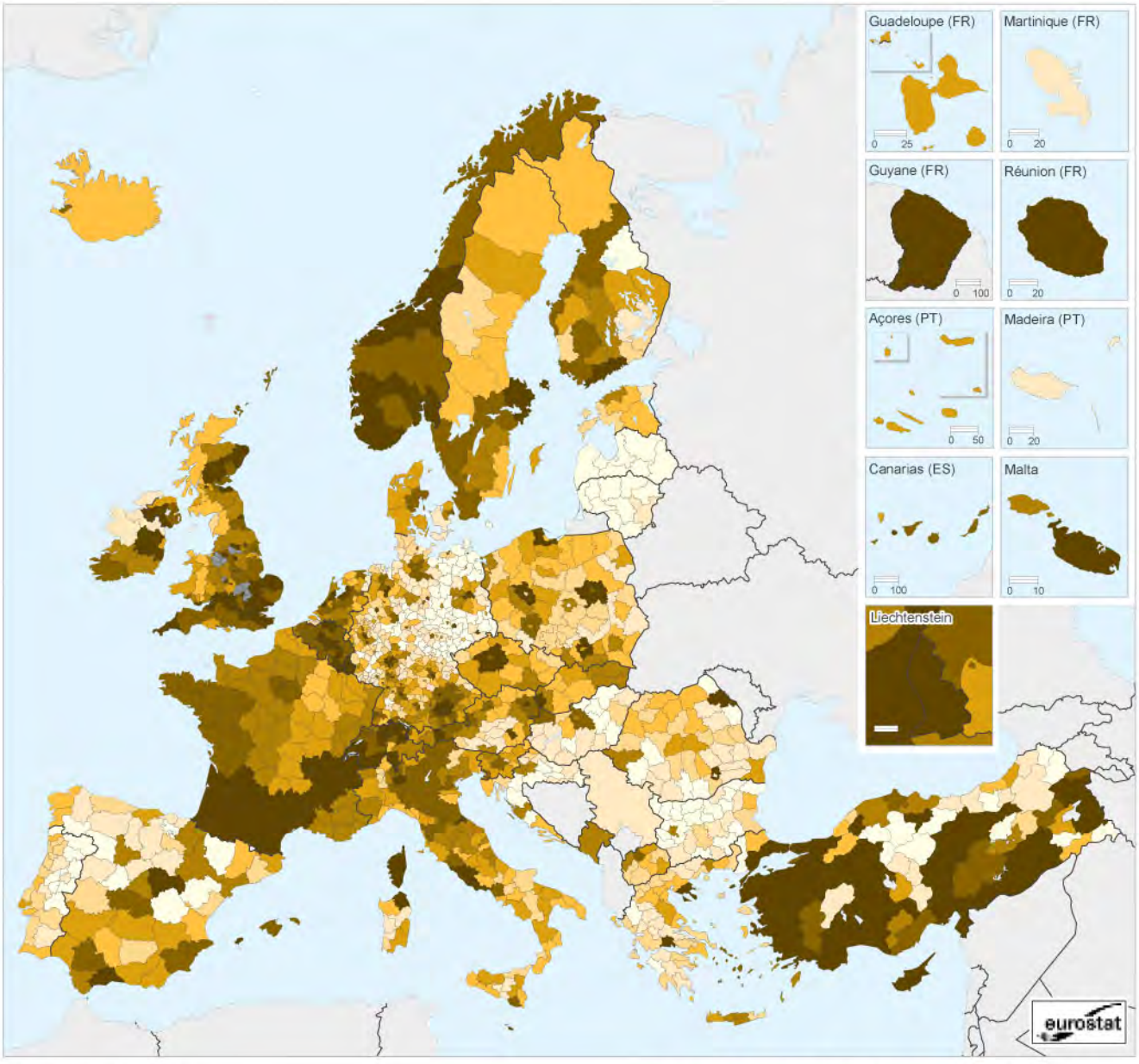
A more detailed analysis indicates that there were 11 NUTS level 3 regions in the EU-27 where the crude rate of natural population change was above 10 per thousand in 2011. Among these, there were four French regions, two of which are overseas departments (Guyane and Réunion) and two of which are located within the vicinity of Paris (Seine-Saint-Denis and Val-d'Oise); Guyane had the highest crude rate of natural population change among all EU-27 regions (23.4 per thousand inhabitants). The remainder of the regions with high natural population growth included three Irish regions (Mid-East, Dublin and Midland), three regions from the south-east of the United Kingdom (Inner London - East; Luton; and Outer London - West and North West; data for 2010), as well as the Spanish overseas territory of the Ciudad Autónoma de Melilla.

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

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

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

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



(per thousand inhabitants)

EU-27 = 2.6

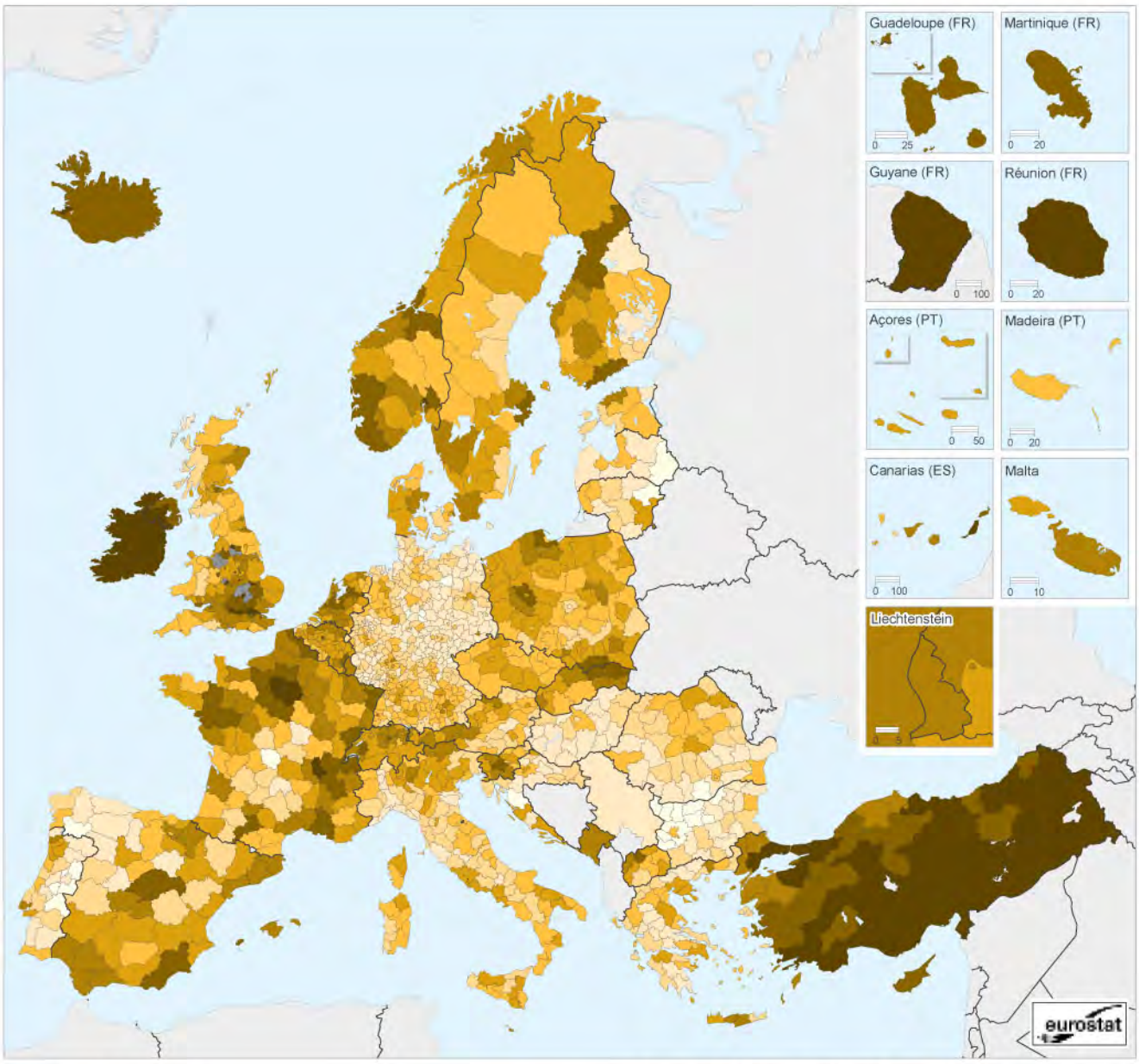
- <= -8.0
- -8.0 – -4.0
- -4.0 – -2.0
- -2.0 – 0.0
- 0.0 – 2.0
- 2.0 – 4.0
- 4.0 – 8.0
- > 8.0
- Data not available

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

0 200 400 600 800 km

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

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



(per thousand inhabitants)

EU-27 = 0.8

- <= -8.0
- -8.0 – -4.0
- -4.0 – -2.0
- -2.0 – 0.0
- 0.0 – 2.0
- 2.0 – 4.0
- 4.0 – 8.0
- > 8.0
- Data not available

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

0 200 400 600 800 km

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

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

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

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

Almost all of the capital city regions of non-member countries reported an increase in their respective populations, as both components of population change moved in a positive direction. The only exceptions were the Höfuðborgarsvæði region of Iceland (Greater Reykjavík, where an overall increase in the population was due to positive natural growth, while there was a negative rate of net migration) and Serbia as a whole (for which there is no regional information available), where the negative rate of natural change far outweighed a modest increase in the crude rate of net migration.

Decline in the fertility rate

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

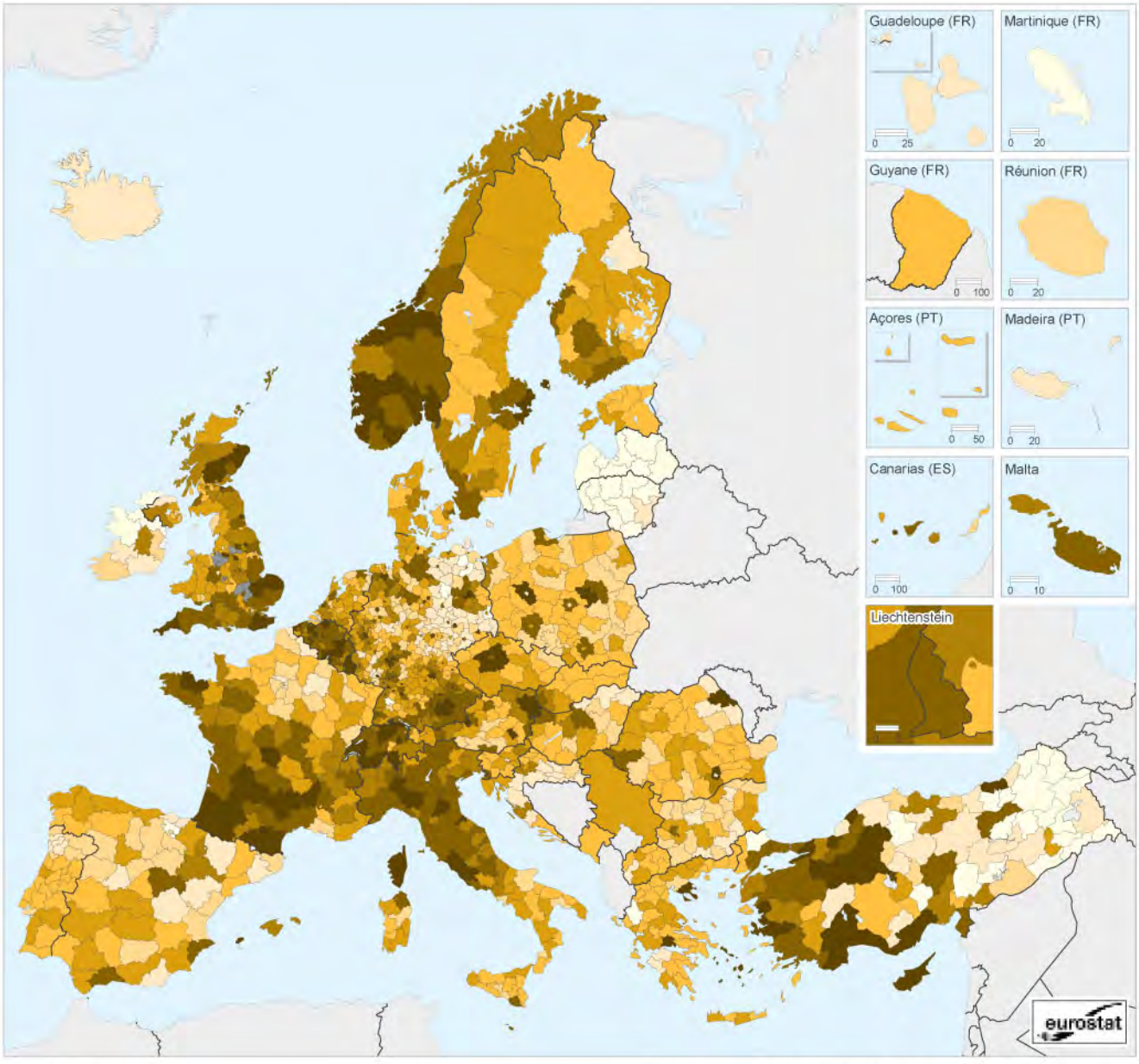
The total fertility rate in the EU-27 was well below replacement levels in recent decades. From a low of 1.46 live births per woman in 2002, the total fertility rate in the EU-27 has subsequently seen a slight recovery in many of the EU Member States, such that the average for the whole of the EU-27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

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

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

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

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



(per thousand inhabitants)

EU-27 = 0.8

- <= -8.0
- -8.0 – -4.0
- -4.0 – -2.0
- -2.0 – 0.0
- 0.0 – 2.0
- 2.0 – 4.0
- 4.0 – 8.0
- > 8.0
- Data not available

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

0 200 400 600 800 km

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

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

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

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

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

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

Declining infant mortality

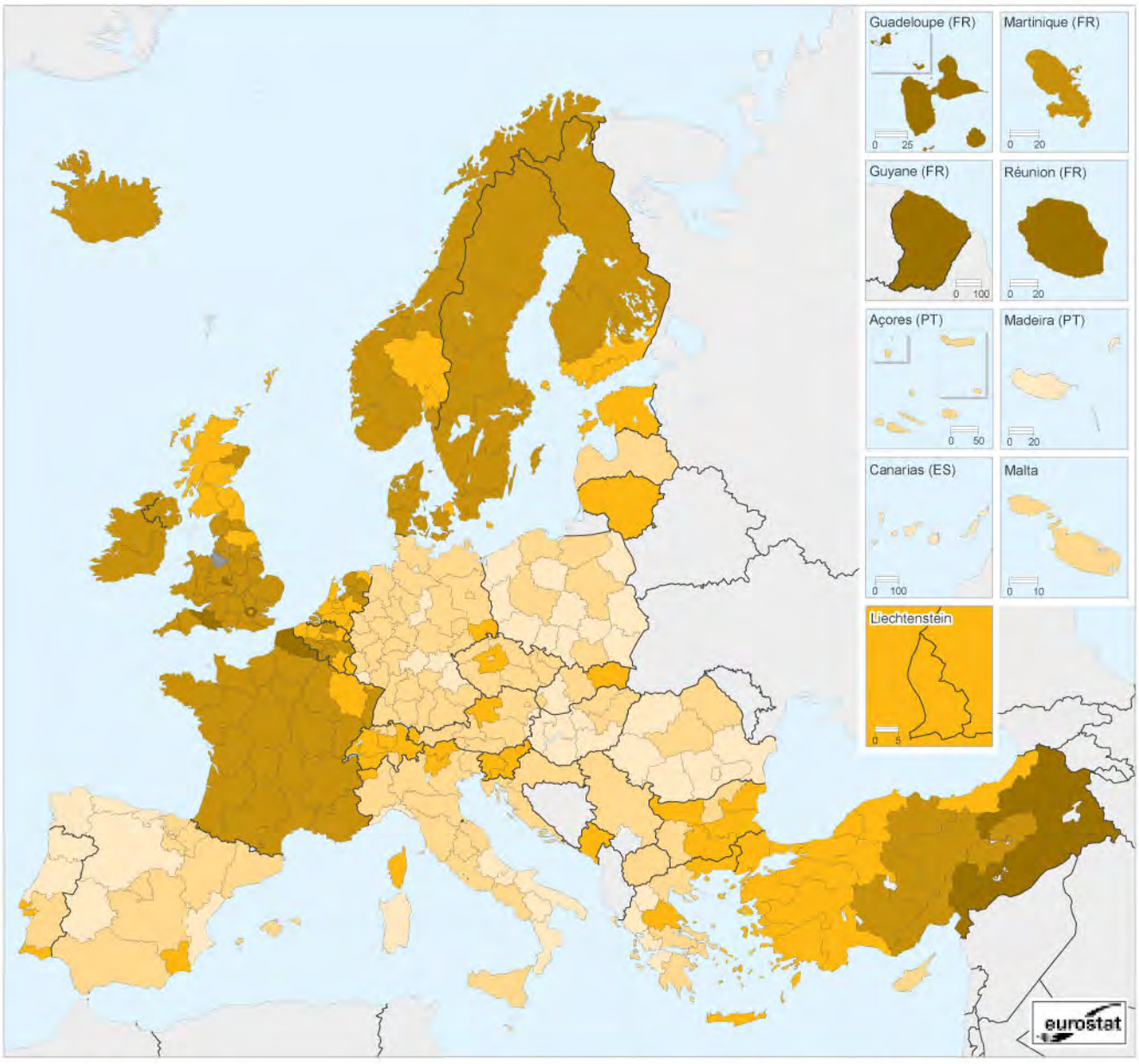
Along with the established pattern of a gradual reduction in the average number of children being born per woman, the EU-27 has also recorded an almost continuous reduction in its infant mortality rate over recent decades, due among other issues to: improvements in (access to) healthcare — more information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

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

Life expectancy gaps between men and women

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

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



(number of live births per woman)

EU-27 = 1.57

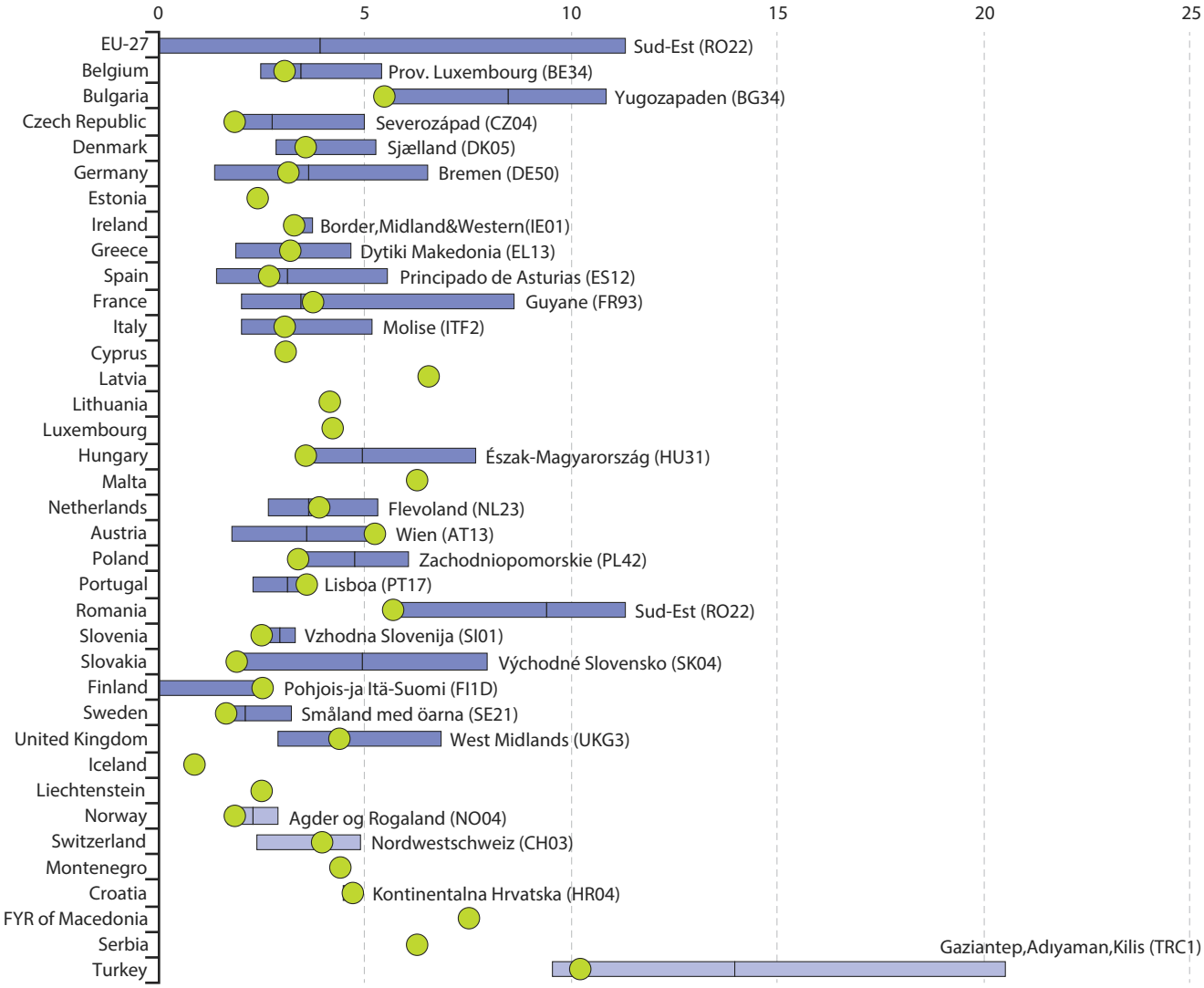
- <= 1.30
- 1.30 – 1.50
- 1.50 – 1.80
- 1.80 – 2.10
- > 2.10
- Data not available

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

0 200 400 600 800 km

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

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



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

Map 2.6 shows that male life expectancy at birth was 74.0 years or less in 2011 across much of eastern Europe, including all of the NUTS level 2 regions of Bulgaria, Hungary, Romania and the three Baltic Member States (each being a single region at this level of detail). In addition, all but one (the capital city region of Bratislavský kraj) of the regions in Slovakia and all but two (the extreme southerly regions of Podkarpackie and Małopolskie) of the regions in Poland also reported male life expectancy at birth that was 74.0 years or less. There were three other regions that recorded male life expectancy below this level (indicated with the lightest shade used in Map 2.6): two of these were from the Czech Republic (Severozápad and Moravskoslezsko), while the final region was the Portuguese offshore Região Autónoma dos Açores. Relatively low male life expectancy at birth was also apparent in the acceding and candidate countries, as only the coastal strip and islands of Croatia (the Jadranska Hrvatska region) recorded male life expectancy above 74.0 years (data for 2010), while the lowest life expectancy in 2011 (72.0 years) was recorded for Serbia (no regional information available). None of the EFTA regions reported male life expectancy equal to or below 74.0 years in 2011.

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

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

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

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

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

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

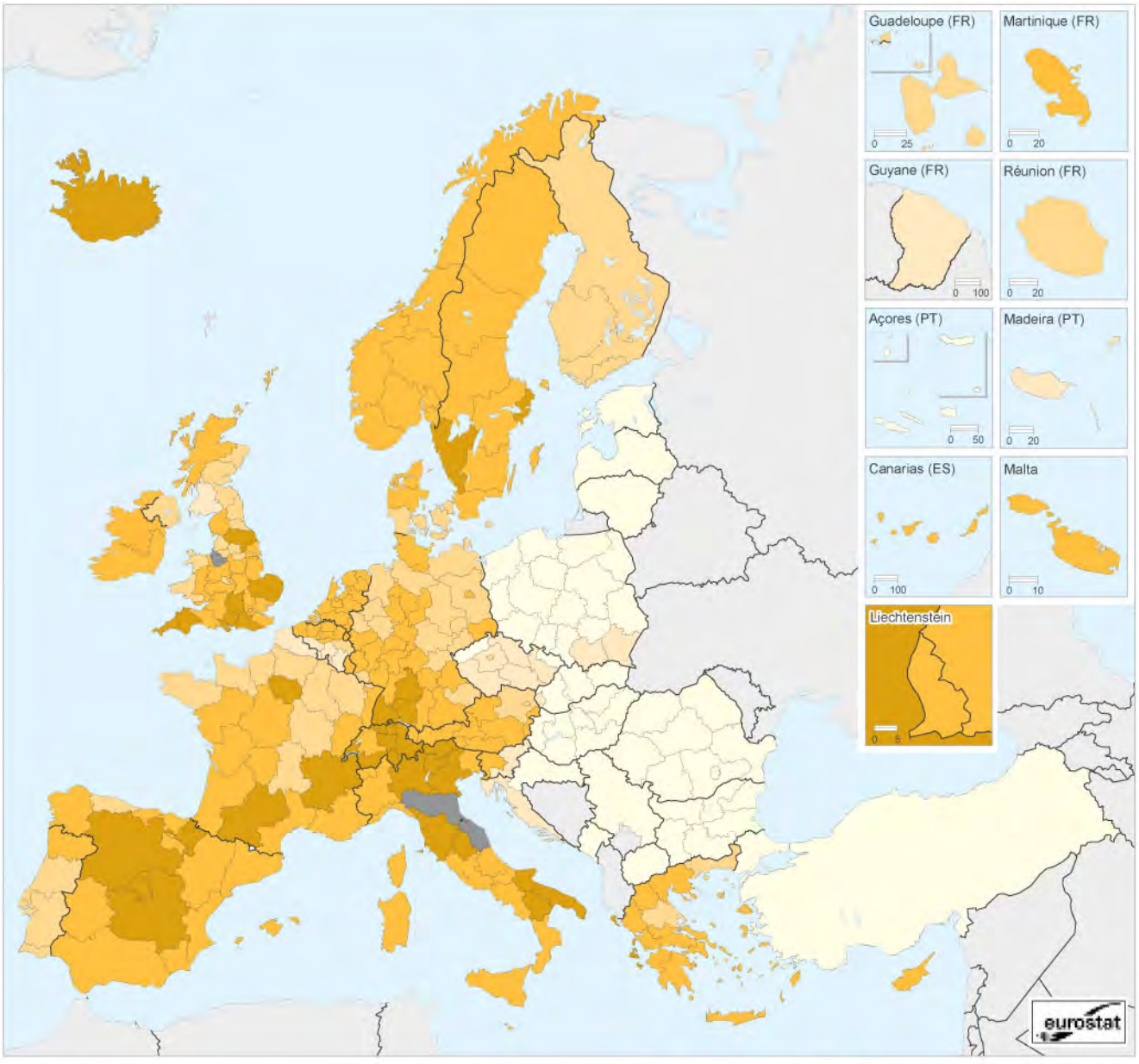
Among the non-member countries analysed, Iceland had the smallest gender gap, equal to 3.4 years, while Zurich (Switzerland) was the only other region where the gap between women and men was less than 4 years. The largest differences between the sexes in relation to life expectancy were recorded for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

Demographic ageing

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

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

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



(years)
EU-27 = 77.0
<= 74.0
74.0 – 76.0
76.0 – 78.0
78.0 – 80.0
> 80.0
Data not available

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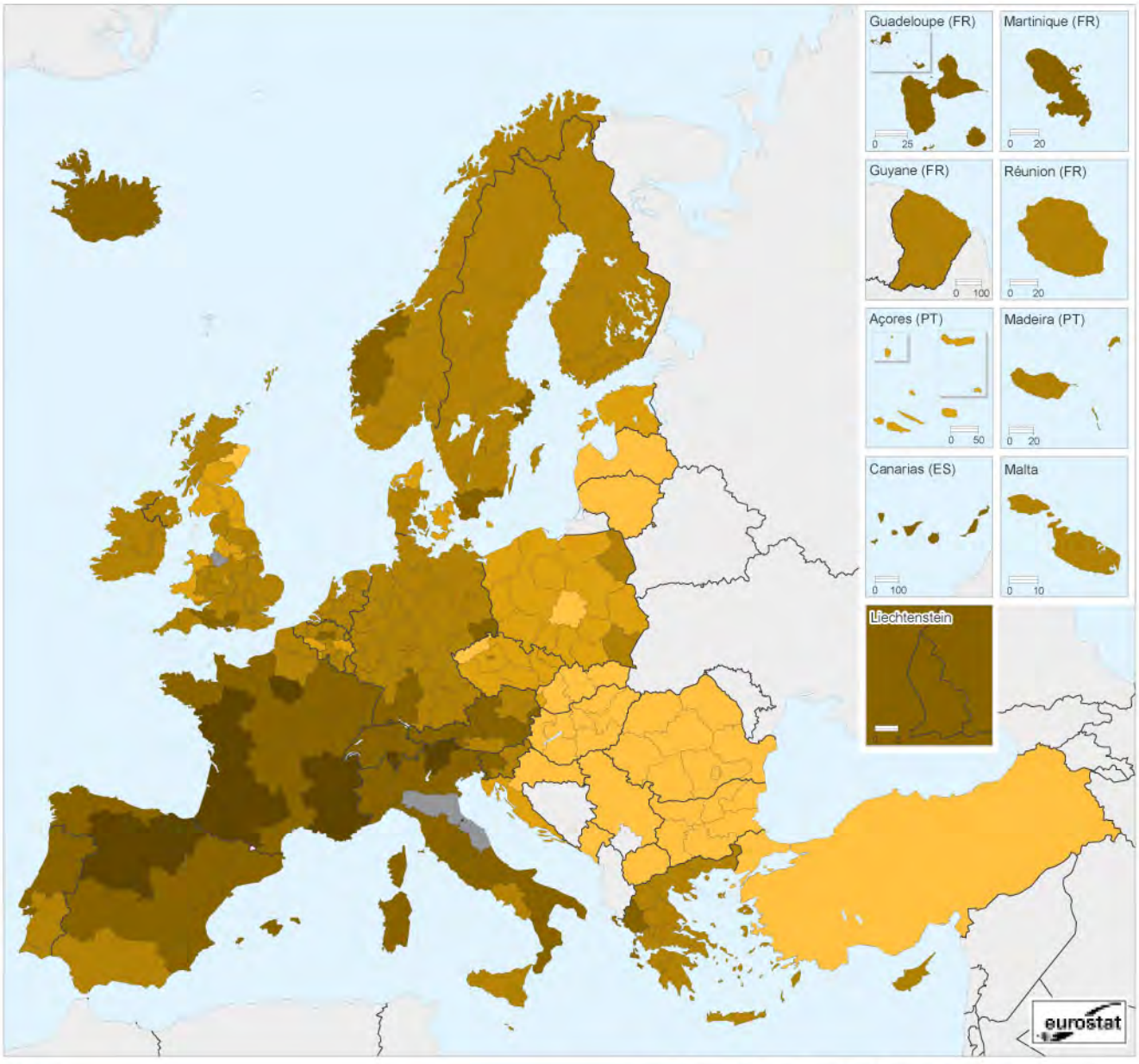
Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

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

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



(years)
EU-27 = 82.9
<= 80.0
80.0 – 82.0
82.0 – 84.0
84.0 – 86.0
> 86.0
Data not available

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

0 200 400 600 800 km

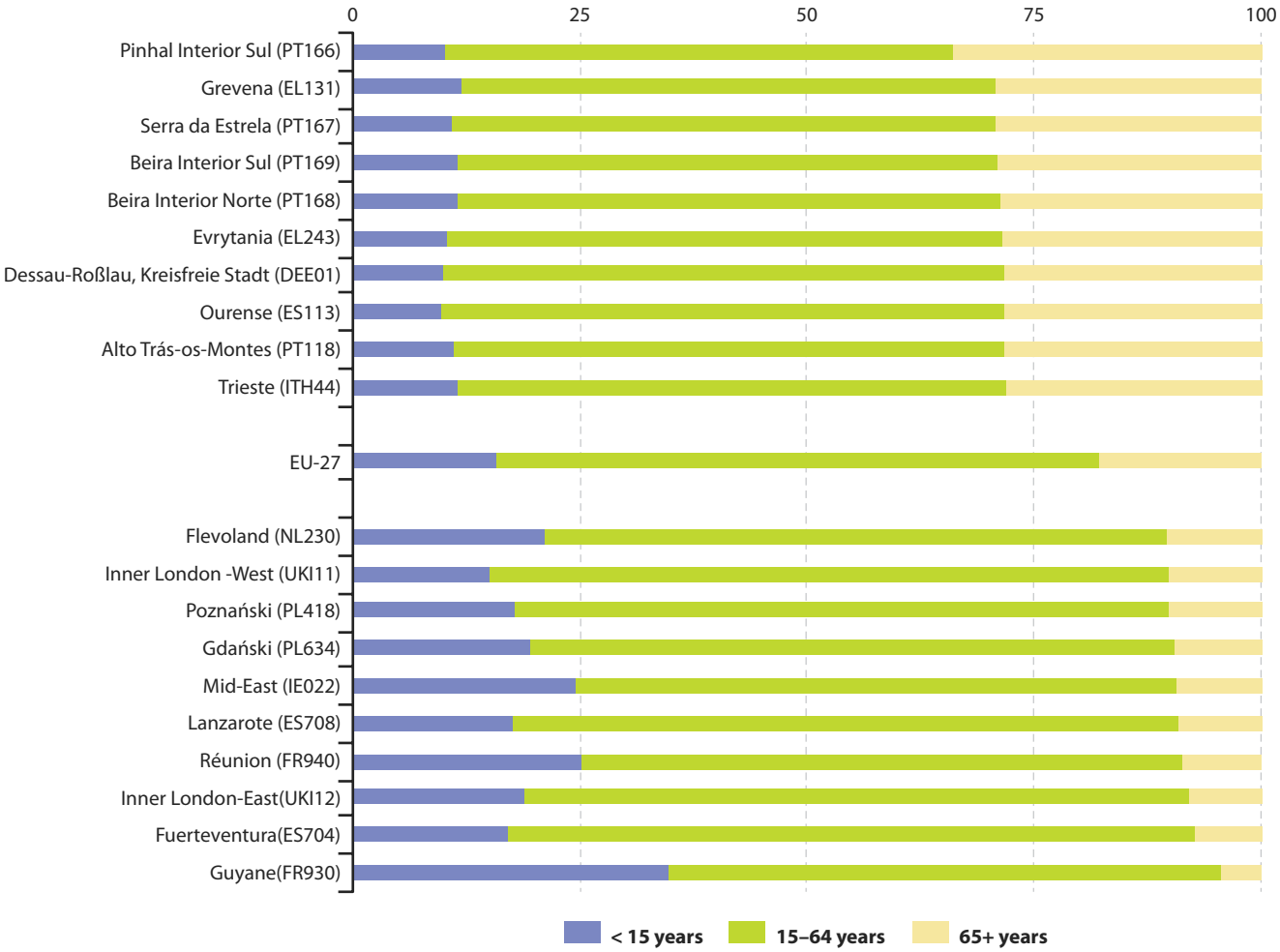
(1) EU-27, Belgium, Guadeloupe (FR91), Guyane (FR93), Italy, the United Kingdom and Croatia, 2010; Turkey, 2009; Serbia and Turkey, national level.
Source: Eurostat (online data codes: demo_r_mlifexp and demo_mlexpec)

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

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

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

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



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

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

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

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

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

Data sources and availability

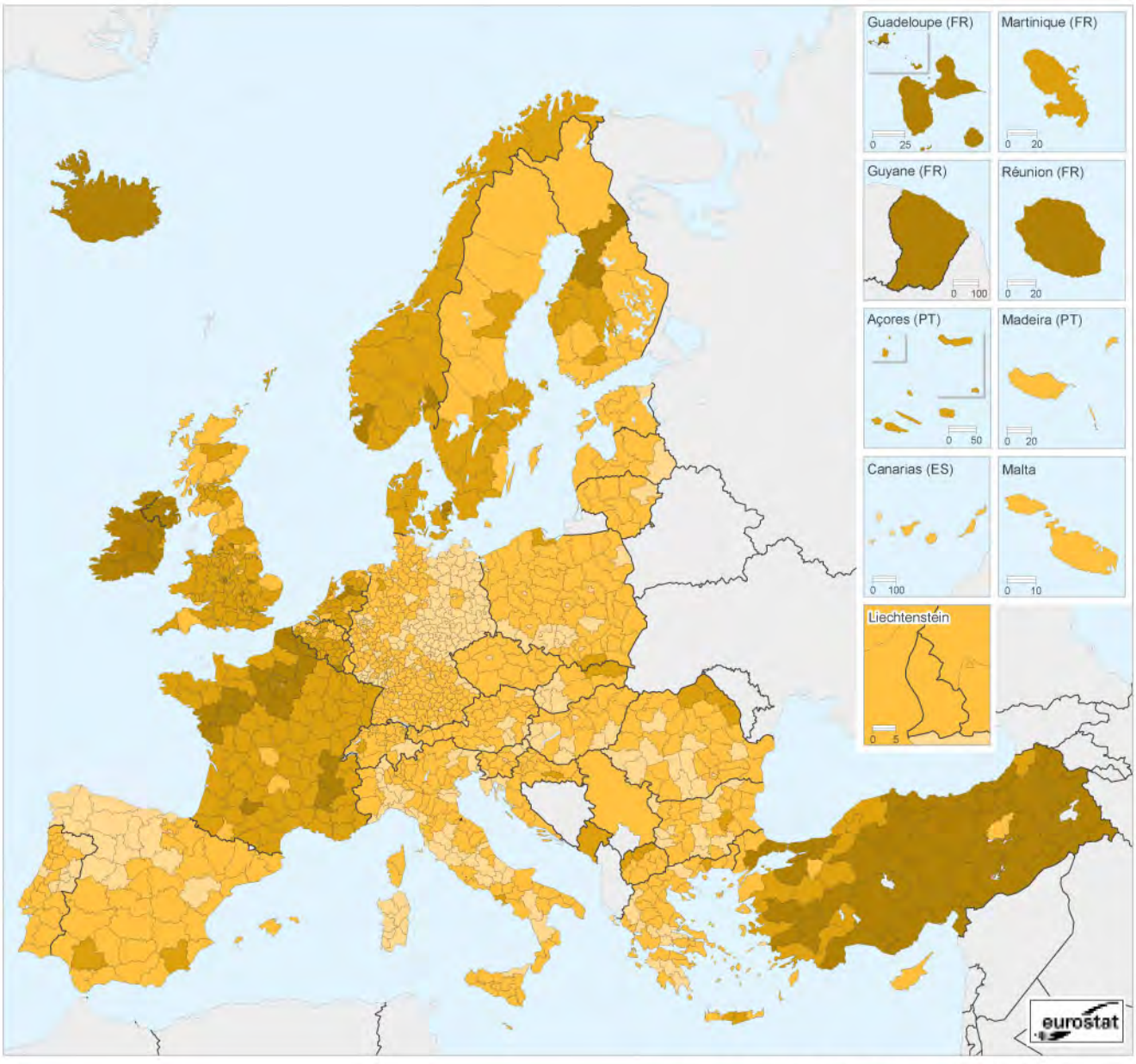
Eurostat provides a wide range of demographic data: this includes statistics on national and regional populations, as well as data for various demographic events (births, deaths, marriages, divorces, immigration and emigration) which influence the population's size, structure and specific characteristics.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

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

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

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

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



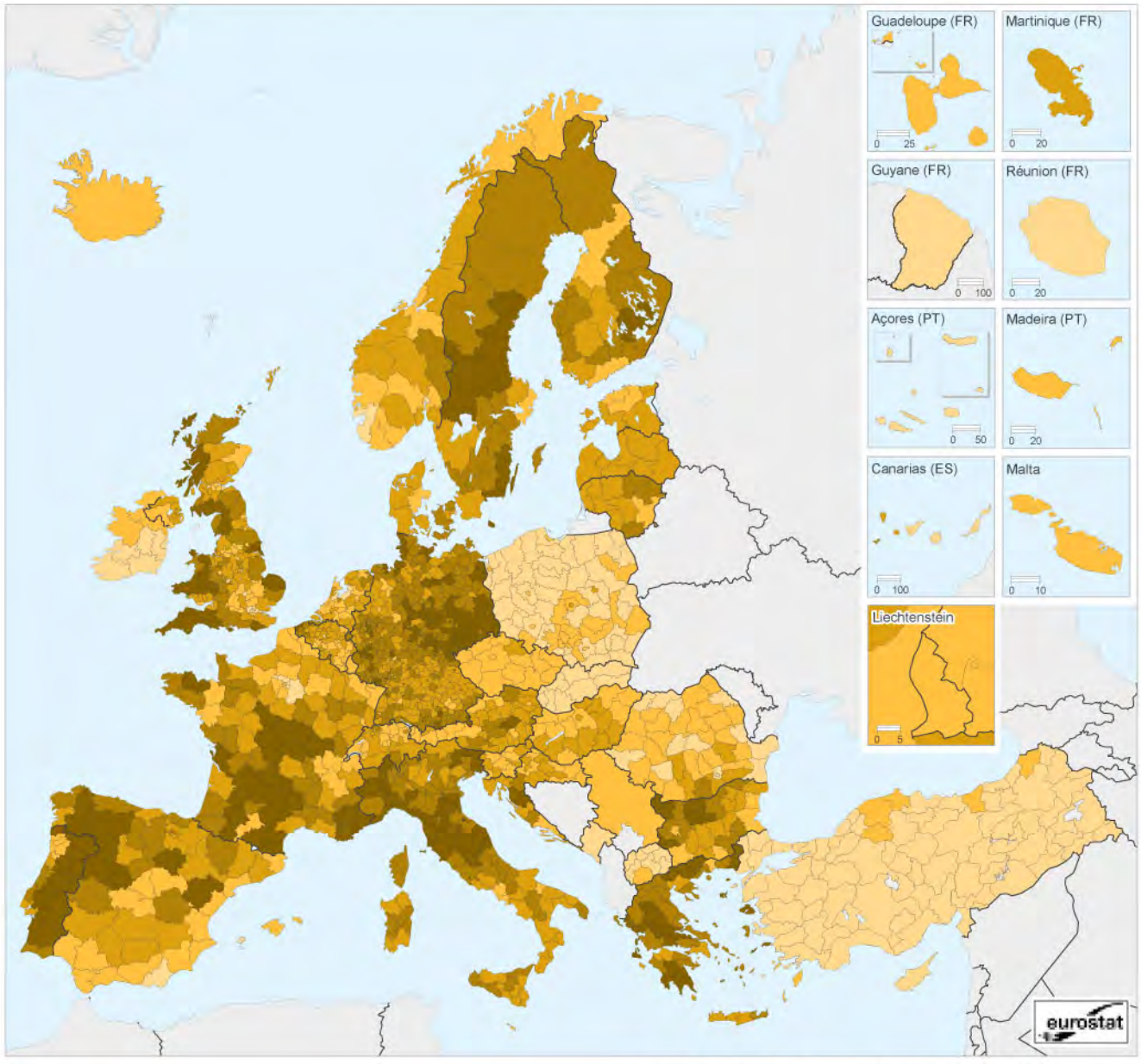
(%)
EU-27 = 23.4
<= 15.0
15.0 – 20.0
20.0 – 25.0
25.0 – 30.0
> 30.0
Data not available

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

0 200 400 600 800 km

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

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



(%)
EU-27 = 26.8
<= 20.0
20.0 – 25.0
25.0 – 30.0
30.0 – 35.0
> 35.0
Data not available

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

0 200 400 600 800 km

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

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

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

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

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

Context

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

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

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

Health

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

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

Main statistical findings

Causes of death

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

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

These pathologies generally affect the population at advanced ages — for example, over 80 % of the deaths in the EU-27 in 2010 resulting from diseases of the circulatory system occurred among people aged 70 years and above. By contrast, a higher proportion of relatively young persons died from cancer: more than one third (37.0 %) of the total number of deaths from malignant neoplasms were recorded among those aged 40–69.

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

Diseases of the circulatory system

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

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

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

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

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

The three Bulgarian regions with the highest overall standardised death rates from diseases of the circulatory system were also the three EU-27 regions with the highest male standardised death rates — Severozapaden (838.8 per 100 000 male inhabitants), Yugoiztochen (822.7) and Severen tsentralen (771.4); they were followed by the three remaining regions in Bulgaria, Latvia, Lithuania and the north-eastern Hungarian region of Észak-Magyarország. At the other end of the range, the regions with the lowest male death rates from diseases of the circulatory system were the capital city regions of France and Spain: Île de France (127.3 per 100 000 male inhabitants) and the Comunidad de Madrid (135.6). There were also low male standardised death rates from diseases of the circulatory system in the Région lémanique and Ticino in the south of Switzerland.

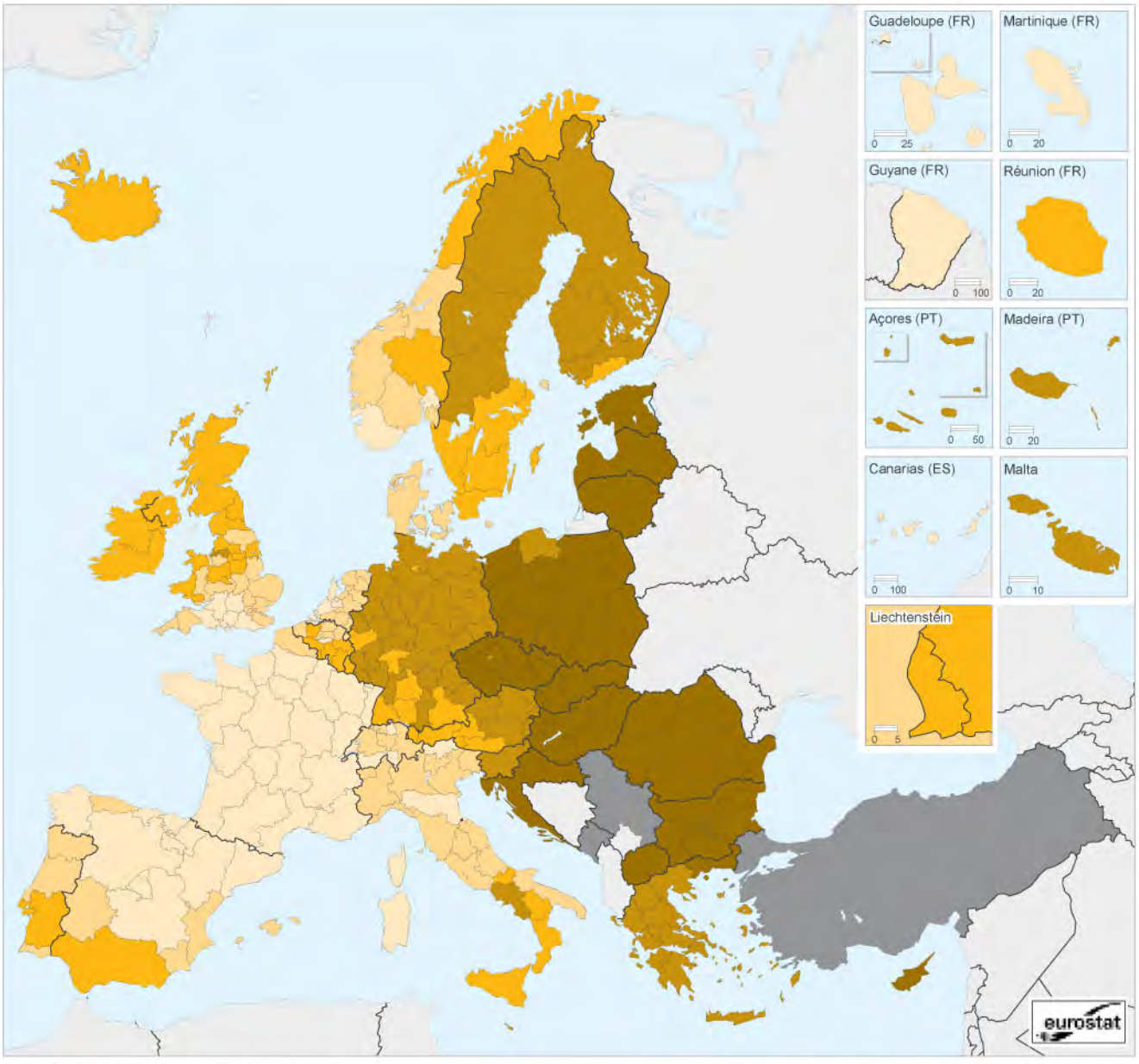
The pattern for women was similar (although rates were at a lower level). The three Bulgarian regions of Severozapaden (567.9 per 100 000 female inhabitants), Yugoiztochen (538.8) and Severen tsentralen (524.8) all recorded high female standardised death rates from diseases of the circulatory system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

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

Diseases of the respiratory system

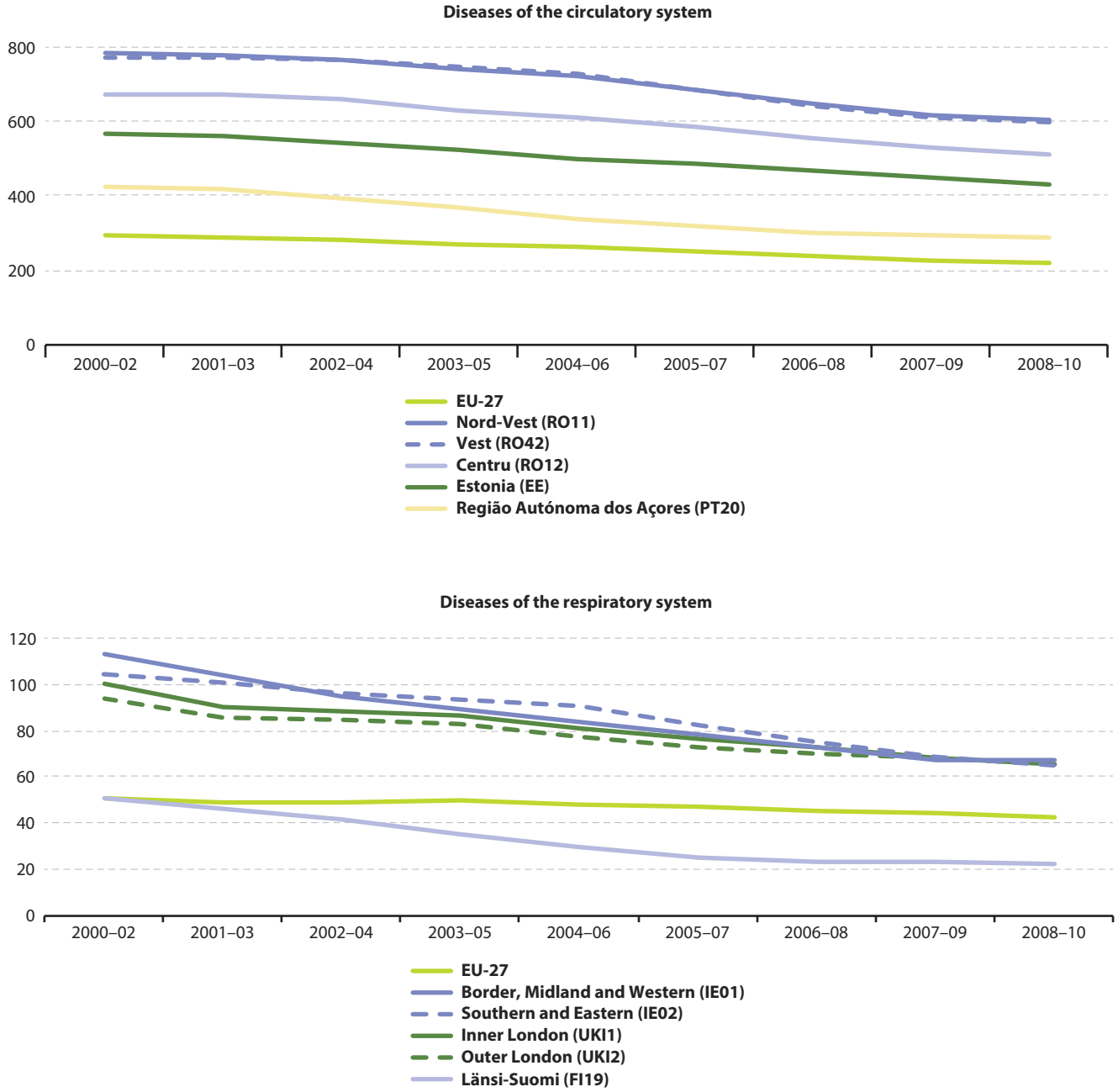
Respiratory diseases include infectious acute respiratory diseases (such as influenza and pneumonia) and chronic lower respiratory diseases (such as asthma). Diseases of the respiratory system mainly affected older people, as almost 9 out of 10 deaths from these diseases occurred among those aged

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



(1) EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.
Source: Eurostat (online data code: hlth_cd_ysdr1)

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



(1) Based on the five regions with the largest reductions in death rates (subject to data availability); EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.
Source: Eurostat (online data code: hlth_cd_ysdr1)

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

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

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

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

On the basis of a comparison of NUTS level 2 regions, the widest differences in death rates between the sexes were often recorded in those regions that recorded the highest death rates: namely the Portuguese Região Autónoma da Madeira and Região Autónoma dos Açores, the Spanish overseas regions of the Ciudad Autónoma de Ceuta and the Ciudad Autónoma de Melilla, as well as the Polish region of Warminsko-Mazurskie and the Belgian region of Province/Provincie Hainaut. Standardised death rates for men were more than four times as high as those for women in both Lithuania (4.3 times as high for men) and Estonia (4.1 times), while they diverged by almost as much in Latvia (3.9 times). The difference in death rates was much lower in most Greek and Swedish regions, as well as in the French overseas regions. In the Greek capital city region of Attiki there was only a small difference between standardised male and female death rates for diseases of the respiratory system (59.2 deaths per 100 000 male inhabitants and 56.5 deaths per 100 000 female inhabitants). A similar pattern was observed in Iceland, as the standardised female death rate was 41.4 deaths per 100 000 female inhabitants in 2007–09, compared with a ratio of 42.2 for men; relatively small differences were also apparent across the seven level 2 Swiss regions.

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

Cancer (malignant neoplasms)

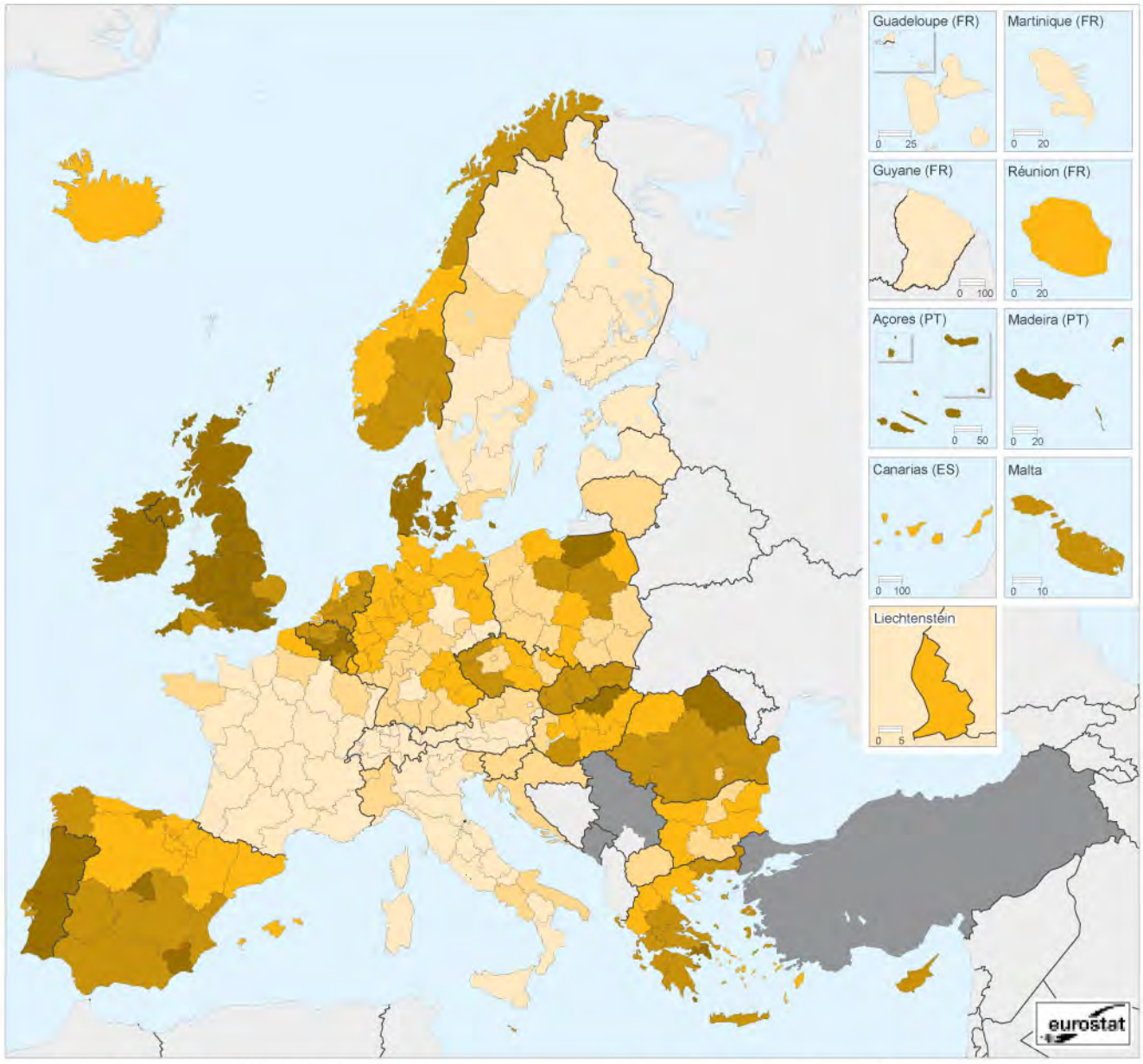
There are many different types of cancer (malignant neoplasms) including those of the larynx, trachea, bronchus, lung, colon, breast or prostate, as well as lymphoid or haematopoietic cancers. The standardised death rate from cancer was 169.3 per 100 000 inhabitants between 2008 and 2010, with the rate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

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

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

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

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



(standardised death rate per 100 000 inhabitants)
EU-27 = 43.0

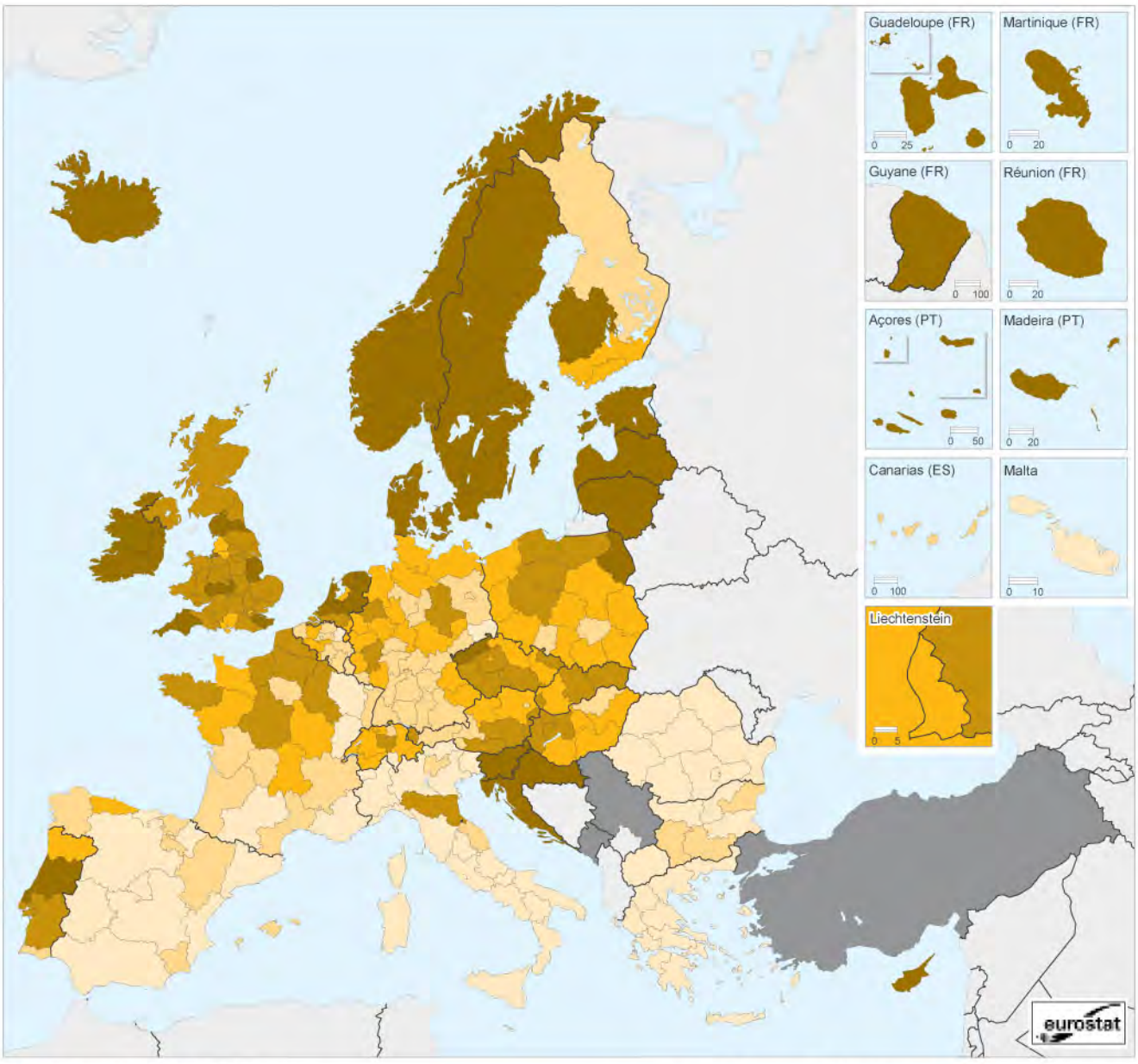
- <= 30.0
- 30.0 – 37.5
- 37.5 – 47.5
- 47.5 – 57.5
- > 57.5
- Data not available

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

0 200 400 600 800 km

(1) EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.
Source: Eurostat (online data code: hlth_cd_ysdr1)

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



(standardised death rate per 100 000 men)
EU-27 = 20.5

- <= 17.5
- 17.5 – 20.0
- 20.0 – 22.5
- 22.5 – 25.0
- > 25.0
- Data not available

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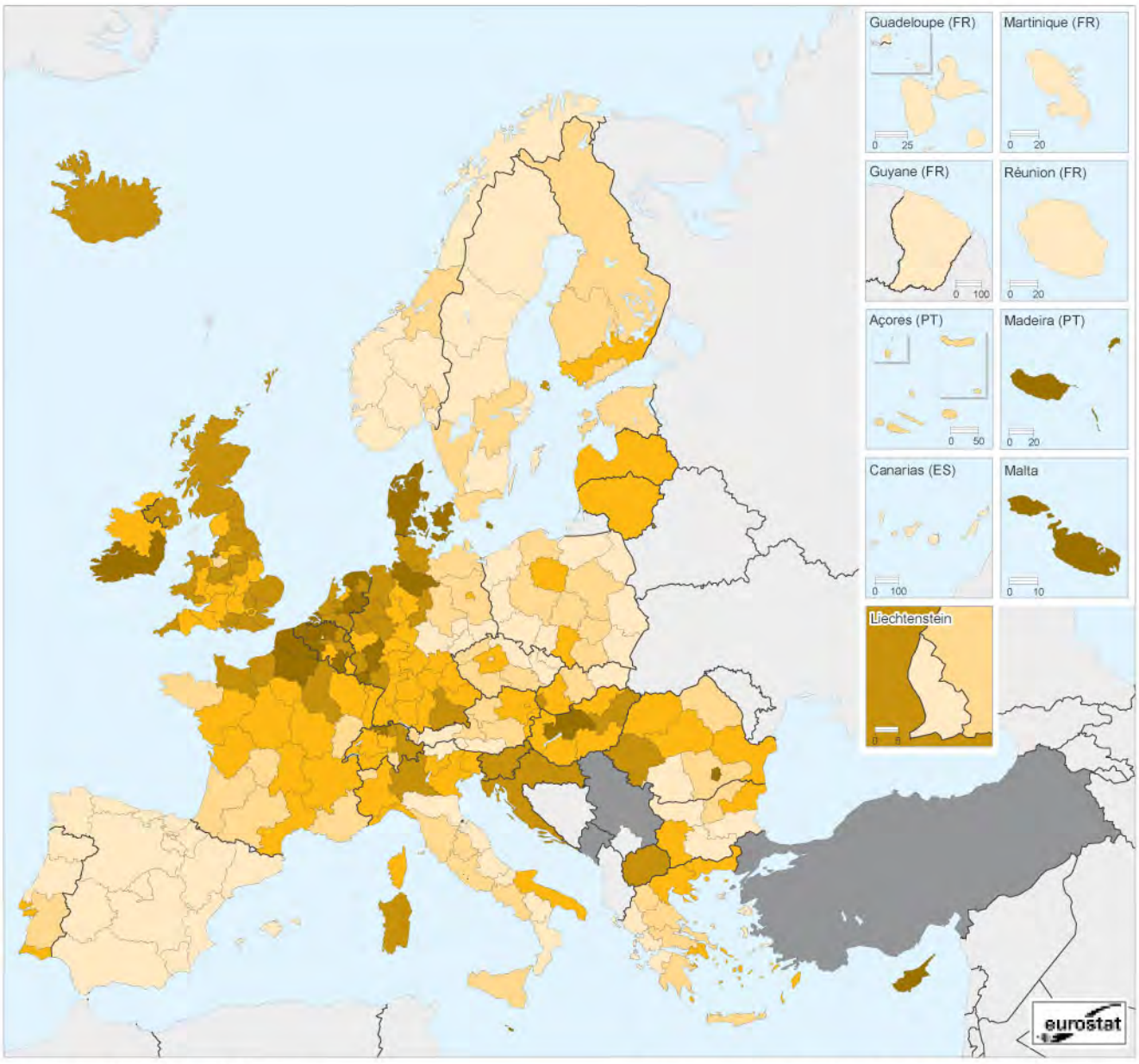
Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

(1) EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.
Source: Eurostat (online data code: hlth_cd_ysdr1)

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



(standardised death rate per 100 000 women)
EU-27 = 23.1

- <= 20.0
- 20.0 – 22.5
- 22.5 – 25.0
- 25.0 – 27.5
- > 27.5
- Data not available

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

0 200 400 600 800 km

(1) EU-27, Denmark, Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), provisional; Liechtenstein, 2010; Belgium, Denmark and Iceland, 2007–09; Scotland (UKM), by NUTS 1 region; Denmark, Slovenia and Croatia, national level.
Source: Eurostat (online data code: hlth_cd_ysdr1)

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

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

Hospital beds

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

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

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

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

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

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

Healthcare professionals

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

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

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

Data sources and availability

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

Causes of death

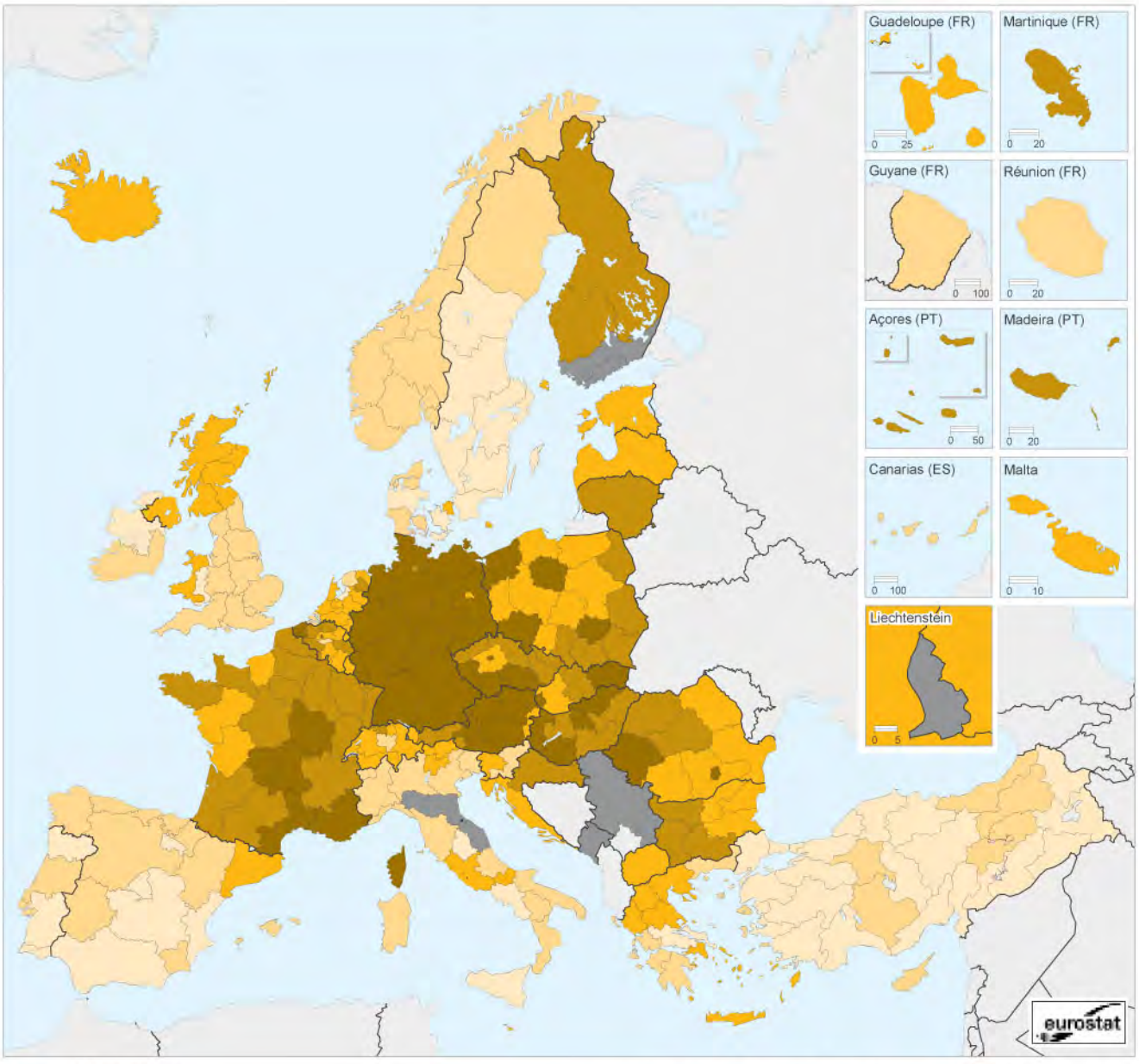
Statistics on causes of death are based on information from death certificates. These statistics record the underlying cause of death: the definition adopted by the World Health Assembly is 'the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances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

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

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

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

Map 3.5: Hospital beds, by NUTS 2 regions, 2010 (1)
(per 100 000 inhabitants)



(per 100 000 inhabitants)
EU-27 = 538

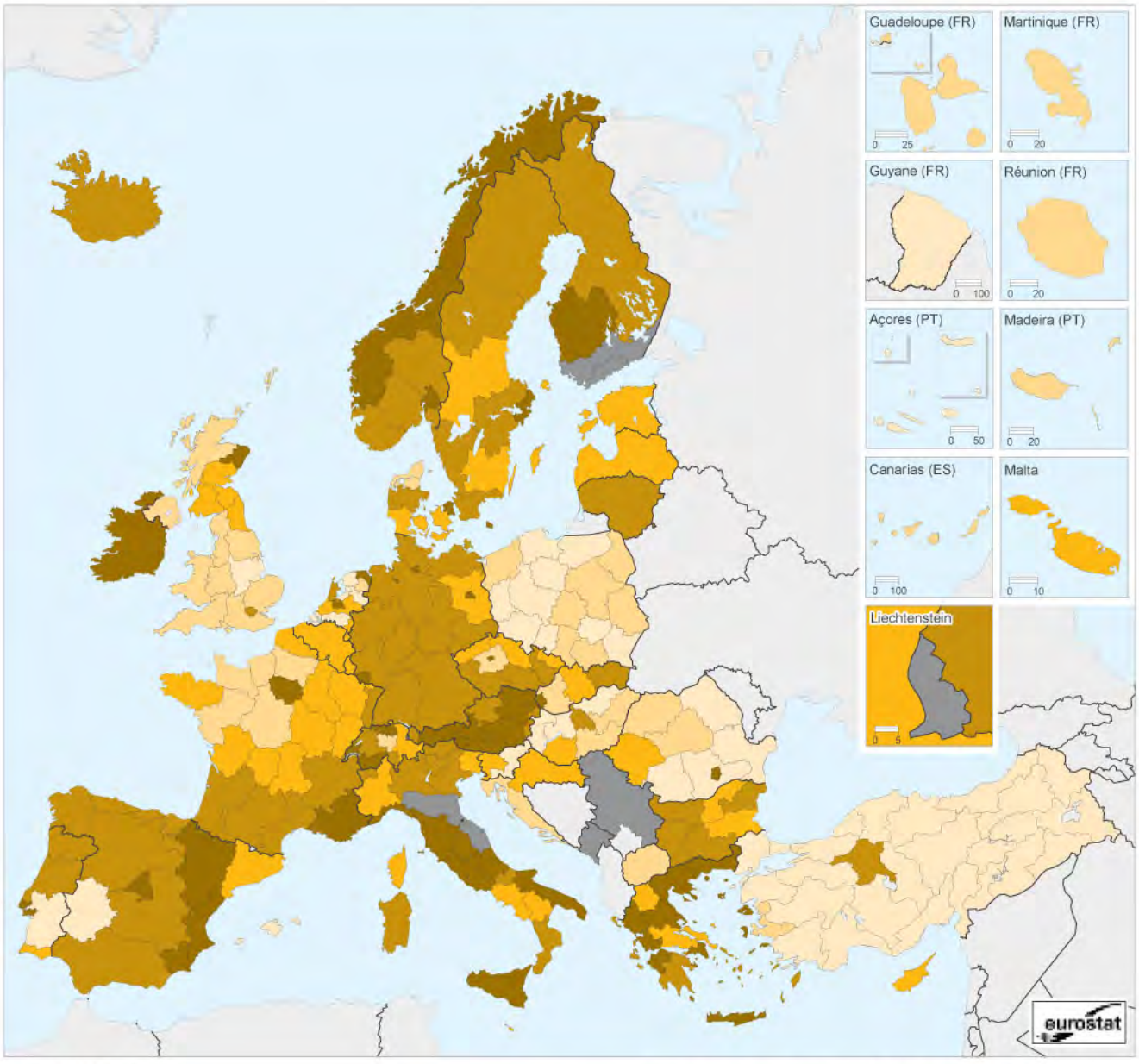
- <= 300
- 300 – 400
- 400 – 600
- 600 – 700
- > 700
- Data not available

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

0 200 400 600 800 km

(1) Greece and the United Kingdom, 2009; Iceland, 2007; the Netherlands, 2002; Spain, the Netherlands and Iceland, estimates; EU-27 and Portugal, provisional; Germany, by NUTS 1 regions; England (UKC to UKK) — average for NUTS regions UKC to UKK.
Source: Eurostat (online data code: hlth_rs_bdsrg)

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



(per 100 000 inhabitants)

- <= 225
- 225 – 275
- 275 – 325
- 325 – 400
- > 400
- Data not available

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

0 200 400 600 800 km

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

Healthcare

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

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

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

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

Context

Health is an important priority for Europeans, who expect to have a long and healthy life, to be protected against illnesses and accidents and to receive appropriate healthcare. Health issues cut across a range of topics — including consumer protection (food safety issues), workplace safety and environmental or social policies. The policy areas covered by these health-related issues fall under the 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 EU Member States, while the EU has a mandate to complement national action on health. The latter consists mainly of: protecting people from health threats and disease, promoting healthy lifestyles and helping national authorities in the EU cooperate on health issues.

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

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

The three strategic themes include:
- fostering good health in an ageing Europe;
- protecting citizens from health threats;
- looking to develop dynamic health systems and new technologies.

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

4 Education

Education, vocational training and, more generally, 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. Education is one of five pillars which are central to Europe's growth strategy, Europe 2020, and several of the indicators presented in this chapter are used to study the progress being made at a regional level in relation to a range of benchmark targets for the Europe 2020 initiative.

Main statistical findings

Figures for the EU-27 for 2010 indicate that there were around 93.1 million students enrolled in the regular education system covering all levels of education from primary to postgraduate studies; there were an additional 14.9 million young students enrolled in pre-primary education.

Participation of 4-year-olds in education

The legal age to start education varies across the EU Member States: in Luxembourg and in Northern Ireland (the 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 across 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 91.7 % of 4-year-olds were in pre-primary or primary education across the whole of the EU-27 in 2010. Participation rates of 4-year-olds in pre-primary or primary education were generally high — national averages of over 95 % in Belgium, Denmark, Germany, Ireland, Spain, France, Italy, Luxembourg, the Netherlands and the United Kingdom, as well as in Iceland and Norway. By contrast, Greece, Poland and Finland reported that fewer than 70 % of four year-olds were enrolled; lower rates were also recorded in the EFTA countries of Liechtenstein and Switzerland, as well as in the acceding and candidate countries of Croatia, the former Yugoslav Republic of Macedonia and Turkey.

There were 55 regions in the EU that reported more than 99.0 % of 4-year-old children attending pre-primary or primary education in 2011; most of these were in France (16 NUTS level 2 regions), Spain (13 regions), the Netherlands (seven regions) and the United Kingdom (seven NUTS level 1 regions), Belgium and Italy (five regions each), while there was also a single region in Denmark (Sjælland).

There were 14 regions in the EU where 65.0 % or less of 4-year-olds participated in pre-primary or primary education. The lowest participation rate for 4-year-olds was recorded in the northern Polish region of Warminsko-Mazurskie (50.4 %). The regions with relatively low levels of participation were predominantly found in Poland (11 regions), along with a single region from Slovakia (Východné Slovensko), as well as Greece and Finland for which only national data are available.

Among the EFTA regions, there were high participation rates for 4-year-olds in pre-primary or primary education in Iceland (national data for 2010) and across all seven Norwegian regions, with rates in excess of 95 %. By contrast, participation rates in Liechtenstein and six of the seven Swiss regions were relatively low, ranging from 62.0 % in the Région lémanique down to 16.4 % in Zentralschweiz. The only exception to this general pattern was the Swiss region of Ticino (which borders Italy), where the participation rate stood at 98.3 %.

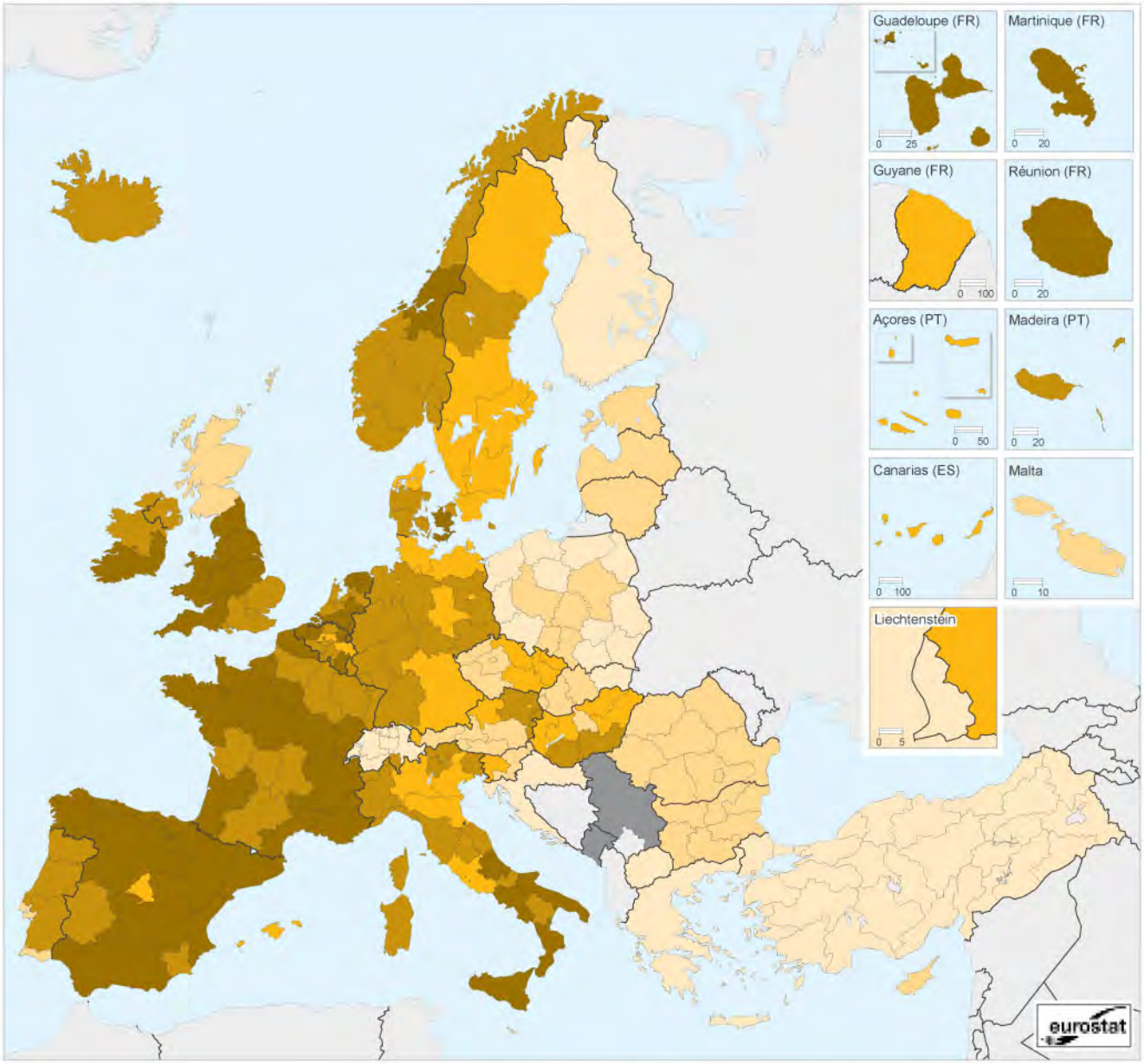
Each region within the acceding and candidate countries reported participation rates for 4-year-olds in pre-primary or primary education that were 65.0 % or less. Only national data are available for Croatia and the former Yugoslav Republic of Macedonia (data for 2010), where rates stood at 57.4 % and 24.0 % respectively. More than half of the 25 level 2 Turkish regions reported that less than 20.0 % of four year-olds participated in pre-primary or primary education in 2011. The lowest participation rate was recorded for the southern Turkish region of Gaziantep, Adiyaman, Kilis (9.7 %), while the second lowest rate was recorded for İstanbul (10.9 %).

Students aged 17 in education

The number of students aged 17 in education (all levels combined) in the EU-27 in 2010 was 5.2 million, equivalent to 91.7 % 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 within the EU in 2011, and this pattern was repeated across all of the EFTA regions — see Map 4.2. As such, for one reason or another, the vast majority of young people aged 17 remained in the education system at or even after the end of compulsory schooling. 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 19 regions in the EU where fewer than four out of five 17 year-olds remained in education in 2011. The highest number of such regions was recorded in Romania

Map 4.1: Participation rates of 4-year-olds in pre-primary and primary education (ISCED levels 0 and 1), by NUTS 2 regions, 2011 (1)
(% of 4-year-olds)



(% of four year-olds)
EU-27 = 91.7

- <= 65.0
- 65.0 – 90.0
- 90.0 – 95.0
- 95.0 – 99.0
- > 99.0
- Data not available

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

0 200 400 600 800 km

(1) EU-27, Denmark, Ireland, Greece, Latvia, Lithuania, Luxembourg, Malta, Sweden, the United Kingdom, Iceland, Liechtenstein and the former Yugoslav Republic of Macedonia, 2010; Germany and the United Kingdom, by NUTS 1 regions; Greece, Finland and Croatia, national level.
Source: Eurostat (online data code: educ_regind)

(five out of the eight NUTS level 2 regions in that country), while relatively low ratios were also recorded in the island regions of Malta (one region at this level of NUTS), the Illes Balears (Spain) and the Região Autónoma dos Açores (Portugal). Ratios of 80.0 % or less were also registered in three northern Italian regions (the Provincia Autonoma di Bolzano/Bozen, the Provincia Autonoma di Trento, as well as Lombardia) and three NUTS level 1 regions in the United Kingdom (the East Midlands; Yorkshire and the Humber; and Wales). There were five other countries that each reported one region with less than four out of five 17-year-olds remaining in education; they were: the Province/Provincie Vlaams-Brabant in Belgium, Yugoiztochen in Bulgaria, Střední Cechy in the Czech Republic, the overseas territory of 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 once they have passed the compulsory schooling age.

Among the EFTA regions, the lowest shares of 17-year-olds remaining in education were recorded in the relatively sparsely populated regions of Nord-Norge (Norway) and Iceland (national data for 2010 at this level), as well as in three regions running across the centre of Switzerland — from west to east, the Espace Mittelland, Zentralschweiz and Ostschweiz — although the shares were still well above 80.0 % in all of these regions. Among the acceding and candidate country regions, the proportion of 17-year-olds who remained in education was above 80.0 % in Croatia (national data) and three Turkish regions (including the capital city region of Ankara and two north-western regions of Bursa, Eskisehir, Bilecik and Tekirdag, Edirne, Kirklareli). There were four Turkish regions where the proportion of 17-year-olds who remained in education was 50.0 % or lower — they were all in the south and east of the country, namely: Sanliurfa, Diyarbakir; Mardin, Batman, Sirnak, Siirt; Agri, Kars, Igdir, Ardahan; and Van, Mus, Bitlis, Hakkari. The lowest ratio of 17-year-olds remaining in education was recorded in Van, Mus, Bitlis, Hakkari, where the share was only slightly more than one third (35.5 %) in 2011.

Early leavers from education and training

An indicator that presents information about early leavers from education and training tracks the proportion of individuals aged 18–24 who have finished no more than a lower secondary education, and who are not involved in further education or training: some 13.5 % of 18- to 24-year-olds in the EU-27 were classified as early leavers from education and training in 2011, with a somewhat higher proportion of male early leavers (15.3 %) compared with female early leavers (11.6 %). Europe's growth strategy, Europe 2020, has set an EU-27 target for the proportion of early leavers from education and training to be below 10 % by 2020; there are individual targets for each of the Member States that range from 5 % to 29 %.

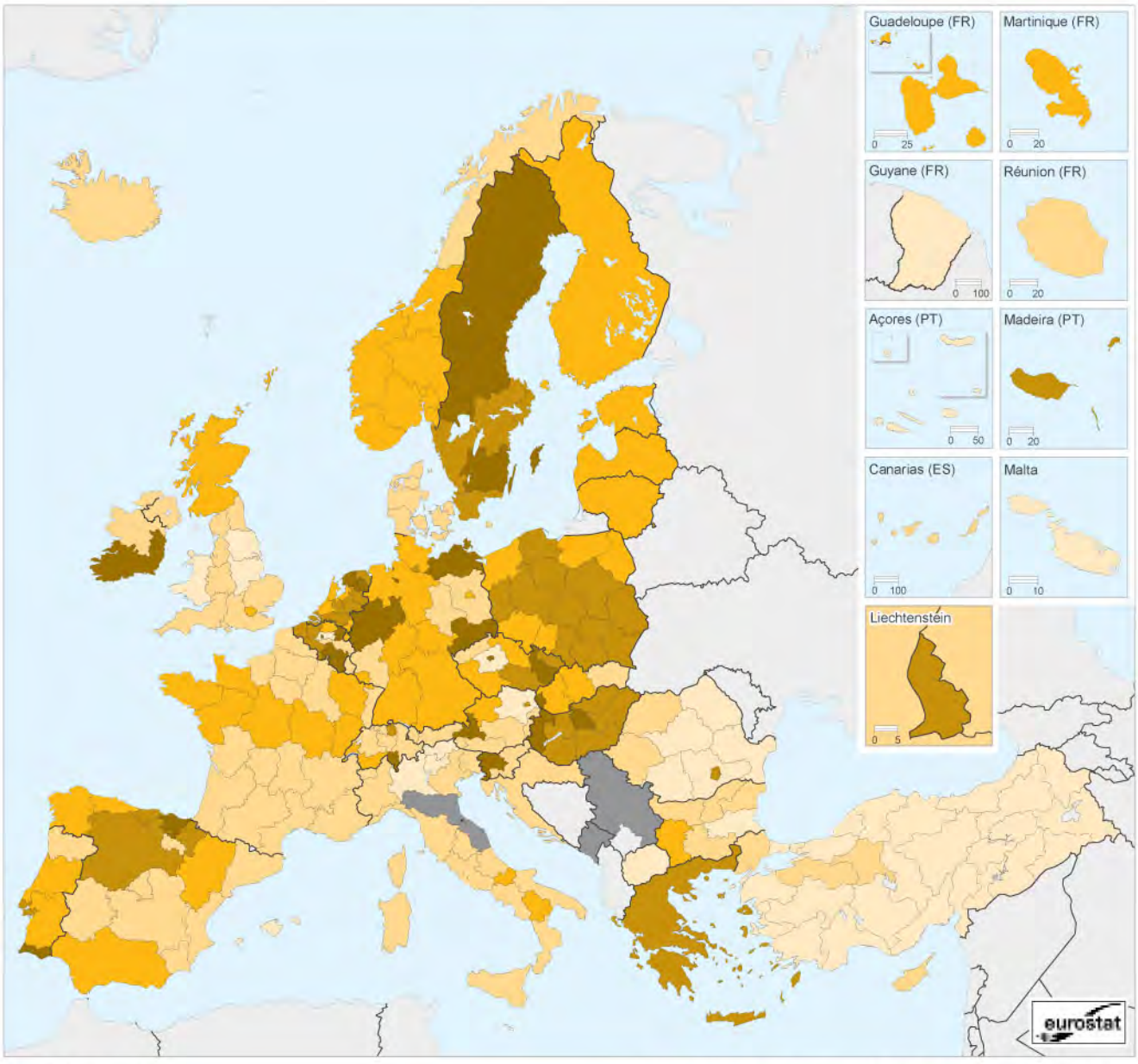
Map 4.3 shows that the proportion of early leavers from education and training varied significantly across the EU in 2011. There were 26 NUTS level 1 regions where no more than 1 in 10 of the population aged 18–24 were classified as early leavers from education and training (the first two shades in the map). Most of these 26 regions were concentrated in central and eastern Europe, where some of the lowest proportions of early leavers from education and training were found. This area spread from Lithuania down through the six Polish NUTS level 1 regions into the Czech Republic and Slovakia (both one region at this NUTS level) and the capital city region of Közép-Magyarország (Hungary) and continued through all three Austrian regions down into Slovenia. In total, these 26 regions were spread across 15 different EU Member States and also included three out of the four NUTS level 1 regions in the Netherlands, all three Swedish regions, as well as a single region from each of Belgium (Vlaams Gewest), Bulgaria (the capital city region of Yugozapadna i yuzhna tsentralna Bulgaria), Denmark (one region at this NUTS level), France (Ouest), Luxembourg (one region at this NUTS level) and Finland (only national data available).

There were only five regions where the share of early leavers from education and training was equal to or below 5.0 %, they were: Slovenia (4.2 %), the two Polish regions of Poludniowy and Centralny (both 4.6 %), the Czech Republic (4.9 %) and Slovakia (5.0 %).

In 11 NUTS level 1 regions across the EU, early leavers accounted for more than one fifth of the population aged 18–24; these regions were all located in southern Europe. They included: five of the Spanish regions (all except the capital city region of the Comunidad de Madrid and the Noreste region); all three regions in Portugal; the islands of Italy (Isole); Malta (one region at NUTS level 1); and the eastern part of Romania (Macroregiunea doi). The highest ratios for early leavers were recorded in three island regions, namely, the Portuguese islands of the Região Autónoma dos Açores (44.3 %) and the Região Autónoma da Madeira (37.3 %), as well as Malta (33.5 %; note that the Maltese series are under review), while two Spanish regions — the south of Spain (Sur) and the islands of the Canarias — were the only other regions where early leavers aged 18–24 accounted for more than 30.0 % of the population aged 18–24. Note that young persons who are officially residing at their parents' address in one of these regions may follow an educational course in another region 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.

Map 4.4 shows the change in the proportion of early leavers from education and training — the comparison is generally based on the 5-year period 2006–11. Across the whole of the EU-27, the proportion of early leavers fell by 2.0 percentage points from 15.5 % to 13.5 % by 2011. The biggest

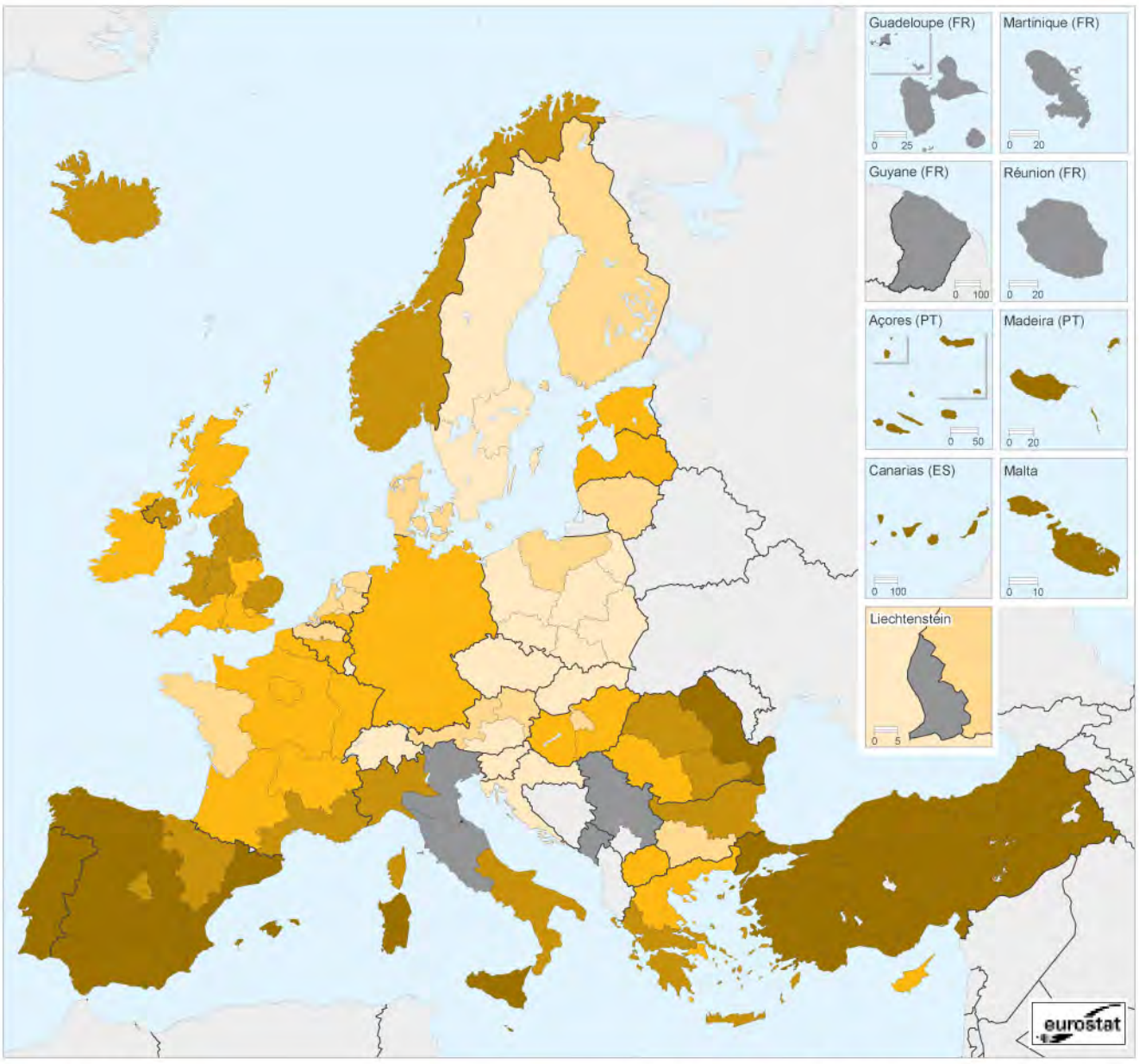
Map 4.2: Students aged 17 years in all levels of education (ISCED levels 0–6), by NUTS 2 regions, 2011 (1)
(% of 17-year-olds)



(1) Number of students aged 17 years divided by the resident population of 17-year-olds; EU-27, Denmark, Estonia, Ireland, Greece, France, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Sweden, the United Kingdom, Iceland, Liechtenstein and the former Yugoslav Republic of Macedonia, 2010; Germany and the United Kingdom, by NUTS 1 regions; Greece, Finland and Croatia, national level.

Source: Eurostat (online data code: educ_regind)

Map 4.3: Early leavers from education and training, by NUTS 1 regions, 2011 (1)
(% of 18- to 24-year-olds)



(% of 18–24 year-olds)
EU-27 = 13.5

- <= 7.5
- 7.5 – 10.0
- 10.0 – 15.0
- 15.0 – 20.0
- > 20.0
- Data not available

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

0 200 400 600 800 km

(1) Proportion of those aged 18–24 years having attained at most a lower secondary education and not being involved in further education or training; Região Autónoma da Madeira (PT3), 2010; Germany and Finland, national level; the Maltese series are under review by the Maltese Statistical Office and Eurostat — the review concerns the classification of certain qualifications at secondary level and the revision could mean a reduction of about 8 percentage points for all data.

Source: Eurostat (online data code: edat_lfse_16)

reductions were recorded for the three Portuguese regions — the largest decline being recorded for the mainland region of Continente, down 15.9 percentage points to a 22.3 % share. The three Portuguese regions were the only regions in the EU where the proportion of early leavers was reduced by 10.0 percentage points or more during the period 2006–11. There were five other regions across the EU where the proportion of early leavers was reduced by at least 5.0 percentage points: these included two regions in Spain (the Comunidad de Madrid and Sur), the East Midlands in the United Kingdom, Malta (one region at this level of NUTS; note again that the Maltese series are under review) and the northern Greek region of Voreia Ellada.

There were also considerable reductions in the number of early leavers from education and training in most Turkish regions; all but two of the regions in Turkey recorded a reduction of at least 5.0 percentage points. The two exceptions were the eastern region of Ortadogu Anadolu and the capital city region of Bati Anadolu, where rates were nevertheless reduced by 4.1 and 4.6 percentage points respectively. The largest reductions (more than 10.0 percentage points) in the rate of early leavers in Turkey were recorded at either end of the country: in the south-eastern region of Güneydogu Anadolu and in the western region of Ege (that includes the city of İzmir). There was also a considerable reduction in the proportion of early leavers from education and training in the former Yugoslav Republic of Macedonia where the share fell by 9.3 percentage points. Among the EFTA countries, the only region to record a reduction of at least 5.0 percentage points was Iceland (one region at this level of NUTS) where the share fell by 5.9 percentage points.

Across the 95 regions for which data are available in Map 4.4, there were 18 regions where the proportion of early leavers from education and training rose between 2006 and 2011; Croatia (one region at this level of NUTS) was the only region from outside of the EU. Most of the increases experienced between 2006 and 2011 were relatively small, as 13 regions (including Croatia) reported that their proportion of early leavers did not increase by more than 1.0 percentage points. The remaining five regions were located across five different Member States, with the highest increase (4.4 percentage points) being recorded for Macroregiunea unu (north-west and central Romania). The south-west of France (Sud-Ouest), Scotland in the north of the United Kingdom, Luxembourg (one region at this level of NUTS) and the Region Poludniowo-Zachodni in the south-west of Poland were the other regions where the proportion of early leavers rose by an amount in excess of 1.0 percentage points between 2006 and 2011.

Information relating to the proportion of early leavers may also be analysed with respect to gender differences. As noted above, the proportion of female early leavers from education and training was, on average, 3.7 percentage points lower for the EU-27 in 2011 than the corresponding ratio for men. The widest differences between the sexes were recorded in southern Europe, where the rates for male early leavers were generally much higher than those for females — see Figure 4.1. This was particularly the case across Greece, Spain, Italy and Portugal, as well as in the islands of Cyprus and Malta (each one region at this level of NUTS; data for the latter are under review), but was also true in Latvia and Lithuania (also one region for each country), the Méditerranée and Nord - Pas-de-Calais regions of France, the Région Wallonne in Belgium and Northern Ireland in the United Kingdom.

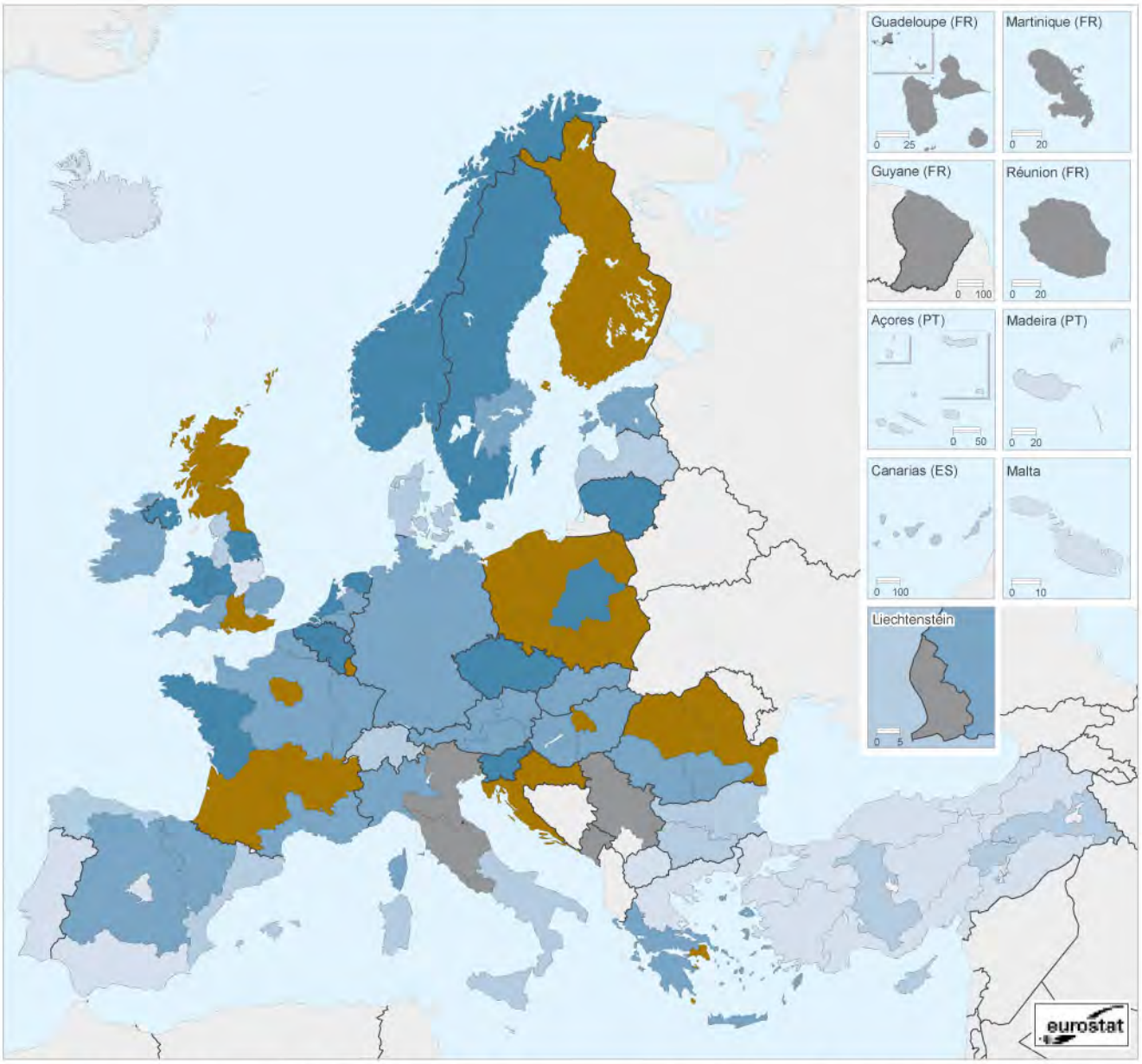
Among the 84 NUTS level 1 EU regions for which data are available, there were only six where the proportion of male early leavers was lower than the proportion of female early leavers in 2011. Both Bulgarian NUTS level 1 regions featured in this list, including the region with the most atypical distribution — Severna i yugoiztochna Bulgaria (north and south-west Bulgaria), where the proportion of male early leavers (15.6 %) was 3.0 percentage points lower than the corresponding rate for women (18.6 %). The southern Austrian region of Südösterreich reported that its proportion of male early leavers was 2.0 percentage points lower than the corresponding rate for females. The remaining four regions where rates were lower for men recorded only minor differences between the sexes; indeed, male rates were 0.5 or 0.6 percentage points lower in each of these regions: Yugozapadna i yuzhna tsentralna (covering the remainder of Bulgaria); two regions in the west of the United Kingdom (Wales and the West Midlands); and Dunántúl (western Hungary).

The proportion of early leavers was consistently higher among men than among women in each of the EFTA regions; this was particularly true in Norway and Iceland (one region at this level for each country), where the proportion of men leaving education and training early was 6.8 and 5.1 percentage points higher than the corresponding rate for women. The female rate for early leavers from education and training was also lower than that recorded for males in Croatia (only national data available). By contrast, each level 1 region in Turkey recorded a lower proportion of early leavers for men than for women; there were double-digit differences between the sexes in half of the Turkish regions, with the difference peaking at 16.8 percentage points in the north-eastern region of Kuzeydogu Anadolu. The male rate for early leavers from education and training was also lower than that recorded for females in the former Yugoslav Republic of Macedonia (3.3 points difference).

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 2010 (the 2009/10 academic year), the number of students enrolled in tertiary education in the EU-27 stood at 19.8 million; this was equivalent to 62.7 % of all persons aged 20–24.

Map 4.4: Change in proportion of early leavers from education and training, by NUTS 1 regions, 2006–11 (1)
(percentage points difference between 2011 and 2006, % of 18- to 24-year-olds)



(percentage points difference between 2011 and 2006, % of 18–24 year-olds)
EU-27 = -2.0

- <= -5.0
- -5.0 – -3.0
- -3.0 – -1.5
- -1.5 – 0.0
- > 0.0
- Data not available

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

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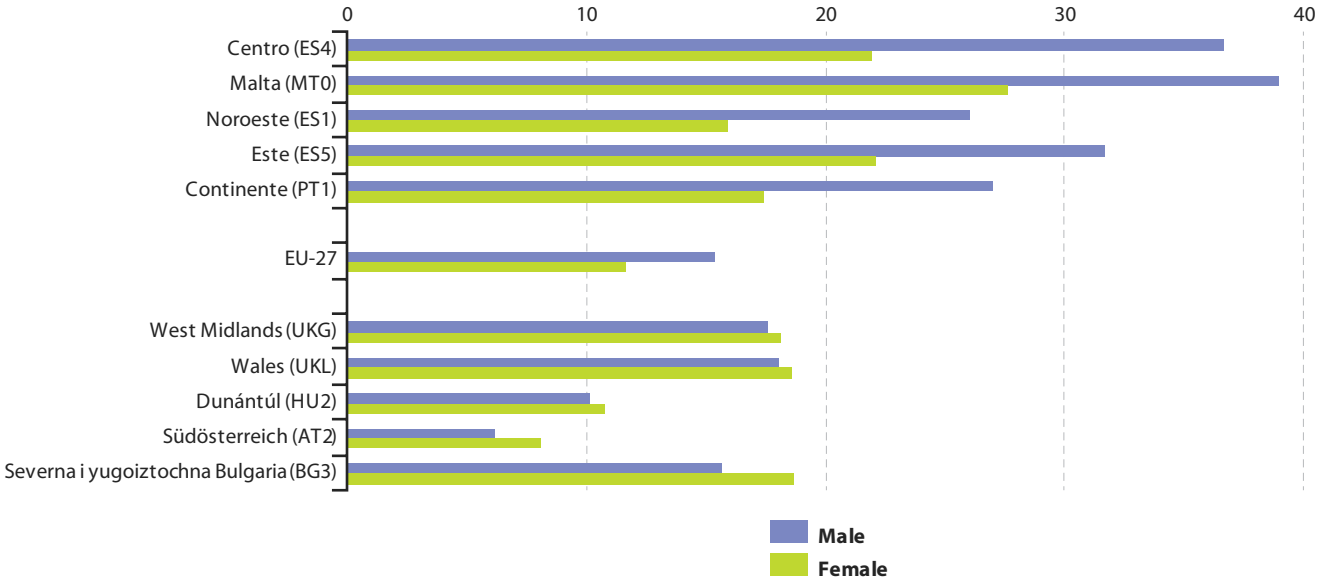
(1) Czech Republic, Denmark, Romania, Sweden, the United Kingdom and Croatia, 2007–11; Luxembourg, 2009–11; Região Autónoma da Madeira (PT3), 2006–10; the Netherlands, 2006–09; Germany and Finland, national level; the Maltese series are under review by the Maltese Statistical Office and Eurostat.
Source: Eurostat (online data code: edat_lfse_16)

Figure 4.1: Early leavers from education and training, NUTS 1 regions with atypical gender gaps, 2011 (1) (%)



(1) Based on the five regions with the biggest gender gaps in both directions (subject to data availability); Rheinland-Pfalz (DEB), Luxembourg (LU0), Südösterreich (AT2) and Northern Ireland (UKN), 2010; Berlin (DE3), 2009; Finland, national level; the Maltese series are under review by the Maltese Statistical Office and Eurostat — the review concerns the classification of certain qualifications at secondary level and the revision could mean a reduction of about 8 percentage points for all data.
Source: Eurostat (online data code: edat_lfse_16)

Map 4.5 shows the number of students enrolled in a university or similar (tertiary level) education in each region relative to the number of residents aged 20–24 in the same region: this gives an idea of how attractive each region is to tertiary students. Note that it is possible that some students are not resident in the region where they study. 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; these high ratios reflect the fact that these regions attract considerable numbers of students from other regions. Note that with the promotion of education and learning for all members of society, tertiary level students may increasingly fall outside of the traditional 20- to 24-year-old age group (used as the denominator for this ratio).

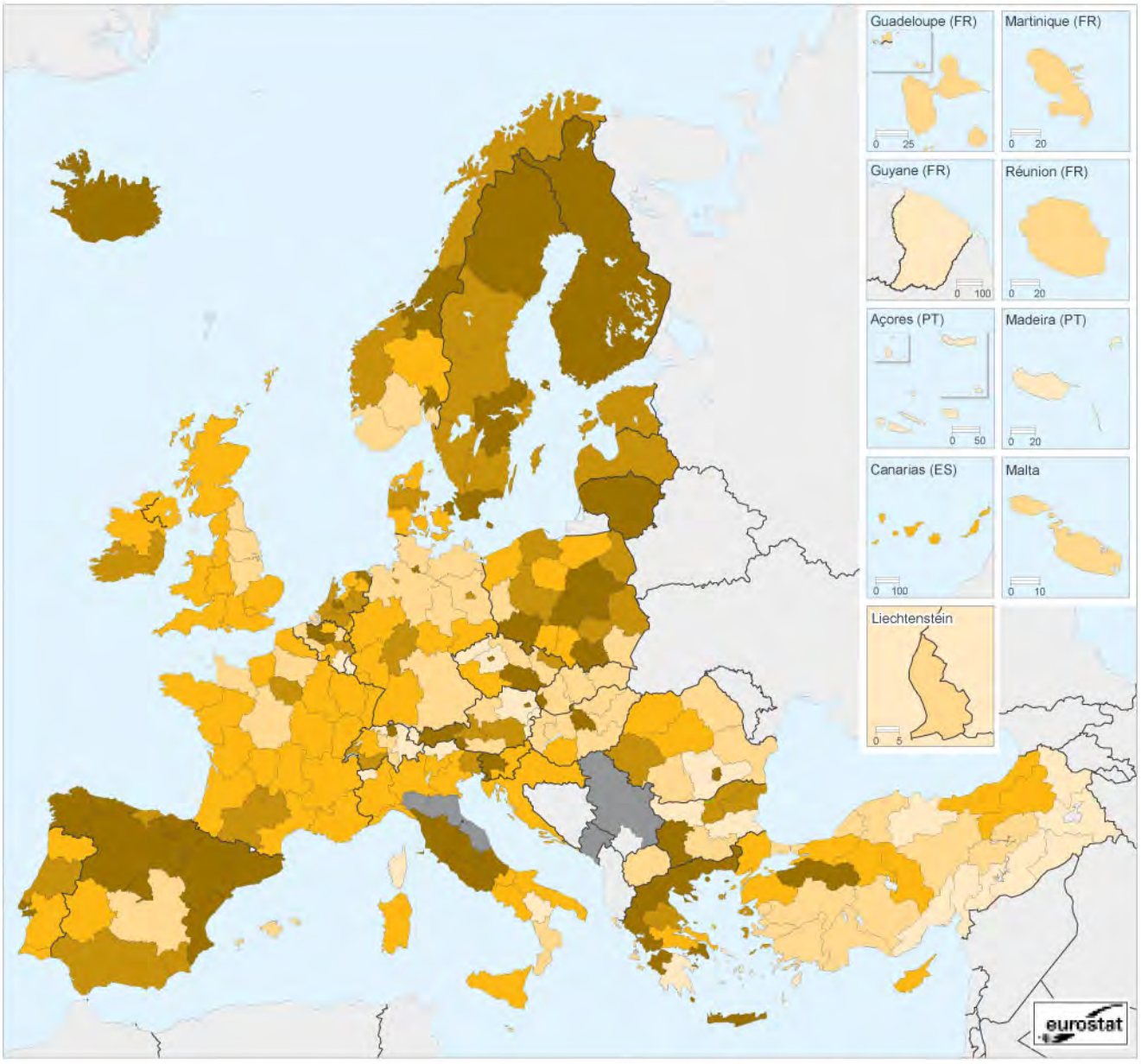
Of the 16 regions across the EU that reported more students enrolled in tertiary education than residents aged 20–24 in 2010/11, a majority (11) were capital city regions: Praha (the Czech Republic), Bratislavský kraj (Slovakia), Bucureşti - Ilfov (Romania), Wien (Austria), the Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (Belgium, data are for 2009/10), Mazowieckie (Poland), Zahodna Slovenija (Slovenia), the Comunidad de Madrid (Spain), Lisboa (Portugal), Attiki (Greece, data are for 2008/09) and Közép-Magyarország (Hungary). Four of the five remaining regions across the EU that reported more tertiary level students than residents aged 20–24 were in northern and western Greece — each reporting a ratio of students in tertiary education to residents aged 20–24 that was higher than in the capital city region of Attiki; the fifth region was in Belgium (the Province/Provincie Brabant Wallon).

Capital city regions also reported the highest concentration of tertiary students in Bulgaria, Denmark, Ireland, France, Italy and the United Kingdom, although their ratios were below 100 %. As such, Germany was the only large Member State to report its most dense concentration of tertiary students outside of the capital city region, as Hamburg (75.4 %) and Bremen (71.0 %) recorded ratios that were higher than that recorded in Berlin (65.7 %); the other exceptions to this general pattern were the Netherlands (where Groningen had the highest concentration of tertiary students (90.3 %)), and in the far north of Sweden (where Övre Norrland had the highest concentration (97.5 %)).

Within the EFTA countries, the highest ratios of students in tertiary education as a percentage of the population aged 20–24 were recorded in the Norwegian regions of Trøndelag and Oslo og Akershus (where shares rose above 100 %) and the Swiss region of Zürich (97.9 %).

In Turkey there was a particularly high concentration of tertiary students in Bursa, Eskişehir, Bilecik — this may be attributed to there being an open university in Eskişehir, where a high proportion of students are enrolled on distance learning courses. Otherwise, the ratio of students enrolled in tertiary education to residents aged 20–24 was below 60 % for all of the remaining regions in the candidate and accession countries.

Map 4.5: Total number of students in tertiary education (ISCED levels 5 and 6), as a percentage of the population aged 20–24, by NUTS 2 regions, 2011 (1)
(%)



(1) Total number of tertiary students divided by the resident population of 20- to 24-year-olds; data covers enrolments at regional level in school year 2010/11: Belgium, Denmark, Estonia, Ireland, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Sweden, the United Kingdom, Iceland, Liechtenstein and the former Yugoslav Republic of Macedonia, 2009/10; Greece, 2008/09; Germany and the United Kingdom, by NUTS 1 regions; Finland and Croatia, national level.
Source: Eurostat (online data code: educ_regind)

Tertiary educational attainment

The final three maps in this chapter provide information relating to the proportion of the population that has attained a higher level of education — in other words, a university or similar (tertiary level) education. Map 4.6 gives an indication of recent tertiary educational attainment levels among those aged 30–34. Map 4.7 presents information on the change in levels of tertiary educational attainment among the same age group, based upon an analysis of differences between 2006 and 2011. Map 4.8 presents information on a wider age group, namely those aged 25–64, presenting data for the proportion of the working age population that attained a tertiary education.

In 2011, for the EU-27 as a whole, just over one third (34.6 %) of 30- to 34-year-olds had completed tertiary education. These figures support the premise that a rising proportion of the EU's population is studying to a higher level — in keeping with one of the Europe 2020 targets, namely that by 2020 at least 40 % of persons aged 30–34 in the EU-27 should have attained a tertiary level education.

Map 4.6 shows that in 2011 there were 30 regions in the EU (among the 91 NUTS level 1 regions for which data are available) which recorded in excess of 40 % of their population aged 30–34 having attained a tertiary level of education. Among these, there were six regions from the United Kingdom, four each from Spain and France, all three regions from Belgium, two of the three Swedish regions, and a single region each from Germany, Hungary, the Netherlands and Poland. Denmark, Estonia, Ireland, Cyprus, Lithuania and Luxembourg also reported that more than 40 % of their population aged 30–34 had attained a tertiary level education (each of these countries is a single region at this level of NUTS), as did Finland (for which only national data are available).

Given that most persons aged 30–34 will have completed their tertiary education prior to the age of 30, this indicator may be used to assess the attractiveness (or pull effect) of regions with respect to the employment opportunities they may offer graduates. There were seven regions in the EU where more than half of the population aged 30–34 had attained a tertiary education level, with graduates in the United Kingdom drawn to London, the neighbouring South East (of England) and to Scotland, while those in Spain were attracted to the capital city region of the Comunidad de Madrid and to the Noreste (which includes the cities of Bilbao, Donostia-San Sebastián and Zaragoza). The other two regions that reported shares of more than 50.0 % were also capital city regions, namely, the Île de France (which includes Paris and its surrounding area) and Östra Sverige (which includes Stockholm) in eastern Sweden.

By contrast, there were six regions where less than one in five persons aged 30–34 had attained a tertiary level education in 2011. Three of these six regions were located in Romania (with shares of 16.5 % to 18.0 %): the only NUTS level 1 Romanian region to be an exception was the capital city region of Macroregiunea trei. Two regions were in Italy including the region with the lowest ratio across the whole of the EU, namely Isole (16.1 %) which includes Sardinia and Sicily; the other Italian region was the south (Sud, 16.6 %). The sixth and final region was Saarland in Germany (19.1 %).

Bati Anadolu (23.6 %) — which includes the Turkish capital city of Ankara — was the only Turkish region to report that more than one in five of its residents aged 30–34 had attained a tertiary level education. By contrast, the lowest ratios presented in Map 4.6 were recorded for the north-east of Turkey (Kuzeydogu Anadolu), where only just over 1 in 10 (10.2 %) of the population aged 30–34 had attained a tertiary level education.

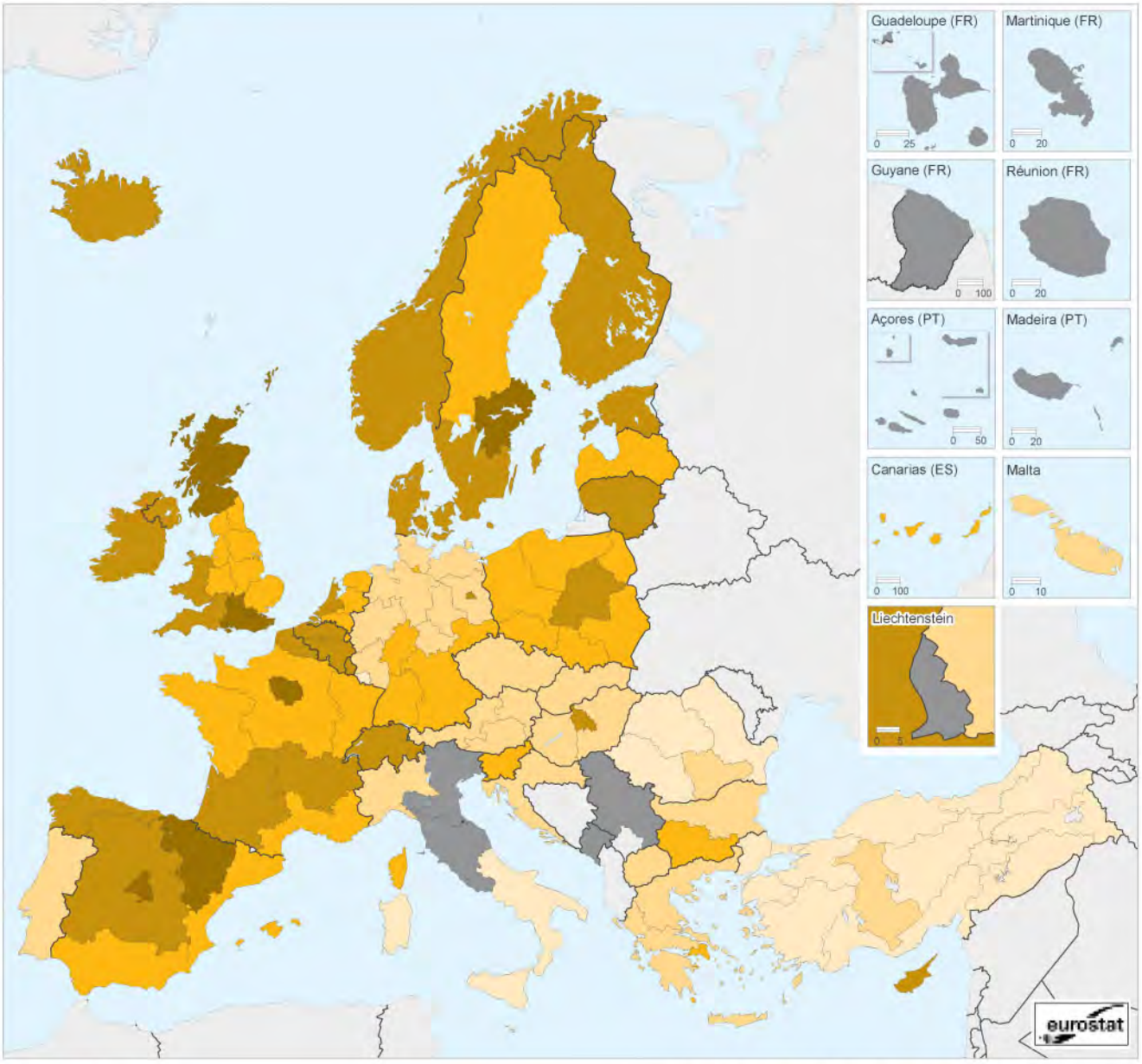
The penultimate map on education shows the change in the proportion of residents aged 30–34 having attained a tertiary level of education over the period 2006–11. Across the whole of the EU-27, this proportion increased by 5.7 percentage points over the period under consideration, such that 34.6 % of the population aged 30–34 had completed a tertiary education level by 2011. If this rate of change is maintained through to 2020, then the Europe 2020 target of at least 40 % of EU-27 residents aged 30–34 attaining a tertiary level education by 2020 should be attained.

Latvia (national data at this level of NUTS) reported the most rapid increase in its proportion of residents aged 30–34 with a tertiary level education, their share rising by 16.5 percentage points between 2006 and 2011. There were 12 other regions in the EU where double-digit percentage point increases were recorded, including all six NUTS level 1 regions in Poland, four regions in the United Kingdom (including London), the capital city region of Hungary (Közép-Magyarország) and the Czech Republic (one region at this level of NUTS).

By contrast, there were eight regions where the proportion of residents aged 30–34 having attained a tertiary level education declined during the period 2006–11. None of the reductions were particularly large, as the most sizeable reduction was the decline of 0.7 percentage points recorded for Südösterreich. Among the seven other regions, two were in France (including the capital city region of Île de France) and there were also the two island Member States of Cyprus and Malta, as well as Vlaams Gewest (Belgium), Mecklenburg-Vorpommern (Germany) and the whole of Finland (for which only national data are available).

Map 4.8 shows the proportion of the population aged 25–64 in 2011 who had successfully completed a tertiary level education. The demographic structure of each region has some influence on this measure, as younger generations tend to report higher levels of educational attainment than older persons (due to a rising share of the population studying for longer and to higher levels). In 2011, an average of 26.8 %

Map 4.6: Persons aged 30–34 with tertiary education (ISCED levels 5 and 6) attainment, by NUTS 1 regions, 2011 (1)
(% of 30- to 34-year-olds)



(% of 30–34 year-olds)
EU-27 = 34.6

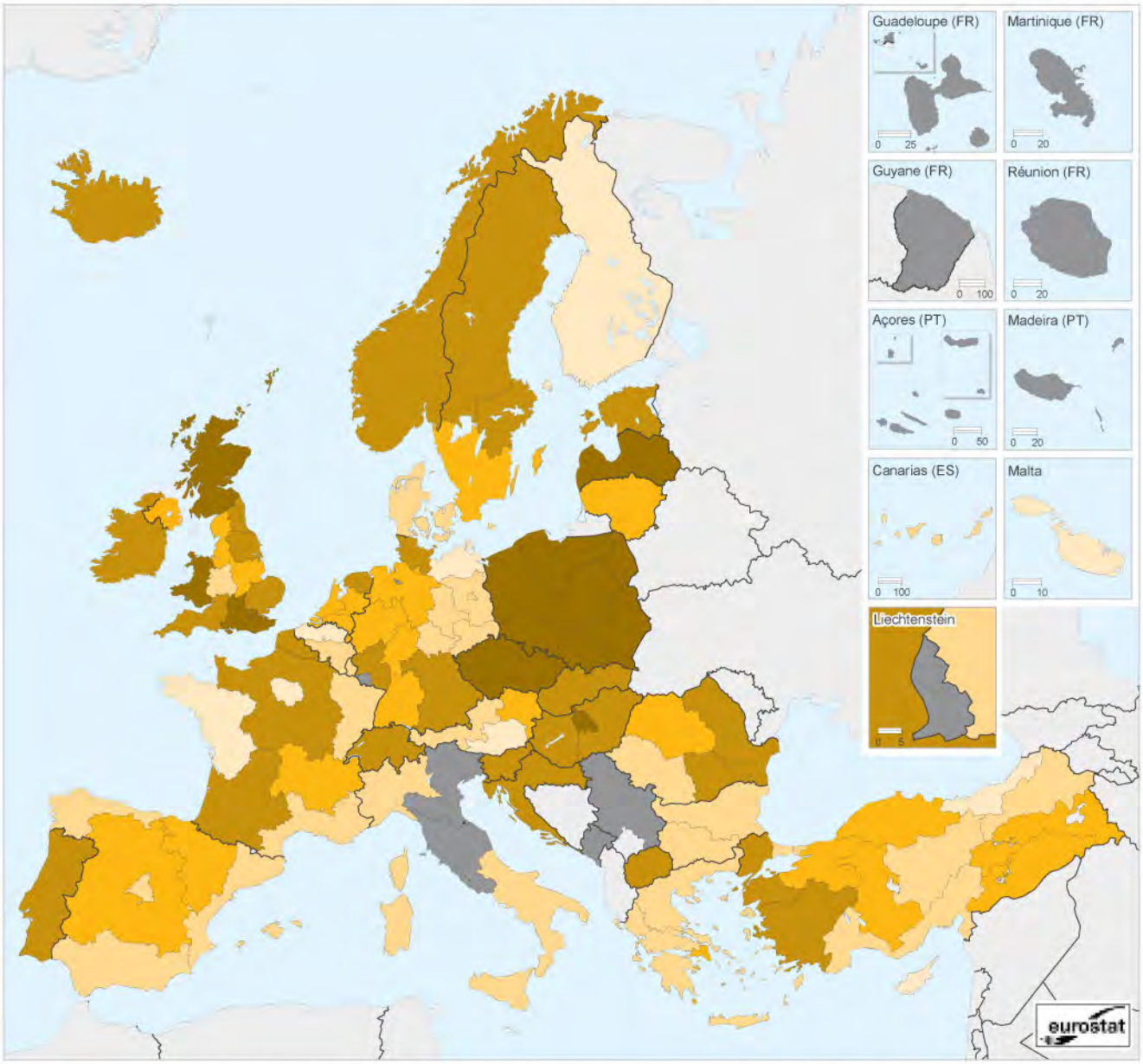
- <= 20.0
- 20.0 – 30.0
- 30.0 – 40.0
- 40.0 – 50.0
- > 50.0
- Data not available

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

0 200 400 600 800 km

(1) Bremen (DE5) and Saarland (DEC), 2004; Sweden, provisional; Finland, national level.
Source: Eurostat (online data code: edat_lfse_12)

Map 4.7: Change in proportion of persons aged 30–34 with tertiary education (ISCED levels 5 and 6) attainment, by NUTS 1 regions, 2006–11 (1)
(percentage points difference between 2011 and 2006, % of 30- to 34-year-olds)



(percentage points difference between 2011 and 2006, % of 30–34 year-olds)
EU-27 = 5.7

- <= 0.0
- 0.0 – 4.0
- 4.0 – 6.0
- 6.0 – 10.0
- > 10.0
- Data not available

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

0 200 400 600 800 km

(1) Denmark, Sachsen-Anhalt (DEE), Romania, Sweden and Croatia, 2007–11; Luxembourg, 2009–11; Sweden, provisional; Finland, national level.
Source: Eurostat (online data code: edat_lfse_12)

of the EU-27's working age population (25–64 years) had attained a tertiary level of education. This can be compared with the corresponding share (34.6 %) for 30- to 34-year-olds in order to show the differences in levels of attainment between the generations.

There were 39 NUTS level 2 regions in the EU (out of a total of 258 regions for which data are available) where more than 35.0 % of the population aged 25–64 had completed a tertiary level education. As with the analysis for those aged 30–34, those regions with the highest shares were often characterised as being capital city regions or other densely populated urban regions; these regions are likely to be more attractive to highly qualified persons with respect to the employment opportunities they can potentially offer. The United Kingdom reported 15 regions with more than 35.0 % of the population aged 25–64 having completed a tertiary level of education, while there were four regions in each of Belgium and Spain, two in each of Germany, France, the Netherlands and Sweden, and a single region in the Czech Republic, Denmark, Ireland and Slovakia. The pull of capital city regions was apparent as they featured in each of the 11 Member States that reported at least one region with more than 35.0 % of its resident population aged 25–64 having completed a tertiary level education. In addition, the whole of Estonia, Cyprus and Luxembourg had shares above 35.0 % (all three of these countries are covered by a single region at NUTS level 2), as did Finland (for which there is only national data available).

The highest share of the population aged 25–64 having completed a tertiary level education was recorded for Inner London (the United Kingdom, 59.7 %), while the Belgian region of the Province/Provincie Brabant Wallon (to the south of Brussels) had the second highest share (55.7 %) and was the only other region in the EU to report that a majority of its working age (25–64) population had attained a tertiary level of education. Outside of the EU Member States, Oslo og Akershus (the capital city region of Norway) and Zürich (Switzerland) reported the highest shares of residents aged 25–64 who had attained a tertiary level of education (48.8 % and 42.6 % respectively); there were two additional Norwegian regions and two additional Swiss regions that reported shares above 35.0 %.

At the bottom end of the ranking, 75 regions in the EU reported that 20 % or less of their resident population aged 25–64 had attained a tertiary level education. Among these, 19 regions were in Italy (every Italian region for which data are available), eight were in Austria (all but the capital city region of Wien), seven each were in the Czech Republic, Romania and Greece (all except the capital city regions of Praha and Bucuresti – Ilfov, and just over half of all the regions in Greece), six each were in Hungary and Portugal (all except the capital city regions of Közép-Magyarország and Lisboa), four each were in Bulgaria and Poland, three from Slovakia (all except the capital city region of Bratislavský kraj), two from France and one from Spain; Malta (which is just one NUTS level 2 region) also had a ratio below 20 %. Looking within each country, the regions which had the lowest proportion of working age residents with a tertiary level education were often concentrated in rural or remote regions — for example the islands, southern and mountainous regions of Italy, the island regions of the Região Autónoma dos Açores and the Região Autónoma da Madeira or the rural Alentejo region in Portugal, or regions in the east of Romania.

None of the EFTA regions reported that 20 % or less of their resident population aged 25–64 had attained a tertiary level education — the lowest share in the EFTA regions was recorded for the relatively mountainous region of Hedmark og Oppland, the only landlocked region in Norway (29.0 %). By contrast, Ankara (23.7 %) was the only region in the acceding and candidate countries (among those for which data are available) to report that more than one in five of its resident population aged 25–64 had attained a tertiary level education. There were nine level 2 regions in Turkey where there were fewer than 1 in 10 persons aged 25–64 with a tertiary level of education; the lowest share was recorded for the north-eastern region of Ağrı, Kars, Iğdır, Ardahan (6.7 %).

Data sources and availability

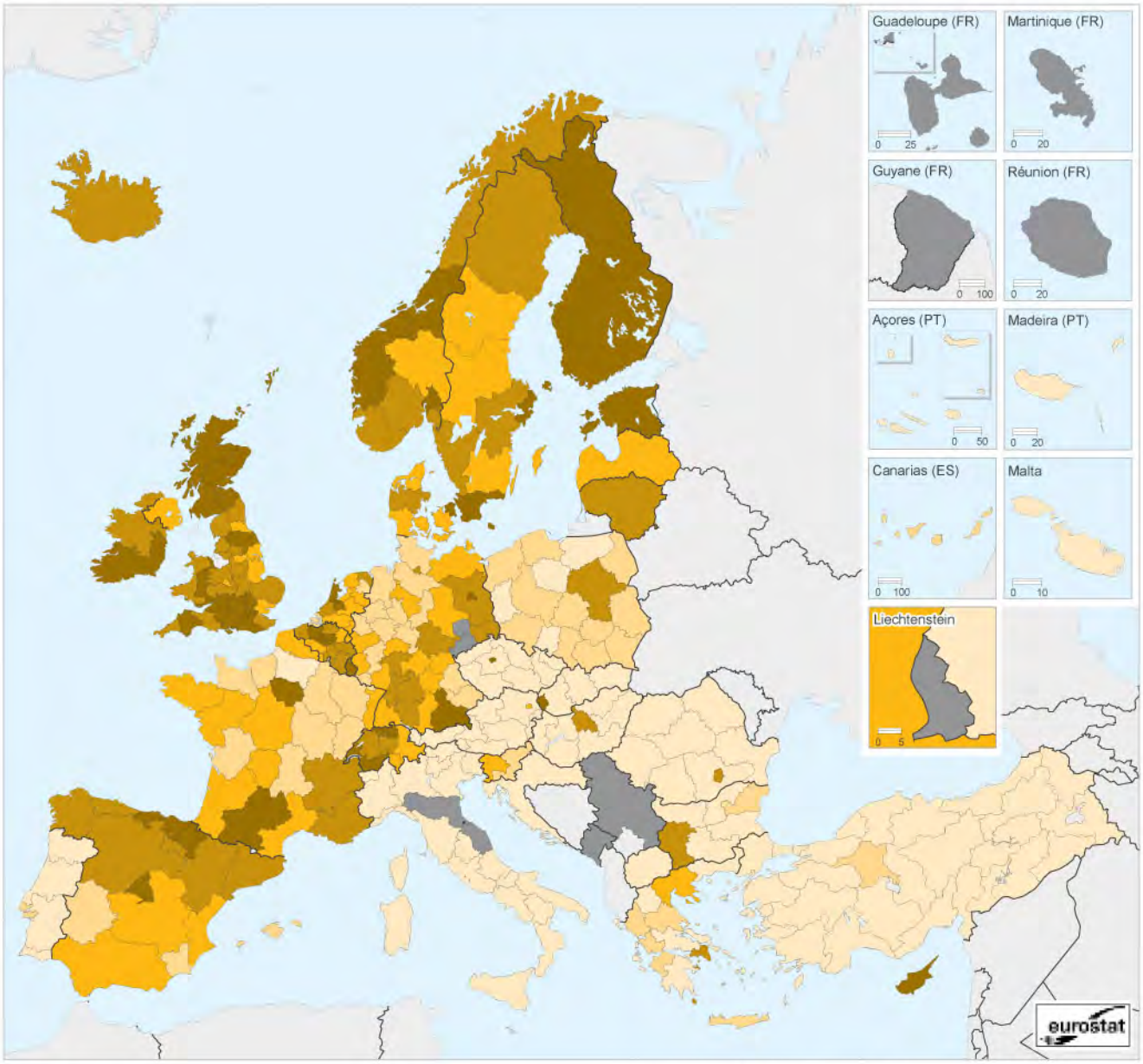
As the structure of education systems varies from one country to another, a framework for assembling, compiling and presenting regional, national and international education statistics and indicators is a prerequisite for comparability. The International Standard Classification of Education (ISCED) provides the basis for collecting data on education. ISCED-97 (the current version of a classification introduced in 1997) classifies all educational programmes by field of education and educational level; it presents standard concepts and definitions. A full description is available on the United Nations Educational, Scientific and Cultural Organisation (UNESCO) Institute for Statistics (UIS) website. ISCED-97 distinguishes seven levels of education:

- pre-primary education (level 0);
- primary education (level 1);
- lower secondary education (level 2), upper secondary education (level 3);
- post-secondary non-tertiary education (level 4);
- tertiary education (first stage) (level 5) and tertiary education (second stage) (level 6).

A review of the ISCED began in 2009 and the revised classification (ISCED 2011) was adopted by a UNESCO General Conference in November 2011. The first statistics to be based on ISCED 2011 are expected to be published in 2015.

Eurostat collates education statistics at a European level as part of a jointly administered exercise that includes the UNESCO-UIS, the Organisation for Economic Cooperation and Development (the OECD) and Eurostat — often referred

Map 4.8: Persons aged 25–64 with tertiary education (ISCED levels 5 and 6) attainment, by NUTS 2 regions, 2011 (1)
(% of 25–64 year-olds)



(% of 25–64 year-olds)
EU-27 = 26.8

- <= 20.0
- 20.0 – 25.0
- 25.0 – 30.0
- 30.0 – 35.0
- > 35.0
- Data not available

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

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(1) Sweden, provisional; Finland and Croatia, national level.
Source: Eurostat (online data code: edat_lfse_11)

to as the UOE data collection exercise. Otherwise, statistics on early leavers from education and training and on tertiary educational attainment are collected through the EU's labour force survey.

Statistics on enrolment in education include all initial education programmes and 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 18–24 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 question concerning the highest level of education or training attained) having attained a given education level.

Note that Maps 4.2 and 4.5 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 education level — this is particularly the case for higher education levels where student mobility becomes a more usual phenomenon.

Context

Diversity of national education systems

Age is generally the sole criterion for admission to full-time compulsory primary education, which starts at the age of 5 or 6 in most EU Member States, although Bulgaria, Estonia, Lithuania, Finland and Sweden have a compulsory starting age of 7, and compulsory education in Cyprus and Northern Ireland (the United Kingdom) starts before the age of 5. On average, full-time compulsory education lasts 9 or 10 years in most of the EU Member States, exceeding this in Latvia, Malta and most parts of the United Kingdom (11 years), Luxembourg, Portugal and Northern Ireland (12 years), Hungary and the Netherlands (13 years). In general, compulsory education is completed at the end of lower secondary education, although in some countries it continues into upper secondary education: full-time compulsory education continues beyond the age of 16 in Hungary, the Netherlands and Portugal as does part-time compulsory education in Belgium, Germany and Poland.

At the age of 16 or 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 8 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 15–17 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.

In February 2011, the European Commission adopted a communication titled 'Early childhood education and care: providing all our children with the best start for the world of tomorrow' (COM(2011) 66 final). 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 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.

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 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

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 a communication titled 'Tackling early school leaving: a key contribution to the Europe 2020 agenda' (COM(2011) 18 final). 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 was 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, the strategic framework for European cooperation in education and training (known as ET 2020), was adopted by the Council in May 2009. This strategy 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;
- an average of at least 15 % of adults aged 25–64 should participate in lifelong learning.

Two new benchmarks on learning mobility were adopted by the Council in November 2011:

- by 2020, an EU average of at least 20 % of higher education graduates should have had a period of higher education-related study or training (including work placements) abroad, representing a minimum of 15 European credit transfer and accumulation system (ECTS) credits or lasting a minimum of 3 months;
- by 2020, an EU average of at least 6 % of 18- to 34-year-olds with an initial vocational education and training qualification should have had an initial vocational education and training (VET) related study or training period (including work placements) abroad lasting a minimum of 2 weeks, or less if documented by Europass.

Another benchmark on employability was added in May 2012:

- by 2020, the share of employed graduates (20- to 34-year-olds) having left education and training no more than 3 years before the reference year should be at least 82 %.

Early leavers from education and training and tertiary educational attainment are headline indicators for the Europe 2020 strategy. They were selected to help to 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. It starts by providing an overview of employment, focusing on those aged 20–64, including an analysis of the regional dispersion of employment to see whether or not employment rates are moving closer together (cohesion) or further apart. The second section looks at regional unemployment, the change in unemployment rates and one of the main concerns of policymakers — youth unemployment. The analysis of unemployment also includes information relating to regional cohesion, looking at the dispersion of unemployment rates. There follows some information in relation to regional wages and salaries, with an analysis of gross average hourly earnings and gross average annual earnings per employee.

Main statistical findings

Employment rates

The EU-27 employment rate for the 20–64 age group increased from 66.5 % in 2000 to peak at 70.4 % in 2008 before the effects of the financial and economic crisis resulted in successive reductions to 69.1 % in 2009 and 68.5 % in 2010. There was almost no change in 2011, when the EU-27 employment rate for those aged 20–64 stood at 68.6 %. As such, the employment rate in 2011 remained well below one of the Europe 2020 headline indicators, namely that at least 75 % of the population aged 20–64 should be in employment by 2020.

Map 5.1 presents the distribution of employment rates for the 20–64 age group for NUTS level 2 regions, with the darkest colour shade indicating those regions that already exceeded the overall Europe 2020 target of 75 % — it should be noted that individual EU Member States have set national targets which may be higher or lower than the EU-27 target (taking into account the different situations in each Member State); there are no specific employment rate targets at a regional level.

In 2011, 75 of the 270 NUTS level 2 regions in the EU for which data are available for the employment rate reported that they had an employment rate that was above 75.0 %, while there was one additional region with an employment rate of exactly 75.0 %. At the other end of the range, there were 74 regions where employment rates were at least 10.0 percentage points below the target; among these were 14 regions where the employment rate was at least 20.0 percentage points 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 and Slovakia reporting an employment rate of more than 75.0 %. The highest employment rate in 2011 was registered in the Åland region of Finland (84.1 %), while there were seven other regions that had employment rates in excess of 80.0 %: three of these were in Sweden (Stockholm, Småland med öarna and Västsverige), three were in southern Germany (Freiburg, Tübingen and Oberbayern — the latter includes Munich) and one was in the Netherlands (Utrecht).

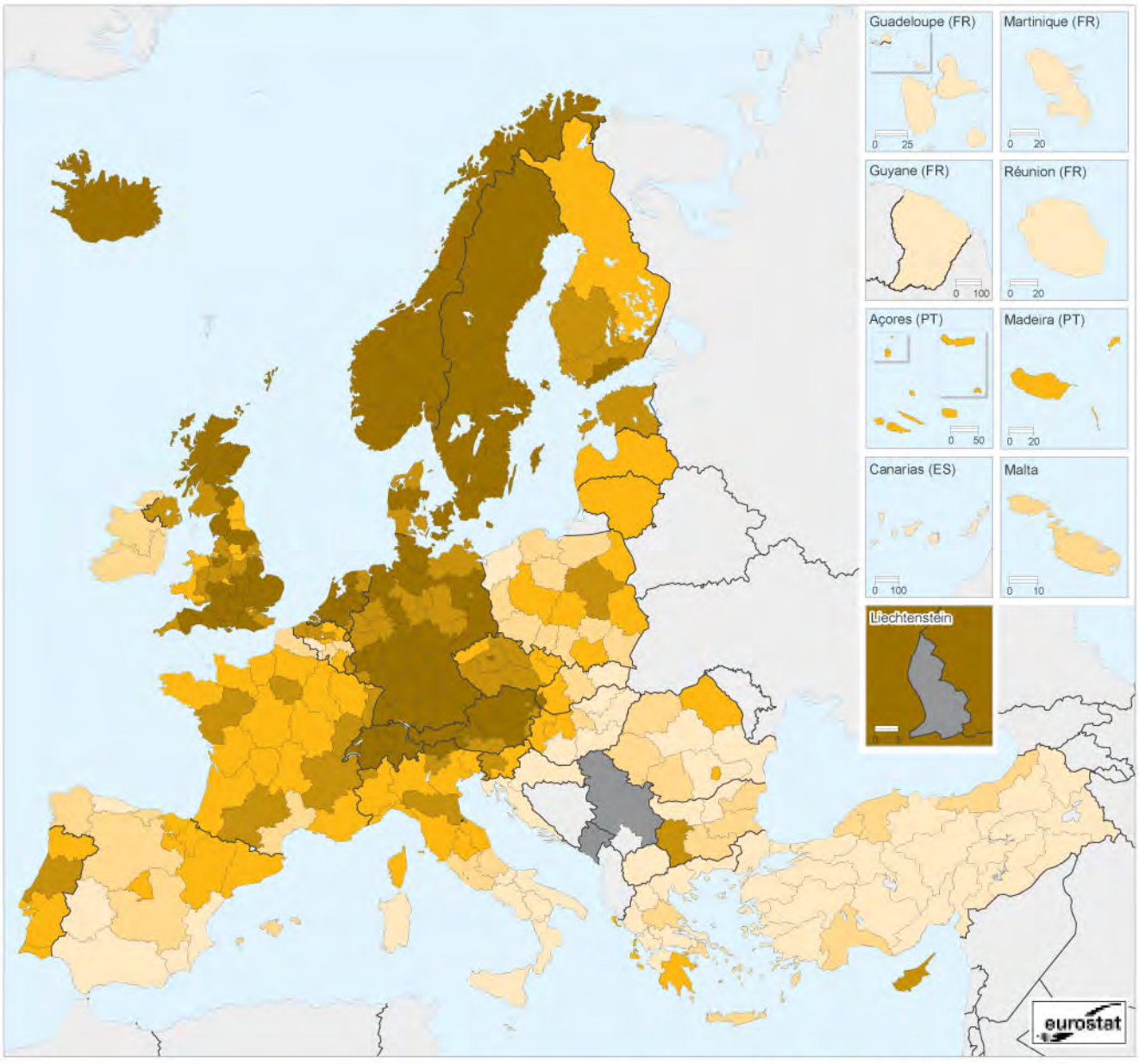
The lowest regional employment rates in 2011 were generally found in southern regions of Spain and Italy, as well as in Greece, Hungary, the Spanish overseas regions of the Ciudad Autónoma de Ceuta and the Ciudad Autónoma de Melilla, and the French overseas regions. Relatively low employment rates (60.0 % or lower) were also apparent in Belgium (for the capital city region of Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest and the western region of the Province/Provincie Hainaut), the north of Bulgaria, the north-west of Poland, the centre and south-east of Romania and the east of Slovakia. There were four regions in southern Italy where less than half of the population aged 20–64 was in employment, namely Puglia, Calabria, Sicilia and Campania — where the lowest employment rate was registered (43.1 %). Employment rates were also 50.0 % or lower in the French overseas region of Réunion (49.1 %) and the Spanish Ciudad Autónoma de Ceuta (50.0 %).

Employment rates in the EFTA regions were relatively high, as each level 2 region reported a rate that was above 75.0 % in 2011, while nine EFTA regions recorded employment rates that were above 80.0 %, peaking at 83.7 % in central and eastern Switzerland (Zentralschweiz and Ostschweiz). This was in stark contrast to the acceding and candidate countries, where each region had an employment rate that was below 65.0 %, while six Turkish regions (including Ankara and İstanbul) and the former Yugoslav Republic of Macedonia reported that less than half of those aged 20–64 were in employment. By far the lowest employment rates (among those regions displayed in Map 5.1) were recorded in the two eastern Turkish regions of Mardin, Batman, Şırnak, Siirt (36.0 %) and Sanliurfa, Diyarbakir (35.6 %).

Changes in employment rates from 2008 to 2011

Labour markets generally lag economic activity and the effects of the financial and economic crisis were not evident in relation to the EU-27 employment rate until 2009. Map 5.2 provides an analysis of the change in employment rates from their most recent highs of 2008 compared with the latest situation for which data are available, namely in 2011. While some regions may have consistently recorded increases or decreases in the rate during this period, in many regions the rates may have moved in contrasting directions; in the case, for example, of an initial fall in 2009 and a subsequent recovery thereafter, the analysis shows the net impact

Map 5.1: Employment rate, persons aged 20–64, by NUTS 2 regions, 2011
(%)



(%)
EU-27 = 68.6

- <= 60.0
- 60.0 – 65.0
- 65.0 – 70.0
- 70.0 – 75.0
- > 75.0
- Data not available

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

0 200 400 600 800 km

Source: Eurostat (online data code: lfst_r_lfe2emprt)

of these contrasting movements. The EU-27 employment rate for those aged 20–64 had a net decline of 1.8 percentage points during the period 2008–11.

Almost three quarters (73.0 %) of the 270 NUTS level 2 regions for which data are available reported a contraction in employment rates between 2008 and 2011. The biggest fall across EU regions during the period 2008–11 was recorded in the Spanish region of the Comunidad Valenciana — where the employment rate dropped by as much as 9.5 percentage points. There were reductions of at least 8.0 percentage points in the neighbouring Región de Murcia and the offshore Illes Balears, while reductions of at least 8.0 percentage points were also recorded in the Border, Midland and Western region of Ireland, in Latvia (one region at NUTS level 2), in the south of Bulgaria (Yuzhen tsentralen) and the far north of Greece (Anatoliki Makedonia, Thraki).

The employment rate was higher in 2011 than in 2008 in 67 of the 270 NUTS level 2 regions for which data are available, and despite the financial and economic crisis there were considerable gains recorded in some regions. The highest increase was in Corse (France), where the employment rate rose by 8.2 percentage points between 2008 and 2011 to reach 68.4 %. The gains recorded in Corse were almost twice as high as the next highest increase, with the employment rate in the eastern German region of Sachsen-Anhalt rising by 4.5 percentage points to 75.0 %. Aside from these two regions, there were 10 more regions in the EU where employment rates rose by more than 2.5 percentage points between 2008 and 2011 (as shown by the darkest shade in Map 5.2). These regions were almost exclusively in Germany — in particular within Niedersachsen and Sachsen; the only exception was the French overseas region of Martinique.

European social cohesion objectives seek to minimise disparities in regional labour markets. 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 %); this falling coefficient indicates that regional employment rates had, on average, moved closer together. The impact of the financial and economic crisis was evident thereafter, as the pattern was reversed, with the dispersion rate increasing for four successive years to reach 12.5 % by 2011 (see Figure 5.1).

The difference in employment rates between regions (across the NUTS level 2 regions of the same country) can also be measured in terms of a dispersion rate; note that by definition there are no dispersion rates for those Member States with only one or two regions at NUTS level 2, namely Estonia, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta and Slovenia. The most evident disparities in employment rates within the same country were in Italy, which recorded the highest dispersion rate (17.9 %) among the EU Member States in 2011 (the regions in Italy were largely split on a north–south basis), followed by Spain (10.0 %). Denmark, Portugal, the Netherlands, Sweden and Austria had the lowest dispersion for employment rates in 2011, all below 4.0 %, as did Norway and Switzerland. Both Turkey (12.7 %) and Croatia (10.1 %) had dispersion rates that were higher than in all EU Member States except for Italy.

There was a mixed pattern to the development of dispersion rates across EU Member States between 2008 and 2011. Dispersion rates rose in 8 of the 19 countries for which data are available, particularly so in Romania, Spain, Bulgaria and Italy. By contrast, dispersion rates for Hungary, Portugal and Finland — and to a lesser extent, Germany, France, Austria, Denmark and the United Kingdom — narrowed, indicating that regional employment rates in these countries were becoming more homogeneous. A narrowing of dispersion rates could be the result of under-performing regions catching up with the national average, but could equally result from declining employment rates among those regions with above average performance.

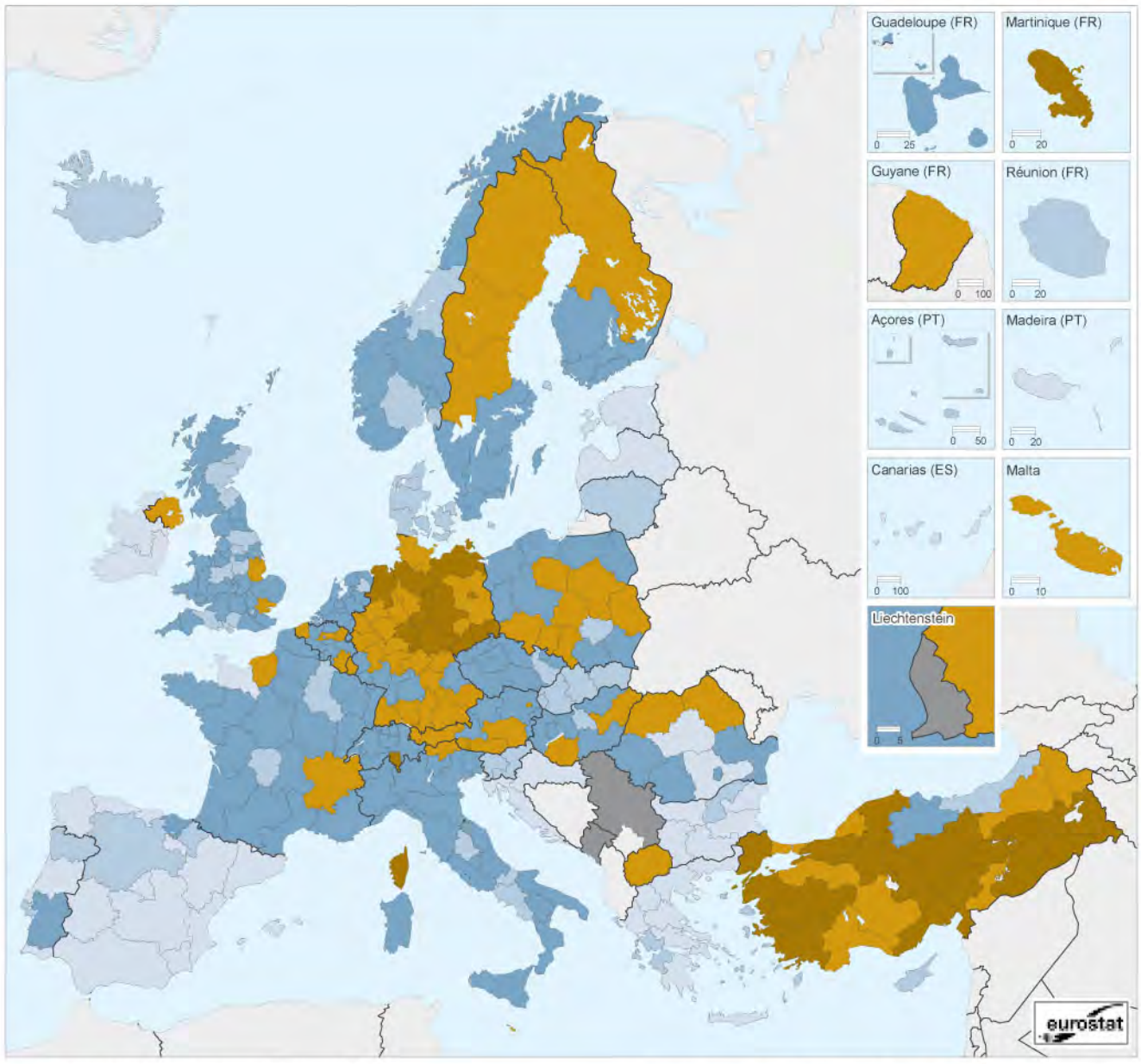
Male and female employment rates

The EU-27 female employment rate (the proportion of women aged 20–64 in employment) peaked in 2008 at 63.0 % before falling in consecutive years to 62.1 % in 2010; the latest information available shows that the female employment rate rose marginally to 62.2 % in 2011, still 0.8 percentage points below its pre-financial and economic crisis high. The male employment rate in the EU-27 also peaked in 2008 (77.9 %) — some 14.9 percentage points above the corresponding female rate. Thereafter, the male employment rate fell to 75.0 % in 2010 and remained at the same rate in 2011. As such, the gender gap in employment rates narrowed steadily between 2008 and 2011, largely due to a higher fall for the male employment rate, which was more strongly affected by the financial and economic downturn.

Regionally, there is a strong link between the female employment rate and the overall employment rate, as Maps 5.1 and 5.3 show broadly similar patterns. Map 5.3 presents the distribution of female employment rates for NUTS level 2 regions in 2011, with Åland (Finland) reporting a female employment rate (81.3 %) that was almost three times as high in Campania (Italy), where the lowest rate was recorded (27.7 %). The corresponding range for male employment rates was considerably less, from a high of 86.8 % in Åland to a low of 56.3 % in Réunion (France).

The Europe 2020 strategy does not make a distinction between the sexes with respect to its 75 % target for the employment rate among those aged 20–64. There were 13 regions across the EU where female employment rates were in excess of 75.0 % in 2011: aside from Åland these included another region in Finland (the capital city region of Helsinki-Uusimaa), six of the eight Swedish regions (Östra Mellansverige and Sydsverige were the exceptions), four regions in Germany (Freiburg, Tübingen, Brandenburg and Oberbayern), as well as Utrecht in the Netherlands. With the

Map 5.2: Change in employment rate, persons aged 20–64, by NUTS 2 regions, 2008–11 (1)
(percentage points difference between 2011 and 2008)



(percentage points difference between 2011 and 2008)
EU-27 = -1.8

- <= -5.0
- -5.0 – -2.5
- -2.5 – 0.0
- 0.0 – 2.5
- > 2.5
- Data not available

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Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

(1) Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Pohjois- ja Itä-Suomi (FI1D), Cheshire (UKD6), Merseyside (UKD7) and Kontinentalna Hrvatska (HR04), 2009–11.
Source: Eurostat (online data code: lfst_r_lfe2emprt)

Figure 5.1: Dispersion of regional employment rates, persons aged 15–64, by NUTS 2 region, EU-27, 2000–11 (coefficient of variation)

Source: Eurostat (online data code: lfst_r_lmder)

exception of two regions in Switzerland (Région lémanique and Ticino) and two regions in Norway (Sør-Østlandet and Hedmark og Oppland), all of the level 2 regions in Iceland, Norway and Switzerland also reported female employment rates above 75.0 %.

In 2011, five out of the six lowest female employment rates across NUTS level 2 regions were recorded in the south of Italy — in Basilicata, Calabria, Puglia, Sicilia and Campania — where rates were consistently below 40 %; the only other region to record such a low female employment rate was the overseas region of the Ciudad Autónoma de Ceuta (Spain). There was only one region in the acceding and candidate countries where the female employment rate was over 50 %, namely inland Croatia (Kontinentalna Hrvatska), while the north-eastern Turkish region of Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane had a female employment rate of exactly 50.0 %. There were five Turkish regions where fewer than one in four women aged 20–64 were employed in 2011, including İstanbul (with a female employment rate of 24.3 %). The lowest female employment rates were recorded in the south-east of Turkey, in particular in Mardin, Batman, Şırnak, Siirt and in Şanlıurfa, Diyarbakır, where less than 10.0 % of all women aged 20–64 were in employment.

There were no NUTS level 2 regions in the EU where the female employment rate exceeded the male employment rate in 2011 (contrary to 2010, when the female employment rate in Lithuania had been 1.5 percentage points higher than the corresponding rate for men) — see Map 5.4. Female employment rates were generally relatively close to corresponding male employment rates in many Nordic and Baltic regions, as well as in several regions in Bulgaria and Germany. 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 southern Italy, Malta, Greece and the Spanish overseas regions of the Ciudad Autónoma de Ceuta and the Ciudad Autónoma de Melilla. The biggest difference between male and female employment rates was recorded in Malta, where the male employment rate (78.8 %) was 35.4 percentage points higher than the female employment rate. The gender gap between male and female employment rates was even wider in many Turkish regions — the widest differences (more than 50.0 percentage points) were recorded in the three south-eastern regions of: Mardin, Batman, Şırnak, Siirt; Şanlıurfa, Diyarbakır; and Gaziantep, Adıyaman, Kilis.

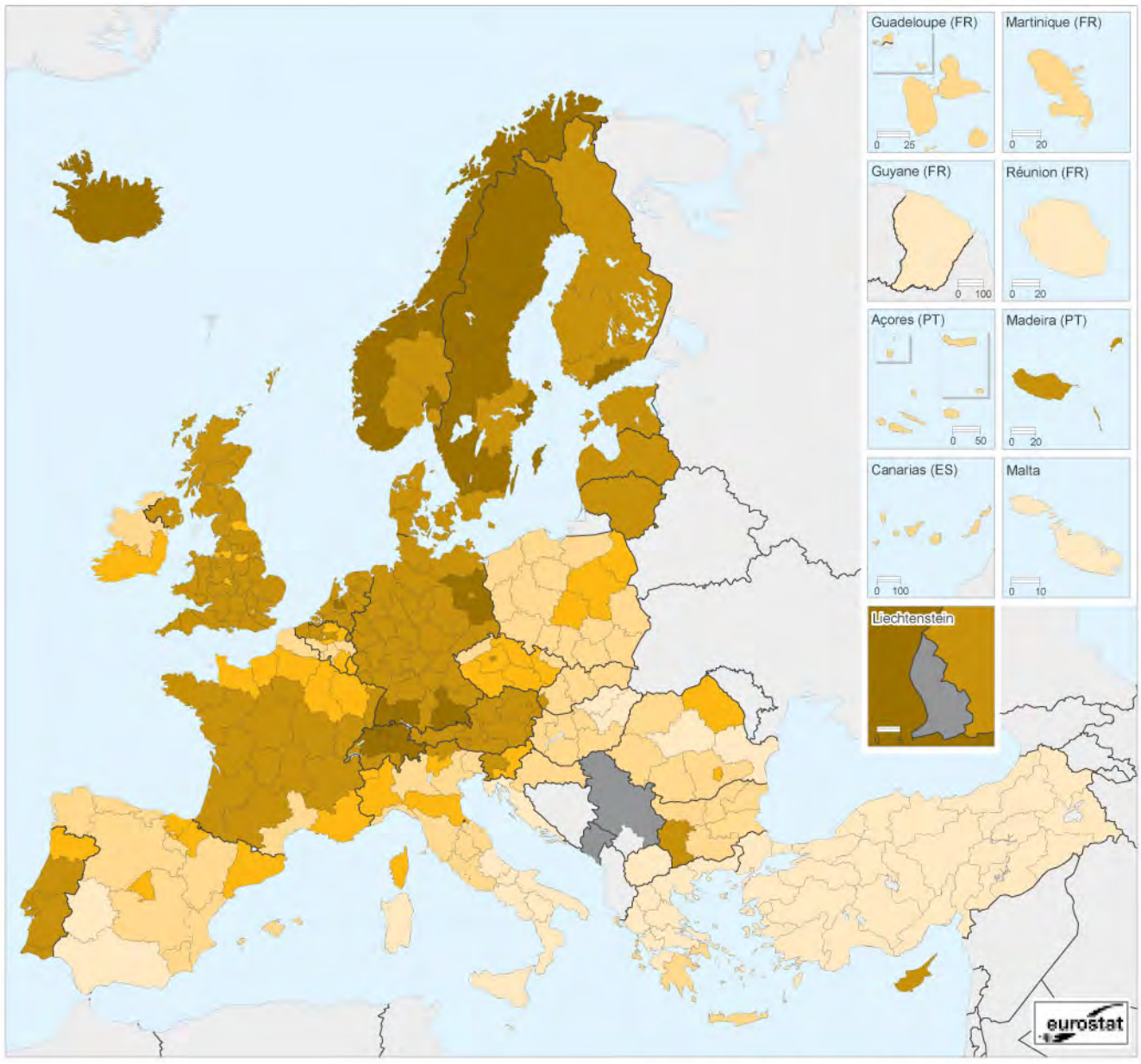
Employment rates for older workers

The EU-27 employment rate for older workers (aged 55–64) stood at 47.4 % in 2011; this marked an increase of 11.9 percentage points when compared with the rate in 2000 and provided evidence of an extension in the average length of working lives in the EU. Despite the financial and economic crisis, the employment rate for older workers continued to expand throughout the period from 2007–11, although the pace of growth slowed in 2009 and 2010, before an expansion of 1.1 percentage points between 2010 and 2011.

In 2011, there were 118 NUTS level 2 regions across the EU that had an employment rate for older workers above 50.0 %; among these, 89 regions had a rate that exceeded 55.0 %, 42 regions had a rate that exceeded 60.0 %, 13 regions had a rate that exceeded 65.0 %, while six had a rate that was over 70.0 %. By contrast, there were 152 NUTS level 2 regions in the EU with an employment rate for older workers of 50.0 % or less in 2011; 79 of these had a rate of 40.0 % or less, and 23 regions recorded rates equal to or below 35.0 %.

The highest employment rates for older workers in the EU were systematically recorded across Sweden, which accounted for the eight highest employment rates in 2011; the employment rate in the south of Sweden (Sydsverige) was equal, at 69.4 %, to the rate recorded in Åland (a Swedish-speaking

Map 5.3: Female employment rate, persons aged 20–64, by NUTS 2 regions, 2011
(%)



(%)
EU-27 = 62.2

- <= 50.0
- 50.0 – 60.0
- 60.0 – 65.0
- 65.0 – 75.0
- >75.0
- Data not available

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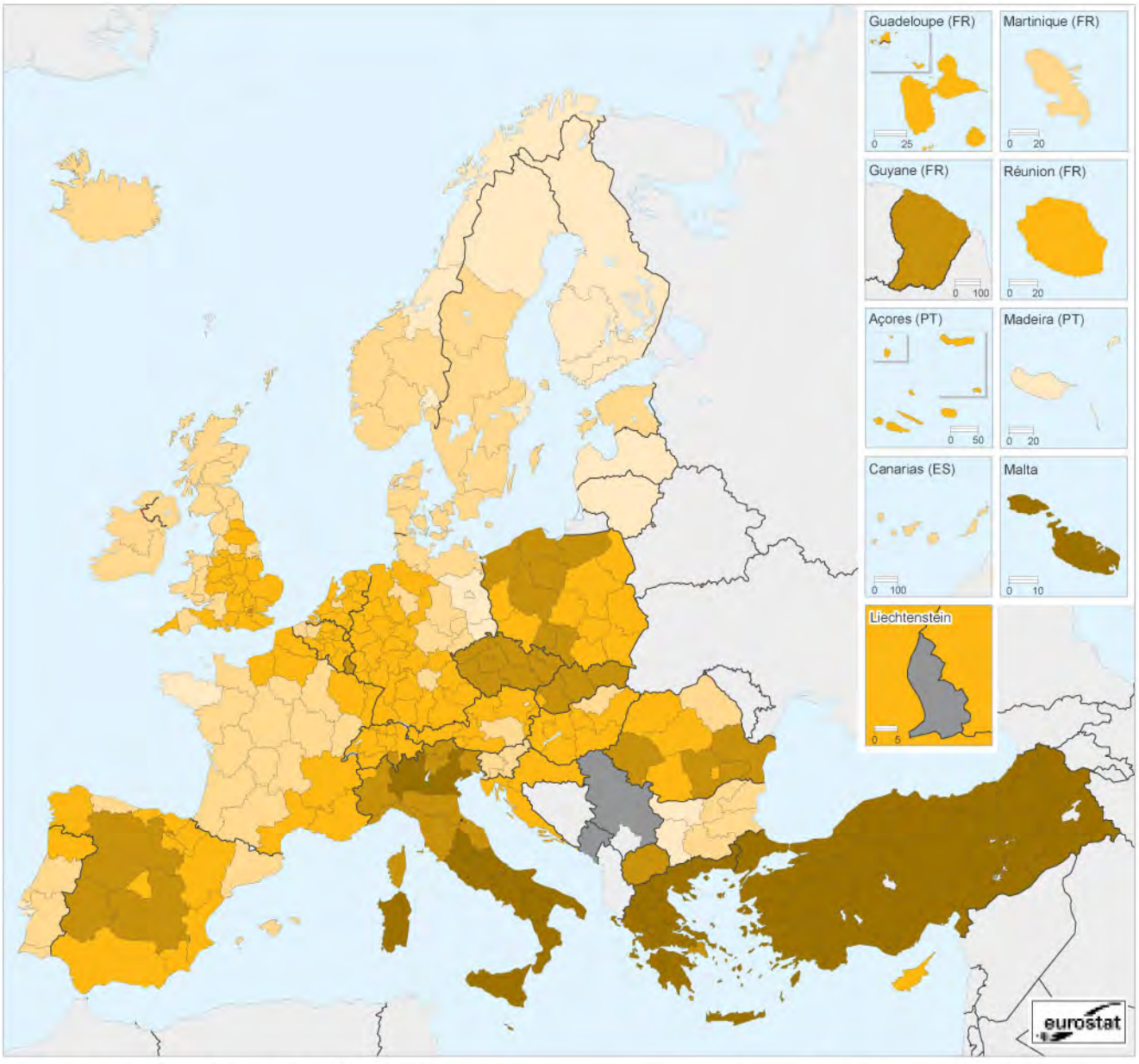
Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

Source: Eurostat (online data code: lfst_r_lfe2emprt)

Map 5.4: Gender gap for the employment rate, persons aged 20–64, by NUTS 2 regions, 2011
(percentage points difference between male and female rates)



(percentage points difference between male and female rates)
EU-27 = 12.8

- <= 5.0
- 5.0 – 10.0
- 10.0 – 15.0
- 15.0 – 20.0
- >20.0
- Data not available

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

0 200 400 600 800 km

Source: Eurostat (online data code: lfst_r_lfe2emprt)

island region of Finland located between Sweden and Finland). At the other end of the range, the 23 regions with the lowest employment rates for older persons (the lightest shade in Map 5.5) were principally found in Hungary, Malta, Poland, Slovenia and Romania, as well as in Belgium (the Province/Provincie Namur and the Province/Provincie Hainaut), Greece (Voreio Aigaio), France (Nord - Pas-de-Calais, Poitou-Charentes and Réunion) and Italy (Puglia). Many of the regions with low employment rates for older workers were historically dependent upon heavy industrial sectors (such as coal and steel), which have contracted greatly or even ceased to exist in some regions, leading to economic restructuring and associated job losses — especially for older workers whose skills may no longer be applicable to current labour market opportunities. The three regions in the EU with the lowest employment rates for older workers in 2011 were: the Polish region of Śląskie (specialised in the mining of coal and lignite); the Hungarian region of Észak-Magyarország (mining and metallurgy); and the Slovenian region of Vzhodna Slovenija (vehicle production, mining and quarrying).

In the EFTA countries, there were generally relatively high employment rates for older workers. This was particularly true in Iceland (79.2 %), and there were also a number of Norwegian and Swiss regions that recorded employment rates for older workers above 70.0 %. With the exception of Ticino (Switzerland), each level 2 region in Norway and Switzerland had an employment rate for older persons in excess of 60.0 %. By contrast, much lower employment rates for older workers were generally recorded in the acceding and candidate countries: there were only two Turkish regions where a majority of older workers were in employment — the region of Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane (which borders the Black Sea coastline in north-eastern Turkey) and Ağrı, Kars, Iğdır, Ardahan (in the extreme east of the country); both of these regions are characterised as having relatively high levels of net emigration, which may reflect economic migration among younger generations. Otherwise, employment rates for older workers were situated between 30.0 % and 40.0 % in much of Turkey, in Croatia and in the former Yugoslav Republic of Macedonia. There were seven regions in Turkey where the employment rate of older workers fell to a level between 20.0 % and 30.0 %, while the lowest rate was recorded in İstanbul (16.1 %).

Unemployment rates

The unemployment rate in the EU-27 was 9.6 % in 2011, the same figure as in 2010. Map 5.6 shows the distribution of unemployment rates by NUTS level 2 regions. The highest regional unemployment rate in 2011 was recorded in Andalucía in the south of Spain (30.4 %), while the lowest unemployment rates were registered in the neighbouring Austrian regions of Salzburg and Tirol (both 2.5 %).

Particularly high unemployment rates are shown in Map 5.6 using the darkest shade: there were 14 NUTS level 2 regions which posted unemployment rates in excess of 20.0 % in 2011. Nine of these regions were in Spain (Andalucía, Canarias, Ciudad Autónoma de Ceuta, Región de Murcia, Extremadura, Comunidad Valenciana, Ciudad Autónoma de Melilla, Castilla-La Mancha and the Illes Balears), while there was also all four French overseas regions (Réunion, Guadeloupe, Guyane and Martinique), as well as the northern Greek region of Dytiki Makedonia (which borders both Albania and the former Yugoslav Republic of Macedonia). More generally, high unemployment rates (above 15.0 %) were recorded in several other regions of Spain and Greece, as well as the Belgian capital city region (Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest), north-eastern Bulgaria, the Border, Midland and Western region of Ireland, Campania in the south of Italy, Latvia, Lithuania, Észak-Magyarország in the north-east of Hungary, the Algarve in Portugal and eastern and central Slovakia.

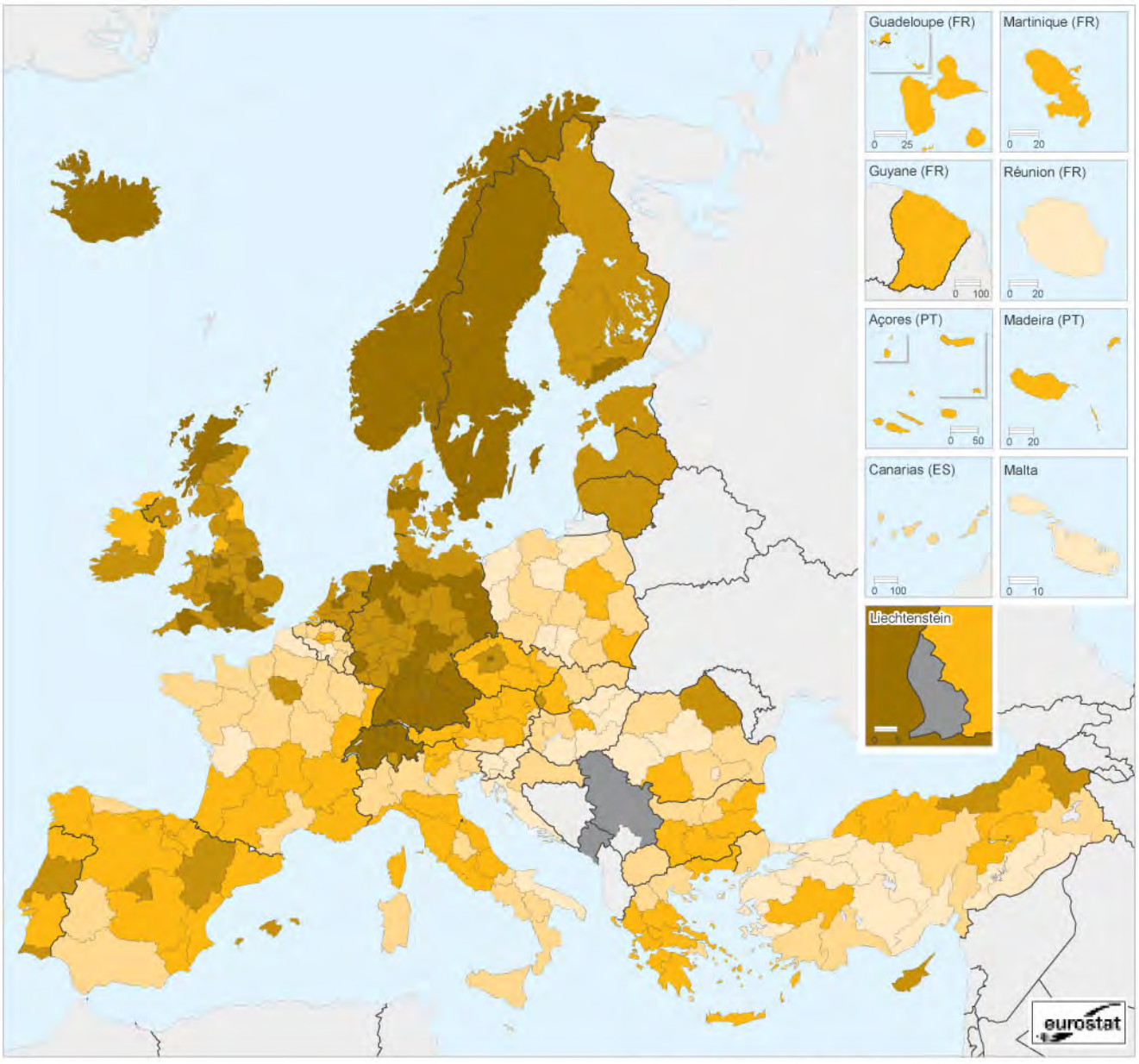
There were 45 NUTS level 2 regions across the EU that recorded an unemployment rate that was 5.0 % or lower in 2011; of these, only six had an unemployment rate that was 3.0 % or lower — they were Niederbayern, Oberbayern and Freiburg in southern Germany, Zeeland in the Netherlands, and the two Austrian regions of Salzburg and Tirol.

Apart from the Région lémanique and Ticino in Switzerland, unemployment rates in Norway and Switzerland were consistently below 5.0 % in 2011. In Iceland, the unemployment rate experienced a steep increase, rising from 3.0 % in 2008 to 7.2 % in 2009 — despite a further increase in 2010 (7.6 %), the unemployment rate in Iceland returned to 7.0 % in 2011. Across the acceding and candidate countries, regional unemployment rates ranged from a high of 13.7 % in İzmir (Turkey) down to rates of less than 5.0 % in three other Turkish regions (Samsun, Tokat, Çorum, Amasya; Manisa, Afyonkarahisar, Kütahya, Uşak; and Balıkesir, Çanakkale).

The financial and economic crisis continued to have a strong asymmetric impact on regional labour markets in 2011; many regions saw declining unemployment rates, while others recorded considerable increases, as large disparities in regional unemployment persisted. Figure 5.2 shows that the dispersion of regional unemployment rates across the EU widened from 2007 onwards. The coefficient of variation of regional unemployment rates rose by 12.6 percentage points between 2007 and 2011, inferring that the labour market effects of the financial and economic crisis were unevenly spread between regions.

Belgium recorded the highest dispersion of regional unemployment rates in 2011 among the EU Member States, while Italy, Germany and Austria also had a relatively high dispersion. There were stark differences in unemployment rates between the regions of some of these Member States as

Map 5.5: Older persons employment rate, persons aged 55–64, by NUTS 2 regions, 2011
(%)



(%)
EU-27 = 47.4

- <= 35.0
- 35.0 – 40.0
- 40.0 – 50.0
- 50.0 – 60.0
- > 60.0
- Data not available

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Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

Source: Eurostat (online data code: lfst_r_lfe2emprt)

shown in Map 5.6. For example, there were much lower unemployment rates than in the rest of their Member State in the Vlaams Gewest (Flanders) region of Belgium, parts of western Germany and northern Italy, while there was a much higher rate in the capital city region (Wien) compared with the rest of Austria. The lowest degrees of dispersion for unemployment rates across NUTS level 2 regions were recorded in Denmark, Greece, Sweden, Portugal and the Netherlands — other than Greece, each of these countries also reported relatively low dispersion for regional employment rates — suggesting they had rather homogeneous labour markets from a regional perspective.

During the period 2008–11, the coefficient of variation for unemployment rates (across NUTS level 2 regions within a Member State) fell in many Member States — see Figure 5.3; note that during the period under consideration, unemployment rates were generally rising, even if the dispersion between different regions of the same country was narrowing. The largest reductions in dispersion between 2008 and 2011 were recorded in the Czech Republic, Hungary, Bulgaria and Italy.

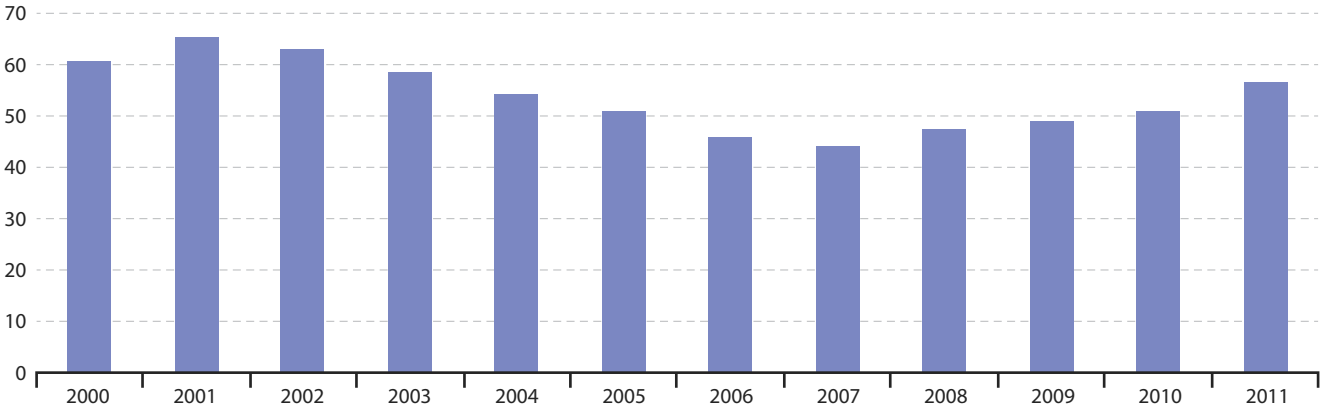
Changes in unemployment rates

Between 2008 and 2011, the EU-27 unemployment rate rose by 2.6 percentage points to reach 9.6 %. Map 5.7 reflects the change in regional unemployment rates over this period, presenting the percentage point difference between unemployment rates (the rate for 2011 minus that for 2008). Again it should be remembered that, while some regions may have consistently recorded increases or decreases in the rate during this period, in many other regions the rates may have moved in contrasting directions and the comparison of rates for 2011 with those for 2008 shows the net impact over the whole period. Out of the 269 NUTS level 2 regions in the EU for which data are available, the unemployment rate increased between 2008 and 2011 in 214 regions, remained unchanged in three regions and fell in 52 regions.

The development of regional unemployment rates since 2008 shows that labour markets in the Spanish and Greek regions were hardest hit by the financial and economic downturn, although large increases in unemployment rates were also recorded in many other regions. By contrast, Germany and Luxembourg (the latter covered by a single region at this level of NUTS) were the only EU Member States where unemployment rates in all regions were lower in 2011 than they had been in 2008. The asymmetric nature of these changes was highlighted by the fact that declining unemployment rates were generally observed in those regions which were already characterised as having relatively low levels of unemployment, while unemployment rates tended to rise by a large amount in those regions already experiencing high levels of unemployment.

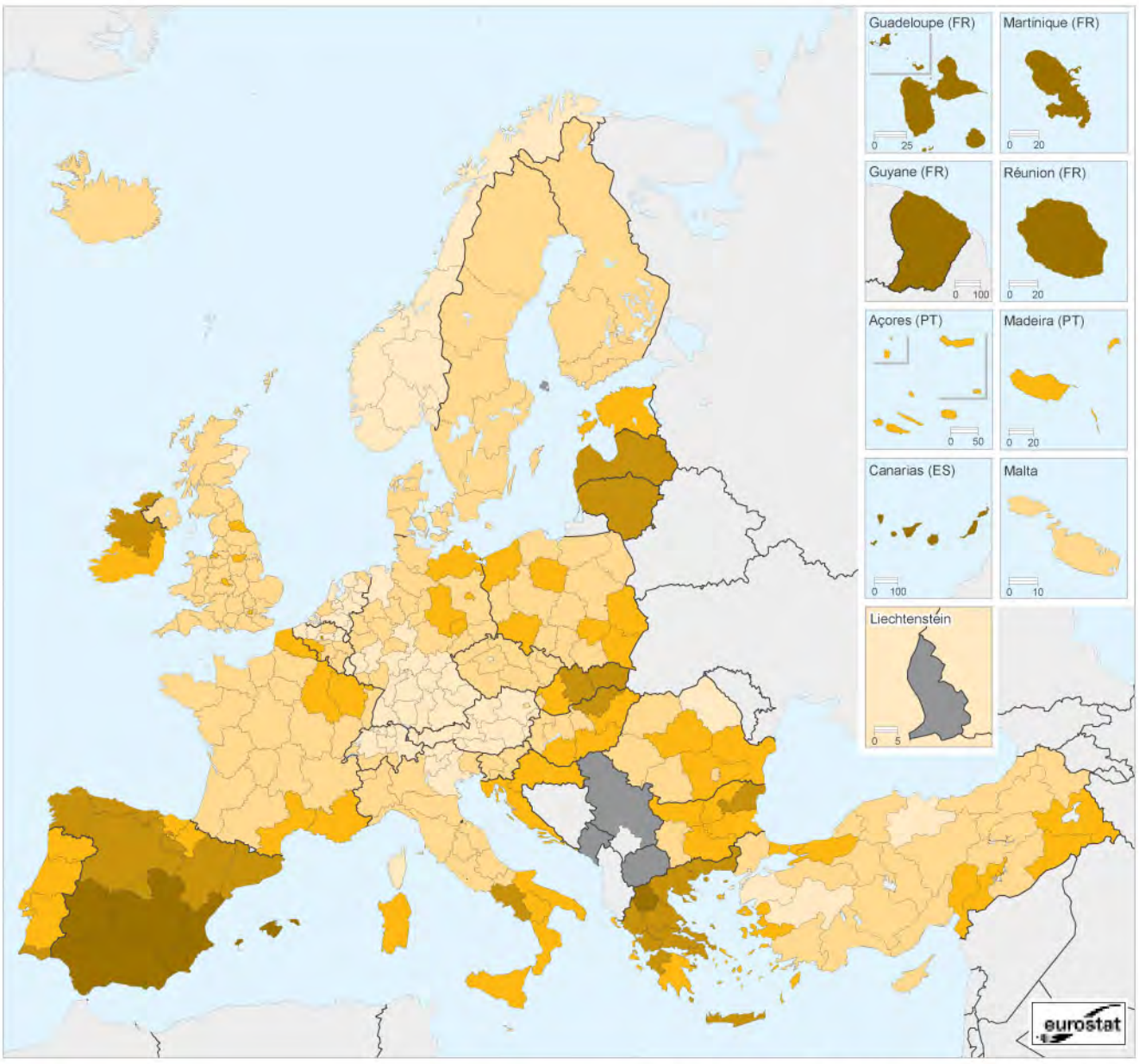
There were 13 regions across the EU-27 that reported their unemployment rate rising by more than 10.0 percentage points between 2008 and 2011. Eight of these regions were in Spain, while the remaining five regions were all in Greece. Rising unemployment was most apparent in the south and south-east of Spain, in the neighbouring regions of Murcia, Andalucía and the Comunidad Valenciana. Apart from all 38 German regions and Luxembourg, the unemployment rate was lower in 2011 than it had been in 2008 in 13 other regions, which were distributed across six different Member States: four regions in Belgium (three of which were in the Région Wallonne), three regions in France, two regions in each of Austria and Finland, and a single region in both the Netherlands and the United Kingdom. The biggest reductions in unemployment rates between 2008 and 2011 were

Figure 5.2: Dispersion of regional unemployment rates, persons aged 15–74, by NUTS 2 regions, EU-27, 2000–11
(coefficient of variation)



Source: Eurostat (online data code: lfst_r_lmdur)

Map 5.6: Unemployment rate, persons aged 15–74, by NUTS 2 regions, 2011 (1)
(%)



(%)
EU-27 = 9.6

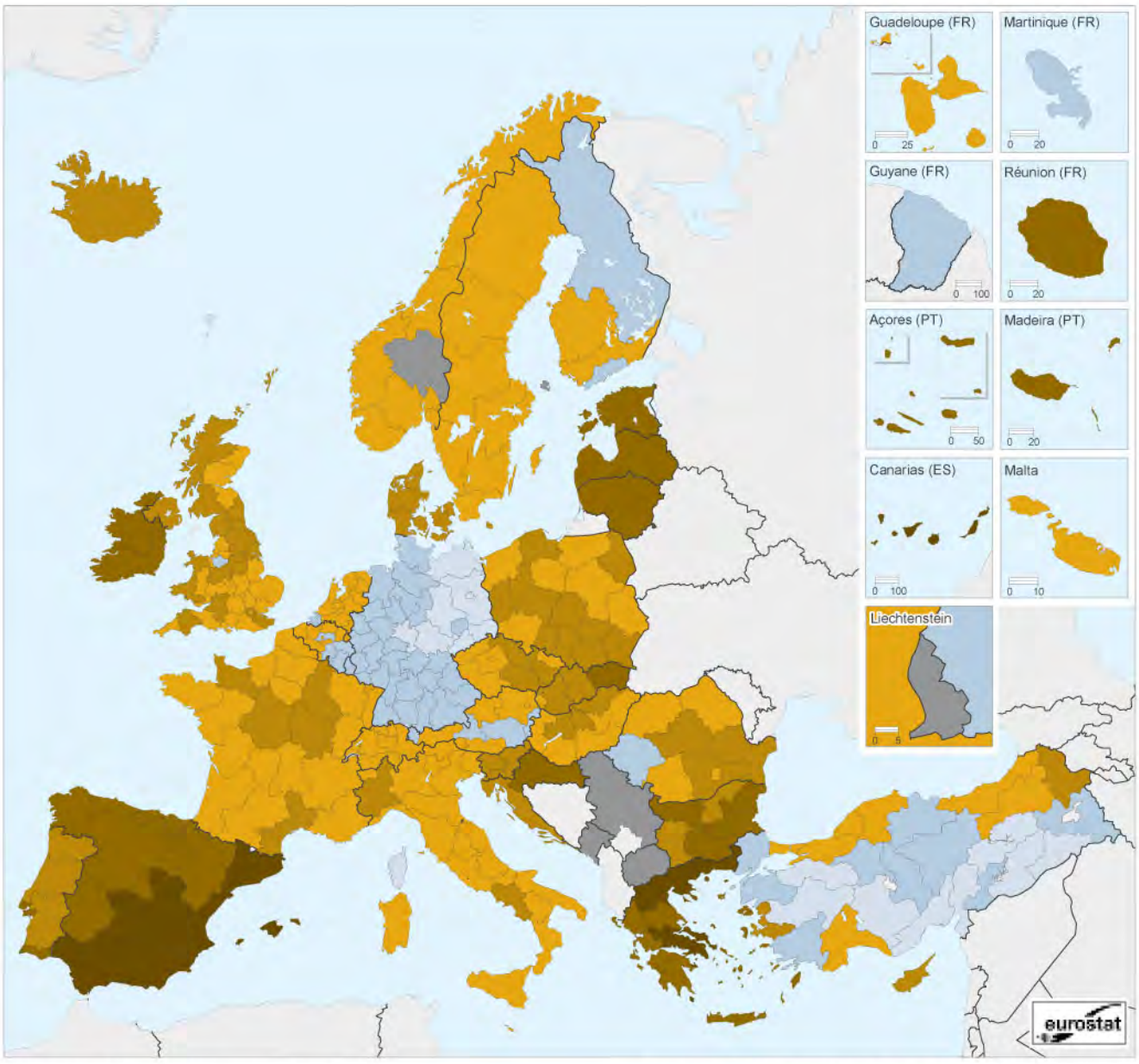
- <= 5.0
- 5.0 – 10.0
- 10.0 – 15.0
- 15.0 – 20.0
- > 20.0
- Data not available

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

0 200 400 600 800 km

Source: Eurostat (online data code: lfst_r_lfu3rt)

Map 5.7: Change in unemployment rate, persons aged 15–74, by NUTS 2 regions, 2008–11 (1)
(percentage points difference between 2011 and 2008)



(percentage points difference between 2011 and 2008)

EU-27 = 2.6

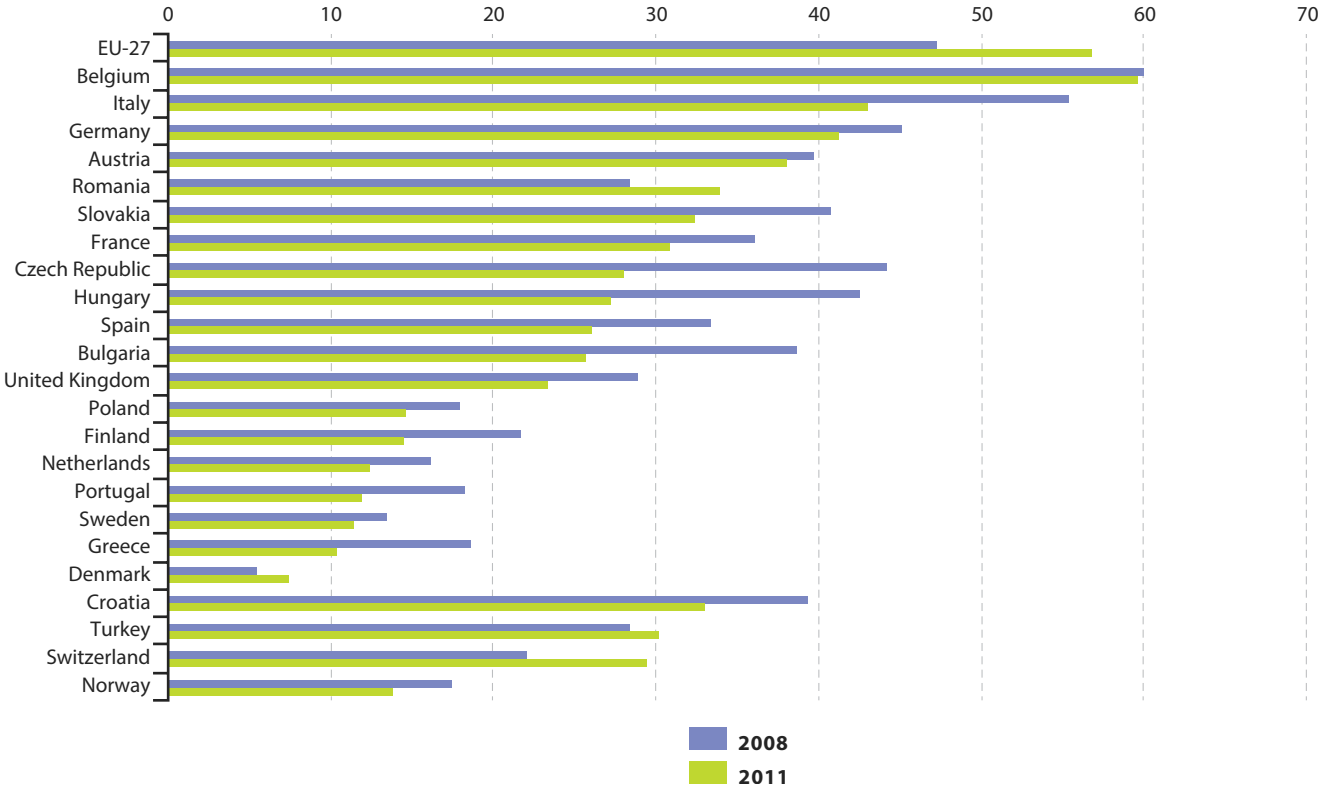
- <= -2.5
- -2.5 – 0.0
- 0.0 – 2.5
- 2.5 – 5.0
- 5.0 – 10.0
- > 10.0
- Data not available

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

0 200 400 600 800 km

Source: Eurostat (online data code: lfst_r_lfu3rt)

Figure 5.3: Dispersion of regional unemployment rates, persons aged 15–74, by NUTS 2 regions, 2008 and 2011 (1)
(coefficient of variation)



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

recorded in two regions in the north-east of Germany — Sachsen-Anhalt (a reduction of 4.2 percentage points) and Mecklenburg-Vorpommern (– 4.4 percentage points).

Unemployment rates increased across all of the EFTA regions for which data are available between 2008 and 2011; this was particularly the case in Iceland. By contrast, the pattern in acceding and candidate countries was mixed. Both Croatian regions recorded increases in their respective unemployment rates of more than 4.0 percentage points, while a majority of Turkish regions recorded a reduction in their unemployment rates between 2008 and 2011. The largest reductions (in excess of 5.0 percentage points) were reported in the southern Turkish regions of: Adana, Mersin; Mardin, Batman, Şırnak, Siirt; and Şanlıurfa, Diyarbakır.

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 15–24, were disproportionately affected by the downturn in economic fortunes and the shrinking labour market. The youth unemployment rate in the EU-27 was 21.4 % in 2011, which was more than double the EU-27's overall unemployment rate (9.6 %).

Map 5.8 presents the regional distribution of the youth unemployment rate at NUTS level 2 in 2011. 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. The youth unemployment rate exceeded 50.0 % in 12 regions in 2011, including: the Spanish overseas regions of the Ciudad Autónoma de Ceuta (where the highest rate of 65.8 % was recorded) and the Ciudad Autónoma de Melilla (65.2 %), as well as the Spanish regions of Andalucía, the Comunidad Valenciana, Extremadura and the Canarias; three of the French overseas regions (Guyane was the exception); and the three northern Greek regions of Dytiki Makedonia, Anatoliki Makedonia and Thraki Kentriki Makedonia. More generally, the effects of the financial and economic crisis were apparent, as youth unemployment rates above 40.0 % were observed in several more Greek and Spanish regions, as well as in the south of Italy and the east of Slovakia.

There were 45 NUTS level 2 regions across the EU that reported a youth unemployment rate that was 10.0 % or lower in 2011 (or the latest available year). The lowest rates were generally registered in Germany (25 regions at or below 10.0 %), the Netherlands (12 regions) and Austria (six regions), while a single region from Italy (Provincia Autonoma di Bolzano/Bozen) and from the Czech Republic (the capital city region of Praha) also reported youth unemployment rates of 10.0 % or less. The three lowest youth unemployment rates in 2011 were recorded in the southern German regions of Freiburg (4.8 %), Oberbayern (4.5 %) and Tübingen (4.3 %), while the Austrian region of Steiermark was the only other region in the EU where youth unemployment was equal to or below 5.0 %.

Youth unemployment rates were higher than overall unemployment rates in each NUTS level 2 region for which data are available in 2011. The largest differences (in percentage point terms) between youth unemployment and overall unemployment rates were recorded in the Spanish overseas regions of the Ciudad Autónoma de Ceuta and the Ciudad Autónoma de Melilla, where youth unemployment rates were 40.8 points and 36.5 points higher respectively than the overall unemployment rate in 2011.

The highest youth unemployment rate among the EFTA countries was recorded in the Swiss region of Ticino (17.3 % in 2011), while approximately two thirds of the EFTA level 2 regions for which data are available reported a youth unemployment rate that was equal to or less than 10.0 %; the lowest youth unemployment rate was recorded in Zentralschweiz (4.2 %). By contrast, youth unemployment rates were much higher in the acceding and candidate countries, as only three Turkish regions recorded single-digit youth unemployment rates in 2011. Nevertheless, with the exception of the two Croatian regions — Kontinentalna Hrvatska (37.6 %) and Jadranska Hrvatska (32.6 %) — and the Turkish region of İzmir (25.5 %), youth unemployment rates remained below the EU-27 average in 2011.

The number of youths (aged 15–24) in the EU-27 who were unemployed increased between 2008 and 2011 by 1.1 million persons to reach 5.3 million in total, an overall increase of 25.6 %. 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 15–24 fell by 2.2 million persons between 2008 and 2011. These two movements combined, such that the youth unemployment rate passed from 15.8 % in 2008 to reach 21.4 % by 2011. At the same time, an increasing proportion of young people remained in education — as some young people extended ongoing 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. These changes in the structure of the population also affected the relative weight of youth unemployment in total unemployment. Just over one in four (25.1 %) of those unemployed in the EU-27 in 2008 were aged 15–24; this share fell to 22.9 % of the total number of persons unemployed in 2011.

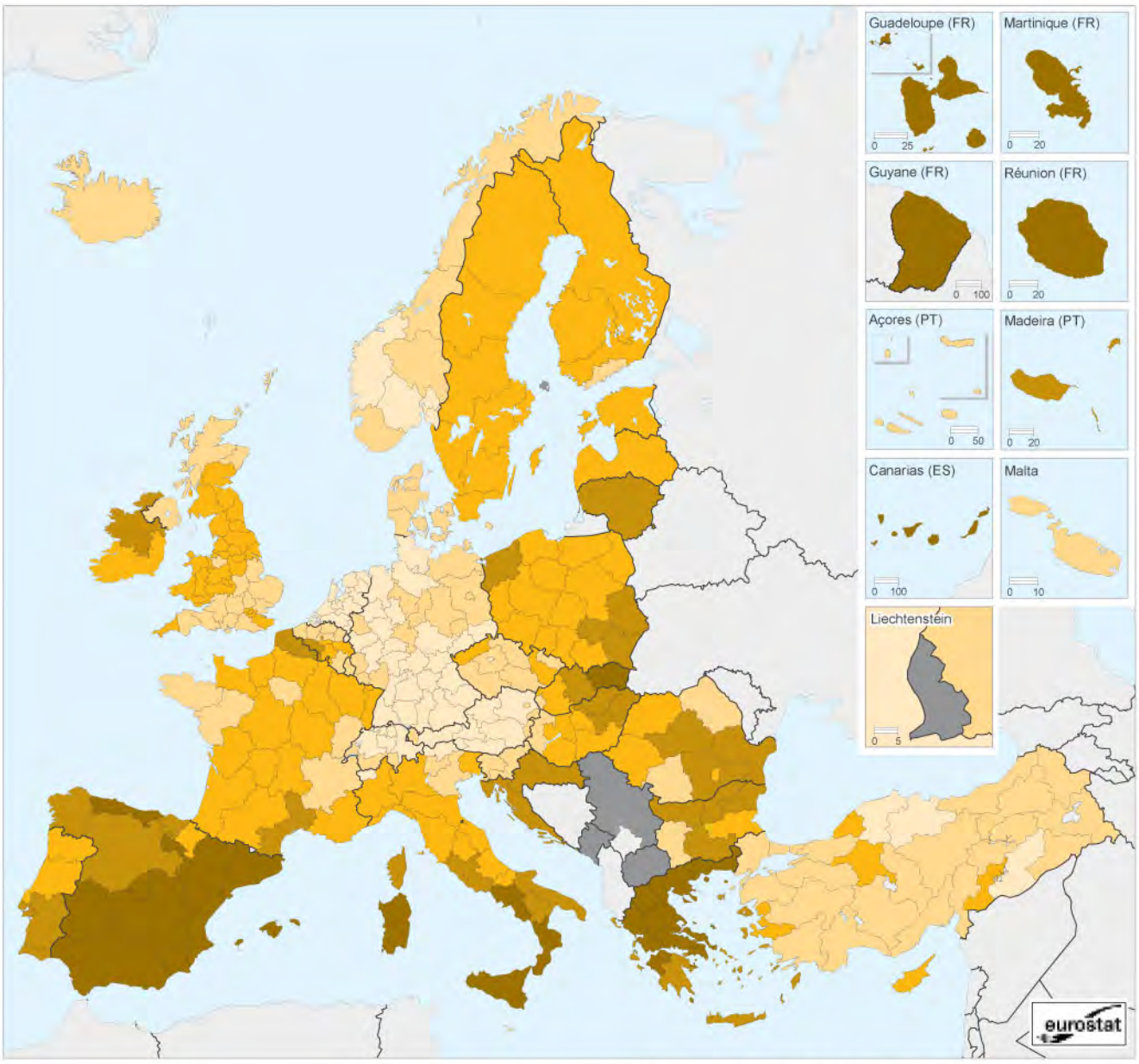
Map 5.9 provides some evidence of the impact of the financial and economic crisis on youth unemployment — in particular in Spain and Greece. Youth unemployment rates increased by more than 20.0 percentage points over the period 2008–11 in 11 Spanish and five Greek regions, as well as in the southern Bulgarian region of Yuzhen tsentralen (which borders Greece). The highest increase in youth unemployment was registered in the northern Greek region of Anatoliki Makedonia, Thraki where the unemployment rate rose by 30.6 percentage points between 2008 and 2011 to reach 52.4 %.

There were another 49 NUTS level 2 regions in the EU where youth unemployment rates rose by more than 10.0 percentage points (but not more than 20.0 points) over the period 2008–11. These were spread across a wide range of Member States, including: seven regions in Poland, six more regions in Spain, five more regions each in Bulgaria and Greece and five regions in the United Kingdom, four regions in Portugal, three regions in each of Italy and Slovakia, two regions in each of Ireland, France and Romania, and a single region in the Czech Republic; the youth unemployment rate also rose by an amount between 10.0 and 20.0 percentage points in the Baltic Member States and in Cyprus (each covered by a single region at this level of the NUTS).

The youth unemployment rate fell in 41 of the 243 NUTS level 2 regions for which data are shown in Map 5.9; note that the comparison is generally made for the period 2008–11, although for a limited number of regions the period under consideration is 2009–11 or 2008–10. The largest reductions in the youth unemployment rate (in percentage point terms) were recorded in two German regions — Dresden (– 7.8 points) and Hamburg (– 5.3 points) — while the youth unemployment rate was reduced in a further 24 out of the remaining 32 German regions for which data are available (for two of these regions — Chemnitz and Leipzig — the reduction in youth unemployment rates was during the period 2009–11). Otherwise, there were also reductions in youth unemployment rates over the period 2008–11 across much of southern Belgium (except to the south of the capital in the Province/Provincie Brabant Wallon), south-western and north-eastern Romania, as well as in Molise (central Italy), Luxembourg (a single region at this level of the NUTS) and Steiermark (south-east Austria). The youth unemployment rate also fell in most of Finland (other than the western region of Länsi-Suomi) and in Cheshire (north-west England, the United Kingdom) between 2009 and 2011.

There was a large increase of 6.2 percentage points in the youth unemployment rate in Iceland between 2008 and 2011. Regional patterns were mixed in Switzerland, with an increase of a similar magnitude to that recorded in Iceland

Map 5.8: Youth unemployment rate, persons aged 15–24, by NUTS 2 regions, 2011 (1)
(%)



(%)
EU-27 = 21.4

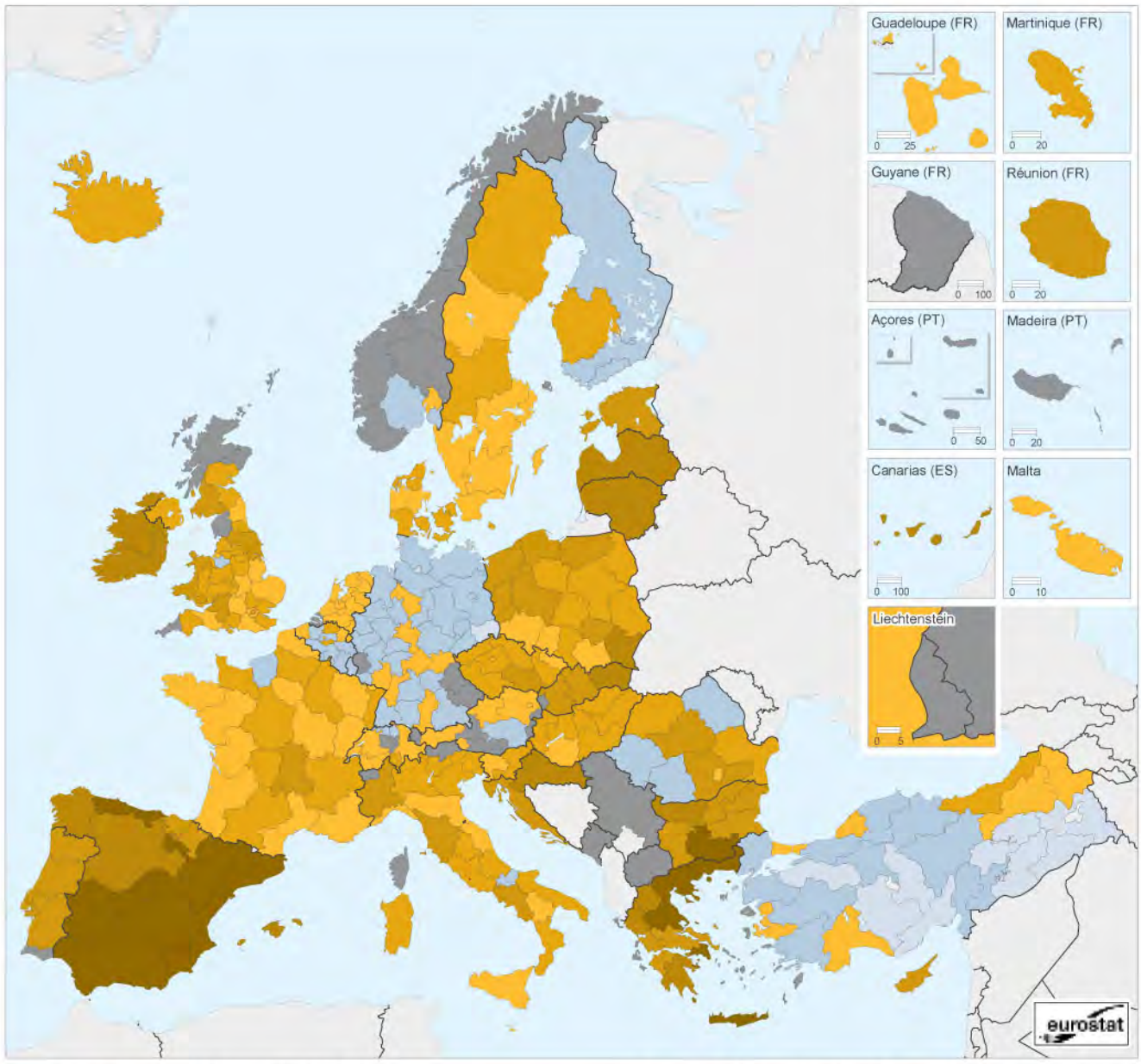
<= 10.0
10.0 – 20.0
20.0 – 30.0
30.0 – 40.0
> 40.0
Data not available

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

0 200 400 600 800 km

Source: Eurostat (online data code: lfst_r_lfu3rt)

Map 5.9: Change in youth unemployment rate, persons aged 15–24, by NUTS 2 regions, 2008–11 (1)
(percentage points difference between 2011 and 2008)



(percentage points difference between 2011 and 2008)

EU-27 = 5.8

- <= -5.0
- -5.0 – 0.0
- 0.0 – 5.0
- 5.0 – 10.0
- 10.0 – 15.0
- 15.0 – 20.0
- > 20.0
- Data not available

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

0 200 400 600 800 km

(1) Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Pohjois- ja Itä-Suomi (FI1D), Cheshire (UKD6), Merseyside (UKD7) and Kontinentalna Hrvatska (HR04), 2009–11; Prov. Luxembourg (BE34), Oberfranken (DE24), Unterfranken (DE26), Kassel (DE73) and Tirol (AT33), 2008–10.

Source: Eurostat (online data code: lfst_r_lfu3rt)

being registered in the southern region of Ticino (a 6.1 percentage point increase), while the youth unemployment rate fell in the northern regions of Nordwestschweiz (by 0.3 points) and Zürich (by 1.7 points). Within the acceding and candidate countries, the youth unemployment rate rose by more than 10.0 percentage points in both Croatian regions (the biggest increase being recorded in Kontinentalna Hrvatska, up 15.4 points between 2009 and 2011), while the majority of the regions in Turkey reported a decline in their youth unemployment rates between 2008 and 2011. Indeed, youth unemployment rates fell in five Turkish regions by more than in any of the regions in the EU, while a sixth Turkish region reported a reduction that was equivalent to that recorded in Dresden (where the biggest decline in the EU was registered).

Earnings at a regional level

This section presents data on earnings at NUTS level 1, based on the structure of earnings survey (SES) — which is a sample business survey conducted every 4 years. The level of earnings depends not only on business-related factors (such as the economic activity, the size of the business and the existence of collective agreements), but also on employee-related characteristics (sex, age, level of education, occupational group, length of service and working hours). From the employer's perspective, wages and salaries are a major part of the production costs for goods and services and largely correspond to the costs borne by an employer for employing staff. From the employee's point of view, earnings are usually the main component of disposable income. The cost of living in a particular country (or specific region) is an additional factor that influences earnings. However, earnings statistics that take account of different price levels — for example, those reported using purchasing power standards — are only available at a national level; the information presented below is denominated in euro terms.

Average gross hourly earnings across the EU-27 businesses economy (in other words, Sections B to N of the statistical classification of economic activities in the European Community — NACE Rev. 2) amounted to EUR 13.57 per hour in 2010. Map 5.10 shows the substantial regional differences in earnings per hour — which peaked at EUR 27.96 in Denmark (a single region at NUTS level 1). Earnings were generally highest in capital city regions and this was particularly apparent in the capital city regions of the United Kingdom, Belgium and France: London (EUR 24.83); the Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (EUR 21.55); and the Île de France (EUR 20.57). Along with Denmark, each of these capital city regions featured among the six regions with the highest average hourly earnings in the EU; the other two were Luxembourg (EUR 21.50) and Ireland (EUR 20.64), both of which are covered by a single region at NUTS level 1 and by definition therefore also include the capital city. Average hourly earnings in Denmark were 15.7 times as high as in the EU region with the lowest average hourly earnings, namely Severna i Yugoiztochna in Bulgaria (EUR 1.78 per hour). Average gross earnings of EUR 5.00 or less per hour were recorded across 17 NUTS level 1 regions in 2010, including both Bulgarian regions, all four Romanian regions, two out of three Hungarian regions, five out of six Polish regions, all three of the Baltic Member States and Slovakia (the latter four countries are each covered by a single region at NUTS level 1).

In 2010, average gross annual earnings across the EU-27 amounted to EUR 30 766; it should be noted that gross annual earnings include extraordinary payments, which are not included in the hourly earnings described above (for example 13th and 14th month salaries, productivity bonuses, profit shares and payments in kind). The regions or countries with the highest annual earnings were London (the United Kingdom), Denmark and the Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (Belgium), in other words the same three regions with the highest average earnings per hour (although the positions of Denmark and London were reversed). On average, an employee in London received gross annual earnings of EUR 61 113, which was almost EUR 3 000 more than in Denmark and almost EUR 10 000 higher than in the Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest. There were a further seven regions across the whole of the EU that reported average earnings above EUR 42 500 per employee (as shown by the darkest shade in the map). The remaining seven included Luxembourg, the Finnish region of Åland, the German regions of Hamburg and Hessen, the French capital city region of Île de France, Vlaams Gewest in Belgium and one of its neighbouring regions from across the border in the Netherlands (West-Nederland).

At the other end of the scale, average earnings were EUR 10 000 or less per year in both Bulgarian regions and all four Romanian regions, as well as in three Polish regions (Region Północno-Zachodni, Region Północny and Region Wschodni), two Hungarian regions (Dunántúl and Alföld És Észak), Lithuania and Latvia (single regions at NUTS level 1).

Gross annual earnings in Switzerland (EUR 59 408) and Norway (EUR 54 169) were almost as high as in London, while in Iceland these averaged EUR 30 620 per employee in 2010. By contrast, annual earnings were considerably lower in the acceding and candidate countries, ranging from EUR 12 280 in Croatia, through EUR 9 764 in Turkey to a low of EUR 5 666 for the former Yugoslav Republic of Macedonia.

Data sources and availability

Most regional results in this chapter pertain to annual averages of the quarterly labour force survey (LFS). 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 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 EU 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: aged 16 and over in Spain, Sweden (1995–2001) and the United Kingdom; aged 15–74 in Denmark, Estonia, Finland, Hungary, Latvia and Sweden (from 2001 onwards); aged 16–74 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 20–64 (a Europe 2020 target) and so the employment rate that is presented relates to employed persons aged 20–64 as a percentage of the total population aged 20–64. The old-age employment rate represents employed persons aged 55–64 as a percentage of the total population aged 55–64.
- The dispersion rate of employment (unemployment) is the coefficient of variation for regional employment (unemployment) rates in a Member State (or another geographical aggregate), weighted by the active population of each region (geographical aggregate).
- The unemployed are persons aged 15–74 who were without work during the reference week, or 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: aged 16–74 in Spain, Sweden (for the years 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 15–24.

The structure of earnings survey provides harmonised data on the components of gross earnings; this information is collected every 4 years. The 2010 survey provides information on the level of hourly, monthly and annual remuneration, personal characteristics of employees (sex, age, occupation, length of service, highest educational level attained) and information relating to employers (economic activity, size and economic control of the enterprise). These statistics are collected under Council Regulation (EC) No 530/1999 concerning structural statistics on earnings and on labour costs and Commission Regulation (EC) No 1738/2005 amending Regulation (EC) No 1916/2000 as regards the definition and transmission of information on the structure of earnings.

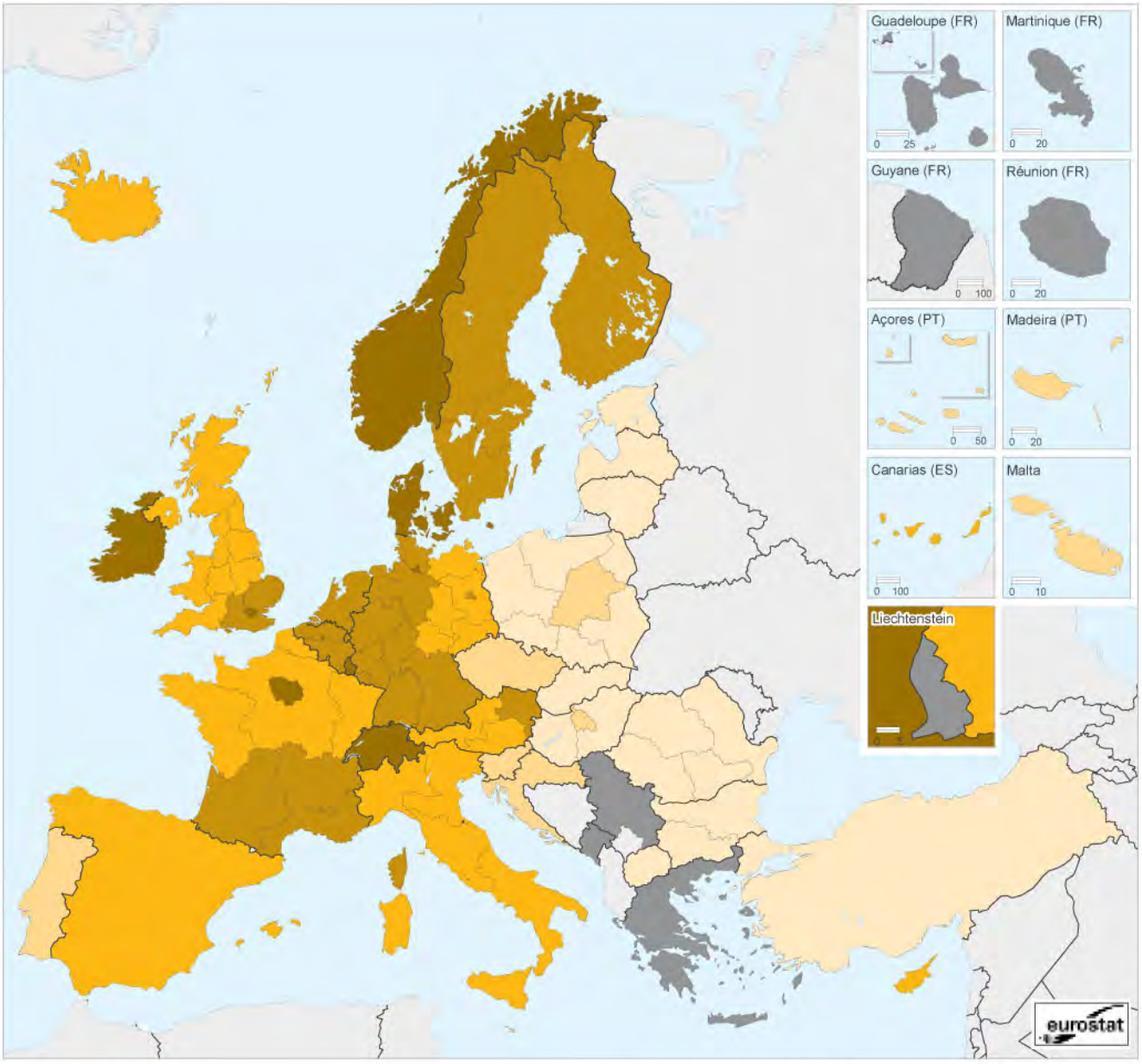
Context

Geographical mobility is cited as an important factor that contributes towards success within regional labour markets. One example is the flow of commuters on a daily or weekly basis for work from relatively poor regions with few jobs to richer regions where there are a wider range of job opportunities.

Employment is a key factor in combating social exclusion. Promoting more and better jobs, supporting the integration and participation of disadvantaged groups and developing an inclusive society accessible to all are overarching objectives which underpin EU funding. A large part of the expenditure from the European Social Fund (ESF) during the period 2007–13 aimed to promote access to employment and social inclusion for various groups; special emphasis was given to younger and older workers, migrants and ethnic minorities. Specific actions were also aimed at helping women to get (back) into work, reducing gender-based segregation of the labour market and better reconciling work and private life.

The European employment strategy (EES) was launched at the Luxembourg jobs summit in November 1997 and was

Map 5.10: Gross hourly earnings per employee for enterprises in the business economy, by NUTS 1 regions, 2010 (1)
(EUR per hour)



(EUR per hour)
EU-27 = 13.57

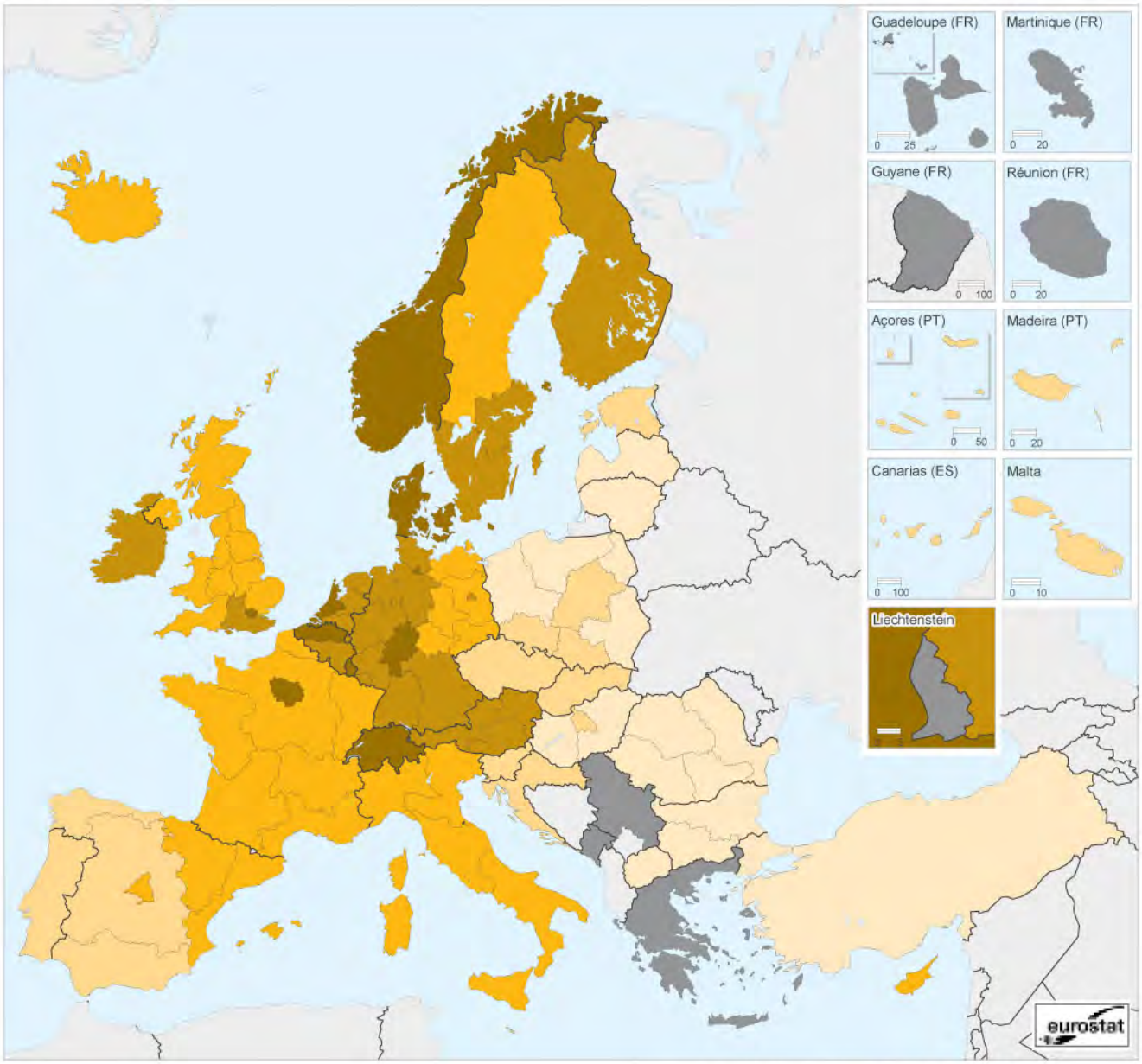
- <= 5.00
- 5.00 – 10.00
- 10.00 – 15.00
- 15.00 – 20.00
- > 20.00
- Data not available

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

0 200 400 600 800 km

Source: Eurostat (online data code: earn_ses10_rhr)

Map 5.11: Gross annual earnings per employee for enterprises in the business economy, by NUTS 1 regions, 2010 (1)
(EUR per year)



(EUR per year)
EU-27 = 30 766

- <= 10 000
- 10 000 – 25 000
- 25 000 – 35 000
- 35 000 – 42 500
- > 42 500
- Data not available

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

0 200 400 600 800 km

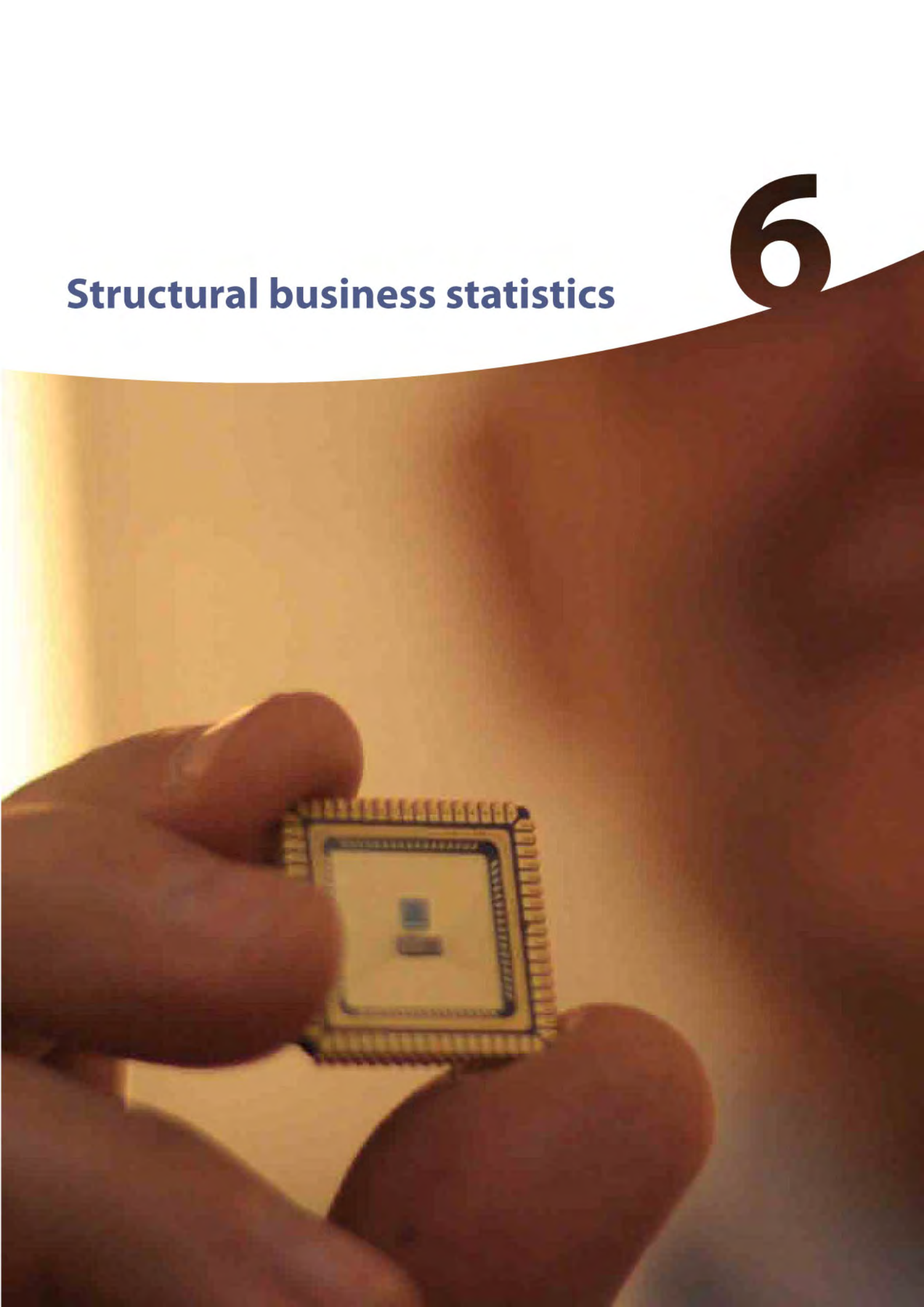
Source: Eurostat (online data code: earn_ses10_rann)

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 20–64 years old to 75 % by 2020. 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.

When there is an economic downturn, it usually takes some time before the unemployment rate begins to rise. Equally, once the economy starts to pick up, employers usually remain cautious about hiring new staff and it may again take some time 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. 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. The slow pace of recovery from the financial and economic crisis and mounting evidence of rising unemployment led the European Commission to make a set of proposals — 'Towards a job-rich recovery' (COM(2012) 173 final) — in April 2012 for measures to boost jobs through a dedicated employment package.

6

Structural business statistics



Structural business statistics (SBS) cover industry, construction and non-financial services, collectively referred to as the non-financial business economy. Presented according to the activity classification, NACE, these statistics describe the structure, conduct and performance of businesses. Structural business 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 their non-financial business economies. While some activities — such as retail trade — are spread relatively evenly across most regions, many others exhibit a considerable variation in their level of concentration, often with a few regions having a particularly high degree of specialisation. 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 (for example for scientific research and development), costs (for wages and other inputs), infrastructure (for example for transport or telecommunications), legislation, climatic and topographic conditions (particularly regarding tourism-related activities) and the proximity to markets.

Main statistical findings

According to estimates made using annual structural business statistics, there were approximately 21.8 million enterprises active in the EU-27's non-financial business economy in 2010. Together, they generated EUR 5 934 billion of gross value added and employed some 132.5 million persons. According to national accounts, industry accounted for 19.2 % of the total value added (at basic prices) generated across the whole economy (in other words, including financial services and services such as defence, health or education), construction for a 6.2 % share and non-financial services for about 44.2 %

Industrial and services specialisation

A regional analysis of the non-financial business economy workforce between the industrial sector, the construction sector and the non-financial services sector for 2010 is shown in Maps 6.1–6.3; no data are available for Malta, while data for the Greek, Dutch and Bulgarian construction sector refer to 2009. On the basis of this information, non-financial services accounted for almost two thirds of the non-financial business economy workforce (65.2 %), followed by industry with just under a quarter of the total (24.6 %), while the construction sector accounted for the smallest share (10.1 %).

Among the 261 regions in the EU for which NUTS level 2 data are available, just over one in five (or 57 regions) reported that industrial activities accounted for a share in excess of 35.0 % of the non-financial business economy workforce. The highest regional share for industrial activities in 2010 was 47.0 % in Severovýchod (in the north-east of the Czech Republic); together with the central Moravian region of Střední Morava (also in the Czech Republic) and two regions in Romania (Vest and Sud – Muntenia), these were the only NUTS level 2 regions where more than 45.0 % of the non-financial business economy workforce was employed in an industrial activity.

Eastern European regions often reported some of the highest shares in relation to the industrial economy's weight in the non-financial business economy workforce in 2010. Indeed, the southern German regions of Tübingen and Oberfranken were the only regions from EU-15 Member States to record an employment share for industrial activities of more than 40.0 %. The relatively high degree of employment in industrial activities was most pronounced in the Czech Republic (seven regions above 40.0 %), Poland and Romania (each with five regions), Bulgaria (three regions) and Hungary (two regions), as well as Slovakia and Slovenia (each with a single region).

There were 42 regions in the EU where 15.0 % or less of the non-financial business economy workforce was active in an industrial activity; this was often the case in capital city regions. In 13 of these 42 regions, the industrial economy accounted for less than 1 in 10 persons within the non-financial business economy workforce. These were spread across seven different EU Member States — with the lowest share recorded in the Ciudad Autónoma de Melilla (Spain), at just 1.7 %. There were two other Spanish regions where the share of industry in the non-financial business economy workforce was less than 10.0 % and these are both renowned tourist destinations, namely the islands of the Canarias and the Illes Balears. Other tourist destinations characterised as having relatively low shares of employment within the industrial economy included three Greek island regions — two in the Aegean Sea (Voreio Aigaio and Notio Aigaio) and one in the Ionian Sea (Ionia Nisia) — the French island of Corse and the Algarve region in southern Portugal. The remaining five regions which reported less than 10.0 % of their respective non-financial business economy workforce working in the industrial economy included the capital city regions of Belgium (Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest), the Netherlands (Noord-Holland) and the United Kingdom (both Inner and Outer London), as well as Utrecht (which is located to the south-east of Amsterdam and also forms part of the Randstad conurbation in the Netherlands).

The Norwegian capital city region of Oslo og Akershus also stood out for its relatively low share (8.7 %) of industrial employment in the non-financial business economy; none of the

remaining regions in Norway recorded a share of less than 15.0 % in 2010, as the weight of industry in the non-financial business economy workforce ranged from 18.9 % (Nord-Norge) to a high of 34.3 % in Agder og Rogaland (the south-west of Norway) — where a large part of the Norwegian petroleum industry is based. Among the remaining EFTA countries, the only information available within structural business statistics for Switzerland is at a national level: this shows that the respective share of industrial employment was 27.6 % in 2010. Within the acceding and candidate countries, the only information available within structural business statistics relates to Croatia (also national data): the employment share of industrial activities in the Croatian non-financial business economy total was 31.1 %.

Map 6.2 shows the employment share of construction activities in 2010. There were 31 regions in the EU where construction activities accounted for more than 16.0 % of the non-financial business economy workforce. These were located in a small group of Member States, with 14 regions in France, nine in Spain, three each in Italy and Portugal and a single region in Belgium and in Luxembourg (the latter is a single region at NUTS level 2). The highest share of construction activities in the non-financial business economy workforce was recorded in the French island regions of Corse (24.5 %) and Guyane (21.5 %), while the French region of Languedoc-Roussillon, the Spanish regions of Extremadura and the Ciudad Autónoma de Melilla, and the Portuguese Região Autónoma dos Açores were the only other regions where in excess of one in five persons within the non-financial business economy were employed in the construction sector.

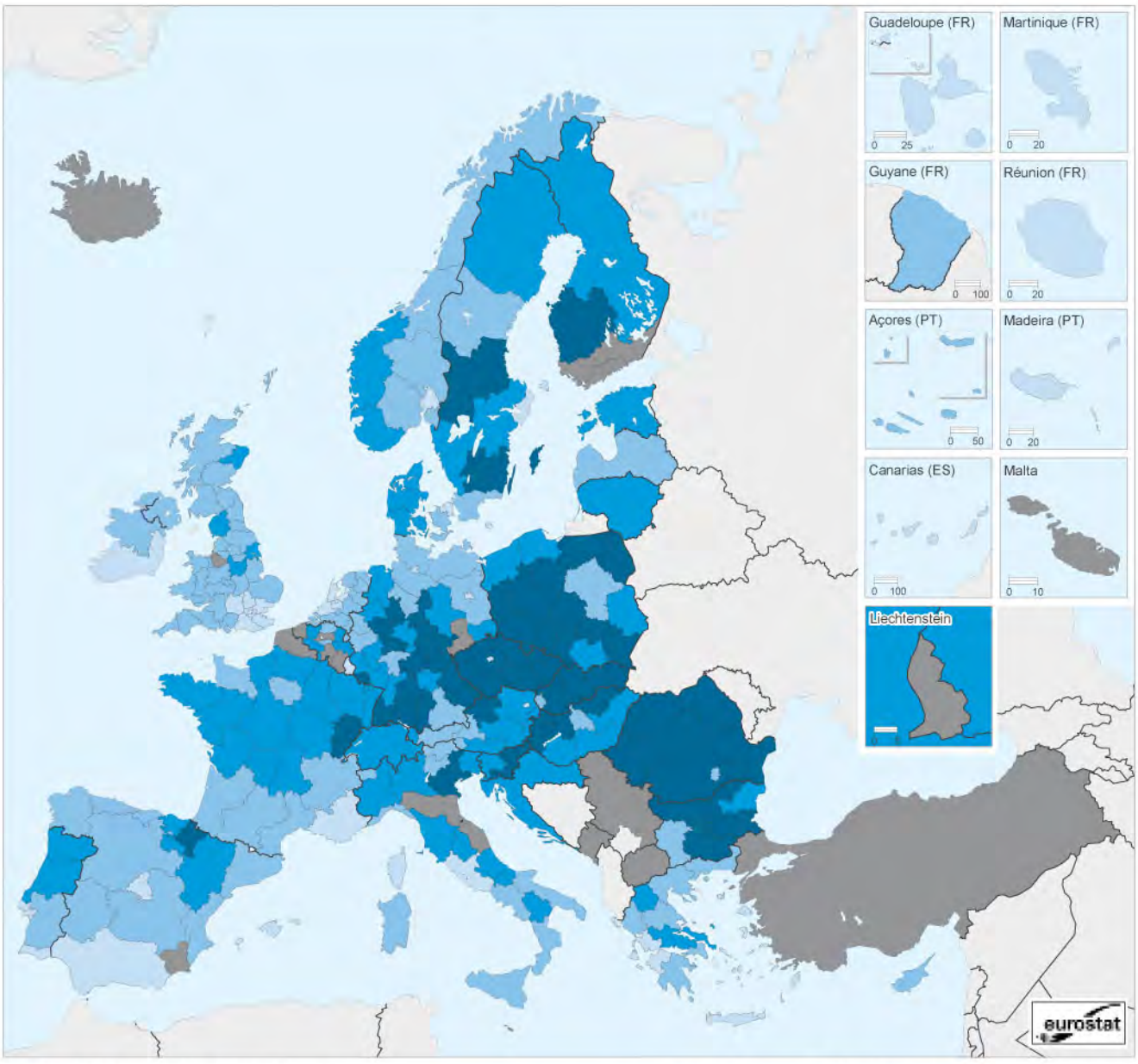
There were 100 regions across the EU where the construction sector accounted for 1 in 10 or fewer of the non-financial business economy workforce. Just over half of these (53 regions) recorded an employment share for construction that was less than or equal to 8.0 % — as shown by the lightest shaded regions in Map 6.2. The vast majority of these were either in Germany (24 regions) or the United Kingdom (18 regions), while there were also three regions from the Netherlands, two regions from each of Belgium and Ireland, and a single region each from Denmark, France, Hungary and Slovakia. Each of these Member States reported a low share of employment in construction activities within their capital city region (this may be linked to enterprises having their offices, vehicle parks and yards for stocking construction materials outside of capital city regions given the premium on land prices or rental prices in capital cities and major conurbations); Közép-Magyarország (Hungary, 7.7 %), Hovedstaden (Denmark, 7.6 %), Bratislavský kraj (Slovakia, 7.5 %), the Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (Belgium, 7.3 %), Noord-Holland (the Netherlands, 7.0 %), Berlin (Germany, 6.0 %), the Île de France (France, 5.9 %), Southern and Eastern (Ireland, 5.4 %) and Inner London (the United Kingdom, 3.8 %).

The German urban region of Hamburg recorded the lowest share of persons working in the construction sector (3.7 % of the non-financial business economy workforce in 2010), while four other German regions reported employment shares of less than 5.0 % — Bremen, Köln, Darmstadt and Mittelfranken — as did Inner London and the Border, Midland and Western region of Ireland. Both Irish regions featured among the 10 EU regions with the lowest shares of employment in construction. This was in stark contrast to the prominence of the construction sector in Ireland during the period from the late 1990s through to 2007, when the country experienced a construction boom and had some of the highest levels of construction activity in Europe. Despite the end of a similar construction boom in Spain, the share of the construction sector in non-financial business economy employment remained above the EU average in all Spanish regions, although the share of construction fell in nearly all of the Spanish regions following the financial and economic crisis.

The most service-oriented non-financial business economy workforces were mainly in or bordering major urban areas (and especially capital city regions) — for example London and the surrounding south-east of England, Hamburg and Berlin in Germany, Noord-Holland (including Amsterdam) and Utrecht in the Netherlands, or the Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest in Belgium. The highest share of non-financial services in the non-financial business economy workforce in 2010 was 93.2 % in Inner London. High shares of employment in non-financial services were also found in many regions often associated with tourism, particularly island regions, including Notio Aigaio, Ionia Nisia, Kriti and Voreio Aigaio in Greece, the Canarias in Spain and the Algarve in Portugal.

Non-financial services accounted for more than 75.0 % of the non-financial business economy workforce in 39 regions across the EU in 2010, among which were 12 capital city regions from the United Kingdom (93.2 %), Belgium (83.8 %), the Netherlands (83.1 %), Denmark (80.3 %), Germany (79.8 %), Ireland (79.6 %), Spain (79.1 %), Portugal (79.1 %), Austria (78.2 %), Sweden (77.6 %), Slovakia (77.4 %) and the Czech Republic (75.3 %). Alongside these, the remaining 27 regions with a high proportion of employment in non-financial services (as shown by the darkest shade in Map 6.3) included a further 11 regions from the United Kingdom, four regions in the Greek islands, three additional regions from each of Germany, Spain and the Netherlands, one additional region each from Belgium and from Portugal and a single region from Finland; the Norwegian capital city region of Oslo og Akershus (80.9 %) also recorded in excess of three quarters of its non-financial business economy workforce employed within non-financial services in 2010.

Map 6.1: Employment in the industrial economy, by NUTS 2 regions, 2010 (1)
(% share of the non-financial business economy)



(% share of the non-financial business economy)

EU = 24.6

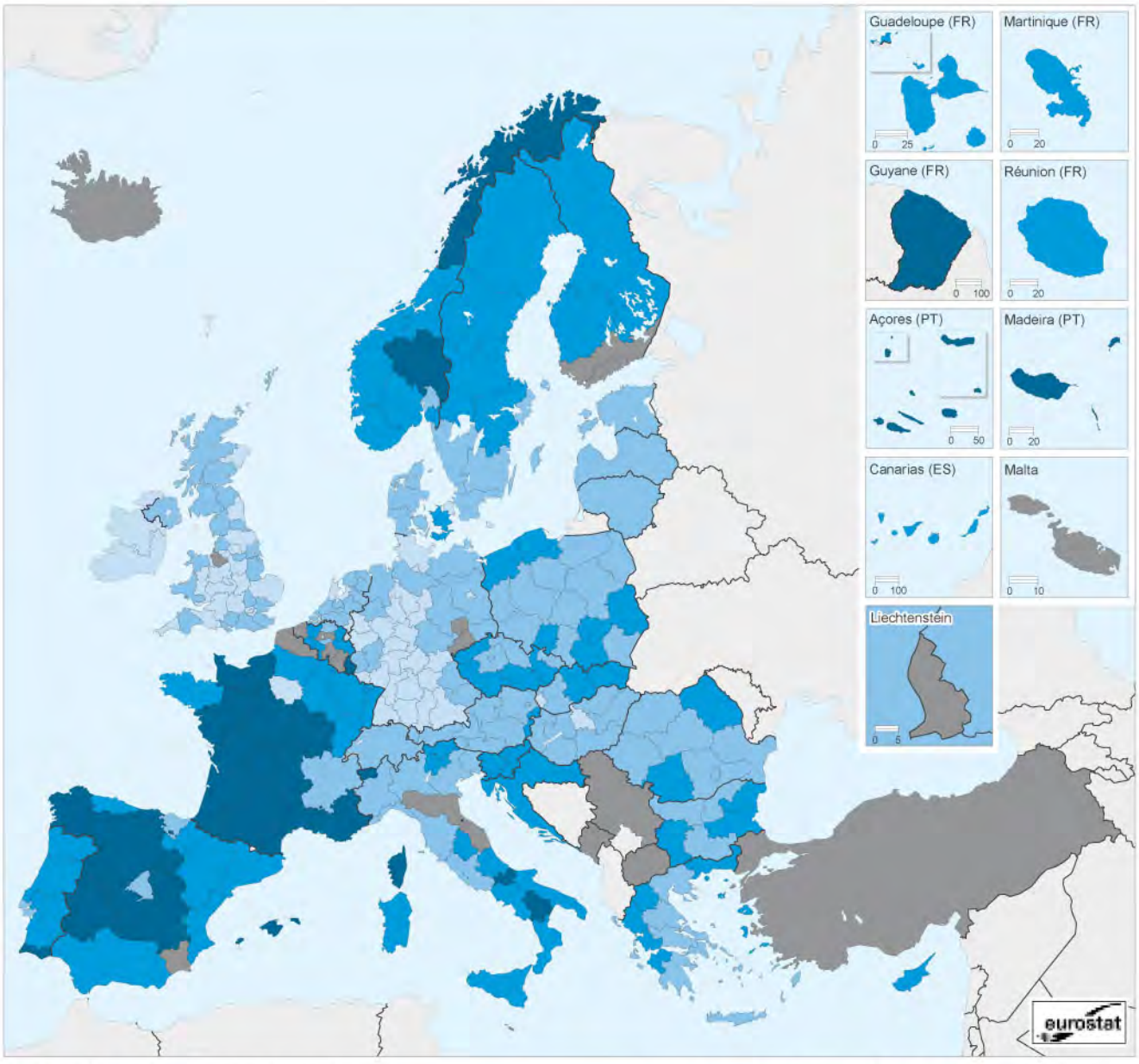
- <= 15.0
- 15.0 – 25.0
- 25.0 – 35.0
- > 35.0
- Data not available

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

0 200 400 600 800 km

(1) Bulgaria (NACE Section F), Greece and the Netherlands, 2009; Switzerland and Croatia, national level.
Source: Eurostat (online data code: sbs_r_nuts06_r2)

Map 6.2: Employment in construction, by NUTS 2 regions, 2010 (1)
(% share of the non-financial business economy)



(% share of the non-financial business economy)

EU = 10.1

- <= 8.0
- 8.0 – 12.0
- 12.0 – 16.0
- > 16.0
- Data not available

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

0 200 400 600 800 km

(1) Bulgaria (NACE Section F), Greece and the Netherlands, 2009; Switzerland and Croatia, national level.
Source: Eurostat (online data code: sbs_r_nuts06_r2)

In total there were 29 regions in the EU where the non-financial services share of employment was 50.0 % or less (the lightest shade in Map 6.3). There were eight regions across the EU where the share of employment attributed to non-financial services was 45.0 % or less in 2010: half of these were located in the Czech Republic, while there were two Romanian regions and a single region from each of Slovenia and Slovakia. The lowest shares were recorded in the Czech regions of Střední Morava (41.2 %) and Severovýchod (41.4 %) — which had reported the highest shares for industrial employment. The non-financial services share of employment was consistently above 50.0 % in each of the EFTA and the acceding or candidate countries for which data are available (national data), while this was also true for each of the Norwegian regions.

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 activity, the table indicates the median and mean share of that activity in the non-financial business economy workforce across all regions. The final two columns in the table show for each activity which region was the most specialised, providing the employment share of that activity in relation to the non-financial business economy workforce in that region.

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; this often results in a handful of regions accounting for a relatively high share of sectoral employment. The most notable examples include the mining of coal and lignite in Śląskie (Poland) or mining support services in North Eastern Scotland (the United Kingdom) — the latter provides support for the offshore extraction of crude petroleum and natural gas in the North Sea.

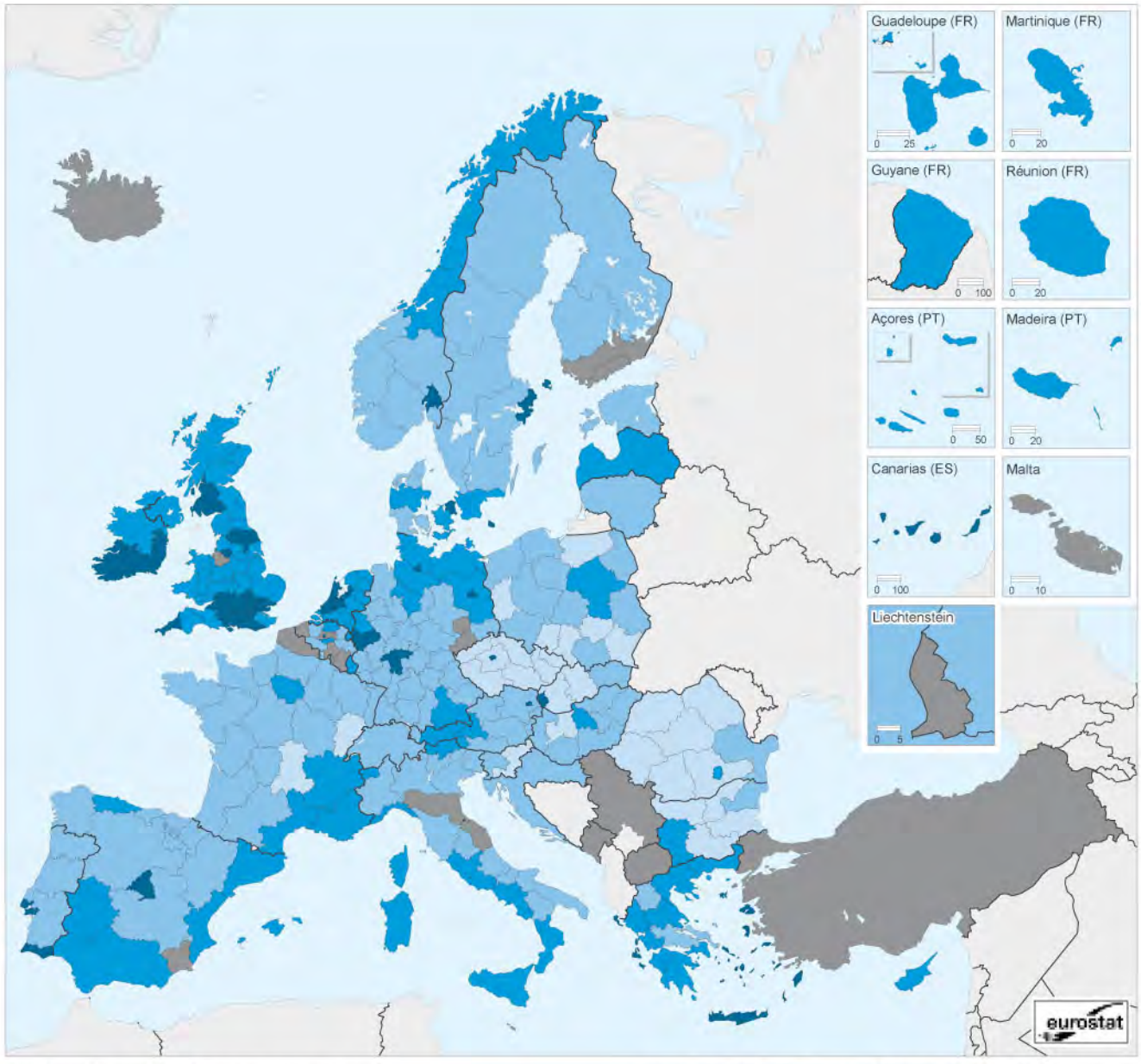
Manufacturing activities that involve the primary processing stages of agricultural, fishing or forestry products tend to be concentrated in areas close to the source of the raw material. The regions most specialised in food manufacturing (NACE Division 10) were often located in rural areas or close to agricultural production centres: for example Bretagne (in north-west France), Podlaskie (eastern Poland), Dél-Alföld in Hungary, Alentejo in Portugal, Severen tsentralen in Bulgaria or Lincolnshire in the United Kingdom. Heavily forested Nordic and Baltic regions and mountainous central Slovakian regions were among the most specialised regions for the manufacture of wood and wood products (NACE Division 16) and for the related manufacturing of paper and paper products (NACE Division 17). Stredné Slovensko (Slovakia) was the most specialised region for 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 almost one in four of the non-financial business economy's workforce in Corse (France) in 2010 and for relatively high shares in several Spanish and Portuguese regions (for example Extremadura in Spain or the Região Autónoma da Madeira in Portugal).

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 ferry services between Sweden and Finland and other Baltic Sea traffic — it was very highly specialised in water transport, which accounted for 32.4 % of the total number of persons employed in this region's non-financial business economy in 2010, 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, which is home to Deutsche Post DHL) was particularly specialised in postal and courier activities, which accounted for more than 1 in 10 of all employment in the non-financial business economy workforce.

Regions traditionally associated with tourism, for example in Greece, Italy, Portugal and Spain, were the most specialised in accommodation services (NACE Division 55) and food and beverage service activities (NACE Division 56). The relative importance of tourism to many of these regions has been all the more important in recent years, given the effects of the financial and economic crisis. The south Aegean region of Greece (Notio Aigaio — which includes, among others, the islands of Kos, Mykonos and Rhodes) recorded the highest share of non-financial business economy employment in accommodation and food and beverage service activities. These services also accounted for a relatively high share 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), as well as the Algarve in Portugal, the Scottish Highlands and Islands (the United Kingdom) and the German coastal region of Mecklenburg-Vorpommern.

Map 6.3: Employment in the non-financial services economy, by NUTS 2 regions, 2010 (1)
(% share of the non-financial business economy)



(% share of the non-financial business economy)

EU = 65.2

- <= 50.0
- 50.0 – 62.5
- 62.5 – 75.0
- > 75.0
- Data not available

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Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

(1) Bulgaria (NACE Section F), Greece and the Netherlands, 2009; Switzerland and Croatia, national level.
Source: Eurostat (online data code: sbs_r_nuts06_r2)

Specialisation in information and communication activities (NACE Divisions 58 to 63), real estate activities (NACE Section L), professional scientific and technical activities (NACE Divisions 69 to 75) and administrative and support service activities (NACE Divisions 77 to 82) is sometimes 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). Inner London in the United Kingdom was the most specialised region for multimedia publishing (NACE Division 59), while Utrecht in the Netherlands had the highest proportion of its regional non-financial business economy workforce employed within computer activities (NACE Division 62). The Belgian capital city region of Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest and Köln in Germany were the most specialised in telecommunications (NACE Division 61); the latter boosted by the presence of Deutsche Telekom's headquarters in Bonn. Latvia was the most specialised region for real estate activities, while British regions were the most specialised in nearly all of the professional, scientific and technical activities: Inner London for legal and accounting activities (NACE Division 69), activities of head offices (NACE Division 70), advertising and market research (NACE Division 73), and other professional, scientific and technical activities (NACE Division 74); North Eastern Scotland for architectural and engineering activities (NACE Division 71) — which (among other services) provides services for North Sea oil and gas platforms; and East Anglia (which includes Cambridge) for scientific research and development (NACE Division 72). The Province/Provincie Luxembourg in southern Belgium was the most specialised region for veterinary activities (NACE Division 75).

The Portuguese capital city region of Lisboa was the most specialised in administrative and support service activities (NACE Section N), with 22.6 % of its non-financial business economy workforce employed in these activities. At a more detailed level, Groningen (the Netherlands) was particularly specialised in employment activities (NACE Division 78) and the Romanian capital city region of Bucureşti - Ilfov had the highest proportion of its non-financial business economy workforce engaged in security and investigation services (NACE Division 80).

Range of specialisation

Figure 6.1 provides an overview of the relative importance of economic 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 that activity in its non-financial business economy workforce to the region with the highest share; the region with the highest share is also 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 the least and most specialised region is very wide for manufacturing as is the breadth of the coloured box, indicating the varying degrees of importance for manufacturing across EU regions. By contrast, the employment spread for large, basic activities, like construction and distributive trades, which tend to serve more local clients, was much narrower, both in terms of the spread of the extreme values (shown by the horizontal lines) and in terms of the breadth of the inter-quartile range (the coloured box containing half of the regions).

Manufacturing (NACE Section C) accounted for shares in the total number of persons employed in the non-financial business economy between 1.5 % and 44.4 % — the latter was recorded for Severovýchod (the Czech Republic). Transport and storage (NACE Section H) and mining and quarrying (NACE Section B) are also activities where a few regions tend to be very highly specialised. The highest specialisation for transport and storage was in the small Finnish island region of Åland, where almost two fifths of the workforce (39.6 %) was employed in this sector; 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 a few regions being highly specialised on account of deposits of metallic ores, coal, oil or gas. Mining and quarrying accounted for 13.9 % of the non-financial business economy workforce in North Eastern Scotland (the United Kingdom), while the median share across all EU regions was 0.3 %.

By contrast, the spread of employment was much narrower for distributive trades (NACE Section G), which was the activity displaying the highest median employment share, as these activities were present on a relatively large scale in all regions. Employment shares for distributive trades ranged from a low of 16.1 % to just over two fifths (40.2 %) of the non-financial business economy workforce in Dytiki Ellada (western Greece).

Table 6.1: Average share of non-financial business economy employment and most specialised regions by activity (NACE sections and divisions) and by NUTS 2 regions, 2010 (1)
(% share of non-financial business economy employment)

Activity (NACE code)	Across EU regions		Most specialised region	
	Median share	Mean share	Name (NUTS level 2)	Share in regional non-financial business economy employment (%)
Mining and quarrying (B)	0.3	0.6	North Eastern Scotland (UKM5)	13.9
Mining of coal and lignite (05)	0.0	0.2	Śląskie (PL22)	9.5
Extraction of crude petroleum and natural gas (06)	0.0	0.1	North Eastern Scotland (UKM5)	4.7
Mining of metal ores (07)	0.0	0.0	Övre Norrland (SE33)	c
Other mining and quarrying (08)	0.2	0.2	Świętokrzyskie (PL33)	1.3
Mining support service activities (09)	0.0	0.1	North Eastern Scotland (UKM5)	9.0
Manufacturing (C)	22.1	23.0	Severovýchod (CZ05)	44.4
Manuf. of food (10)	3.2	3.4	Bretagne (FR52)	13.9
Manuf. of beverages (11)	0.3	0.4	Dytiki Ellada (ES23)	3.0
Manuf. of tobacco products (12)	0.0	0.1	Trier (DEB2)	c
Manuf. of textiles (13)	0.3	0.5	Prov. West-Vlaanderen (BE25)	3.9
Manuf. of wearing apparel (14)	0.3	0.8	Severozapaden (BG31)	9.8
Manuf. of leather and leather products (15)	0.1	0.3	Nord-Vest (RO11)	3.9
Manuf. of wood and wood products (16)	0.7	1.0	Stredné Slovensko (SK03)	4.4
Manuf. of paper and paper products (17)	0.4	0.5	Norra Mellansverige (SE31)	3.9
Printing and reproduction of recorded media (18)	0.6	0.6	West Yorkshire (UKE4)	2.1
Manuf. of coke and refined petroleum products (19)	0.0	0.1	Peloponnisos (EL25)	1.0
Manuf. of chemicals and chemical products (20)	0.6	0.8	Rheinhessen-Pfalz (DEB3)	8.3
Manuf. of pharmaceutical products and preparations (21)	0.2	0.4	Prov. Brabant Wallon (BE31)	10.8
Manuf. of rubber and plastic products (22)	1.1	1.3	Auvergne (FR72)	11.4
Manuf. of other non-metallic mineral products (23)	1.0	1.1	Świętokrzyskie (PL33)	4.6
Manuf. of basic metals (24)	0.5	0.9	Norra Mellansverige (SE31)	9.8
Manuf. of fabricated metal products (25)	2.5	2.7	Franche-Comté (FR43)	8.0
Manuf. of computer, electronic and optical products (26)	0.6	0.8	Észak-Magyarország (HU31)	5.4
Manuf. of electrical equipment (27)	0.7	1.0	Oberpfalz (DE23)	7.6
Manuf. of other machinery and equipment (28)	1.4	2.0	Tübingen (DE14)	11.8
Manuf. of motor vehicles, trailers and semi-trailers (29)	0.7	1.6	Braunschweig (DE91)	c
Manuf. of other transport equipment (30)	0.3	0.5	Midi-Pyrénées (FR62)	5.7
Manuf. of furniture (31)	0.6	0.8	Warmińsko-Mazurskie (PL62)	7.8
Other manufacturing (32)	0.5	0.6	Border, Midland and Western (IE01)	5.4
Repair and installation of machinery (33)	0.8	0.9	Mittelfranken (DE25)	4.0
Electricity, gas, steam and air conditioning supply (D)	0.7	0.8	Sud-Vest Oltenia (RO41)	4.5
Water supply, sewerage, waste management (E)	0.9	1.0	Sud-Est (RO22)	3.0
Water supply (36)	0.2	0.3	Severozapaden (BG31)	1.8
Sewerage (37)	0.1	0.1	Trier (DEB2)	0.8
Waste management (38)	0.6	0.6	Sicilia (ITG1)	1.9
Remediation (39)	0.0	0.0	Valle d'Aosta/Vallée d'Aoste (ITC2)	0.4

Table 6.1: Average share of non-financial business economy employment and most specialised regions by activity (NACE sections and divisions) and by NUTS 2 regions, 2010 (1) *(cont.)*
(% share of non-financial business economy employment)

Construction (F)	10.8	11.3	Corse (FR83)	24.5
Construction of buildings (41)	2.8	3.4	Extremadura (ES43)	11.6
Civil engineering (42)	1.3	1.4	Região Autónoma da Madeira (PT30)	5.5
Specialised construction activities (43)	5.8	6.5	Corse (FR83)	21.1
Distributive trades (G)	25.7	25.8	Dytiki Ellada (EL23)	40.2
Motor trades and repair (45)	3.1	3.1	Prov. Luxembourg (BE34)	5.4
Wholesale trade (46)	7.4	7.6	Kentriki Makedonia (EL12)	15.4
Retail trade (47)	14.6	15.1	Nord - Pas-de-Calais (FR30)	28.9
Transport and storage (H)	7.2	7.6	Åland (FI20)	39.6
Land transport and pipelines (49)	4.2	4.3	Lietuva (LT00)	8.4
Water transport (50)	0.1	0.3	Åland (FI20)	32.4
Air transport (51)	0.0	0.2	Outer London (UKI2)	3.4
Supporting transport activities (52)	1.5	1.7	Bremen (DE50)	10.8
Postal and courier activities (53)	1.1	1.1	Köln (DEA2)	11.6
Accommodation and food service activities (I)	7.5	8.4	Notio Aigaio (EL42)	32.7
Accommodation (55)	1.5	2.3	Notio Aigaio (EL42)	18.2
Food and beverage service activities (56)	5.8	6.1	Notio Aigaio (EL42)	15.4
Information and communication (J)	2.5	3.3	Inner London (UKI1)	14.6
Publishing activities (58)	0.4	0.6	Gießen (DE72)	4.4
Multimedia publishing (59)	0.1	0.2	Inner London (UKI1)	2.9
Programming and broadcasting (60)	0.1	0.1	Ciudad Autónoma de Melilla (ES64)	1.4
Telecommunications (61)	0.5	0.6	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (BE10)	4.7
Computer activities (62)	1.1	1.5	Utrecht (NL31)	8.4
Information service activities (63)	0.2	0.3	Wien (AT13)	1.5
Real estate activities (L)	1.8	1.8	Latvija (LV00)	5.8
Professional, scientific and technical activities (M)	6.9	7.4	Inner London (UKI1)	24.4
Legal and accounting activities (69)	2.2	2.3	Inner London (UKI1)	8.8
Activities of head offices (70)	1.0	1.3	Inner London (UKI1)	6.4
Architectural and engineering activities (71)	1.9	2.1	North Eastern Scotland (UKM5)	11.8
Scientific research and development (72)	0.2	0.3	East Anglia (UKH1)	2.1
Advertising and market research (73)	0.5	0.7	Inner London (UKI1)	3.3
Other professional, scientific and technical activities (74)	0.6	0.6	Inner London (UKI1)	1.7
Veterinary activities (75)	0.1	0.2	Prov. Luxembourg (BE34)	c
Administrative and support service activities (N)	8.0	8.5	Lisboa (PT17)	22.6
Rental and leasing activities (77)	0.4	0.5	Ionia Nisia (EL22)	c
Employment activities (78)	1.9	2.7	Groningen (NL11)	14.2
Travel agency and related activities (79)	0.3	0.4	Ionia Nisia (EL22)	2.0
Security and investigation (80)	0.8	1.0	Bucureşti - Ilfov (RO32)	5.0
Service to buildings and landscape activities (81)	2.7	2.7	Berlin (DE30)	7.7
Other administrative and business activities (82)	1.1	1.3	Lisboa (PT17)	8.0
Repair of computers and personal and household goods (95)	0.3	0.3	Limousin (FR63)	1.4

(1) Bulgaria (NACE Section F), Greece and the Netherlands, 2009; Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Helsinki-Uusimaa (FI1B), Malta, Etelä-Suomi (FI1C), Pohjois- ja Itä-Suomi (FI1D), Cheshire (UKD6) and Merseyside (UKD7), not available.

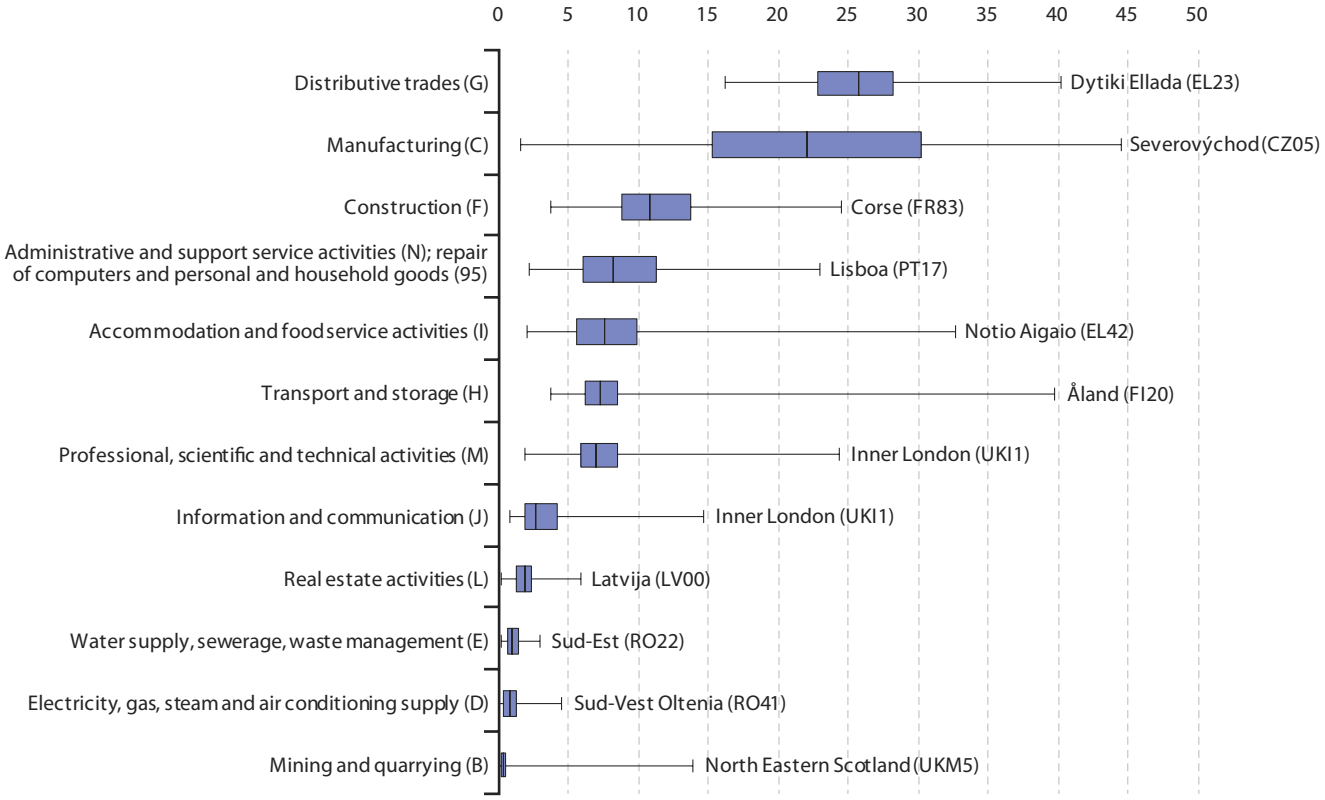
Source: Eurostat (online data code: sbs_r_nuts06_r2)

Business concentration

The analysis of specialisation (above) shows the relative importance of an individual activity in a particular region, regardless of the size of the region or the activity. Figure 6.2 shows the extent to which a particular activity is widely spread across most regions or is concentrated in a small number of regions. Four of the five mining and quarrying NACE divisions topped the ranking in 2010, with a very high share of employment concentrated in relatively few regions. The most concentrated activity was the mining of metal ores (NACE Division 07), where practically the entire EU workforce was concentrated across no more than 50 regions and where the top 10 regions accounted for 83.8 % of the sectoral workforce. Aside from the mining of metal ores, the top 10 regions accounted for more than half of the workforce for the mining of coal and lignite, the extraction of crude petroleum and natural gas, mining support service activities, air transport services and the manufacture of leather and leather products. In the case of air transport, the dominance of the top 10 regions was due to a concentration within large metropolitan regions where main airports tend to be situated: chief among these were the regions that contained Paris, (Outer) London, Köln, Amsterdam and Madrid. Leather and leather products manufacturing, on the other hand, is a relatively small activity that was heavily concentrated in Italian, Portuguese and Romanian regions.

In contrast to the mining and quarrying of metallic and energy-producing minerals, the activity of other mining and quarrying (NACE Division 08) was among those where the cumulative share of the 10 largest regions was least dominant, as the top 10 regions accounted for just 17.7 % of sectoral employment. This relatively low share 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. Of all the activities (NACE divisions), veterinary activities (NACE Division 75), motor trades and repair (NACE Division 45), retail trade (NACE Division 47), civil engineering (NACE Division 42) and the manufacture of food and beverages (NACE Divisions 10 and 11) had the lowest levels of concentration in 2010.

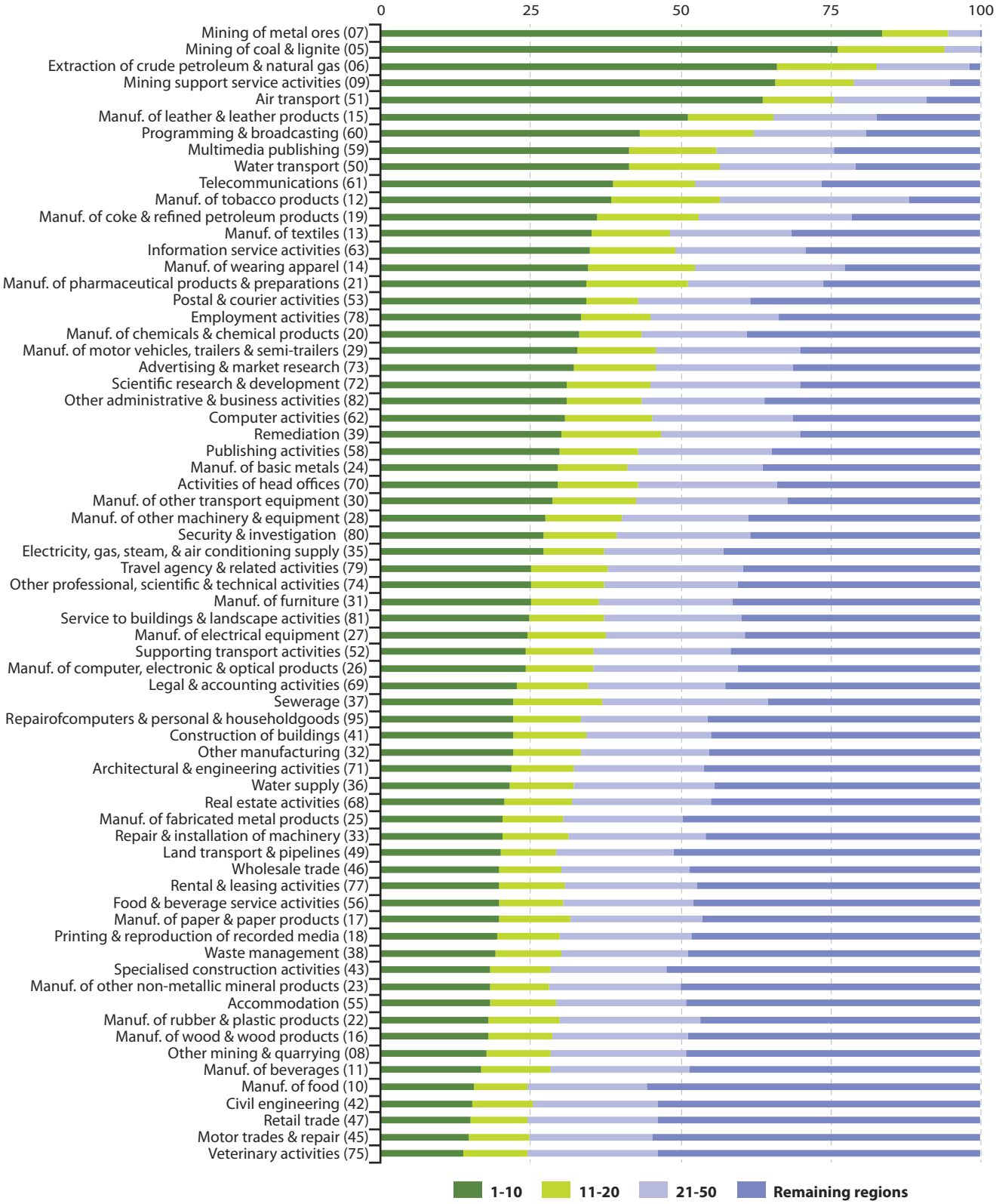
Figure 6.1 Regional specialisation by activity, by NUTS 2 regions, EU, 2010 (1)
(% share of regional non-financial business economy employment)



(1) Minimum and maximum share (vertical lines at the extremes); inter-quartile range (box); median share (vertical line within the box); Bulgaria (NACE Section F), Greece and the Netherlands, 2009; Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Helsinki-Uusimaa (FI1B), Malta, Etelä-Suomi (FI1C), Pohjois- ja Itä-Suomi (FI1D), Cheshire (UKD6) and Merseyside (UKD7), not available.

Source: Eurostat (online data code: sbs_r_nuts06_r2)

Figure 6.2: Concentration of activities (NACE divisions), by NUTS 2 regions, EU, 2010 ([1])
(%, cumulative share of top X regions in sectoral employment)



([1]) Bulgaria (NACE Section F), Greece and the Netherlands, 2009; Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Helsinki-Uusimaa (FI1B), Malta, Etelä-Suomi (FI1C), Pohjois- ja Itä-Suomi (FI1D), Cheshire (UKD6) and Merseyside (UKD7), not available.

Source: Eurostat (online data code: sbs_r_nuts06_r2)

Map 6.4 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 shows an indicator that is based on the cumulative share of the five largest activities (NACE divisions) in the total non-financial business economy workforce: the five largest activities are selected independently for each region, although there are several activities, such as retail trade, that are present among the five main employers in nearly all of the regions.

High levels of employment concentration tend to be recorded in those regions where construction, distributive trades or other services dominate the non-financial business economy, as the distribution of industrial activities tends to be more fragmented. The most concentrated regions were generally those traditionally associated with tourism, in particular specific regions in Greece, Spain, France, Italy and Portugal, underlining the importance of construction, trade, transport, and accommodation and food service activities in tourism-oriented regions. There were 44 regions at the NUTS level 2 that reported in excess of 47.5 % of their non-financial employment concentrated in their five largest activities.

By contrast, the lowest concentrations were mainly recorded in regions with a relatively small services sector and a relatively large manufacturing activity; this was often the case in eastern Europe, in particular in the Czech Republic, Estonia, Hungary, Slovenia and Romania, but also in several regions in Germany, Italy, Finland and Sweden. The five largest activities accounted for around one third of non-financial business economy employment in three Czech regions (Moravskoslezsko, Severozápad and Jihozápad), the French capital city region of Île de France, the Hungarian region of Közép-Dunántúl and in Estonia (the latter is one region at NUTS level 2).

Data sources and availability

Regional SBS are collected under a regulation of the European Parliament and of the Council, using the definitions and analysis (breakdowns) specified in European Commission implementing regulations. The latest information available is generally for the reference year 2010, with regional statistics being presented for all of the EU Member States (except Malta) and for Norway; data are also presented at a national level for Switzerland and Croatia.

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 services (such as defence, education and health), which are not covered by SBS, and also excludes financial services (NACE Section K). Regional SBS are presented by sectors of activity, available at the NACE two-digit (division) 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 EU Member States the activity code is assigned on the basis of the principal activity of the enterprise to which the local unit belongs. 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, based on the enterprise as a statistical unit, are not directly comparable with national aggregates compiled from regional SBS.

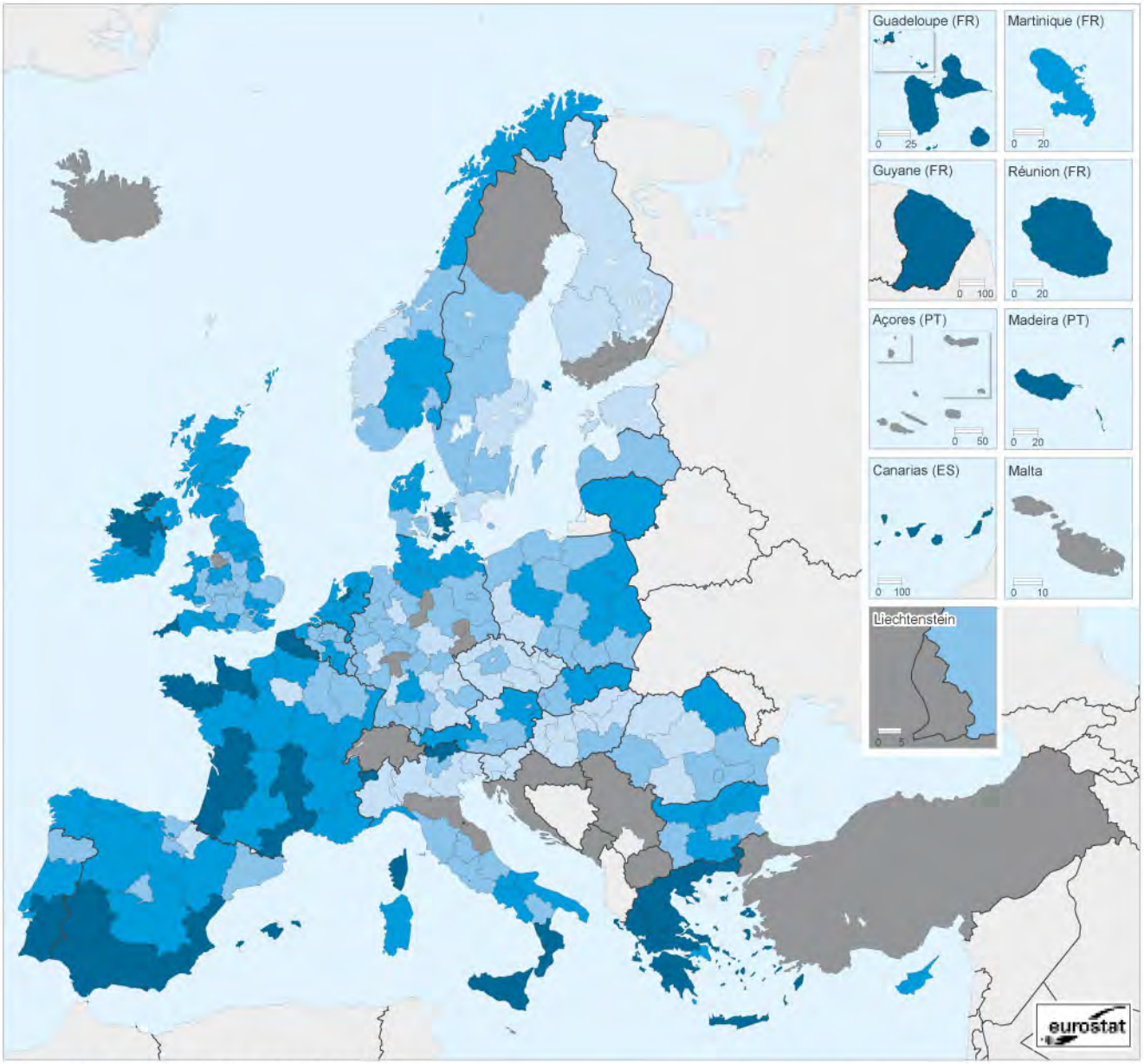
The main variable used for analysis in this chapter is the number of persons employed. For SBS, this is defined as the total number of persons who work (paid or unpaid) in the observation unit, as well as persons who work outside the unit but who belong to it and are paid by it. The number of persons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

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.

Supporting the creation and growth of businesses, in particular small and medium-sized enterprises (SMEs), is a key way by which cohesion policy helps to boost regional economies. SMEs often have difficulty in accessing finance and technology and coping with structural changes in markets. EU cohesion policy aims to tackle these difficulties through a combination of so-called 'hard' measures, such as direct support to investment, and 'soft' measures, notably the provision of business support services, training, fostering an innovative environment, access to finance and technology transfer, as well as the support of networks and clusters.

Map 6.4: Regional business concentration, by NUTS 2 regions, 2010 (1)
(%, cumulative share of the five largest activities (NACE divisions) in regional non-financial business economy employment)



(%, cumulative share of the five largest activities (NACE divisions) in regional non-financial business economy employment)

EU = 37.9

- <= 37.5
- 37.5 – 42.5
- 42.5 – 47.5
- > 47.5
- Data not available

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

0 200 400 600 800 km

(1) Bulgaria (NACE Section F), Greece and the Netherlands, 2009.
Source: Eurostat (online data code: sbs_r_nuts06_r2)

7

Tourism

This chapter presents regional patterns of tourism in the European Union (EU); 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; when compared with the resident population it is often referred to as tourism intensity. The chapter provides details of domestic tourism (which comprises the activities of residents of a given country travelling to and staying in places only within their own country, but outside their usual environment) — detailing the number of nights spent and preferences for different types of tourist accommodation establishments — and contrasts this with similar information on foreign tourists (who are often referred to as non-residents).

Main statistical findings

According to the United Nations World Tourism Organisation, Europe is the most frequently visited region in the world, accounting for over half of all international tourist arrivals worldwide in 2011. In 2011, 5 of the top 10 countries for international visitors in the world were EU Member States (France, Spain, Italy, the United Kingdom and Germany), while a sixth country in the top 10, Turkey, is an EU candidate country. The wealth of European cultures, the variety of its landscapes and the 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

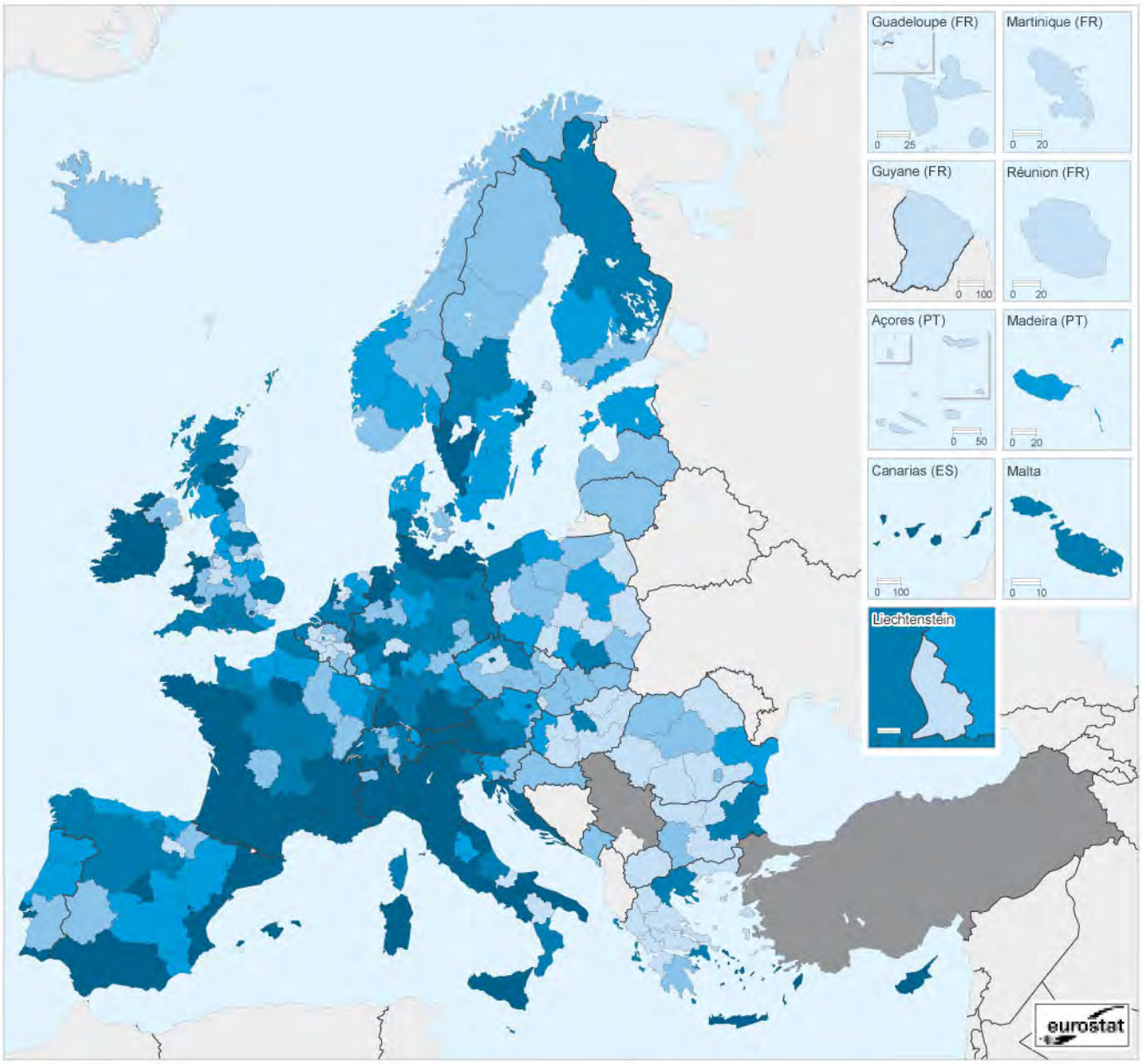
There were 2.44 billion nights spent in hotels, campsites and other collective accommodation establishments (the latter includes tourist dwellings) across the EU-27 in 2011, of which 57.3 % were by domestic tourists in their own country of residence.

Map 7.1 gives an overview of the number of overnight stays by residents and non-residents (combined) in 2011. Tourism in the EU is often concentrated in coastal regions, although the Alpine regions and some cities also experience high demand. A total of 55 regions (including Ireland for which no regional analysis is available) in the EU-27 recorded more than 10.0 million nights spent in hotels, campsites and other collective accommodation establishments, among which 20 regions recorded more than 24.0 million nights. This top 20 list included six regions in Italy, five each in Spain and France, two in Germany and one each in 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 the analysis showing a breakdown between the different types of accommodation. These 20 regions together accounted for 38.6 % of all overnight stays in the 269 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 in 2011, 89.8 million and 77.2 million respectively. They were followed by the Spanish regions of Cataluña — which includes Barcelona, the Costa Brava and Costa Dorada (69.3 million) — and the Illes Balears — which includes the main island destinations of Mallorca, Menorca, Eivissa (Ibiza) and Formentera (64.3 million). The fifth largest was the Italian region of Veneto which includes Venice (63.4 million). Almost one in seven tourism nights spent in the EU were spent in one of these five regions. Inner London in the United Kingdom (eighth place), Tirol in Austria (14th place) and the German regions of Oberbayern (18th place) and Mecklenburg-Vorpommern (20th place) were the only regions in the top 20 regions for nights spent in hotels, campsites and other collective accommodation establishments that were not in one of the EU's three leading Member States for tourism (Spain, France and Italy). Jadranska Hrvatska (Croatia) recorded 37.1 million overnight stays in 2011, which was between the levels recorded by the regions ranked 12th and 13th in the EU.

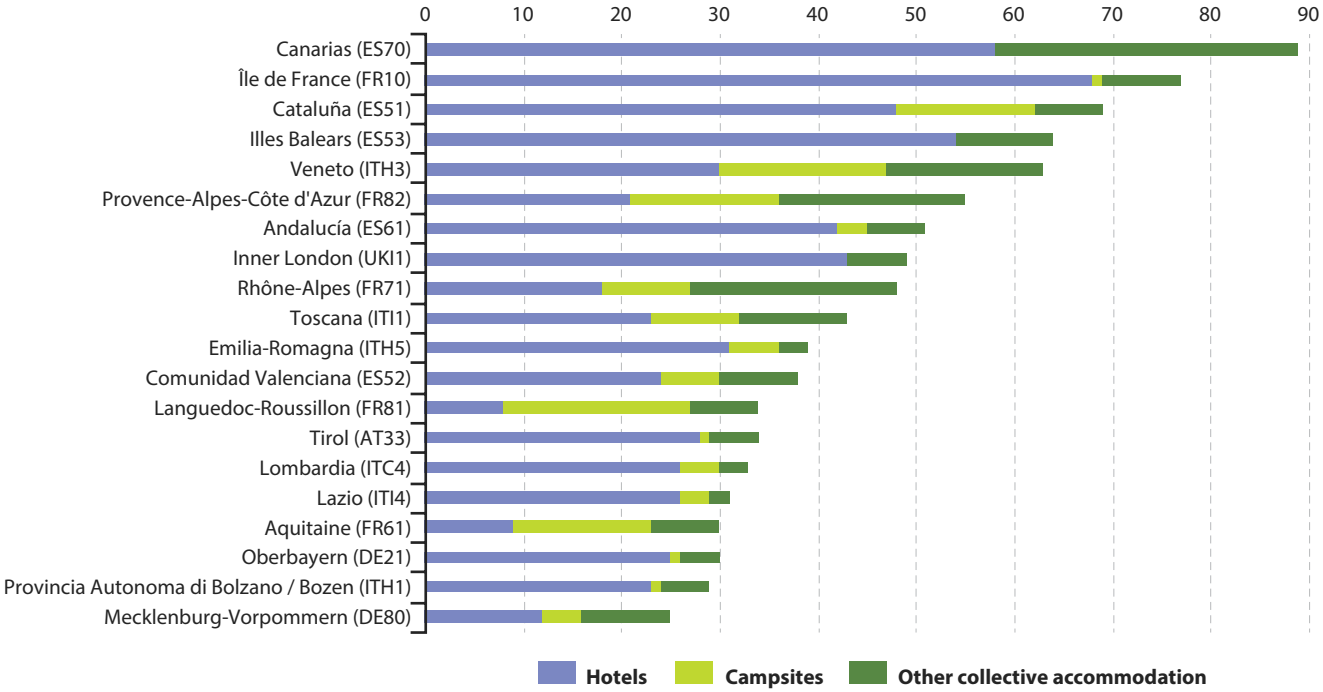
In 14 of the top 20 regions in the EU, hotels and similar establishments accounted for more than half of the nights spent in collective accommodation establishments. The regions with the largest number of overnight stays in hotels in 2011 were the capital city regions of the Île de France and Inner London, 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 Île de France (88.3 %). 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, Provence-Alpes-Côte d'Azur, Aquitaine and the Pays de la Loire (the latter was not one of the top 20 regions overall), as well as Veneto in Italy and Cataluña in Spain, all with more than 10 million overnight stays on campsites; note that Jadranska Hrvatska also recorded more than 10 million overnight stays on campsites. The top two tourist regions for other collective accommodation establishments (in terms of nights spent) were the Canarias and Rhône-Alpes (France), both with more than 20 million overnight stays in other collective accommodation, with Provence-Alpes-Côte d'Azur just below this level.

Map 7.1: Nights spent in hotels, campsites and other collective accommodation establishments, by NUTS 2 regions, 2011 (1)
(million nights)



(1) Greece, Sud-Vest Oltenia (RO41) and Outer London (UKI2), 2010; 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, 2011 (1)
(million nights)



(1) Greece and Tees Valley and Durham (UKC1), 2010; Luxembourg, 2009; Ireland, Ciudad Autónoma de Ceuta (ES63), Ciudad Autónoma de Melilla (ES64), Départements d'outre-mer (FR9), Malta, Região Autónoma dos Açores (PT20), Região Autónoma da Madeira (PT30), Macroregiunea trei (RO3), Sud-Vest Oltenia (RO41) and Outer London (UKI2), not available.
Source: Eurostat (online data code: tour_occ_nin2)

Recent trends in hotel tourism

Maps 7.2 and 7.3 contrast the developments in terms of overnight stays in hotels that were experienced during the initial period of the financial and economic crisis (from the pre-crisis position in 2007 to the deepest point of the crisis in 2009) with the later stages (from 2009 to the latest available data).

The average fall in the number of overnight stays in hotels in the EU-27 between 2007 and 2009 was – 2.2 % per year. The number of nights spent in hotels fell in 171 (of the 258 regions with data available), with average reductions of 3.0 % or more per year in 96 regions and losses of 10.0 % or more in 12 regions. By contrast, 20 regions recorded increases above 4.0 % per year, with five regions — Flevoland in the Netherlands and four British regions — recording annual increases above 10.0 %. It can be noted that many (but not all) British regions saw a strong increase in their level of hotel tourism between 2007 and 2009, which in many cases fell back by 2011. In nearly all of the regions with the largest rises between 2007 and 2009, the change was dominated by increases in the nights spent in hotels by residents, possibly reflecting a substitution of trips abroad by trips within the country of residence. The reverse situation, namely a strong fall during the initial phase of the crisis followed by a considerable rebound/recovery thereafter was observed in Latvia and the Bulgarian Black Sea region of Severoiztochen. The Latvian situation reflected a fall and subsequent recovery in international tourism (overnight stays in hotels by non-residents), whereas the initial fall in Severoiztochen was mainly due to fewer overnight stays in hotels by residents, while the increase between 2009 and 2011 was driven by strong growth in the number of overnight stays by residents and non-residents alike.

The average rise for overnights stays in hotels in the EU-27 between 2009 and 2011 was an increase of 4.0 % per year. There were 112 NUTS level 2 regions in the EU that recorded an annual average increase in excess of 4.0 % for the number of nights spent in hotels between 2009 and 2011, among which 19 recorded average growth above 10.0 % per year: at the top of the range, Lithuania (a single region at NUTS level 2) recorded an average growth of 16.8 %. Eight of the regions with average growth above 10.0 % were in Poland, three in Spain, two each in Belgium, Bulgaria and the United Kingdom, and one each in Estonia, Latvia, Lithuania, Romania and Slovakia. By contrast, the number of nights spent in hotels fell in 57 regions (of the 266 regions with data available), with average reductions of 3.0 % or more per year in 36 regions and losses of 10.0 % or more in 13 regions. Nearly all of the regions with large falls were in the United Kingdom, with one in Hungary (Dél-Dunántúl). Among the regions in

the EFTA countries, the largest falls were – 4.6 % per year in Ticino (Switzerland) and – 4.3 % per year in the Norwegian region of Hedmark og Oppland. None of the regions in EFTA countries recorded annual average growth above 10.0 %, with Iceland (8.4 % per year) and Nord-Norge (Norway, 7.5 %) recording the fastest growth. Among the three regions in acceding and candidate countries, the fastest increase was 10.8 % per year in the former Yugoslav Republic of Macedonia, while the smallest rise per year in the number of overnight stays was 1.6 % in Kontinentalna Hrvatska (Croatia).

Recent trends in camping tourism

Map 7.4 shows that the number of nights spent on campsites in the EU-27 during the period 2009–11 fell, on average, by 1.9 % per year. This average rate for the EU-27 was substantially lower than the equivalent rate of change for hotels, implying a substitution of nights spent on campsites for nights spent in hotels which may have been a rebalancing after the opposite trend was apparent during the onset of the financial and economic crisis. Furthermore, a more varied regional development could be seen for campsites, with a much wider range in the rates of change between 2009 and 2011. The number of nights spent on campsites fell by an average of 10.0 % or more per year in 54 of the 252 regions for which data are available; among these there were reductions of 20.0 % or more per year in 21 regions, with the largest decline recorded for the British region of South Yorkshire (– 82.9 %, 2010–11). The regions where the number of nights spent in campsites fell by 20.0 % or more per year were spread across 10 EU Member States, but included several regions in Poland, Slovakia and the United Kingdom. By contrast, 53 regions recorded an annual average increase in excess of 4.0 %, among which 23 regions posted growth averaging more than 10.0 % per year. The fastest average growth was recorded in Bulgaria, with 648.4 % (2010–11) in the region of Severoiztochen; this high growth rate was recorded from a very low initial number of nights spent on campsites. Six of the regions with average growth above 10.0 % were in the United Kingdom (mixed years of data availability), three each in Bulgaria and Greece (2009–10), two each in Germany, Italy (mixed years of data availability) and Poland, and one each in Belgium, Spain, Cyprus, Latvia and the Netherlands.

Nearly all regions in EFTA countries recorded a decline in overnight stays in campsites between 2009 and 2011, falling by as much as 32.9 % per year in Iceland. The only regions that did not see a fall in overnight stays were in Norway: 1.7 % growth in Oslo og Akershus and no change in Sør-Østlandet. The two acceding and candidate countries with data available saw mixed fortunes, the former Yugoslav Republic of Macedonia recording a 11.8 % per year average fall in overnight stays in campsites, whereas both Croatian regions recorded growth, 3.7 % for Jadranska Hrvatska and 5.1 % for Kontinentalna Hrvatska.

Share of inbound tourism

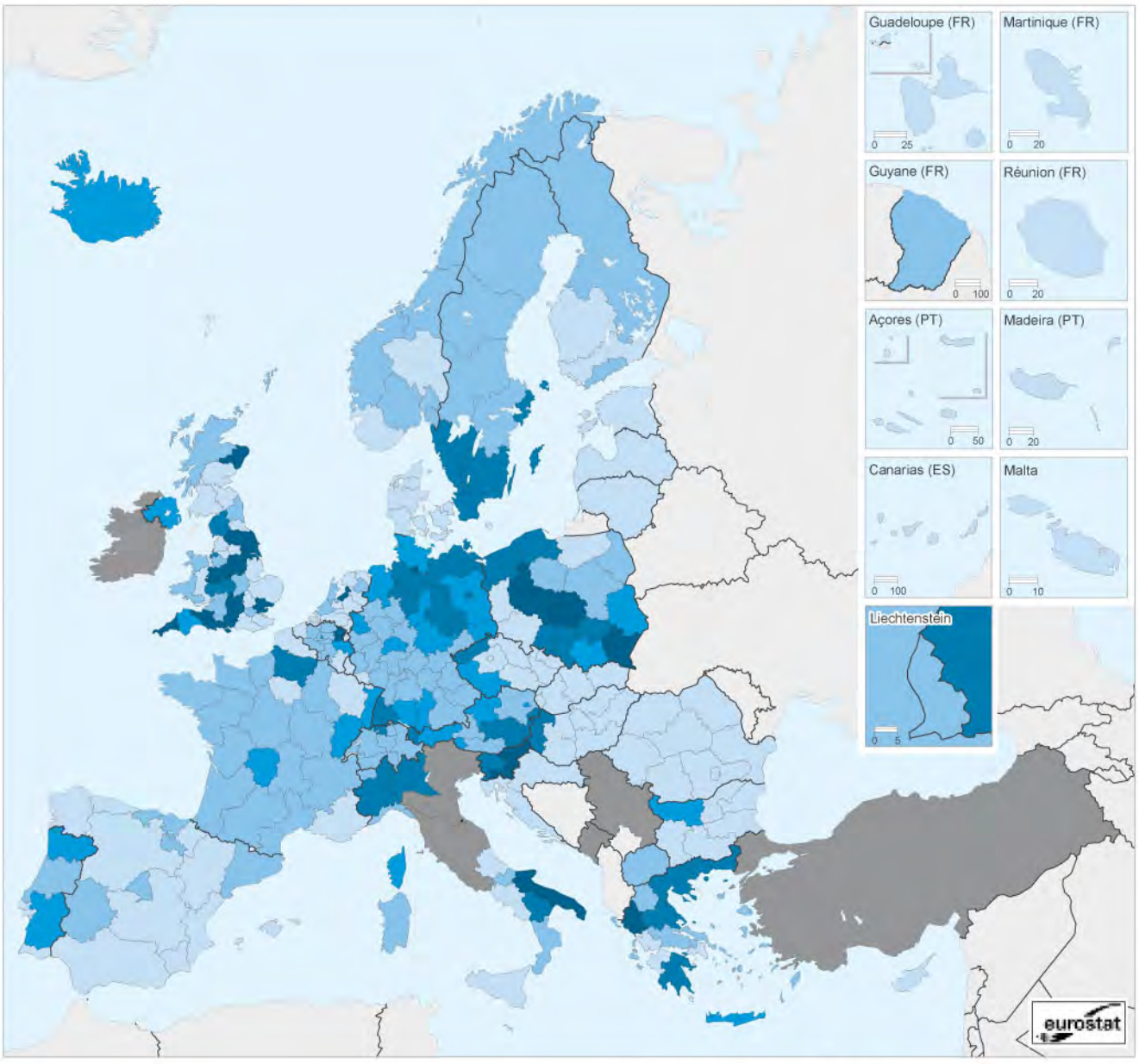
For the EU-27 as a whole, non-residents accounted for 43 % of all overnight stays in hotels, campsites and other collective accommodation establishments in 2011. Across the regions of the EU, the share of inbound tourism (visits from abroad) differed very widely in 2011: this share ranged from a low of 3 % of the total nights spent in the Romanian region of Sud-Vest Oltenia and the German region of Mecklenburg-Vorpommern to a high of 96 % of all nights spent in Malta. Foreign overnight visitors also accounted for more than 90 % of overnight stays in the Greek regions of Kriti and Notio Aigaio, Cyprus, Luxembourg, the Czech capital city region of Praha and the Austrian Alpine region of Tirol; this level was also exceeded in 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 50 EU regions where more than half of the overnight stays in 2011 were made by non-residents. This was often the case in capital city regions — the only exceptions being Germany, Spain (where the share was exactly 50 %), Poland, Finland and Sweden; no regional data are available for Ireland. Southern Europe's island and coastal regions recorded particularly high shares of overnight stays by foreign visitors (more than 50 %), especially Malta, Cyprus, the Greek island regions, the Spanish Illes Balears and Canarias, the Spanish region of Cataluña, the Portuguese Região Autónoma da Madeira and the Região Autónoma dos Açores, the Portuguese region of the Algarve, the Bulgarian Black Sea coast and the Italian regions of Veneto and Toscana. Alpine regions in Austria and Italy also recorded a majority of their overnight stays being made by foreign visitors, as did the Finnish island region of Åland, Severozápad in the Czech Republic (which includes the spa city of Karlovy Vary) and many regions in Belgium.

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

Figure 7.2 shows the 20 EU regions recording the highest number of overnight stays by foreign (inbound) tourists in 2011. These top 20 regions accounted for more than half (53 %) of all overnight stays by non-residents across the EU-27. The top six regions visited by foreign tourists (Canarias, Illes Baleares, Cataluña, Inner London, 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 in eight different EU 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 34.1 million overnight stays from non-residents, which placed it between the sixth and seventh most popular regions within the EU (by this measure).

Map 7.2: Nights spent in hotels, by NUTS 2 regions, average annual change, 2007–09 (1)
(%)



(%)
EU-27 = -2.2

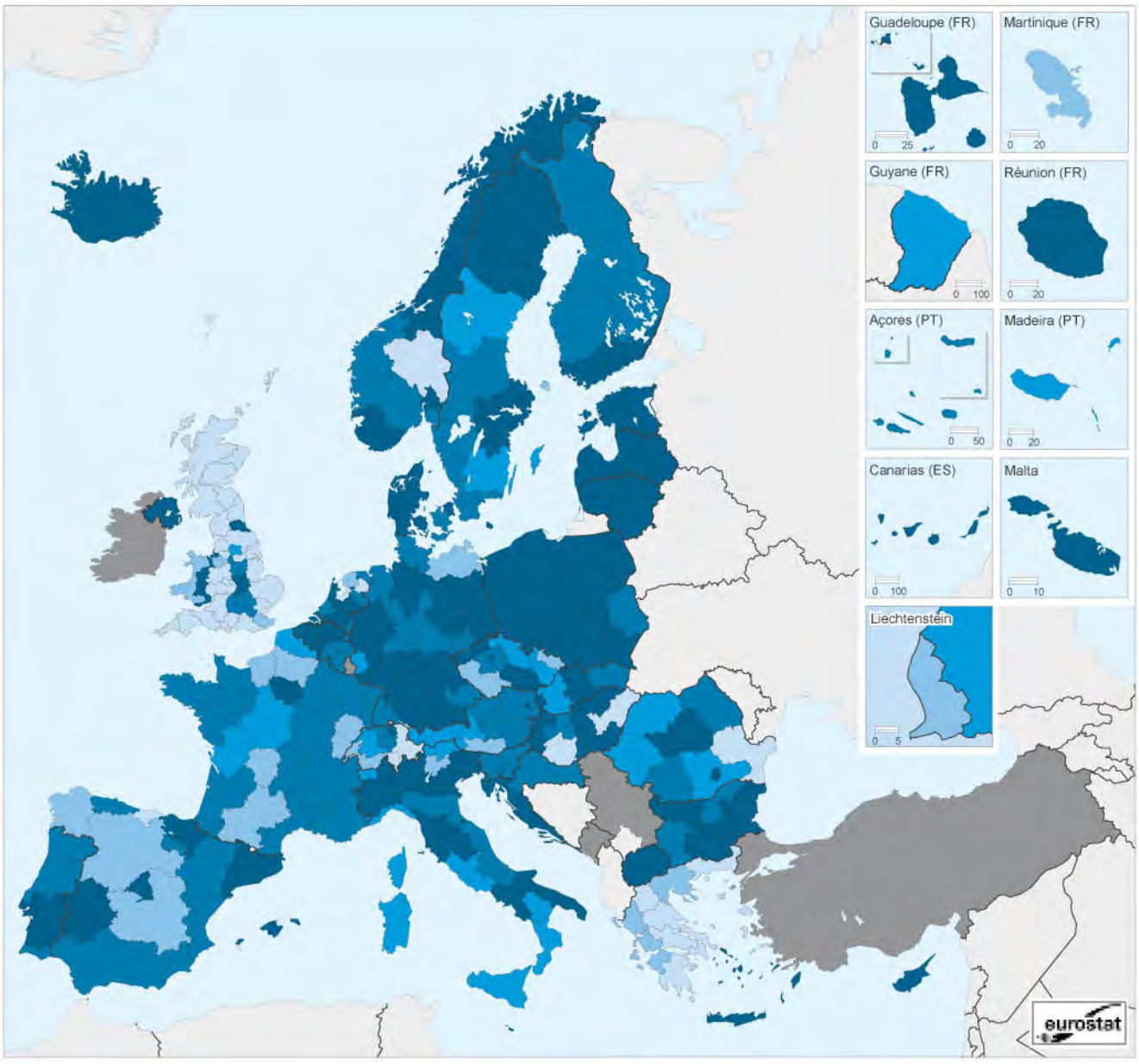
- <= -3.0
- -3.0 – 0.0
- 0.0 – 1.0
- 1.0 – 4.0
- > 4.0
- Data not available

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

0 200 400 600 800 km

(1) The former Yugoslav Republic of Macedonia, 2008–09; London (UKI), by NUTS 1 region.
Source: Eurostat (online data code: tour_occ_nin2)

Map 7.3: Nights spent in hotels, by NUTS 2 regions, average annual change, 2009–11 (1)
(%)



(%)
EU-27 = 3.5

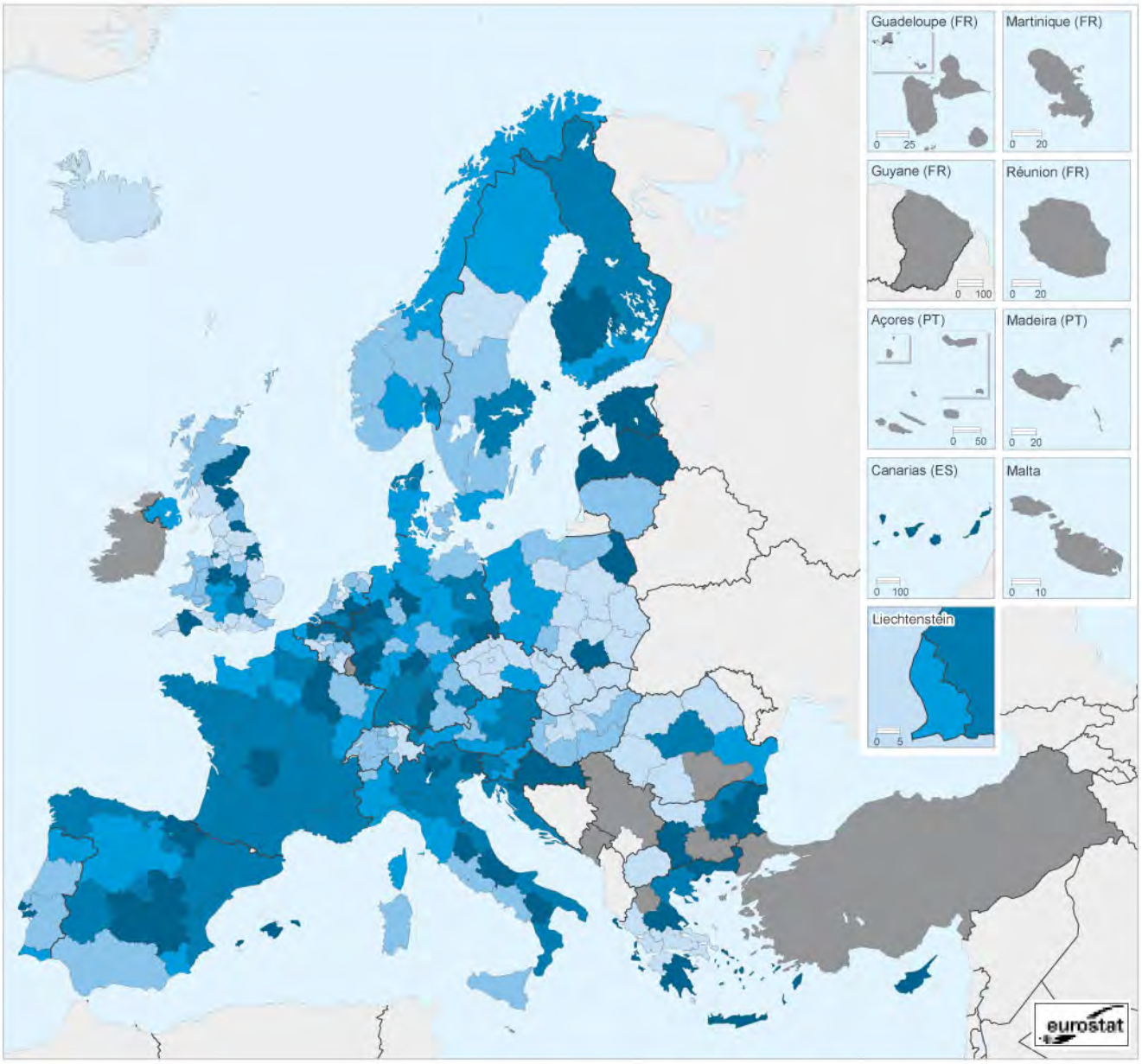
- <= -3.0
- -3.0 – 0.0
- 0.0 – 1.0
- 1.0 – 4.0
- > 4.0
- Data not available

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

0 200 400 600 800 km

(1) Nord-Est (ITH) and Centro (IT1), 2010–11; Greece, 2009–10; London (UKI), by NUTS 1 region.
Source: Eurostat (online data code: tour_occ_nin2)

Map 7.4: Nights spent in campsites, by NUTS 2 regions, average annual change, 2009–11 (1)
(%)



(%)
EU-27 = -1.9

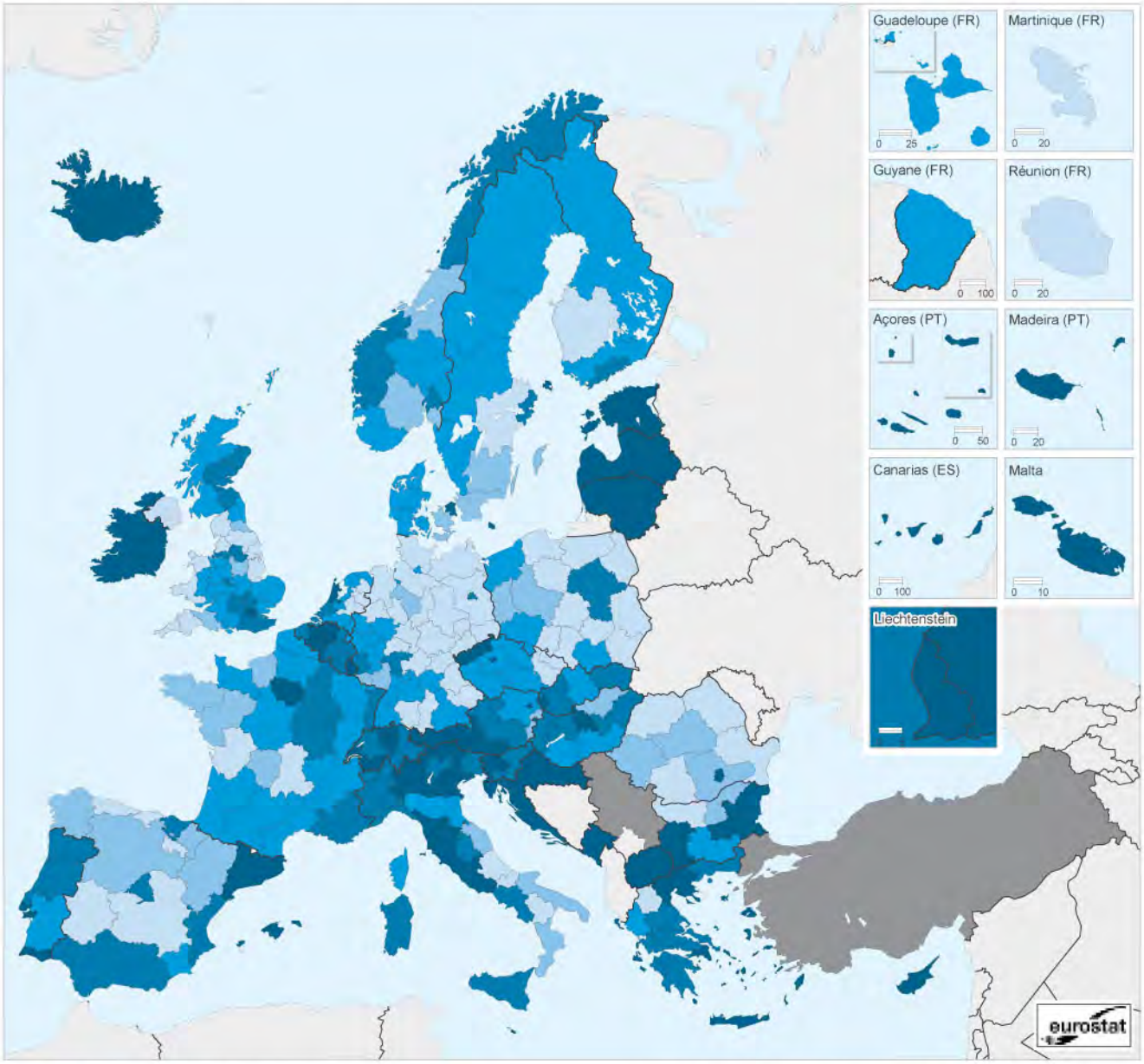
- <= -10.0
- -10.0 – -3.0
- -3.0 – 0.0
- 0.0 – 4.0
- > 4.0
- Data not available

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

0 200 400 600 800 km

(1) EU-27 excluding Ireland, Greece, Luxembourg and Malta; Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE10), Severoiztochen (BG33), Nord-Est (ITH) and Centro (ITI) and South Yorkshire (UKE3), 2010–11; Greece, Sud-Vest Oltenia (RO41) and Tees Valley and Durham (UKC1), 2009–10; London (UKI), by NUTS 1 region.
Source: Eurostat (online data code: tour_occ_nin2)

Map 7.5: Share of non-resident nights spent in hotels, campsites and other collective accommodation establishments, by NUTS 2 regions, 2011 (1)
(% of total nights spent by residents and non-residents)



(% of total nights spent by residents and non-residents)
EU-27 = 43

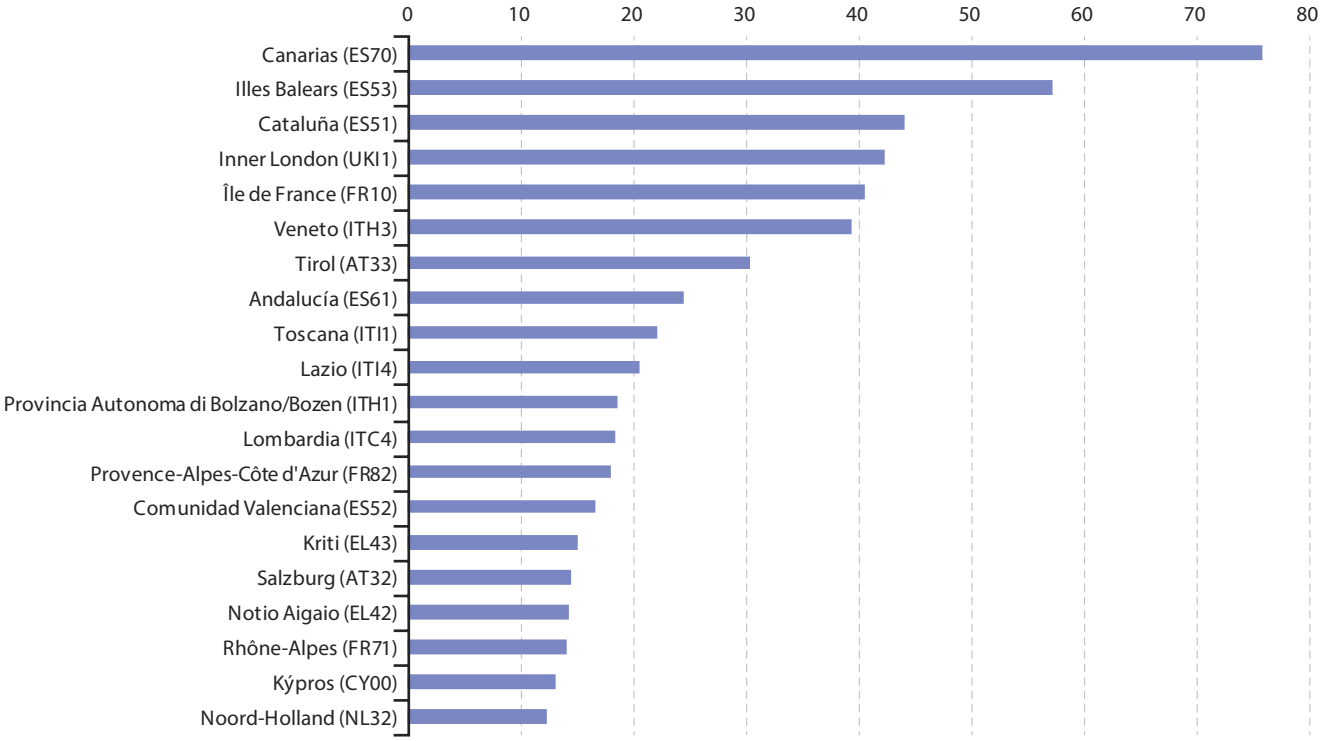
- <= 15
- 15 – 20
- 20 – 30
- 30 – 50
- > 50
- Data not available

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

0 200 400 600 800 km

(1) Greece, Sud-Vest Oltenia (RO41), 2010; 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; London (UKI), by NUTS 1 region; Ireland, national level.
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, 2011 (1)
(million nights)



(1) Greece, Sud-Vest Oltenia (RO41) and Outer London (UKI2), 2010; Luxembourg, 2009; Ireland, Ciudad Autónoma de Ceuta (ES63), Ciudad Autónoma de Melilla (ES64) and Départements d'outre-mer (FR9), not available.
Source: Eurostat (online data code: tour_occ_nin2)

Most popular regions

Across the whole of the EU-27 in 2011, the most popular region for residents (in this case French residents) to visit was the Mediterranean region of Provence-Alpes-Côte d'Azur with 37.3 million nights spent by domestic tourists. The most popular destinations for non-residents (foreign tourists) were the Spanish island regions of the Canarias and Illes Balears and the Spanish mainland region of Cataluña, where 76.0 million nights, 57.2 million nights and 44.0 million nights respectively, were spent by foreign tourists in 2011.

Table 7.1 shows by country, separately for residents and non-residents, which region had the most number of overnight stays in hotels, campsites and other collective accommodation establishments in 2011. Tourists often visit regions with a coastline and this is, by definition, the case for the 10 EU 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 12 EU 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) and the north-western coastal region of Zachodniopomorskie (Poland). Among residents, the most popular region had a coastline in 10 of the 12 remaining Member States, the exceptions being in the Netherlands and Slovenia. Among non-residents, the situation was more balanced, with the most visited region having a coastline in seven of the 12 Member States; all five of the most popular regions for non-residents that did not have a coastline were capital city regions.

Among the 10 EU Member States where all NUTS level 2 regions have a coastline, there were only five countries with more than one region. Of these, non-residents were most likely to visit the capital city regions in Denmark, Finland 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 EU 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.

Table 7.1: Most popular tourist regions, number of nights spent in hotels, campsites and other collective accommodation establishments, by NUTS 2 regions, 2011 (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 (%)
Countries where all regions are coastal						
Denmark	19	Syddanmark (DK03)	31	9	Hovedstaden (DK01)	46
Estonia	2		-	4		-
Ireland	13	Southern and Eastern (IE02)	74	:		:
Cyprus	1		-	13		-
Latvia	1		-	2		-
Lithuania	1		-	2		-
Malta	0		-	7		-
Portugal	19	Algarve (PT15)	25	28	Algarve (PT15)	40
Finland	14	Pohjois- ja Itä-Suomi (FI1D)	37	6	Helsinki-Uusimaa (FI1B)	43
Sweden	37	Västsverige (SE23)	21	11	Stockholm (SE11)	30
Iceland	1		-	2		-
Montenegro	0		-	3		-
Countries with coastal and non-coastal regions						
Belgium	15	Province/Provincie West-Vlaanderen (BE25)	31	17	Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest (BE10)	29
Bulgaria	6	Yugoiztochen (BG34)	27	12	Yugoiztochen (BG34)	45
Germany	276	Mecklenburg-Vorpommern (DE80)	9	63	Berlin (DE30)	15
Greece	18	Kentriki Makedonia (GR12)	18	49	Kriti (GR43)	31
Spain	150	Andalucía (ES61)	18	239	Canarias (ES70)	32
France	277	Provence-Alpes-Côte d'Azur (FR82)	13	123	Île de France (FR10)	33
Italy	210	Emilia-Romagna (ITH5)	14	176	Veneto (ITH3)	22
Netherlands	58	Gelderland (NL22)	15	28	Noord-Holland (NL32)	45
Poland	47	Zachodniopomorskie (PL42)	17	11	Zachodniopomorskie (PL42)	21
Romania	15	Sud-Est (RO22)	25	3	Bucureşti - Ilfov (RO32)	38
Slovenia	4	Vzhodna Slovenija (SI01)	59	5	Zahodna Slovenija (SI02)	67
United Kingdom	143	West Wales and The Valleys (UKL1)	7	88	Inner London (UKI1)	48
Norway	21	Sør-Østlandet (NO03)	20	8	Vestlandet (NO05)	25
Croatia	4	Jadranska Hrvatska (HR03)	76	35	Jadranska Hrvatska (HR03)	96
Landlocked countries						
Czech Republic	19	Severovýchod (CZ05)	26	19	Praha (CZ01)	60
Luxembourg	0		-	2		-
Hungary	10	Nyugat-Dunántúl (HU22)	24	9	Közép-Magyarország (HU10)	62
Austria	32	Steiermark (AT22)	19	74	Tirol (AT33)	41
Slovakia	6	Stredné Slovensko (SK03)	38	4	Stredné Slovensko (SK03)	27
Liechtenstein	0		-	0		-
Switzerland	17	Ostschweiz (CH05)	25	21	Région lémanique (CH01)	29
FYR of Macedonia	1		-	1		-

(1) Greece, 2010; Sud-Vest Oltenia (RO41) and Outer London (UKI2), 2010 for non-residents; Luxembourg, 2009; Switzerland, hotels and campsites only.
Source: Eurostat (online data code: tour_occ_nin2)

Tourism intensity

Map 7.6 provides a measure of tourism intensity: it measures the number of overnight stays (not including overnight stays in non-rented accommodation) 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 4 847 overnight stays per thousand inhabitants in 2011. The Spanish region of Illes Balears had the highest tourism intensity, with 58 889 overnight stays per thousand inhabitants in 2011, followed by the Italian Provincia Autonoma di Bolzano/Bozen and the Greek region of Notio Aigaio, both with more than 50 000 overnight stays per thousand inhabitants.

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 57 EU regions recorded a tourism intensity of more than 7 000 overnight stays (in hotels, campsites or other collective tourist accommodation) per thousand inhabitants (data are generally available for 2011): nine were in Italy, seven were in the United Kingdom, six each in France and Austria, five each in Spain and the Netherlands, four each in Germany and Greece (data for 2010), two each in Portugal and Sweden, and one each in Belgium, the Czech Republic, Denmark, Ireland (2006, national level data only), Cyprus, Malta and Finland. From a geographical perspective, 12 of these regions were Alpine, 40 of them (including Ireland) had a coastline and among these three were Alpine and had a coastline: Provence-Alpes-Côte d'Azur in France as well as Veneto and Friuli-Venezia Giulia in Italy. The eight regions that were neither Alpine nor had a coastline were the Province/Provincie Luxembourg (Belgium), the Czech capital city region of Praha, the German regions of Trier and Niederbayern, the Dutch regions of Drenthe and Limburg as well as Inner London in the United Kingdom.

By contrast, at the other end of the ranking there were 67 regions with 2 000 or fewer overnight stays per thousand inhabitants, of which 20 had 1 000 or fewer overnight stays per thousand inhabitants. The latter were located in Poland (eight regions), Romania (six regions), Bulgaria and the United Kingdom (two regions each), and Belgium and Hungary (one region each).

Among the regions within Iceland, Liechtenstein, Norway and Switzerland (hotels and campsites only), the mountainous Norwegian region of Hedmark og Oppland had the highest tourism intensity, with 10 405 overnight stays per thousand inhabitants; the only other EFTA regions with more than 7 000 overnight stays per thousand inhabitants were Iceland (one level 2 region) and the mountainous region of Ticino (Switzerland). The lowest tourism intensity among the EFTA regions was in Nordwestschweiz (Switzerland), with 1 939 overnight stays per thousand inhabitants.

Among acceding and candidate countries the Croatian coastal region of Jadranska Hrvatska recorded 25 244 overnight stays per thousand inhabitants, which was a slightly higher tourism intensity than the 12th ranked region within the EU. The remaining Croatian region as well as the former Yugoslav Republic of Macedonia recorded a level of intensity below 1 000 overnight stays per thousand inhabitants while in Montenegro the intensity was 5 109 nights per thousand inhabitants.

Average length of stay

Map 7.7 shows the average length of stay in hotels, campsites and other collective tourist accommodation in 2011. 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. By contrast, the average length of stays was substantially longer in typical holiday regions visited chiefly for recreational purposes. Note that the data presented refers 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.

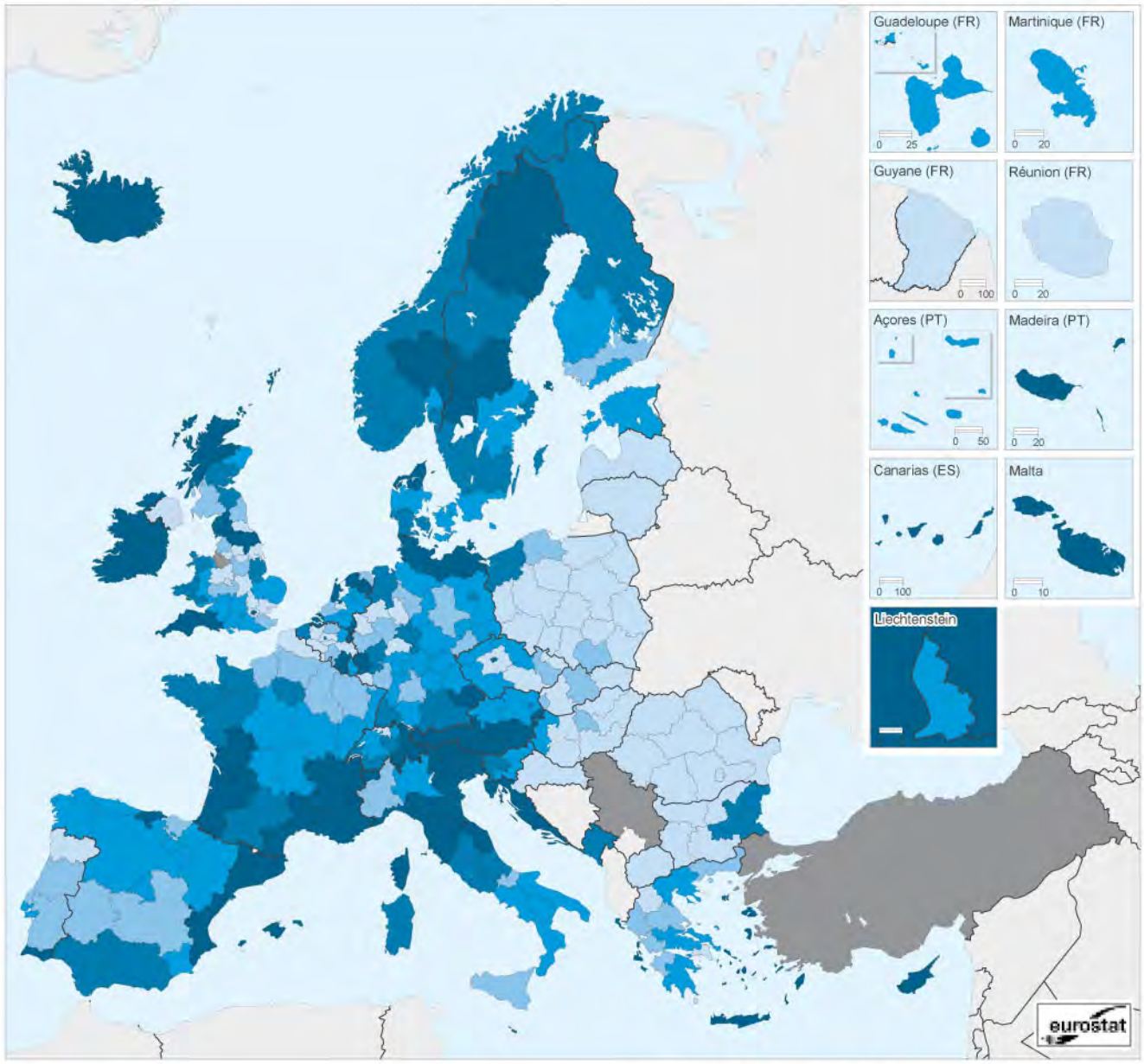
There were 18 NUTS level 2 regions within the EU that reported an average length of stay in hotels, campsites and other collective tourist accommodation of more than 5.0 nights in 2011. The highest figures were recorded in Spanish and Greek holiday destinations: the top five regions including the Canarias (7.7 nights), Kriti (6.7) and the Illes Balears (6.5 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 2011 (excluding Ireland, Greece, Luxembourg and Malta) compared with 2.5 nights for hotels.

Accommodation capacity

In the EU-27 there were 202 000 hotels and around 27 000 tourist campsites in 2011; these provided 12.6 million bed places in hotels and around 9.5 million places on tourist campsites; a further 5.9 million bed places were available

Map 7.6: Tourism intensity: nights spent in hotels, campsites and other collective tourist accommodation, by NUTS 2 regions, 2011 (1)
(per thousand inhabitants)



(per thousand inhabitants)
EU-27 = 4 847

- <= 2 000
- 2 000 – 3 000
- 3 000 – 5 000
- 5 000 – 7 000
- > 7 000
- Data not available

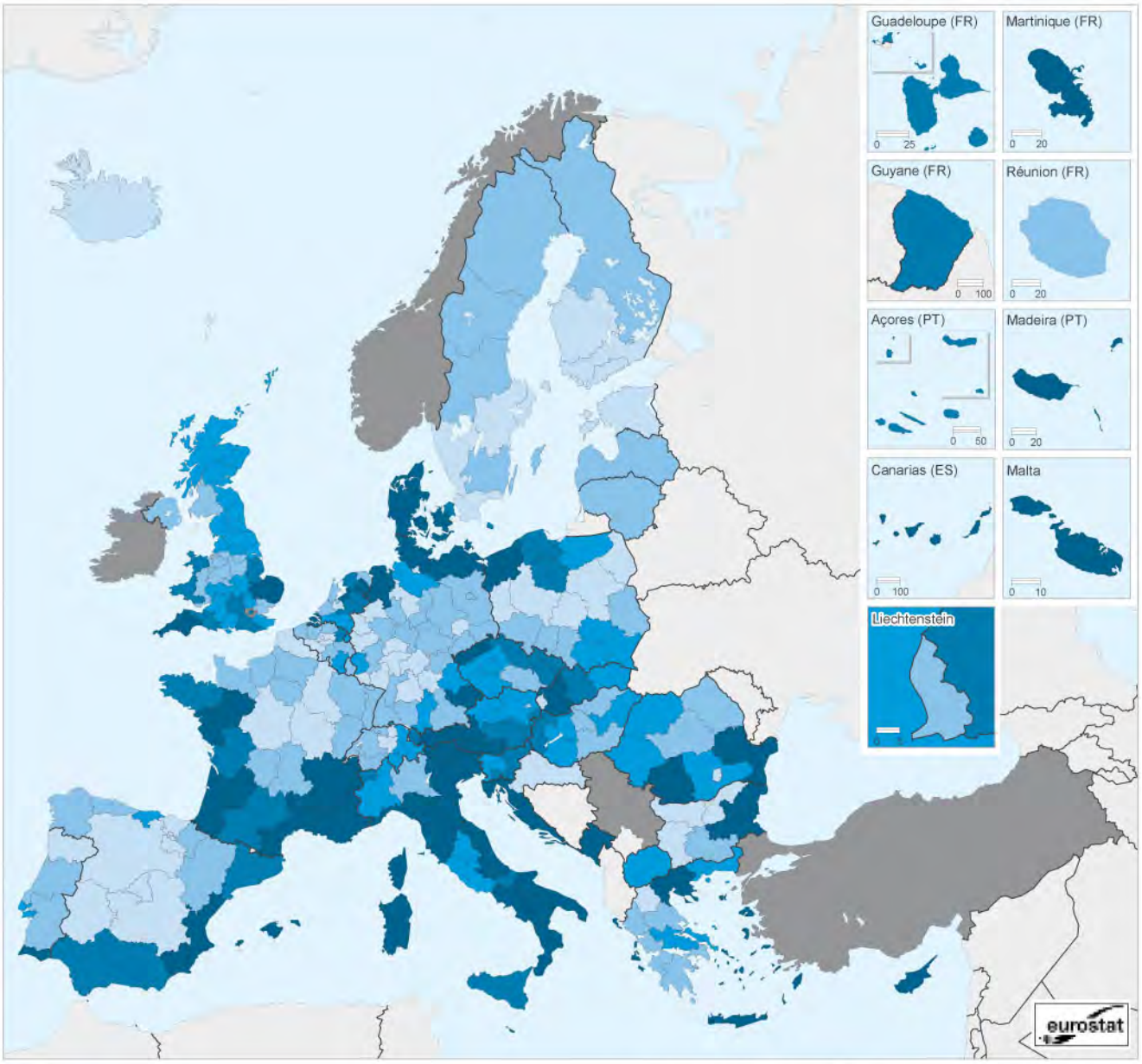
Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

(1) Greece, Sud-Vest Oltenia (RO41) and Outer London (UKI2), 2010; 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; United Kingdom and Croatia, population data from 2010.

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

Map 7.7: Average length of stay in hotels, campsites and other collective tourist accommodation, by NUTS 2 regions, 2011 (1)
(days)



(1) Greece and Sud-Vest Oltenia (RO41), 2010; 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.
Source: Eurostat (online data codes: tour_occ_nin2 and tour_occ_arn2)

in other collective accommodation establishments, including tourism dwellings.

Map 7.8 gives an overview of the number of bed places in hotels relative to the land area, in other words the density of accommodation in 2011; these figures are presented at NUTS level 3. Regions with a high density 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 lakeland regions as well as in regions with capital and other major cities.

Ranked according to their accommodation capacity in 2011, eight of the top 20 EU regions (NUTS level 3) were in France, six in Spain, five in Italy and one in the United Kingdom. Figure 7.3 shows these top 20 regions with an analysis by type of accommodation: note that the Croatian region of Istarska županija had a total accommodation capacity of 177 000 bed places, which would place it 14th in this list, just above Paris (France). 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: hotels dominated accommodation capacity on Mallorca, as well as in Barcelona and Málaga; campsites were the main type of accommodation capacity in Girona (Costa Brava) and Tarragona (Costa Dorada); and other collective accommodation (for example, tourist dwellings available for rent) provided close to two fifths of the capacity in Alicante/Alacant. Focusing on hotels, there were 11 NUTS level 3 regions in the EU that offered more than 100 000 bed places in hotels in 2011: four in Spain (Mallorca, Barcelona, Madrid and Málaga), three in Italy (Provincia Autonoma di Bolzano/Bozen, Rimini and Roma), and one each in France (Paris), Greece (Dodekanisos), Portugal (Algarve) and Germany (Berlin).

Size of accommodation establishments

Accommodation establishments vary greatly in size. Hotels in the EU-27 had 31 bedrooms with 62 bed places on average, while campsites averaged 354 bed places, and other collective tourism accommodation establishments averaged 24 bed places. The relative importance of different types of accommodation can therefore influence the overall average size of establishments in any region as can other factors, such as location and the type of tourism. Furthermore, many countries have a threshold for their data collection: for example, around one half of the EU Member States exclude smaller hotels, holiday dwellings and other collective accommodation, while around one quarter exclude small campsites. In general these thresholds exclude establishments with 5, 10 or 20 bedrooms or bed places, exceeding this level only in Denmark (40 beds for hotels and 75 pitches for campsites). The exclusion of smaller establishments increases the average size of establishments. Detailed information is available in the footnotes for the tourism statistics regional database.

Bearing these limitations in mind, Map 7.9 provides an analysis of the average size of collective tourist accommodation establishments. On a national level, the largest average sizes are found in Denmark (explained at least in part by the thresholds used for data collection) and in Malta (hotels only), while the smallest were in Ireland, Italy and the United Kingdom. The largest average size of collective tourist establishments (at the NUTS level 3) was on the Península de Setúbal in Portugal with 452 bed places per establishment. Four other regions, two in Denmark (Nordjylland and Sydjylland) and one each in Spain (Fuerteventura) and France (les Landes), averaged more than 400 bed places per establishment. All 30 NUTS level 3 regions with an average of less than 20 bed places per establishment were in Ireland, Spain, Italy or the United Kingdom, with two Italian regions and one British region averaging less than 10 bed places per establishment. Among EFTA countries, the range was also large, from an average of 23 bed places in Jura (Switzerland) to more than 400 bed places per establishment in the Norwegian regions of Oslo (429) and Vestfold (410); in general average sizes were high in Norwegian regions and lower in Iceland, Switzerland and, in particular, Liechtenstein. Among the acceding and candidate countries, regional data are available for Croatia and the former Yugoslav Republic of Macedonia. By far the largest average size of establishments was recorded for Istarska županija in Croatia (Istria), where the 584 bed places average was higher than in any region within the EU-27.

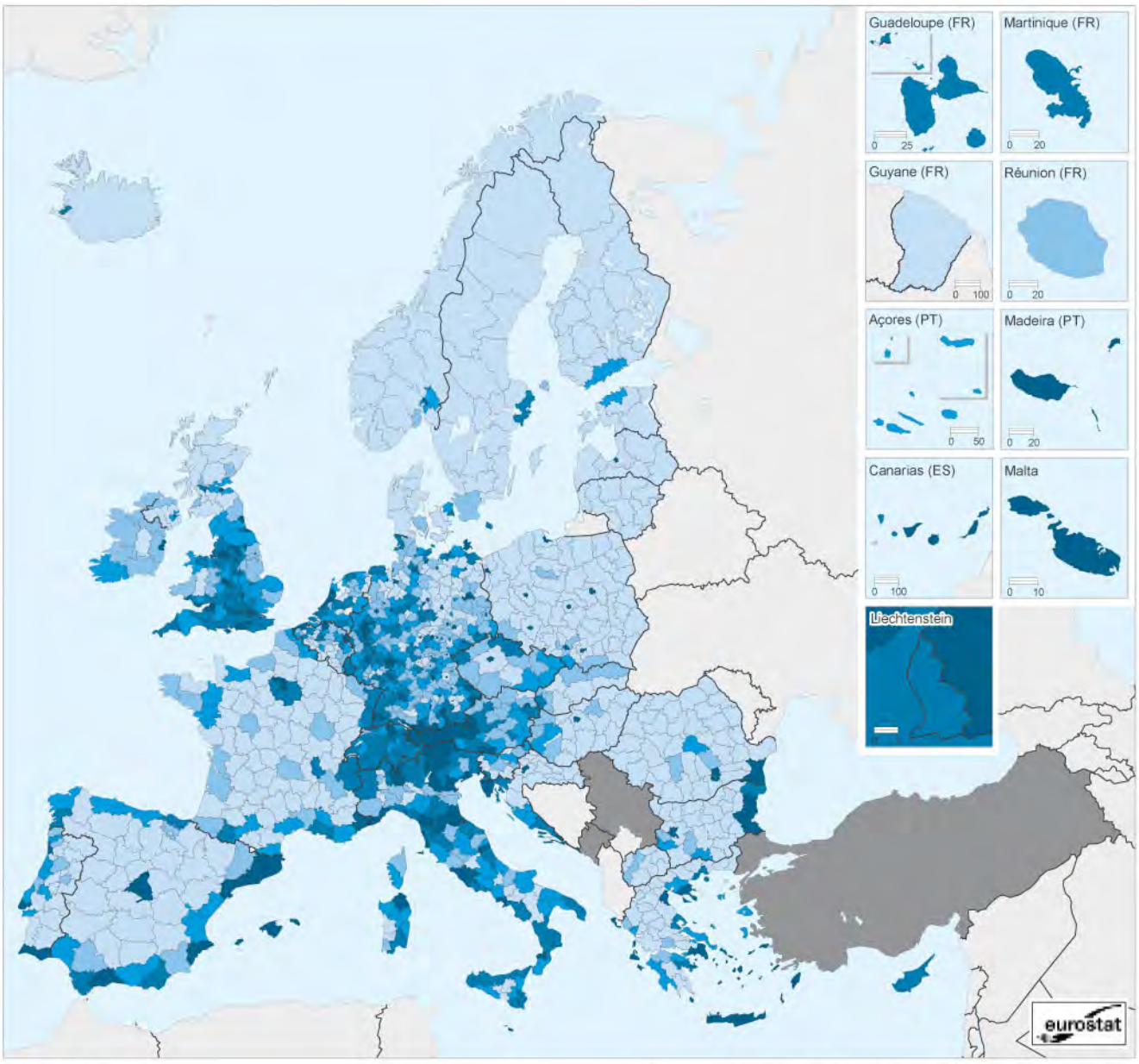
Data sources and availability

A system of harmonised tourism statistics was established in Council Directive 95/57/EC on the collection of statistical information in the field of tourism. This legal basis requires EU Member States to provide a regular set of comparable tourism statistics. In July 2011 the European Parliament and the Council adopted Regulation EU (No) 692/2011 concerning European statistics on tourism and repealing Council Directive 95/57/EC; this came into force for the 2012 reference year.

Tourism statistics cover 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 tourism statistics are only available for the supply side, collected via surveys filled in by accommodation establishments.

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

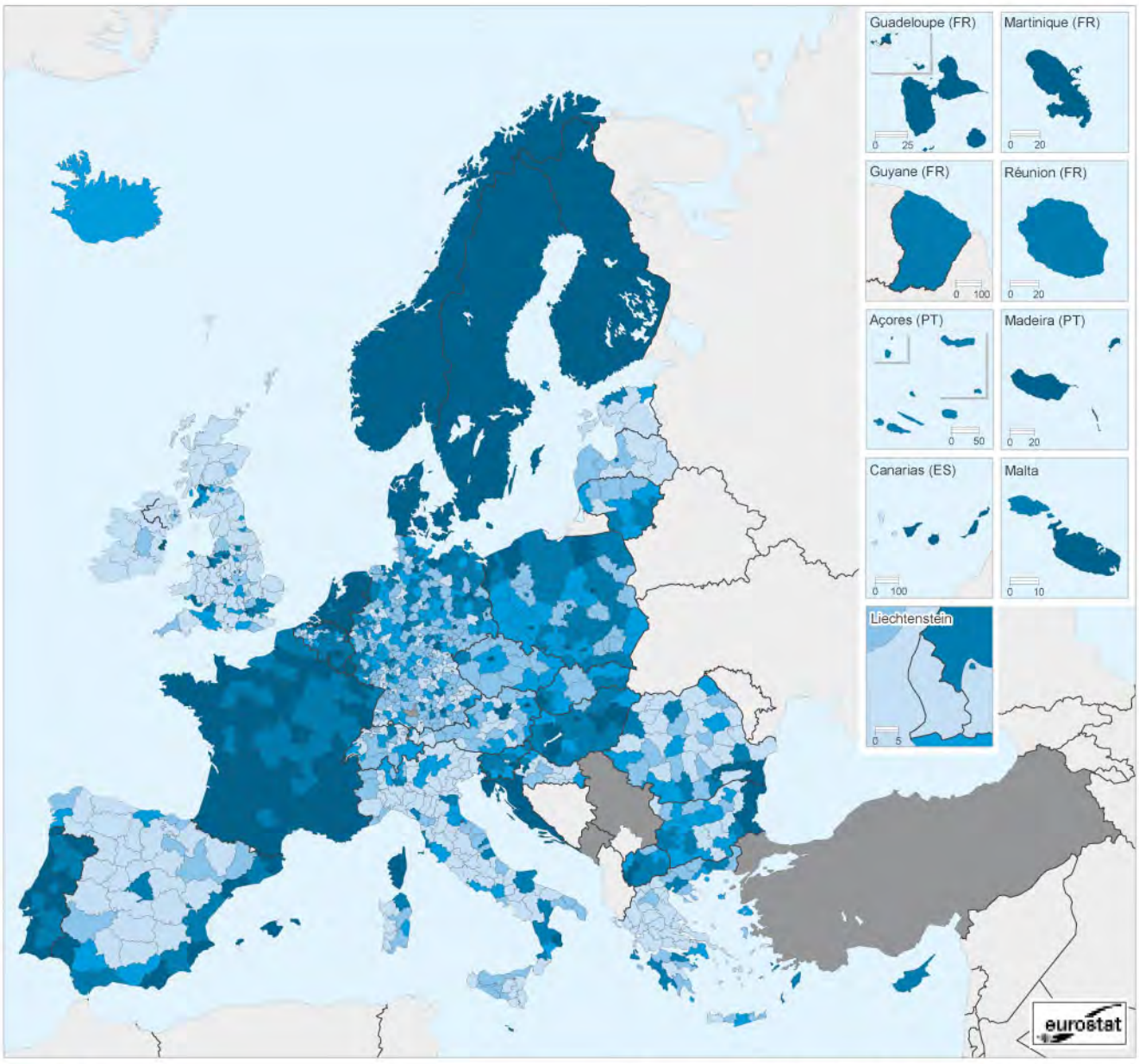
Map 7.8: Density of bed places in hotels relative to land area, by NUTS 3 regions, 2011 (1)
(bed places per km²)



(1) Denmark, Germany, France, Italy, Hungary, Poland, Portugal, Scotland (UKM) and Montenegro, total area instead of land area; Städteregion Aachen (DEA2D), Bautzen (DED2C), Görlitz (DED2D), Meißen (DED2E), Sächsische Schweiz-Osterzgebirge (DED2F), Erzgebirgskreis (DED42), Mittelsachsen (DED43), Vogtlandkreis (DED44), Zwickau (DED45), Leipzig (DED52), Nordsachsen (DED53), Milano (ITC4C), Monza e della Brianza (ITC4D), Foggia (ITF46), Bari (ITF47), Barletta-Andria-Trani (ITF48), Rimini (ITH59), Pesaro e Urbino (ITI31), Ascoli Piceno (ITI34), Fermo (ITI35), Agglomeratie Leiden en Bollenstreek (NL337), Oost-Zuid-Holland (NL338), Groot-Rijnmond (NL339) and Zuidoost-Zuid-Holland (NL33A), 2012 data for area; Biberach (DE146), 2005.

Source: Eurostat (online data codes: tour_cap_nuts3 and demo_r_d3area)

Map 7.9: Average size of collective tourist establishments, by NUTS 3 regions, 2011 (1)
(bed places)



(bed places)
EU-27 = 59.3
<= 40
40 – 55
55 – 70

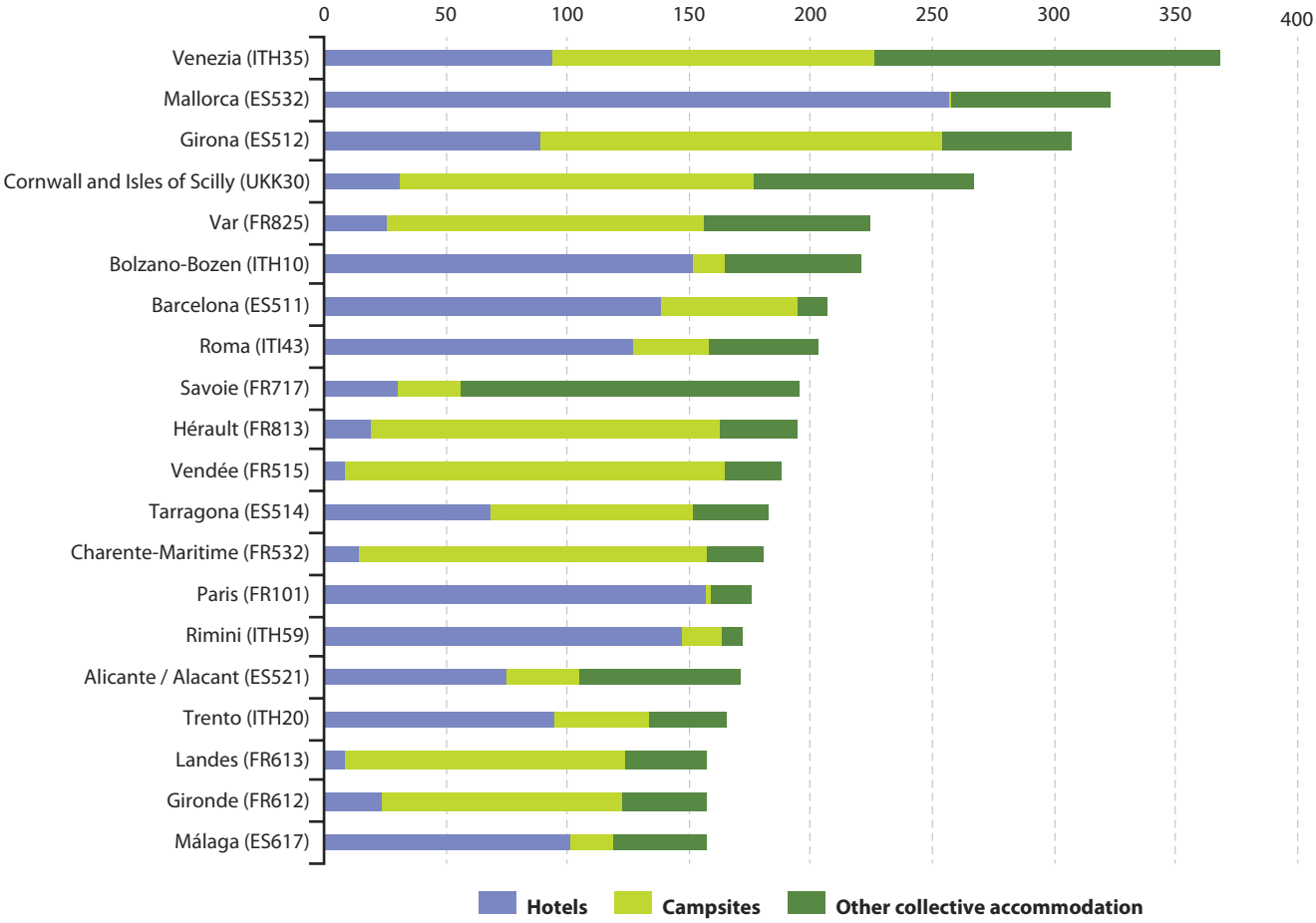
Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

(1) Lovech (BG315) and Iceland, 2010; Départements d'outre-mer (FR9) and Malta, 2009; Germany and Romania, mixed years between 2006 and 2011; Switzerland, hotels only; Iceland, national level.

Source: Eurostat (online data codes: tour_cap_nuts3)

Figure 7.3: EU-27 top 20 regions by accommodation capacity, number of bed places, by NUTS 3 regions, 2011 (1)
(thousand bed places)



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

business visitors have broadly similar consumption patterns as they both make significant demands on transport, accommodation and restaurant services. To the providers of these services, it may be of secondary interest whether their customers are private tourists or on business.

Context

Tourism diversity

Tourism can play a significant role in the development of European regions. Infrastructure created for tourism purposes contributes to local development, while jobs that are created or maintained can help counteract industrial or rural decline. Sustainable tourism involves the preservation and enhancement of cultural and natural heritage, ranging from the arts to local gastronomy or the preservation of biodiversity. Indeed, tourism can be 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 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, particularly in southern Europe, and to the Alpine region.

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

Inbound tourism is of particular interest for an analysis of tourism in a given region; these statistics are based on the visitor's usual country of residence, 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 current account deficit or surplus.

Policies

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 regional, 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 final) 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 EU 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.

The EU's cohesion policy for 2007–13 aims to mobilise tourism for sustainable regional development and job creation. Over this period, directly targeted EU support for tourism under the cohesion policy is planned to exceed EUR 6 billion, representing 1.8% of the total budget: EUR 3.8 billion is allocated for the improvement of tourist services, EUR 1.4 billion for the protection and development of natural heritage and EUR 1.1 billion for the promotion of natural assets. In addition, support for tourism-related infrastructure and services can be provided under other headings.

8

Information society

The widespread use of the Internet and the web has led the development of what is often referred to as the information society. These developments have rapidly created new dimensions to economic, social and political participation for both individuals and groups. Online activities have become ubiquitous, and the geographic location where they are performed is generally no longer significant as long as a connection to the Internet is available. 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 web and those who are excluded from these developments. This chapter emphasises the geographic aspects of the digital divide by presenting a range of regional statistical data on information and communication technology (ICT) within the European Union (EU).

Main statistical findings

The maps in this chapter show the level of Internet access and usage, including the proportion of persons who made online purchases in 2011. Regional data are generally available for NUTS level 2 regions — although the latest reference period is only available for NUTS level 1 regions in Germany, Greece, France, Poland and the United Kingdom and there are only national data available for Slovenia. Data are also presented for Iceland, Norway, Croatia, the former Yugoslav Republic of Macedonia, Serbia and Turkey — although this is mainly available at a national level.

Access to information and communication technologies

Access to ICT is at the heart of the digital divide: although geographic location is just one aspect of this divide, as there are also wide ranging differences in Internet connectivity between various subgroups of the population, for example, when broken down by age or by household income.

Statistics on Internet connections and broadband access are closely related, as broadband is a specific type of Internet connection that has, in recent years, accounted for an increasing share of the Internet market (by type of connection). Efforts have been made to expand both the geographic reach and the speed of broadband Internet across the EU and by 2011 around two thirds (67 %) of all households in the EU-27 had broadband Internet access at home — a share that rose to 72 % in 2012. The relative importance of broadband Internet access grew at an average annual rate of 11.4 % within the EU-27 from 2007 to 2012, which was slower than during the preceding 5 years, reflecting the fact that broadband connection rates were approaching saturation in some regions.

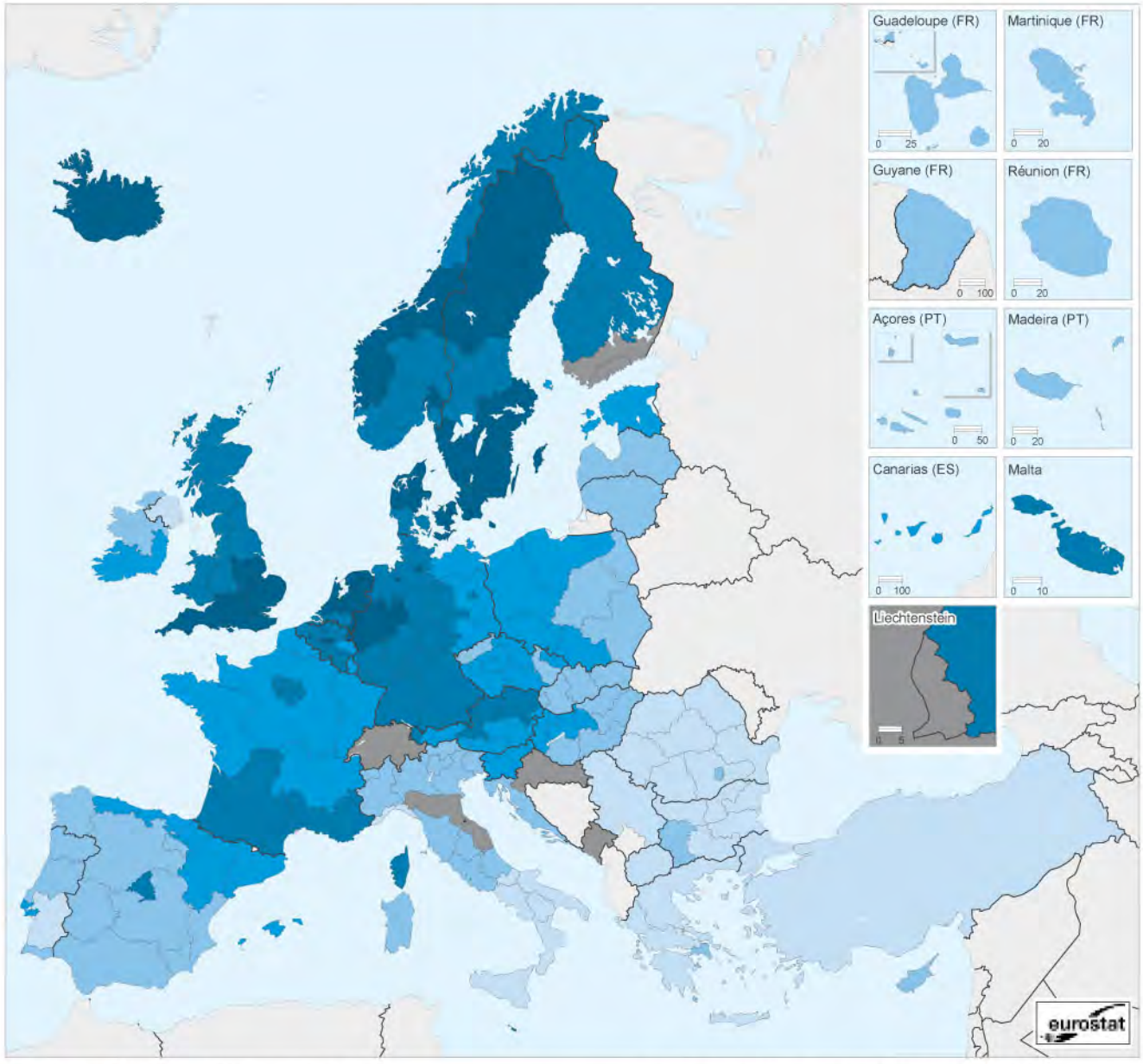
Map 8.1 shows the take-up of broadband connections by households in 2011. There was a particularly high concentration of broadband access across the Nordic Member States, northern Germany and the Netherlands, as well as in the EFTA countries of Iceland and Norway. Many of the regions in these areas reported broadband connection rates well above the 67 % average for the whole of the EU-27. Iceland (92 %) recorded the highest proportion of households with a broadband Internet connection in 2011, while Stockholm (Sweden) was the only region in the EU to record in excess of 9 out of every 10 households with a broadband Internet connection (91 %).

There were 30 NUTS level 2 regions in the EU (Germany, Greece, France, Poland and the United Kingdom, NUTS level 1 regions; Slovenia, national data) that reported a broadband connection rate that was in excess of 80 %. Of these, 10 were in the Netherlands (out of a total of 12 NUTS level 2 regions in that country), seven were in Sweden (out of a total of eight in that country), five were in the United Kingdom, four were in Denmark (out of a total of five in that country), three were in Germany and one was in Belgium. The broadband connectivity rate was also in excess of 80 % in Iceland (which is a single NUTS level 2 region) and three Norwegian regions (Trøndelag, Oslo og Akershus and Vestlandet).

There were 24 regions in the EU that recorded broadband connection rates of 50 % or lower in 2011 — this was considerably less than a year before (in 2010) when the same count had stood at 44 regions. The lowest broadband connectivity rates were almost exclusively recorded in Bulgaria and Romania, as Puglia (Italy, 37 %) and Kentriki Ellada (Greece, 34 %) were the only regions outside these two countries with a broadband connectivity rate below 40 %. Severoiztochen (Bulgaria) and the three Romanian regions of Centru, Sud-Est and Nord-Est each recorded rates that were below 30 % — the lowest in the EU. Broadband connection rates in the acceding and candidate countries were consistently below the EU-27 average, ranging from 23 % in Serbia and 34 % in Turkey (no regional data available for either of these countries, data are for 2009 and 2010 respectively) to 58 % in Jadranska Hrvatska (Croatia).

Within the EU, 21 of the Member States have multiple (more than one) regions at NUTS level 2 — although for this particular data set there is only national data available for Slovenia (despite it having more than one region). An analysis of the different levels of broadband connectivity across regions within the same Member State shows that Denmark, the Netherlands and Sweden had a relatively homogeneous level of connectivity (using the coefficient of variation as a measure of dispersion). Romania, Bulgaria and Greece reported a wider range in connectivity rates between regions, principally as a result of the capital city region having a much higher level of broadband connectivity than any other region. These patterns of dispersion within the EU Member States were repeated when analysing the frequency of Internet access and the propensity for individuals to use the Internet for ordering goods and services.

Map 8.1: Broadband connections in households, by NUTS 2 regions, 2011 (1)
(% of households with a broadband connection)



(% of households with a broadband connection)
EU-27 = 67

- <= 50
- 50 – 60
- 60 – 70
- 70 – 80
- > 80
- Data not available

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

0 200 400 600 800 km

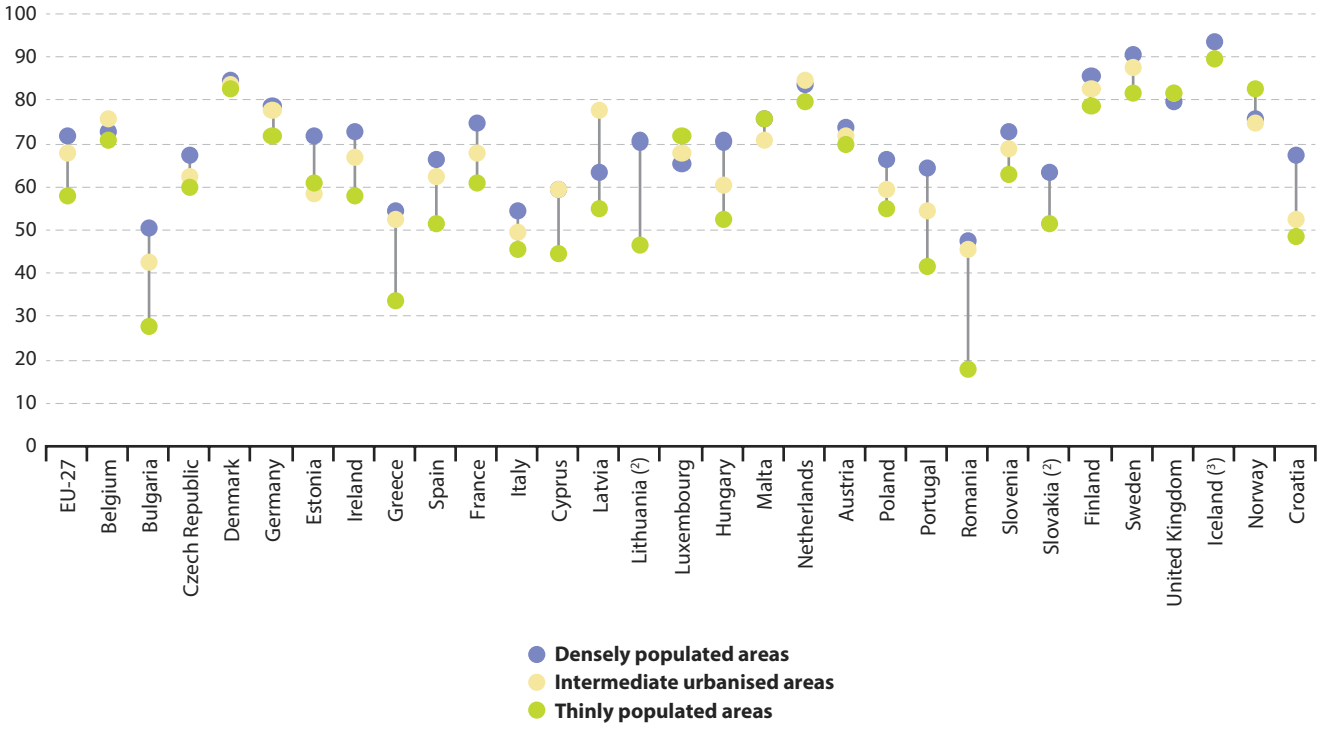
(1) Former Yugoslav Republic of Macedonia and Turkey, 2010; Serbia, 2009; Northern Ireland (UKN), 2008; Åland (FI20), 2007; Germany, Greece, France, Poland and the United Kingdom, by NUTS 1 regions; Slovenia, Serbia and Turkey, national data.
Source: Eurostat (online data code: isoc_r_broad_h)

The 10 regions with the highest increases in broadband connectivity rates from 2009 to 2011 (in percentage point terms) each reported that more than half of their households had a broadband connection in 2011. These 10 regions included two each in eastern Germany, the Walloon region of Belgium, and Italy. The two German regions — Brandenburg and Sachsen — recorded the highest percentage point increases, although they continued to register connectivity rates in 2011 that remained well below their national average. By contrast, the Bulgarian region of Yugozapaden (which includes the capital city of Sofia) also recorded relatively fast growth, such that its connection rate was 35 % higher than the national average by 2011. Only two regions in the EU recorded a fall in their broadband connectivity among households during the period 2009–11: they were Luxembourg (one region at this level of detail) and Utrecht (the Netherlands) — this was also the case in the two northernmost regions of Norway (Trøndelag and Nord-Norge).

According to the European Commission's 'Digital Agenda for Europe', 95 % of EU households had the possibility to access at least a basic broadband connection in 2011, while some 50 % of households potentially had access to fast broadband (defined here as being over 30 Mbps). The availability of fast broadband depends upon cable upgrades and is therefore sometimes restricted to urban areas before these services are rolled out to more rural areas. Note that the take-up of these services is generally much lower than the current level for potential connectivity.

Figure 8.1 shows that most countries recorded higher broadband connectivity rates in densely populated areas (as compared with intermediate or thinly populated regions). Within the EU-27 as a whole, some 72 % of households in densely populated areas had a broadband connection, compared with 68 % in intermediate areas and 58 % in thinly populated areas. This pattern was repeated across most of the individual EU Member States, with the exceptions tending to be found in relatively small, densely populated countries (where broadband connections are already extensively available); for example, households in intermediate areas had a higher broadband Internet connection rate than those in densely populated areas in Belgium, Latvia, Luxembourg, the Netherlands and the United Kingdom in 2011.

Figure 8.1: Broadband connections in households, by degree of urbanisation, 2011 (1)
(% of households with a broadband connection)



(1) Based on NUTS 2006 classification.
(2) Intermediate urbanised area, not available.
(3) Intermediate urbanised area, 2010.
Source: Eurostat (online data code: isoc_bde15b_h)

Regular use of the Internet

Some 70 % of individuals in the EU-27 used the Internet in 2012 on a regular basis, in other words at least once a week. This proportion rose from 51 % in 2007, although the pace of growth slowed considerably during the period 2010–12. Map 8.2 presents regional data for 2011, when 68 % of EU-27 individuals used the Internet on a regular basis.

There is a relationship between regular use of the Internet and broadband connectivity rates: those regions with a higher proportion of broadband connections tend to have a higher share of regular Internet users — as shown by the similarities between Maps 8.1 and 8.2.

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 benchmark ranged, in 2011, from 94 % of individuals in Stockholm (Sweden) — the EU region with the highest broadband connectivity rate — to 33 % in Sud-Vest Oltenia (Romania); in other words, regular use of the Internet was almost three times as high in Stockholm.

Overall, there were 63 NUTS level 2 regions (Germany, Greece, France, Poland and the United Kingdom, NUTS level 1 regions; Slovenia, national data) in the EU in 2011 where more than 75 % of individuals were regular users of the Internet, among which there were 26 where more than 85 % of individuals were regular Internet users. By contrast, there were 41 regions across the EU where 55 % or fewer individuals were regular users of the Internet, among which were 21 regions (in Bulgaria, Greece, Italy, Portugal and Romania) where 45 % or fewer individuals were regular Internet users.

Regular Internet use was consistently high across the EFTA countries: the EFTA region with the lowest share of individuals accessing the Internet at least once a week was Hedmark og Oppland (Norway) where an 89 % share was recorded — this was, nevertheless, 21 percentage points above the EU-27 average. The incidence of regular Internet use in acceding and candidate country regions was consistently below the EU-27 average, ranging from 35 % of individuals in Serbia (2009) and 33 % of individuals in Turkey (data for 2010) — no regional data available for either of these countries — to 58 % in Jadranska Hrvatska (Croatia).

The 10 regions in the EU with the highest growth (in percentage point terms) in their regular use of the Internet from 2009 to 2011 each reported that in excess of 60 % of persons accessed the Internet at least once a week by 2011. The 10 regions with the highest growth included three from Spain (the Ciudad Autónoma de Ceuta, the Ciudad Autónoma de Melilla, and La Rioja), two from Germany and one each from Belgium, Ireland, Austria, Portugal and France. With the exception of the Border, Midland and Western region (Ireland) and the Sachsen region (Germany), the remaining eight regions all reported rates for regular use of the Internet in 2011 that were above their national averages.

E-commerce by individuals

In 2012, 45 % 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 30 % in 2007 and from 40 % in 2010.

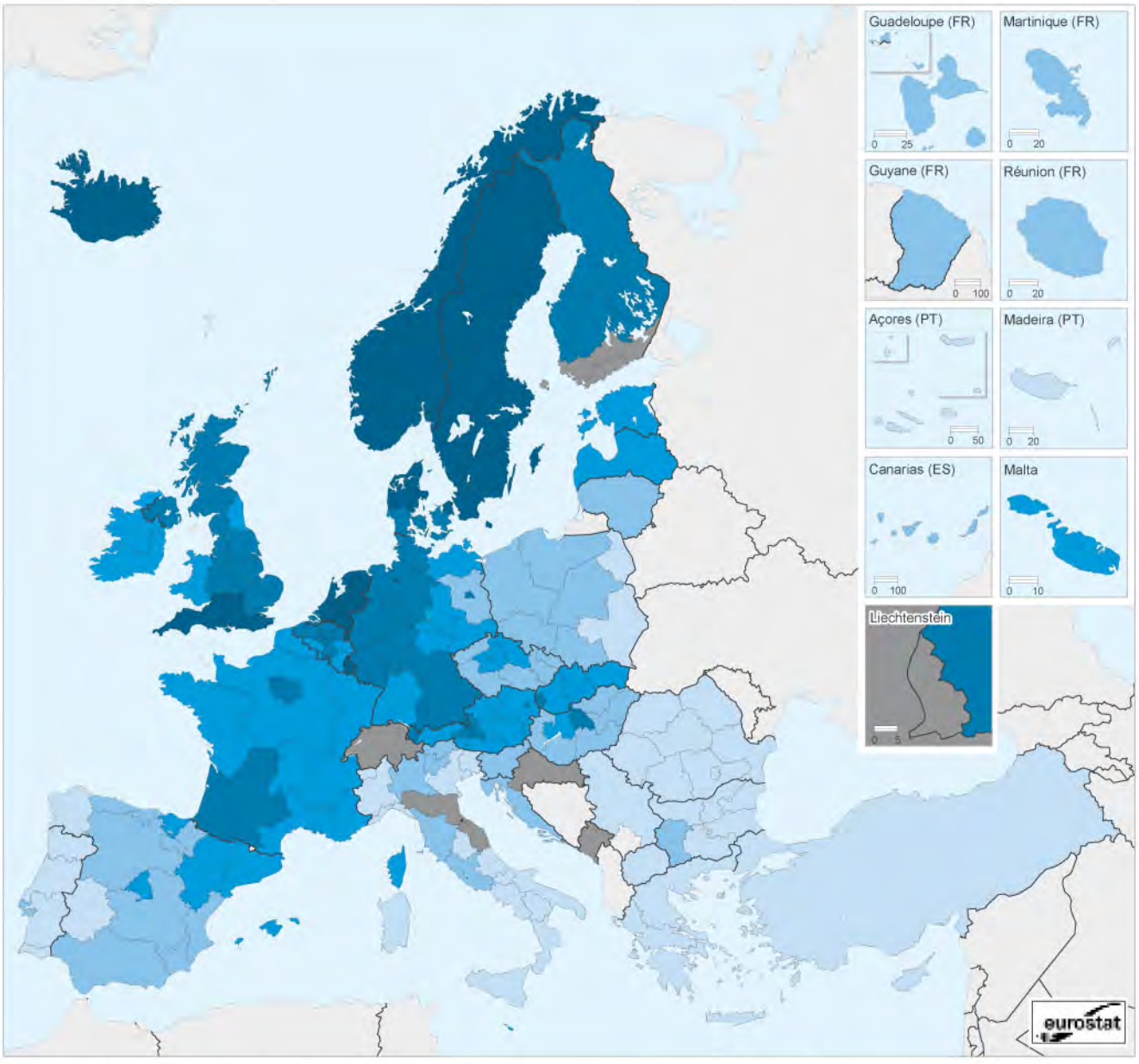
A regional breakdown is only available for 2011 (see Map 8.3). This shows that the highest propensity among individuals to use e-commerce tended to be reported across north-western Europe, while the lowest rates were recorded across southern Member States and many of those Member States that joined the EU in 2004 or 2007. In 2011, the proportion of individuals making online purchases ranged across NUTS level 2 regions (Germany, Greece, France, Poland and the United Kingdom, NUTS level 1 regions; Slovenia, national data) from 82 % in the south-west (of the United Kingdom) to 3 % in the Sud-Est and Vest regions of Romania and the Yuzhen tsentralen region of Bulgaria.

Map 8.3 shows that more than 7 out of every 10 individuals made online purchases in 15 NUTS level 2 regions of the EU in 2011; these included five regions in the United Kingdom (generally in the south, but also Scotland), four regions in the Netherlands, three regions in Sweden, two in Denmark and one in Germany. By contrast, among the 43 NUTS level 2 regions that reported 20 % of individuals or fewer making online purchases in 2011, 14 were in Italy, eight in Romania, six in Bulgaria and in Portugal, three in Greece, two in Spain and in Hungary, as well as one each in Latvia and Lithuania (both these countries equate to a single region at the NUTS level 2).

Among the EFTA countries for which data are available, making online purchases was a relatively widespread activity in 2011 across Norway, with Vestlandet recording the lowest share (66 %). The proportion of people making online purchases in Iceland was just less than one in two (49 %), despite an extremely high broadband connection rate (92 %). People in the acceding and candidate countries were far less likely to have made online purchases in 2011, with only 4 % having done so in the former Yugoslav Republic of Macedonia (2010) and 5 % in Serbia (2009) or Turkey (2010) — no regional data available for the latter two. The highest proportion of people making online purchases among the acceding and candidate country regions was recorded in Jadranska Hrvatska (Croatia, 21 %).

The proportion of people ordering goods or services over the Internet increased (in percentage point terms) during the period 2009–11 by a relatively large amount in many regions in the western-central area of the EU. Among the top 10 increases, there were two regions each from Belgium, Germany, France and the Netherlands, while the other two regions were on the periphery of the EU — namely the Ciudad Autónoma de Ceuta and Bratislavský kraj (the capital city region of Slovakia). Eight of these regions reported that their share of persons ordering goods or services over the Internet

Map 8.2: Regular use of the Internet, by NUTS 2 regions, 2011 (1)
(% of persons who accessed the Internet on average at least once a week)



(% of persons who accessed the Internet on average at least once a week)
EU-27 = 68

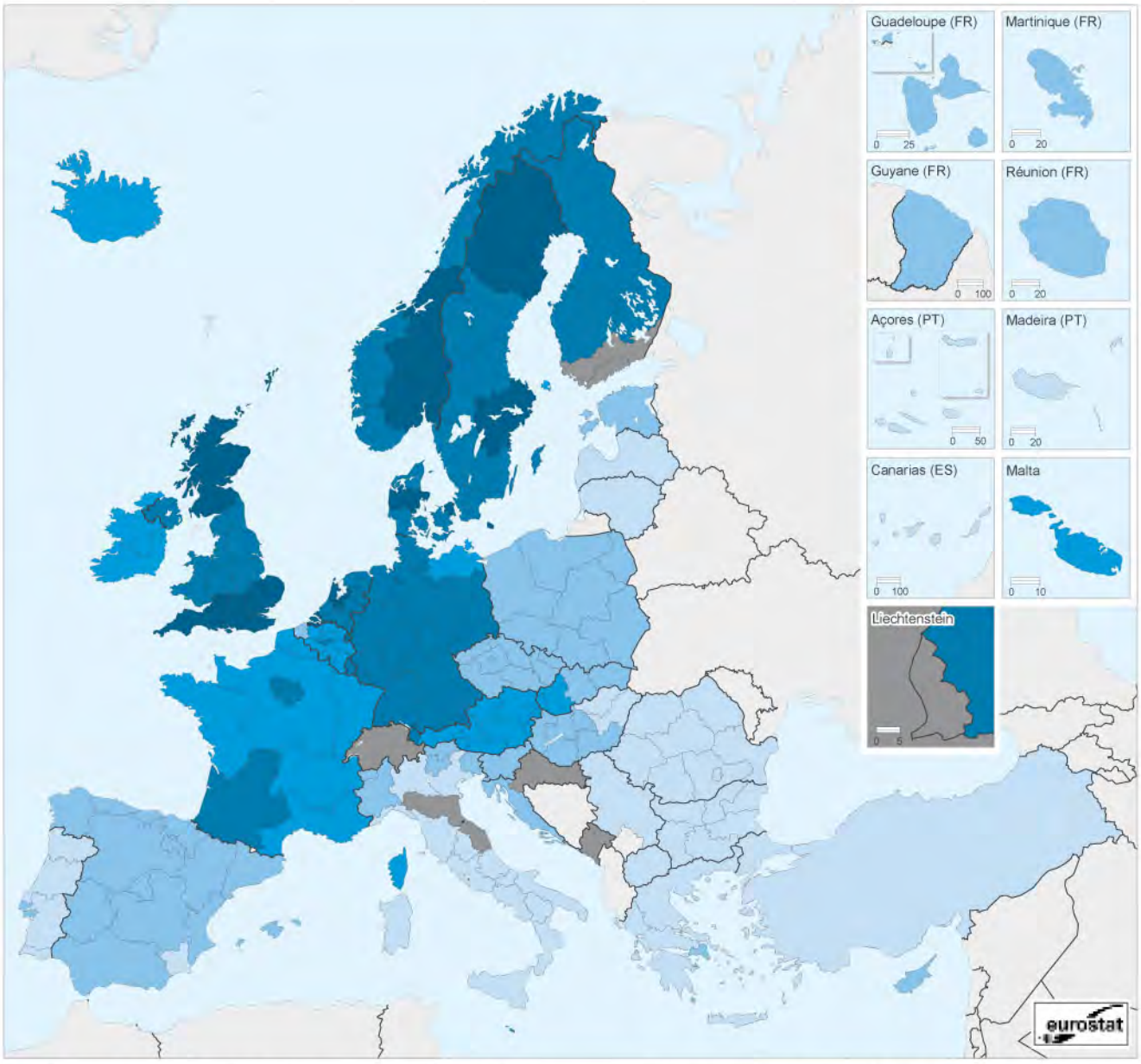
- <= 55
- 55 – 65
- 65 – 75
- 75 – 85
- > 85
- Data not available

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

0 200 400 600 800 km

(1) Northern Ireland (UKN), former Yugoslav Republic of Macedonia and Turkey, 2010; Serbia, 2009; Germany, Greece, France, Poland and the United Kingdom, by NUTS 1 regions; Slovenia, Serbia and Turkey, national level.
Source: Eurostat (online data code: isoc_r_iuse)

Map 8.3: Online purchases, by NUTS 2 regions, 2011 (1)
(% of persons who ordered goods or services over the Internet for private use)



(% of persons who ordered goods or services over the Internet for private use)
EU-27 = 45

- <= 20
- 20 – 35
- 35 – 55
- 55 – 70
- > 70
- Data not available

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

0 200 400 600 800 km

(1) Nisia Aigaiou, Kriti (EL4), Ciudad Autónoma de Melilla (ES64), Northern Ireland (UKN), former Yugoslav Republic of Macedonia and Turkey, 2010; Serbia, 2009; Åland (FI20), 2007; Germany, Greece, France, Poland and the United Kingdom, by NUTS 1 regions; Slovenia, Serbia and Turkey, national level.
Source: Eurostat (online data code: isoc_r_blt12_i)

in 2011 was at least as high as the respective national average. Three regions had a very high relative propensity for individuals to engage in e-commerce: the proportion of people ordering goods or services over the Internet in the Ciudad Autónoma de Ceuta was 51.9 % higher than the Spanish average, while the corresponding rates were 25.6 % higher and 21.6 % higher for the Province/Provincie Vlaams-Brabant (Belgium) and Bratislavský kraj.

Table 8.1: Top 10 regions in terms of increasing use of the Internet, by NUTS 2 regions, 2009–11 ([1])

Top 10 regions	2009	2010	2011	Average rate of change, 2009–11 (% per annum)	Value for 2011 compared with national average (national average = 100)
Broadband connections in households (% of households with a broadband connection)					
Brandenburg (DE4)	40	64	66	28.5	84.6
Sachsen (DED)	47	66	69	21.2	88.5
Prov. Hainaut (BE32)	53	63	74	18.2	100.0
Prov. Namur (BE35)	57	63	78	17.0	105.4
Sardegna (ITG2)	36	54	56	24.7	107.7
Vorarlberg (AT34)	59	65	79	15.7	109.7
Ciudad Autónoma de Ceuta (ES63)	46	61	65	18.9	104.8
East Midlands (UKF)	64	:	83	13.9	103.8
Yugozapaden (BG41)	36	37	54	22.5	135.0
Valle d'Aosta/Vallée d'Aoste (ITC2)	34	48	52	23.7	100.0
Regular use of the Internet (% of persons who accessed the Internet on average at least once a week)					
Ciudad Autónoma de Ceuta (ES63)	45	55	71	25.6	114.5
Prov. Namur (BE35)	63	72	81	13.4	103.8
Ciudad Autónoma de Melilla (ES64)	46	51	64	18.0	103.2
Border, Midland and Western (IE01)	49	56	66	16.1	93.0
La Rioja (ES23)	46	56	62	16.1	100.0
Bremen (DE5)	78	77	92	8.6	119.5
Vorarlberg (AT34)	68	72	82	9.8	107.9
Lisboa (PT17)	50	57	64	13.1	125.5
Sachsen (DED)	56	66	69	11.0	89.6
Sud-Ouest (FR6)	67	68	80	9.3	108.1
Online purchases (% of persons who ordered goods or services over the Internet for private use)					
Ciudad Autónoma de Ceuta (ES63)	20	18	41	43.2	151.9
Sud-Ouest (FR6)	42	52	60	19.5	113.2
Prov. Namur (BE35)	32	43	49	23.7	114.0
Sachsen (DED)	41	51	57	17.9	89.1
Ouest (FR5)	37	44	53	19.7	100.0
Bratislavský kraj (SK01)	29	41	45	24.6	121.6
Thüringen (DEG)	52	61	67	13.5	104.7
Prov. Vlaams-Brabant (BE24)	40	47	54	16.2	125.6
Friesland (NL12)	50	60	64	13.1	92.8
Drenthe (NL13)	57	64	70	10.8	101.4

([1]) Based on only those regions with data available for 2009–11; Germany, Greece, France, Poland and the United Kingdom, by NUTS 1 regions; Slovenia, national level.
Source: Eurostat (online data codes: isoc_r_broad_h, isoc_r_iuse and isoc_r_blt12_i)

Data sources and availability

EU statistics on the use of ICT are based on Regulation (EC) No 808/2004 of the European Parliament and of the Council 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. In 2011 the European Commission enacted an implementing Regulation (EU) No 937/2011 concerning statistics on the information society, which provides a legal basis for the collection of data relating to enterprises, individuals and households as of reference year 2012.

Eurostat's ICT surveys aim to provide the timely provision of statistics on individuals and households concerning the use of ICT. A large proportion of Eurostat's ICT statistics are used in this context for the benchmarking exercise linked to Europe's digital agenda.

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 EU 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 16–74 and households 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, stocks and 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.

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, in part through their effect on raising productivity. 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 through a growing variety of devices. 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 ease working from home or other remote locations, delivering greater flexibility in the working environment. 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.

The dissemination of ICTs across the EU is thought to be a major lever for improving both productivity levels and the competitiveness of regions. EU Structural Funds have been used to help support the uptake of ICTs by businesses and households and promote development through balanced support to the supply of and demand for ICT products in public and private services. According to the European Commission's Directorate-General for Regional and Urban Policy, regional funds allocated to ICTs during the period 2007–13 were valued at EUR 15 billion or 4.4% of the total budget for cohesion policy, with investment priorities shifting from infrastructure to support for the development of content.

The participation of individuals and businesses in the information society depends on access to ICTs, for example the ownership of an electronic device (such as a smart phone, tablet or computer), a fast connection to the Internet and knowledge of the relevant skills. The digital divide distinguishes between those who have access to the Internet and are able to make use of services offered on the web and those who are excluded. The divide can reflect criteria that describe the differences in ICT participation according to sex, age, education, income, social group or geographic location. For example, regular use of the Internet, in particular online purchases, is often found to be less common in rural/remote regions. The EU has acknowledged the importance of bridging the digital divide to give everyone equal access to ICTs and to enable them to participate in the information society. In

2010 the European Commission adopted a communication on 'A Digital Agenda for Europe' (COM(2010) 245 final/2), a strategy designed to provide a flourishing digital economy by 2020. This digital agenda is one of seven flagship initiatives under the Europe 2020 strategy for smart, sustainable and inclusive growth. 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 ICTs 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 insofar as it has set a target for all households in the EU to have broadband subscriptions that are faster than 30 Mbps by 2020 and another target for 50 % of households to have broadband subscriptions with speeds above 100 Mbps by the same year. These two targets form part of a benchmarking initiative to measure progress being made in relation to the development of the European information society and the level of achievement of the policy objectives set out in the digital agenda. The digital agenda scoreboard has 13 specific targets for the years 2013–20.

The digital agenda also puts emphasis on online shopping, with a focus on achieving a single European digital 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.

The connecting Europe facility (CEF) has a proposed budget of up to EUR 50 billion for the period 2014–20: it is designed to promote growth, jobs and competitiveness through infrastructure investment to help build high-performing, sustainable and interrelated networks across the EU in the fields of transport, energy and communications. The European Commission has proposed that EUR 9.2 billion of the CEF should be used to stimulate investment in fast and very fast broadband networks and pan-European digital services. In December 2012, a joint vote by the transport and industry committees of the European Parliament approved rules on how the CEF would fund infrastructure projects; the CEF proposals are expected to be adopted before the end of 2013.

More specifically within the context of the information society, CEF Digital is a proposal for developing broadband networks and digital service infrastructures. Examples include promoting the deployment of fast and ultrafast broadband networks and establishing cross-border access to interoperable, digital public services in the fields of public administration, culture, education, research and health, such as e-procurement, e-health or e-justice. These changes could result in a doctor who is treating an individual who falls sick while travelling in another Member-State being able to retrieve a patient's medical records or alternatively a business in one Member State being able to send a procurement bid to an administration in another Member State through a system that overcomes national fragmentation and language barriers that may currently deter cross-border cooperation or competition.

9 Agriculture

Eurostat's coverage of regional agricultural statistics for the European Union (EU) comprises three main fields: information from agricultural accounts, data relating to livestock and data relating to crop farming. Regional agricultural statistics from the latest agricultural census (2010) have also been included — note that data collected through the census are available at an even more disaggregated level, namely for NUTS level 3 regions.

This chapter starts with an analysis of data from the economic accounts for agriculture (EAA) which provide a wide range of statistics and information on agricultural activity and the income generated by it. 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, income development from farming activities is one of the most common measures used to track living standards within the farming community. The analysis moves on to look at livestock statistics, principally in relation to dairy farming and its output. It concludes with a presentation of crop production, focusing on cereals, potatoes and the output of vineyards.

Main statistical findings

Economic significance of agriculture

In 2012, agriculture in the EU-27 generated around EUR 159.4 billion of value added, some 1.4 % of the added value for the whole economy: the contribution of agriculture fell from 1.8 % a decade earlier (2002), to a low of 1.2 % in 2009, before increasing each year through to 2012. The regional analysis of agricultural accounts is based on data for 2010, when agricultural value added was EUR 145.3 billion, equivalent to 1.3 % of the whole economy.

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 Severen tsentralen and Severozapaden, where it reached 14.1 % and 12.2 % respectively of total value added; no other regions in the EU-27 reported double-digit shares — although this was the case in the former Yugoslav Republic of Macedonia (10.8 %).

Agriculture's contribution to the whole economy was above 3.5 % in 46 out of the 252 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, seven regions in Spain (most of inland Spain as well as the south), five regions each in France (in central France and Guyane) and 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 Italy (Provincia Autonoma di Bolzano/Bozen and Basilicata), the Netherlands (Friesland and Flevoland) and Portugal (Alentejo and the island region of the Região Autónoma dos Açores). As noted above, agriculture's contribution was also above 3.5 % in the former Yugoslav Republic of Macedonia (which is just one region at level 2), while this was also the case for the Croatian region of Kontinentalna Hrvatska.

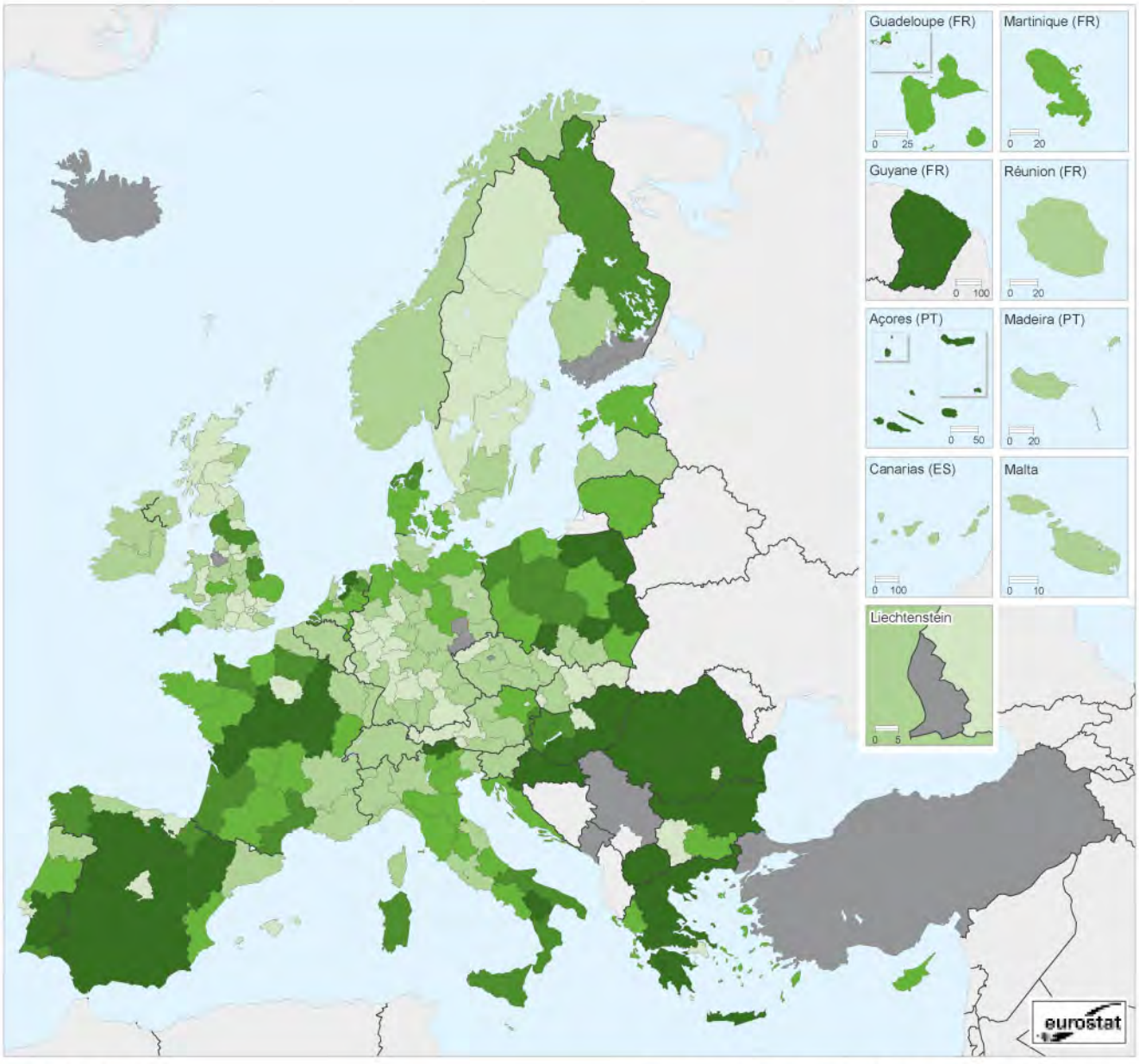
The regions with the lowest contribution from agriculture to total value added included many capital city regions, regions around capital cities and other large urban areas. There were 60 regions in 2010 where agriculture accounted for 0.5 % or less of value added in the local, regional economy and these included 13 capital city regions. Among the other regions beyond the capital city regions where agriculture accounted for 0.5 % or less of value added were 15 regions in the United Kingdom, including several regions surrounding London, as well as regions around Greater Manchester and Liverpool, in Wales and in the west of Scotland. In Germany there were 14 such regions, including Bremen, Hamburg, parts of Bayern (Oberbayern and Mittelfranken), parts of Baden-Württemberg (including Stuttgart and Karlsruhe), and Nordrhein-Westfallen (including Düsseldorf and Köln). There were five such regions in each of Spain (all coastal) and Sweden (in the north, west and eastern-central areas), while there were three regions in western Austria and two each in the Czech Republic and Slovakia.

As noted above, the value added generated by agriculture in 2010 was EUR 145.3 billion, and this was 2.3 % lower than it had been in 2005 (down from EUR 148.7 billion); during this period, value added was volatile, peaking at EUR 156.5 billion in 2007 and falling as low as EUR 131.3 billion in 2009. Agriculture's contribution to the value added of the whole economy fell from 1.5 % in 2005 to 1.2 % in 2009 before picking up to 1.3 % in 2010.

Figure 9.1 presents this percentage point change for the EU-27 between 2005 and 2010 and compares it with the 10 NUTS level 2 regions with the largest increases and the largest decreases in the contribution of agriculture to the whole economy. The Sud-Vest Oltenia region of Romania saw agriculture's share increase from 6.7 % in 2007 to 9.2 % by 2010, the largest percentage point rise among the 231 regions for which data are available. Three other Romanian regions, Sud-Est, Sud – Muntenia and Nord-Est, also saw relatively large percentage point increases, despite already having shares of 6.5 % or higher in 2007. Most of the other regions with relatively high increases grew from much lower shares, no more than 4.0 % in 2005. The Finnish region of Pohjois- ja Itä-Suomi saw a remarkably large increase, its agricultural share more than doubling from 1.4 % in 2005 to 3.0 % by 2010.

The list of regions where the share of agriculture in the whole economy fell the most (in percentage point terms) was dominated by regions from central and northern Greece and the

Map 9.1: Share of agriculture in the economy, gross value added at basic prices, by NUTS 2 regions, 2010 (1)
(% of total value added)



(1) Greece and the United Kingdom, 2009; Cyprus, Latvia, Lithuania, Luxembourg, Malta and Poland, 2008; Belgium, Slovenia, Norway, Switzerland and the former Yugoslav Republic of Macedonia, national level.
Source: Eurostat (online data codes: agr_r_accts and nama_r_e3vab95r2)

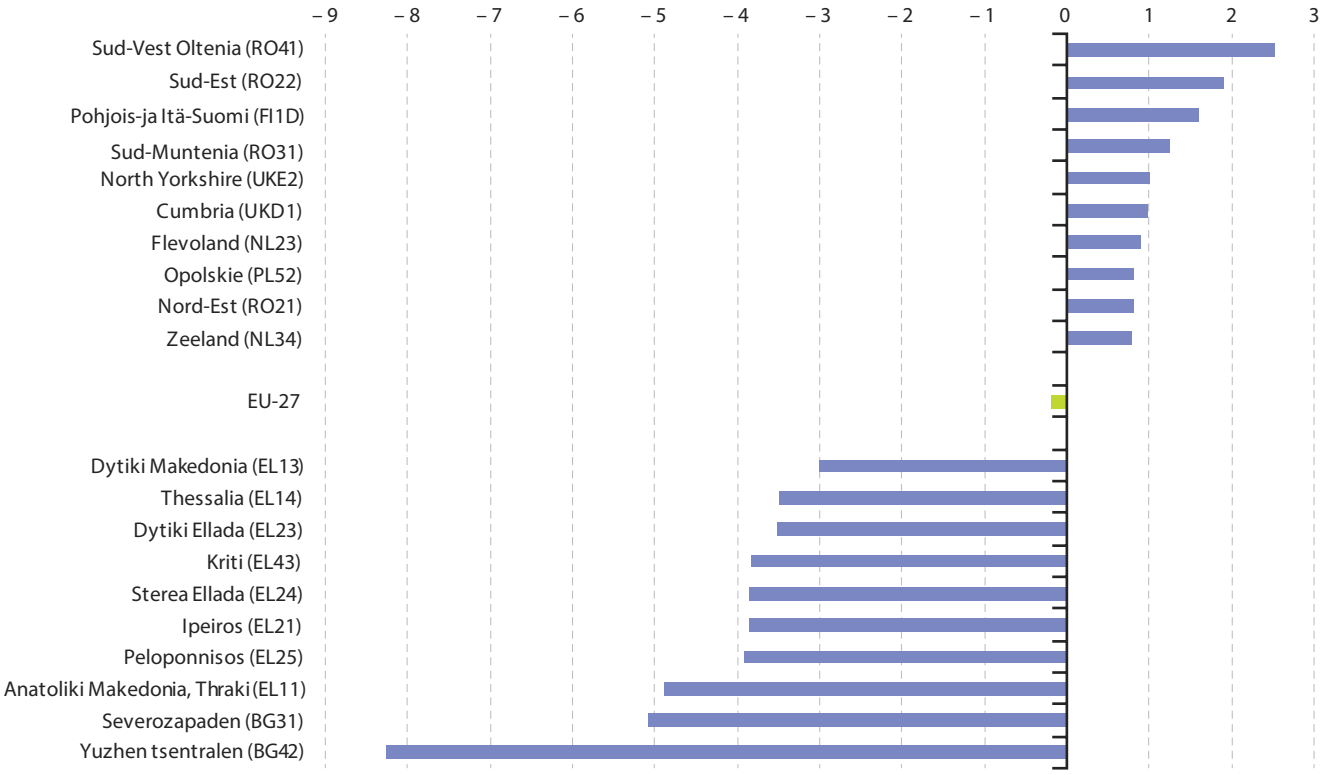
Greek island of Kriti, but was headed by the Bulgarian regions of Severozapaden and Yuzhen tsentralen. In most of these regions the share of agriculture had been relatively high in 2005 — exceeding 10.0 % in the two Bulgarian regions as well as Thessalia in Greece — and had been at its lowest (6.0 %) in Ipeiros in central Greece. The share of agriculture in the whole economy more than halved in three of these 10 regions, falling in Yuzhen tsentralen from 10.7 % to 2.4 % in 2010, in Ipeiros from 6.0 % to 2.1 % (in 2009), and in Anatoliki Makedonia, Thraki from 9.4 % to 4.5 % (also in 2009). A further eight regions (outside the list of the 10 regions with the largest percentage point falls) recorded at least a 50 % reduction in the agricultural share of the economy, with the largest falls in relative terms being in Yugozapaden in Bulgaria (from 2.2 % to 0.4 %) and Východné Slovensko in Slovakia (from 0.5 % to 0.1 %).

Agricultural labour productivity

Agriculture is a highly labour-intensive activity 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, both of which are widespread in agriculture, labour input can be 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. Agricultural labour productivity can be influenced by factors such as average farm sizes, the level of mechanisation and the share of production for on-farm consumption. It should be remembered that labour productivity is only a partial productivity indicator, as it does not take account of all factors.

The EU-27 agricultural gross value added per annual work unit was estimated at EUR 15 800 in 2011. Map 9.2 shows a big difference between the western and eastern parts of Europe in terms of this productivity ratio for NUTS level 2 regions. In 54 regions spread across 11 of the EU Member States — France (16 regions), the Netherlands (12 regions), Germany (eight regions), the United Kingdom

Figure 9.1: Change in the share of agriculture in the economy, gross value added at basic prices, by NUTS 2 regions, 2005–10
(percentage points difference between 2010 and 2005, based on % of total value added)



(1) Germany, Spain and Romania, break in series, 2008; France, the Netherlands, break in series, 2007; Bulgaria, break in series, 2006; Denmark and Romania, 2007–10; Greece and the United Kingdom, 2005–09; Cyprus, Latvia, Lithuania, Luxembourg, Malta and Poland, 2005–08; Praha (CZ01), Chemnitz (DED4), Leipzig (DED5), Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Cheshire (UKD6) and Merseyside (UKD7), not available.
Source: Eurostat (online data codes: agr_r_accts and nama_r_e3vab95r2)

(six regions), Denmark and Spain (four regions each), Sweden (two regions), and Italy and Finland (one region each) — gross value added per annual work unit was above EUR 30 000 in 2011, which was also the case in Belgium as well as the EFTA countries of Norway and Switzerland (no regional data available for any of these three countries). 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. By contrast, 41 regions within the EU recorded agricultural labour productivity of EUR 5 000 or less. These regions were mainly in Poland (10 regions), Romania (eight regions), Bulgaria (six regions), Hungary (four regions), Greece and Portugal (three regions each) and Slovakia (two regions). In five EU regions, agricultural labour productivity was EUR 1 000 or less: Yugozapaden and Yuzhen tsentralen in Bulgaria, Podkarpackie in Poland, Východné Slovensko in Slovakia and the capital city region of Bucureşti - Ilfov in Romania.

Structure of agricultural holdings

A comprehensive farm structure survey (FSS) is carried out by EU Member States every 10 years (the full scope being the agricultural census) and intermediate sample surveys are carried out three times between these basic surveys. The EU Member States collect information from individual agricultural holdings, covering: land use; livestock numbers; rural development (for example activities other than agriculture); and management and farm labour input (including age, sex and relationship to the holder).

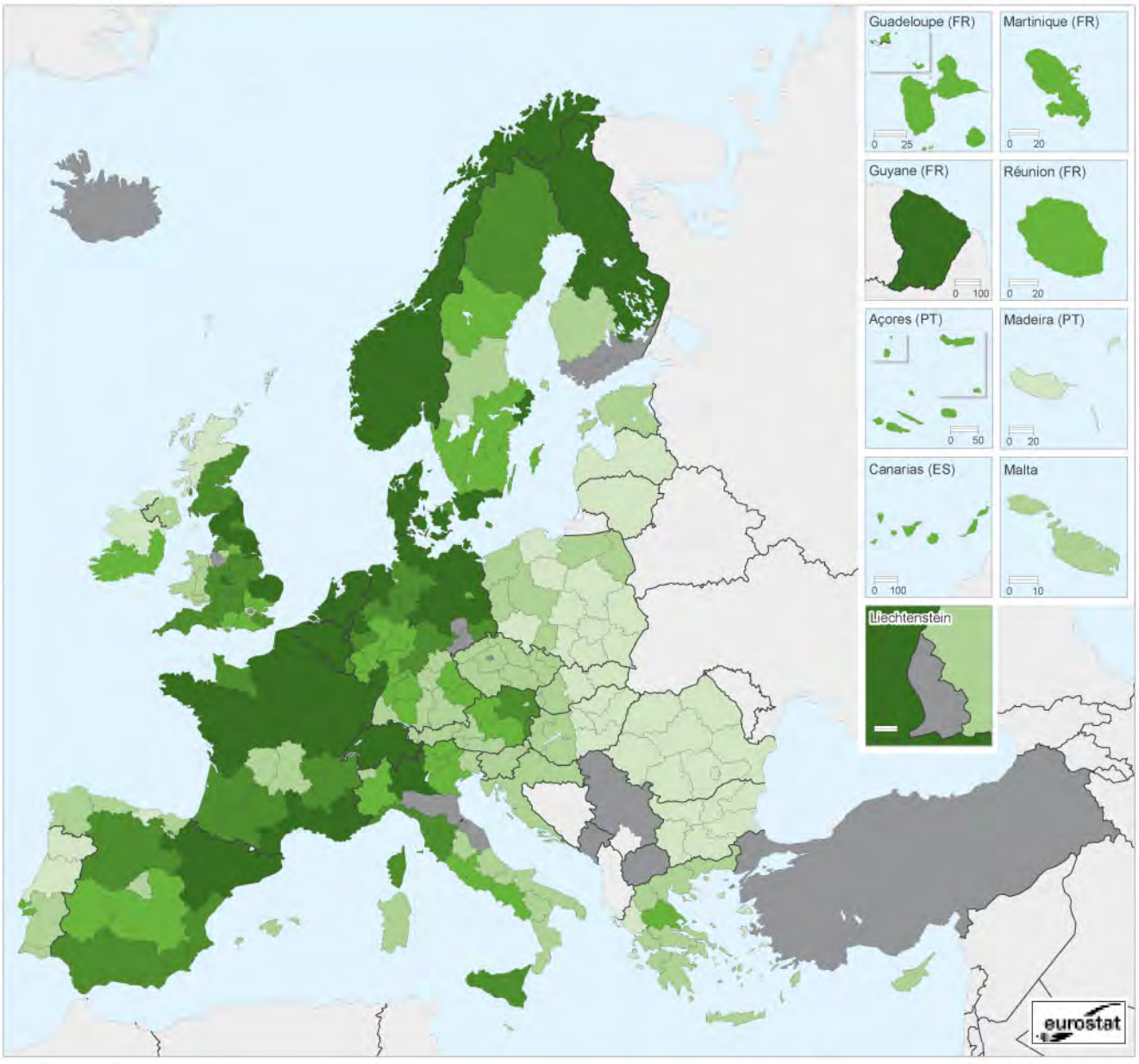
The 2010 surveys aimed to cover at least 98 % of utilised agricultural area (UAA) and 98 % of the livestock in each country. A threshold was defined under which a unit was too small to be counted as an agricultural holding — such as 1 hectare of UAA, a minimum of five pigs, 50 m² under glass or 100 m² of vineyards. Each Member State defined its own set of thresholds in order to meet the targeted coverage but to exclude the smallest farms. Most Member States set a threshold to include farms with a UAA over 1 hectare, although Luxembourg raised its threshold to 3 hectares and the Czech Republic, Denmark, Germany, Sweden and the United Kingdom used a threshold of 5 hectares.

The use of different thresholds should be borne in mind when analysing the results presented in Maps 9.3 and 9.4 from the 2010 census. Furthermore, the information presented in Map 9.3 on the number of agricultural holdings is a simple count and is therefore influenced to some extent by the size of each region; in this respect it should be noted that German data are presented for NUTS level 1 regions which are generally larger than NUTS level 2 regions. The seven EU regions with the largest number of agricultural holdings in 2010 were all in Romania, and included all of the Romanian regions except for the capital city region. These regions were among 56 regions where there were more than 60 000 holdings, which were otherwise concentrated in Italy and Poland (11 regions each), Spain (seven regions), Greece (six regions), Hungary (five regions), Bulgaria, Ireland and Portugal (two regions each), and Germany, Latvia and Lithuania (one region each; the latter two Member States have only one region at NUTS level 2). As such, the regions with large numbers of agricultural holdings were mainly in eastern and southern Europe, as well as in both Irish regions and Bayern in Germany.

The smallest numbers of agricultural holdings, 5 000 or less, were spread across 70 different regions in the EU (as shown by the lightest shade in Map 9.3). They were found mainly in those countries employing a relatively high threshold, namely the United Kingdom (24 regions), Belgium (nine regions), the Czech Republic, Germany and the Netherlands (seven regions each; note that German data are for NUTS level 1 regions), Sweden (three regions) and Denmark (one region). A relatively small number of agricultural holdings were also found in France (three regions), Spain, Austria and Finland (two regions each), and Italy, Luxembourg and Slovakia (one region each); note that Luxembourg has only one region at NUTS level 2, with a total of 2 200 agricultural holdings (with at least 3 hectares of UAA). These 70 regions with the smallest number of agricultural holdings were spread across 14 different EU Member States and included 12 capital city regions; Spain and Italy were the only two Member States in this list where the capital city region had more than 5 000 agricultural holdings.

The average size of the 12.0 million agricultural holdings in the EU-27 in 2010 was 14.3 hectares of UAA, as shown in Map 9.4. The impact of different sized regions is less important for this ratio than for the simple count of holdings, but the varying thresholds nevertheless play a role, as a higher threshold can be expected to exclude a large number of relatively small holdings, so inflating the average size. The four EU regions with the largest average size of agricultural holdings in 2010 were all in Germany and all had an average size in excess of 200 hectares per holding; the highest was in Mecklenburg-Vorpommern on the Baltic coast, with 285.6 hectares per holding. These regions were among 23 regions where the average size of agricultural holdings exceeded 100.0 hectares per holding and among 62 regions where the average size exceeded 60.0 hectares per holding. They were found in just eight of the EU Member States: among those with a higher threshold, 25 regions in the United Kingdom, all eight regions in the Czech Republic, seven (NUTS level 1) regions in Germany, four out of five regions in Denmark and one region in Sweden; amongst those with a lower threshold, 13 regions in France, three (of four) regions in Slovakia and one region in Belgium. As such, the largest agricultural holdings were generally found in western and north-western parts of the EU, as well as in the Czech Republic and Slovakia; the main exception was the one Mediterranean region of Corse (France).

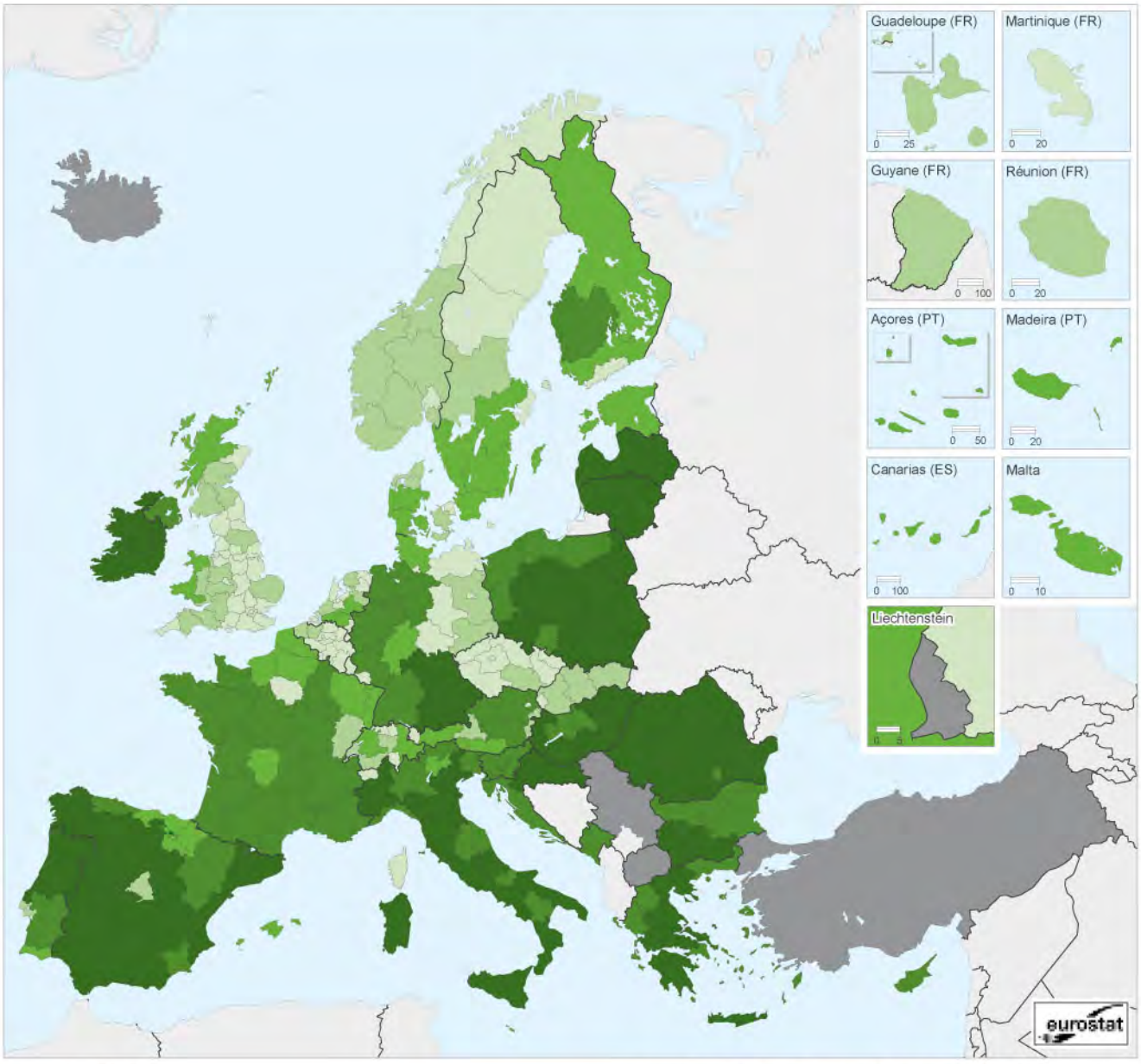
Map 9.2: Gross value added at basic prices in agriculture per annual work unit, by NUTS 2 regions, 2011 (1) (EUR thousand)



(1) Labour force data for all regions, 2007; labour force data for EU-27 and national level data, 2010; Bulgaria, Czech Republic, Germany, Spain, Hungary, the Netherlands, Romania, Finland and Sweden, 2010; Greece and the United Kingdom, 2009; Cyprus, Latvia, Lithuania, Luxembourg, Malta and Poland, 2008; Estonia, estimates; Belgium, Slovenia, Norway, Switzerland and Croatia, national level.

Source: Eurostat (online data codes: agr_r_accts and ef_r_nuts)

Map 9.3: Number of agricultural holidings, by NUTS 2 regions, 2010 (1)
(thousand holdings)



(thousand holdings)
EU-27 = 12 015

- <= 5.0
- 5.0 – 10.0
- 10.0 – 20.0
- 20.0 – 60.0
- > 60.0
- Data not available

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

0 200 400 600 800 km

(1) Germany, by NUTS 1 regions.
Source: Eurostat (online data code: ef_kvaareg)

There were 65 regions where the average size (in terms of UAA) was 10.0 hectares or less, among which 27 regions had an average size of 5.0 hectares or less, and two regions — Malta (0.9 hectares) and the Região Autónoma da Madeira (0.4 hectares) — had an average size of 1.0 hectare or less. The 65 regions with the smallest agricultural holdings were concentrated in the south and east (other than the Czech Republic and Slovakia) of the EU: all 13 regions in Greece and also 13 regions in Italy, all eight regions in Romania, seven regions in Poland, six (of seven) regions in Hungary, five (of seven) regions in Portugal, four regions in France, three regions in Spain, two regions in Bulgaria, both regions in Slovenia, as well as Cyprus and Malta (each one region at NUTS level 2).

Livestock and crops

Cows and cow's milk production

Cow's milk production is often linked to large areas of rich grassland, as found, for example, in Northern Ireland, Scotland and the South West of England (all in the United Kingdom), Ireland, the Netherlands, western and some central parts of France, Lithuania and north-eastern Poland. Cow's 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 areas where grassland is rarer (for example in northern regions or in Mediterranean areas), cow's milk production tends to be lower. With less favourable climatic conditions and relatively low areas of grassland, cow's milk production in some of these regions is replaced by milk production from ewes and goats; this is especially the case in Mediterranean regions.

Across the whole of the EU-27, milk production in 2011 averaged around 35.2 tonnes per km²; this indicator is shown for all regions at NUTS level 2, in Map 9.5. There were 63 regions in the EU where production exceeded 75.0 tonnes per km² (the darkest shade in the map), among which there were 30 regions where production was greater than 150.0 tonnes per km². These 30 regions were found in just eight Member States, with 11 regions in the Netherlands (all except Zeeland), six regions in the United Kingdom, four each in Belgium and Germany, two in France, and one each in Denmark, Italy and Portugal.

The apparent milk yield in the EU-27 averaged 6.6 tonnes per dairy cow. Apparent yields in the 10 largest milk-producing regions were generally above this average, with the exceptions of Southern and Eastern Ireland and Mazowieckie in Poland. The highest apparent yield among these 10 regions was 9.3 tonnes per dairy cow in Emilia-Romagna, whereas for all EU regions the highest yield was 14.0 tonnes in Lisboa (Portugal).

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 cow's milk is the proportion of dairy cows in the total number of cows. Across the EU-27 as a whole, dairy cows accounted for around two thirds (65.3 %) of all cows. Among the 10 regions with the highest milk production, the share of dairy cows exceeded 95.0 % in three regions: Mazowieckie and the two Italian regions, Lombardia and Emilia-Romagna. Shares of dairy cows below the EU-27 average were reported for Galicia in Spain, Southern and Eastern Ireland, as well as the Pays de la Loire in France.

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 2011, the EU-27 produced 290.3 million tonnes of cereals. Cereal production exceeded 4.0 million tonnes in the NUTS level 2 regions of Champagne-Ardenne, Picardie, Centre and Poitou-Charentes (France, 2007 data), Castilla y León and Castilla-la Mancha (Spain), and Sud-Est and Sud - Muntenia (Romania), as well as NUTS level 1 regions of Bayern, Niedersachsen and Nordrhein-Westfalen (in Germany) and the East of England (in the United Kingdom).

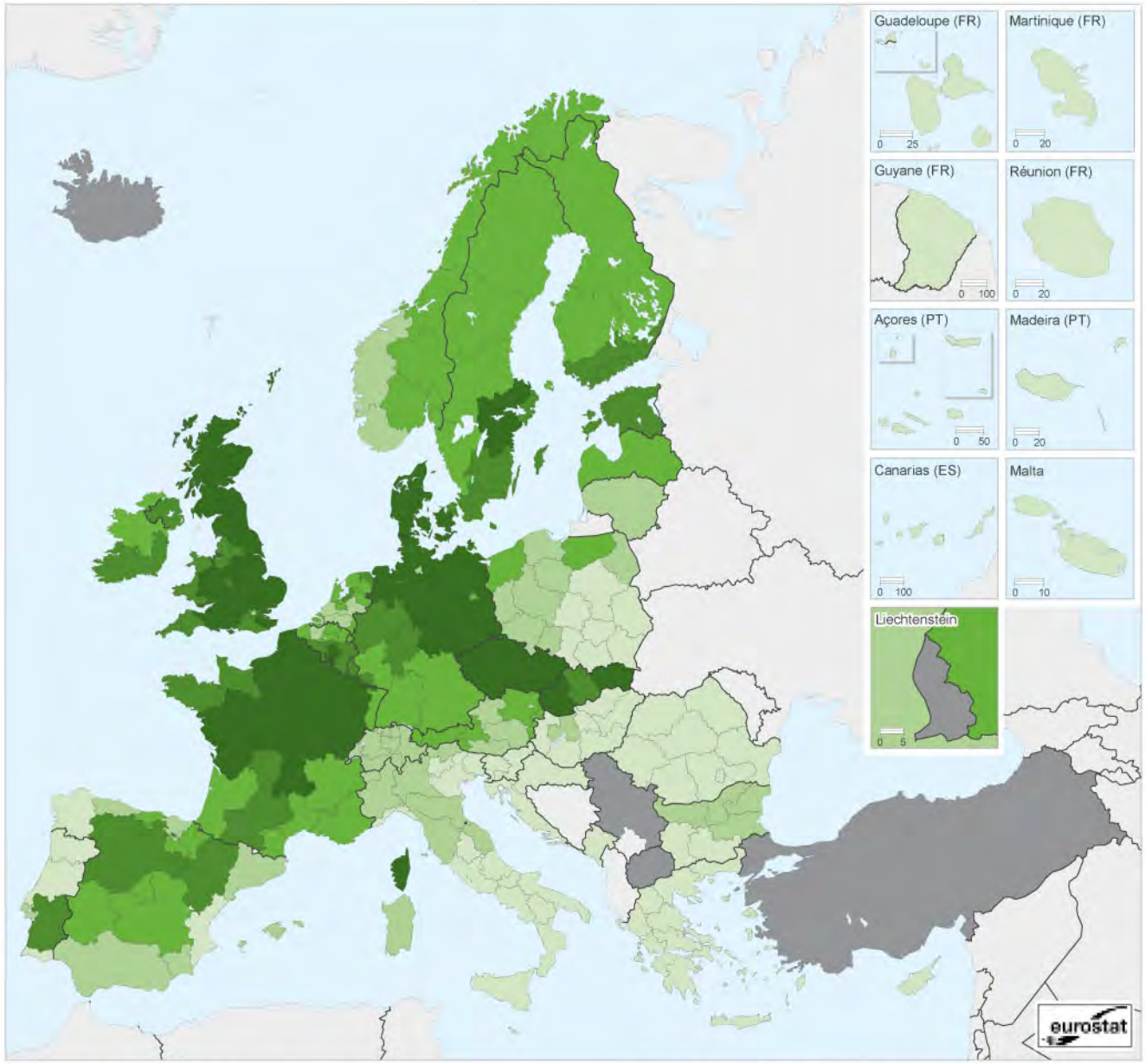
Map 9.6 shows the regional level of harvested production, standardised by dividing production by the region's area, to take account of the different size of regions (in general) and the availability of data at different levels of NUTS. The highest levels of cereal production relative to a region's area were recorded in Sjælland (Denmark) and Picardie, both over 260.0 tonnes per km². All five Danish regions recorded cereals production in excess of 120.0 tonnes per km², as did five of the seven Hungarian regions. Such an intensity of cereal production relative to land area was also recorded in three or more regions in Belgium, Germany, France, Poland and the United Kingdom.

By contrast, the lowest levels of cereal production relative to land area (10.0 tonnes per km² or less) were recorded in 41 regions that were coastal or mountainous area with the exception of Utrecht; note that no data are available for seven regions, including the three city regions in Germany (Berlin, Bremen and Hamburg) and that data for Germany and the United Kingdom are only available for NUTS level 1 regions.

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 production was around 60 million tonnes between

Map 9.4: Average size of farms, by NUTS 2 regions, 2010 (1)
(hectares of utilised agricultural area per agricultural holding)



(hectares of utilised agricultural area per agricultural holding)
EU-27 = 14.3

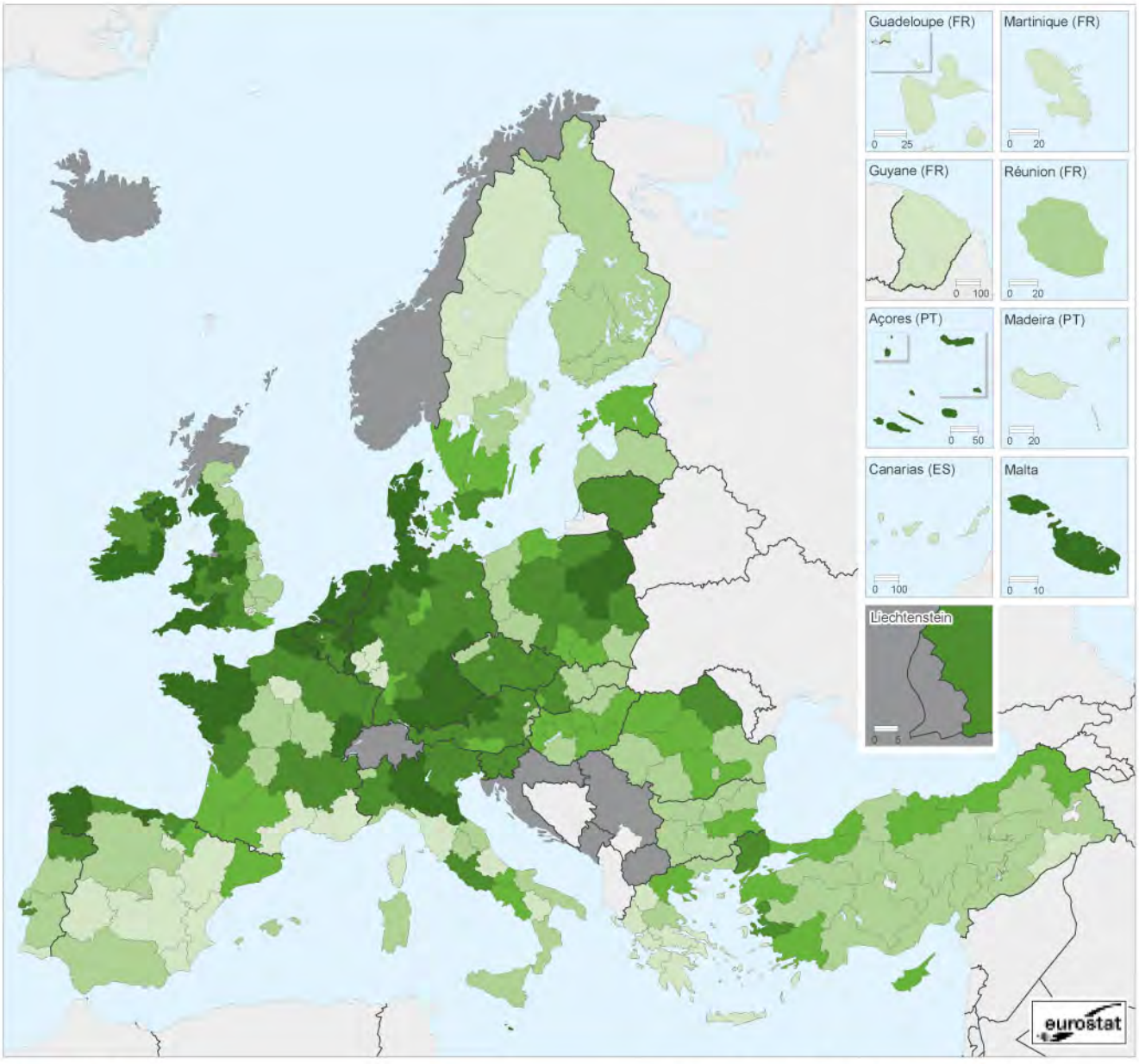
- <= 10.0
- 10.0 – 20.0
- 20.0 – 40.0
- 40.0 – 60.0
- > 60.0
- Data not available

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

0 200 400 600 800 km

(1) Germany, by NUTS 1 regions.
Source: Eurostat (online data code: ef_kvaareg)

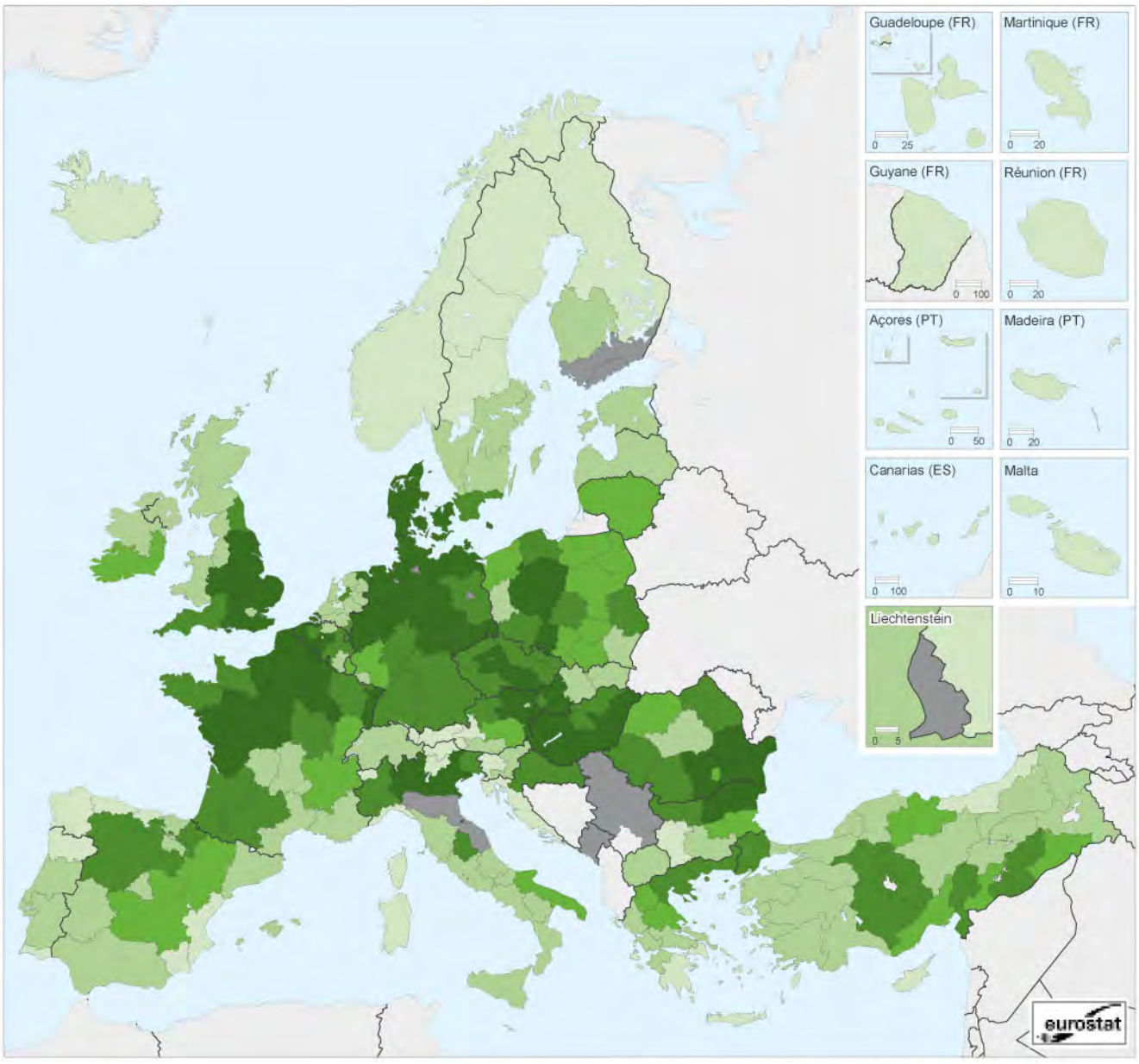
Map 9.5: Production of cow's milk on farms, by NUTS 2 regions, 2011 (1)
(tonnes per km²)



(1) EU-27, excluding Malta; Estonia, Cyprus, Latvia, Lithuania and the United Kingdom (see exceptions), 2010; Luxembourg and Shropshire and Staffordshire (UKG2), 2009; Malta, 2008; Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE10) and Greater Manchester (UKD3), 2006; Tees Valley and Durham (UKC1), Northumberland and Tyne and Wear (UKC2), West Midlands (UKG3), East Anglia (UKH1), Essex (UKH3), Inner London (UKI1) and Outer London (UKI2), 2005; Turkey, 2004; Spain, provisional; based on total area for those Member States for which land area is not available.

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

Map 9.6: Harvested production of cereals (including rice), by NUTS 2 regions, 2011 (1)
(tonnes per km²)



(1) Norway, 2008; France (except Départements d'outre-mer), 2007; Départements d'outre-mer (FR9), 2004; Estonia, Greece and Malta, 2003; Germany and the United Kingdom, by NUTS 1 regions; Norway and Switzerland, national level; based on total area for those Member States for which land area is not available.
Source: Eurostat (online data codes: agr_r_crops, apro_cpp_crop and demo_r_d3area)

2005 and 2011. In 2010, production fell to 56.1 million tonnes but recovered in 2011 to 62.5 million tonnes. Average production in the EU-27 has been estimated at 14.5 tonnes per km² of land area in 2011.

The highest level of harvested production of potatoes in 2011 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 over 1.0 million tonnes was also recorded in the Spanish region of Castilla y León, the Dutch regions of Drenthe and Groningen, the Polish regions of Mazowieckie and Lódzkie (2009 data) and the Romanian region of Centru (2009 data); production in excess of 1.0 million tonnes was also recorded in the Turkish region of Kirikkale, Aksaray, Nigde, Nevsehir, Kirsehir. For Germany, data are only available for the NUTS level 1 regions, and several of these had large-scale potato farming, notably Niedersachsen where 5.3 million tonnes were harvested and Bayern where 2.1 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 Flevoland, Drenthe, Zeeland and Groningen, all over 400.0 tonnes per km². Overall, there were 47 regions in the EU with potato production levels over 24.0 tonnes per km², of which 11 were in each of the Netherlands (all except for Utrecht) and Poland, seven in Belgium, four each in Germany (NUTS level 1 regions) and France, three in Denmark, two in Romania and one each in Malta, Austria, Portugal and Sweden. This level of production relative to area was also achieved in the United Kingdom (no regional data available).

Many mountainous regions in Bulgaria, France, Italy, Austria and Sweden had very low potato production, as did capital city regions in the Czech Republic, Spain and Sweden, the sparsely inhabited north and east of Finland and several regions in Belgium, Bulgaria, Spain and France, as well as the Algarve in Portugal. 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 from vineyards was between 0 and 1 000 tonnes in 10 of the Member States: Belgium, Denmark, Estonia, Ireland, Latvia, Lithuania, the Netherlands, Poland, Finland and Sweden. Production was also relatively low, but increasing, in the United Kingdom.

The total harvested production from vineyards in the EU-27 in 2011 was around 23.2 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). There were four other EU regions with production above 1.0 million tonnes — namely Puglia, Sicilia and Veneto in Italy and Languedoc-Roussillon in France (all 2007 data) — as well as one in Turkey (Manisa, Afyonkarahisar, Kütahya, Usak).

Map 9.8 shows the production from vineyards per km² of land area. There were four regions with more than 50.0 tonnes of output per km², namely Puglia and Veneto in Italy, Languedoc-Roussillon in France and La Rioja in Spain. There were a further 31 regions with more than 10.0 tonnes of output per km², found in just nine Member States. Most of these regions were in southern or Mediterranean Member States — Italy (12 regions), Spain (eight regions), Greece and Portugal (two regions each) and Malta (one region at NUTS level 2); the remaining regions were in more centrally located regions, namely in France (six regions), Austria (two regions), Romania (one region) and Germany (one NUTS level 1 region).

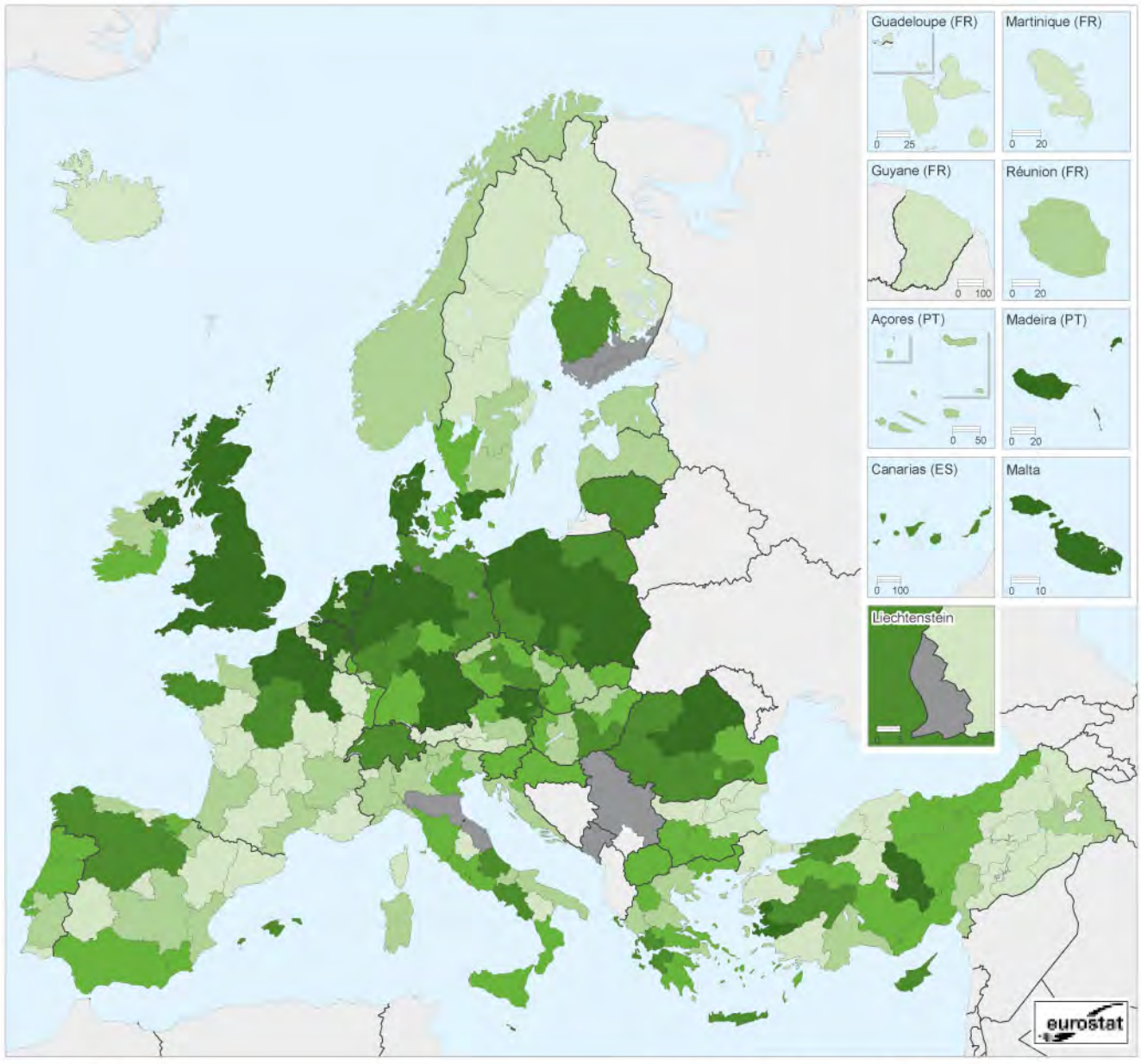
Agri-environmental indicators

Livestock density

Livestock production depends on the availability of agricultural land to supply animal feed. Livestock is commonly split into herbivores (cattle, sheep, goats and equidae) and granivores (pig and poultry), reflecting their different diets. Granivores are usually fed with specific feedstuffs and do not necessarily need agricultural land. By contrast, herbivores are grazing livestock which can either be raised free-range (whereby they directly graze on pasture) or be kept indoors (and fed with harvested fodder). The ratio of the number of grazing livestock to the fodder area is the grazing livestock density; in order to combine the counts of different types of herbivores these values are first converted to livestock units (LSU) and only then this total is divided by the fodder area.

The average grazing livestock density in the EU-27 in 2010 was 1.00 LSU per hectare of fodder area. Regional grazing livestock densities are presented in Map 9.9. The highest densities of grazing livestock across EU regions in 2010 were recorded in the Portuguese island region of the Região Autónoma da Madeira, the Greek regions of Anatoliki Makedonia, Thraki and of Thessalia, and the Spanish region of Murcia, all with an average of more than 4.00 LSU per hectare of fodder area. In total there were 47 regions in the EU where grazing livestock density exceeded 1.70 LSU per hectare of fodder area: 12 of these were in the Netherlands (all Dutch regions), 10 were in Belgium (all regions except the capital city region), eight in Greece, six in France, three in Italy, two in Poland and one each in Germany (at NUTS level 1), Spain, Cyprus (one region at NUTS level 2), Malta (one region at NUTS level 2), Portugal and Romania.

Map 9.7: Harvested production of potatoes, by NUTS 2 regions, 2011 (1)
(tonnes per km²)



(tonnes per km²)
EU-27 = 14.5

- <= 1.0
- 1.0 – 4.0
- 4.0 – 8.0
- 8.0 – 24.0
- > 24.0
- Data not available

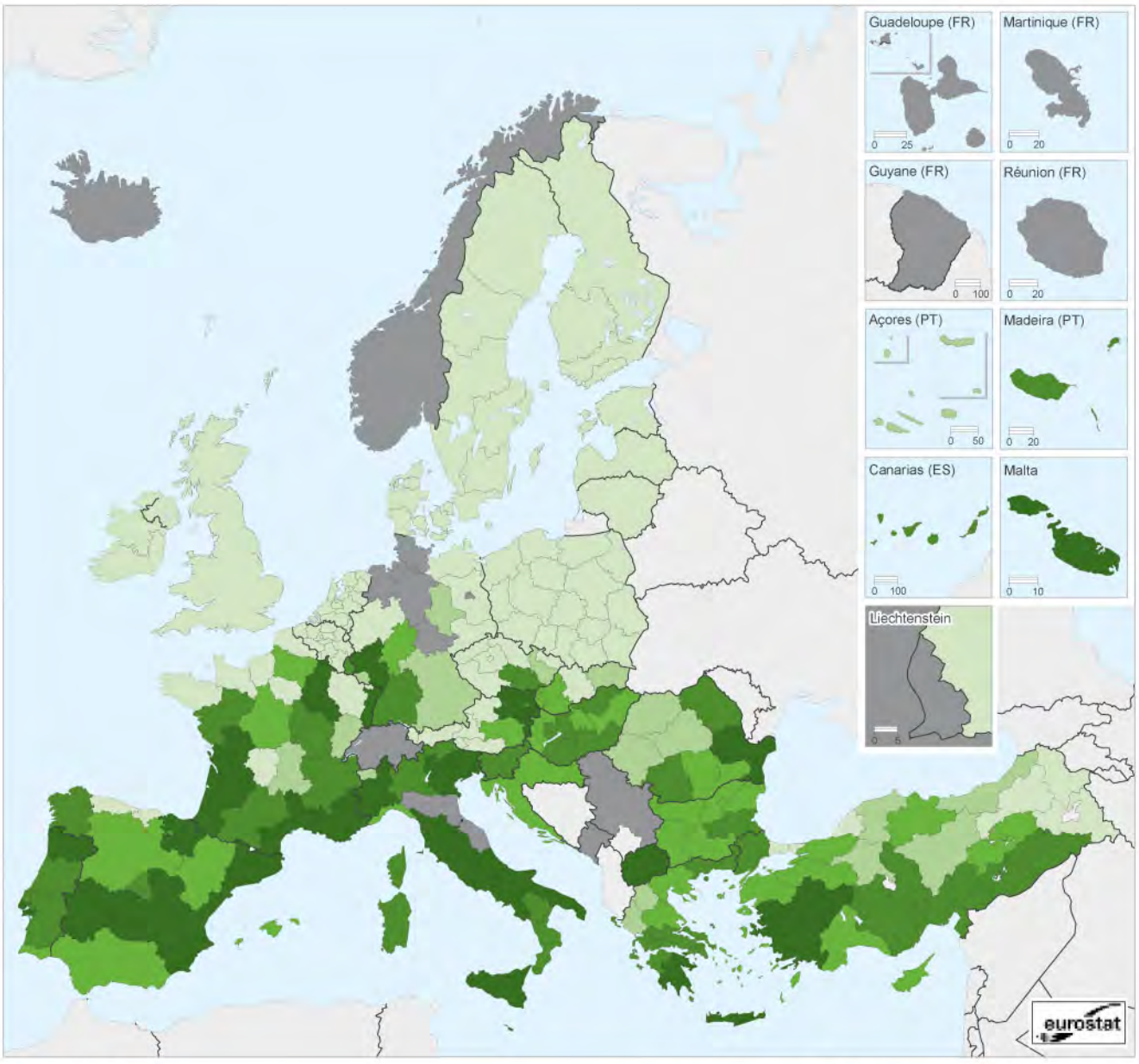
Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

(1) Romania, 2010; Czech Republic, Denmark, Hungary, Poland, Slovenia and Finland, 2009; Norway, 2008; France (except Départements d'outre-mer) and Luxembourg, 2007; Départements d'outre-mer (FR9), 2006; İstanbul (TR10) and Mardin, Batman, Şırnak, Siirt (TRC3), 2004; Greece, 2003; Germany, by NUTS 1 regions; Slovenia, the United Kingdom, Norway and Switzerland, national level; based on total area for those Member States for which land area is not available.

Source: Eurostat (online data codes: agr_r_crops, apro_cpp_crop and demo_r_d3area)

Map 9.8: Harvested production in vineyards, by NUTS 2 regions, 2011 (1)
(tonnes per km²)



(tonnes per km²)

- <= 0.1
- 0.1 – 1.0
- 1.0 – 4.0
- 4.0 – 10.0
- > 10.0
- Data not available

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

0 200 400 600 800 km

(1) Latvia, the United Kingdom and the former Yugoslav Republic of Macedonia, 2010; Bulgaria, the Czech Republic, Germany, Hungary, Austria, Poland, Portugal, Romania and Slovakia, 2009; France and Italy, 2007; Belgium and Spain, 2006; Sweden and Turkey, 2004; Greece, 2003; Germany, by NUTS 1 regions; Slovenia, the United Kingdom and Croatia, national level; based on total area for those Member States for which land area is not available.

Source: Eurostat (online data codes: agr_r_crops, apro_cpp_crop and demo_r_d3area)

At the other end of the scale, some 54 regions had 0.60 LSU or less per hectare of fodder area (the lightest shade in the map). Among these there were 16 regions with a density of 0.40 LSU or less per hectare of fodder area: the capital city regions of Belgium, Bulgaria, the Czech Republic, Austria and the United Kingdom; several mountainous regions in France, Italy, Romania, Slovakia and the United Kingdom; as well as Estonia and Latvia (each one region at NUTS level 2).

Irrigable area

The amount of water used for irrigation depends on factors such as: climate, current weather conditions, crop type, soil characteristics, water quality and cultivation practices. Around 14.6 million hectares of agricultural land are irrigable in the EU, which is about 8.5 % of the total utilised agricultural area; for comparison, the share was 8.8 % in 2007.

Figure 9.2 compares the extent of irrigable utilised agricultural land in 2010 with that in 2007 for the 20 regions with the largest proportion of irrigable land. Unsurprisingly, for reasons of climate this list is dominated by regions in the south of the EU, although it also includes several regions in the Netherlands, reflecting its crop specialisation. The highest share of agricultural land that is irrigable was recorded in the Região Autónoma da Madeira in Portugal (82.3 %), far ahead of any other region. Just over half of the top 20 regions reported that a lower share of agricultural land was irrigable in 2010 than had been in 2007. The most notable increase in the extent of irrigable agricultural land between 2007 and 2010 was the 12.6 percentage point increase in Flevoland (the Netherlands), which was the largest increase among any of the EU regions; the next largest was a 5.1 percentage point increase reported for Noord-Holland. The 10.2 percentage point fall in the Região Autónoma da Madeira was the largest among the top 20 regions, but was less than in Bratislavský kraj (Slovakia, – 13.7 percentage points) and Guyane (France, – 31.9 percentage points).

Data sources and availability

Economic accounts for agriculture (EAA) provide data at a regional level for the value of output, intermediate consumption and income. Eurostat has been collecting, processing and publishing data on the EAA in the form of a regional analysis for more than 15 years. Regional accounts for output items are often used as building blocks for results at the national level, while regional data for intermediate consumption (direct input of goods and services in production) are often broken down from national figures using other information (a top-down approach). Regional EEA may, therefore, be less accurate than data presented at the national level. Agricultural activities correspond to NACE Rev. 2 Division 01: crop and animal production, hunting and related service activities.

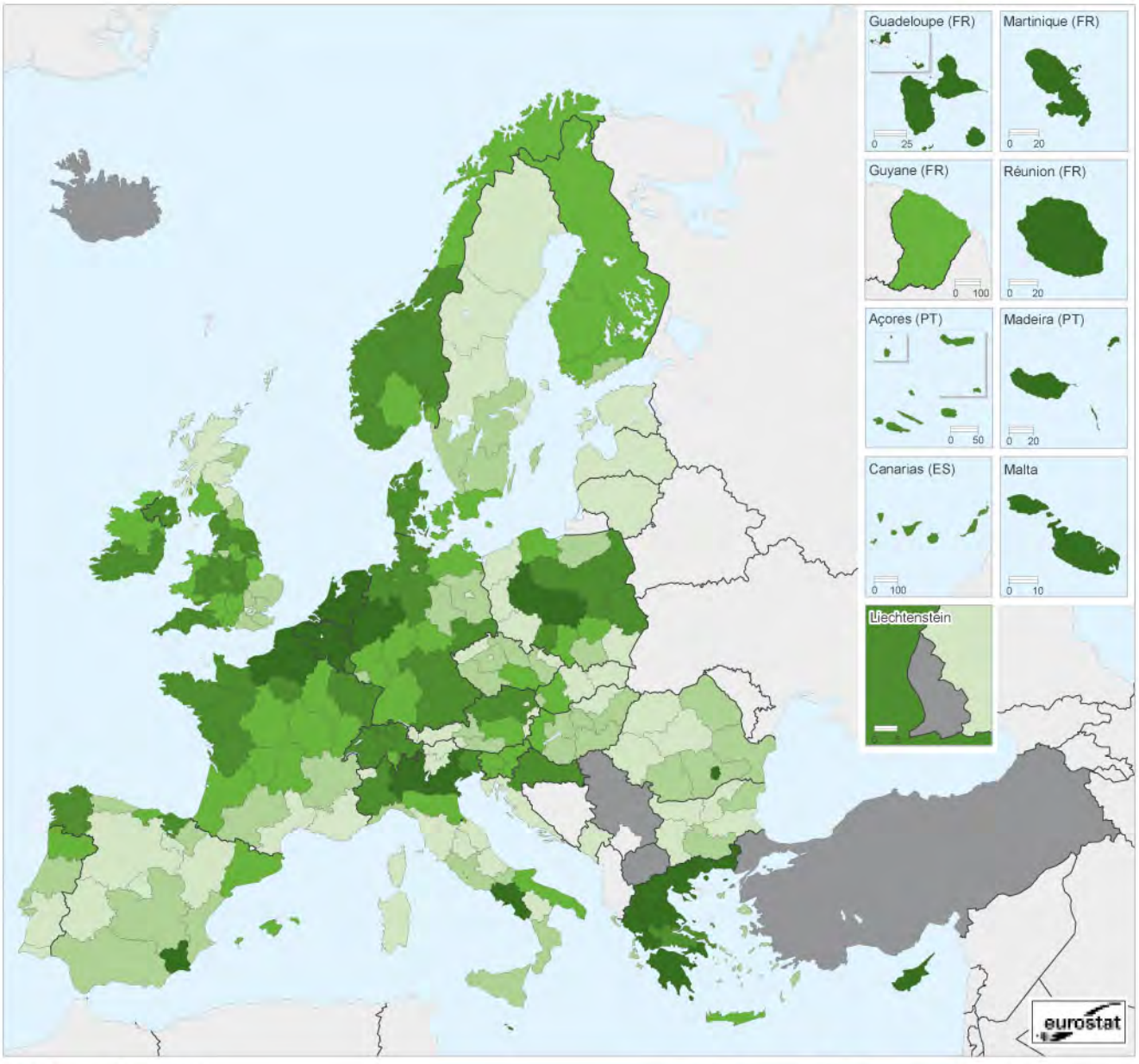
The farm structure survey (FSS) is another major source of agricultural statistics. A comprehensive farm structure survey is carried out by EU Member States every 10 years, with this full scope survey referred to as the agricultural census; intermediate sample surveys are carried out three times between each census. Under the guidance of the Food and Agriculture Organisation (FAO), the ninth round of the world agricultural census (2010) recently took place. Eurostat has followed the FAO's recommendation on the worldwide decennial agricultural census since the 1970 round. A new legal basis was developed for the FSS in relation to the 2010 data collection exercise, namely Regulation (EC) No 1166/2008 of the European Parliament and of the Council on farm structure surveys and the survey on agricultural production methods. The census is a survey collecting information about all agricultural holdings in order to present an updated picture of the structure of agricultural activities from an economic, social and environmental point of view. The information is collected from individual agricultural holdings and covers:

- land use;
- livestock numbers;
- rural development (for example activities other than agriculture);
- irrigable and irrigated areas;
- management and farm labour input (including age, sex and relationship to the holder).

The basic statistical unit underlying the FSS is the agricultural holding. Until 2007, the FSS covered all agricultural holdings with a utilised agricultural area (UAA) of at least 1 hectare and those holdings with a UAA of less than 1 hectare if their market production exceeded certain natural thresholds. Under the new legislation, the minimum threshold for agricultural holdings changed from 1 hectare of UAA to 5 hectares of UAA for the 2010 survey. This threshold of 5 hectares of UAA was adopted in the Czech Republic (from 1 hectare in 2007 to 5 hectares in 2010), Germany (from 2 hectares to 5 hectares), Sweden (from 2 hectares of arable land to 2 hectares of arable land or 5 hectares of UAA) and the United Kingdom (from 'active farms' to 5 hectares), while the threshold in Denmark remained unchanged when compared with 2007 at 5 hectares. Otherwise, the threshold in Luxembourg was changed from 1 hectare to 3 hectares, that in Poland from 0.1 hectares to 1 hectare, and that in Slovakia from 0.5 hectares to 1 hectare.

For livestock numbers, there are specific informal agreements with the EU Member States to provide data. Grazing livestock include cattle, sheep, goats and equidae. In order to combine data for different types of livestock, the number of animals may be converted into a common measurement unit, a livestock unit (LU or LSU), which is a measure related to the feed requirements of each individual animal category; for example, 1 LSU corresponds to one dairy cow or to 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).

Map 9.9: Grazing livestock density, by NUTS 2 regions, 2010 (1)
(LSU/hectare of fodder area)



(LSU/hectare of fodder area)
EU-27 = 1.00

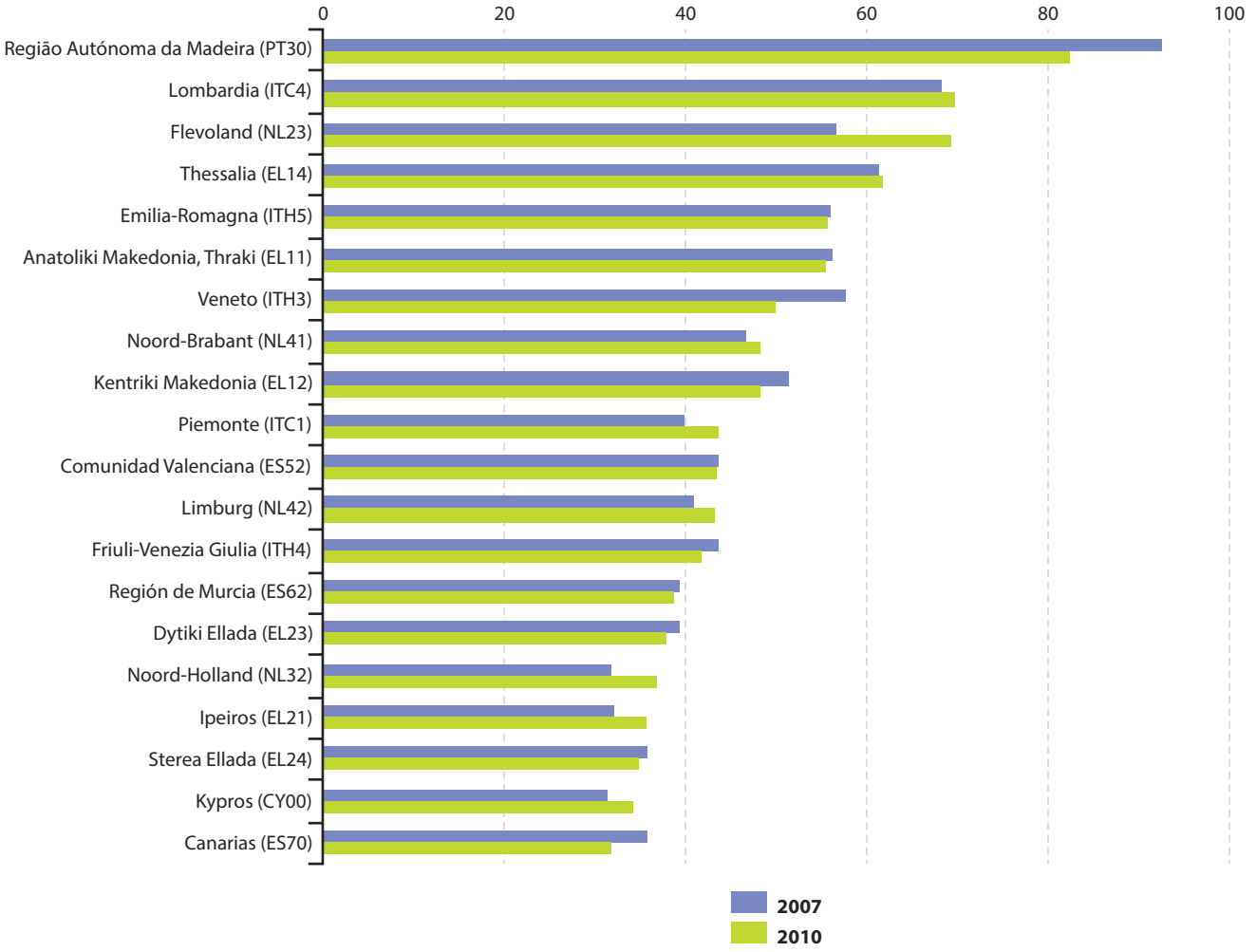
- <= 0.60
- 0.60 – 0.90
- 0.90 – 1.20
- 1.20 – 1.70
- > 1.70
- Data not available

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

0 200 400 600 800 km

(1) Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE10), 2007; Germany, by NUTS 1 regions.
Source: Eurostat (online data codes: aei_ps_ld and ef_olsecsreg)

Figure 9.2: Top 20 EU-27 regions, irrigable area, by NUTS 2 regions, 2007 and 2010 (1)
(% of utilised agricultural area)



(1) Ciudad Autónoma de Ceuta (ES63), Ciudad Autónoma de Melilla (ES64) and Luxembourg, not available.
Source: Eurostat (online data codes: aei_ps_ira and ef_poirrig)

This chapter presents more detailed data on cows and dairy farming. Among other classifications, bovines (cattle) can be distinguished by age and sex: female bovines that have calved are called cows, while those that have not are called 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 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 first reference year when there was a legal basis for the collection of statistics relating to fresh fruit and vegetables (previously various informal agreements were used). 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, as well as losses during transport, storage and packaging. The main cereals harvested within the EU are wheat, barley, grain maize, rye and maslin; in this chapter the production of cereals also includes rice. The data are obtained from sample surveys supplemented by estimates based on expert observations and administrative data.

Irrigation is the use of water in agriculture in order to foster crop growth, especially in dry areas. It is a major input use in agriculture and a basic driving force for water abstraction. The data

presented relate to irrigable areas, which represent the irrigation potential — in other words, the maximum area which could be irrigated during the year using the equipment and the quantity of water normally available on the farm. The irrigable area is generally quite stable over time, whereas the irrigated area — those areas which were actually irrigated at least once during the year — can vary substantially, depending on climatic conditions.

For maps which show additive variables, there is a bias linked to the area of each region: the bigger the region, the more the value of the variable will increase: this is the case for livestock numbers and agricultural production. In order to eliminate this bias, in this chapter some livestock numbers and production data have been normalised, dividing the regional quantities by each region's area. For crop production, the resulting indicators (see Maps 9.6–9.8) should not be confused with crop yields, which are based not on the region's area but on the harvested area used for each crop.

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, as well as providing 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 terrain and land cover that permit almost all their land area 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 naturally varies from region to region across Europe.

The links between the richness of the natural environment and farming practices are complex. Many valuable habitats in Europe are maintained by extensive farming, and a wide range of wild species rely on this for their survival. But inappropriate agricultural practices and land use can also have an adverse impact on natural resources, for example soil, water and air pollution, the fragmentation of natural habitats and the loss of wildlife.

Livestock patterns are an indicator of the pressure of livestock farming on the environment. High livestock density, through manure production and the subsequent application of manure to the land and enteric fermentation in ruminants, contributes to climate change (greenhouse gas emissions). The production of manure and the application of manure also leads to emissions of air pollutants such as ammonia (NH_3), nitric oxide or nitrogen dioxide (NO_x). Excess supply of nutrients to the soil can also cause nutrients to leach into water, leading to water pollution and eutrophication. In general, a high grazing livestock density increases the risk of overgrazing, which can have devastating effects on grasslands (for example soil erosion and desertification in arid regions). By contrast, a low grazing livestock density indicates potential for scrub and woodland invasion of meadows and a loss of soil fertility due to insufficient supply of nutrients — alternatively, it may increase the need for industrial fertilisers to be used on agricultural land.

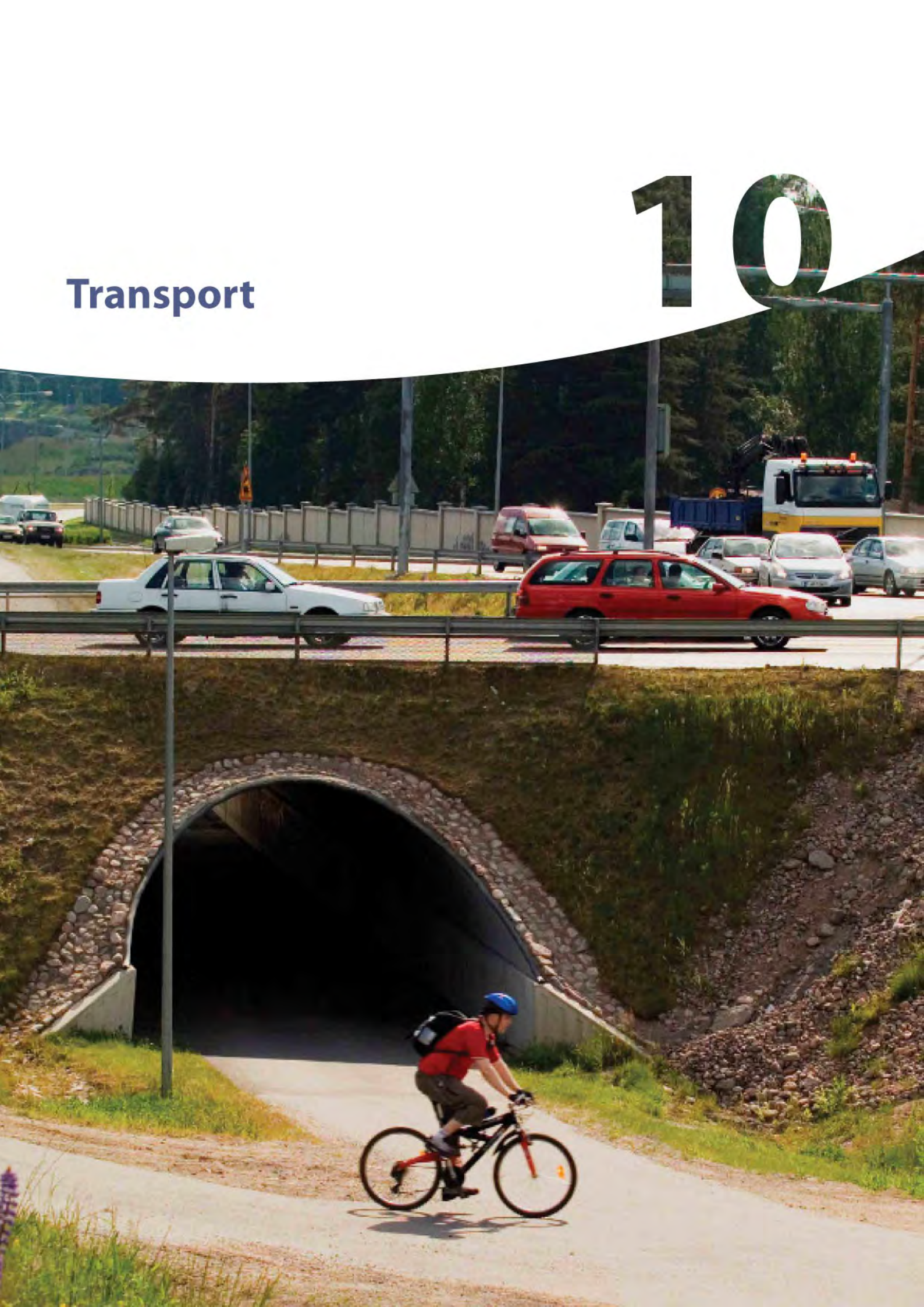
Irrigation improves crop productivity and reduces risks associated with dry periods. However, irrigation may lead to the depletion of water supplies, erosion or increased soil salinity. On the other hand, traditional irrigation systems have the potential to create diverse landscapes which support a variety of wildlife and have important cultural and historic value.

Approximately half of the surface area of the EU is used for agricultural purposes and is classified as predominantly rural. Production quality, agricultural intensity, rural development, the environment and food safety issues are among a diverse range of factors that are influenced by the development of the agricultural sector. Alongside the CAP, in particular the European Agricultural Fund for Rural Development (EAFRD), the European Regional Development Fund (ERDF) and the European Social Fund (ESF) also work towards furthering economic diversification in rural areas and improving the quality of rural life — for more information see the section on rural development policy in the Introduction.

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 should have been decoupled by 2012. The European Commission presented a Communication titled 'The CAP towards 2020: meeting the food, natural resources and territorial challenges of the future' (COM(2010) 672 final) outlining options for the future of the CAP, following consultation with other European institutions and stakeholders. This was followed in October 2011 by a set of legal proposals (COM(2011) 625 to 631 final) concerning: direct payments; support for rural development; aids and refunds; support to vine-growers; the common organisation of markets in agricultural products; and the financing, management and monitoring of the CAP. These proposals are designed to ensure that the CAP is more effective in delivering a competitive and sustainable agricultural sector, while encouraging vibrant rural areas; this latest set of reforms is due to be in place by the start of 2014. Any future reform is likely to be made in relation to the goals of developing intelligent, sustainable and inclusive growth, in line with the Europe 2020 strategy, while taking account of the wealth and diversity of the agricultural sector.

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 (freight) 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 four main sections. The first of these concerns road transport, which is by far the most widespread means of inland transportation in the EU and this covers: passenger transport by road, including information relating to the motorisation rate (passenger cars per inhabitant); the role played by public transport vehicles (such as buses, trolleybuses and motor coaches), examining the stock of road freight vehicles and their equipment rates (number of vehicles per inhabitant); and closes with an analysis of road safety (victims in road accidents). The second to fourth sections review the top regions in terms of passengers and freight transported by air, rail and sea respectively.

Main statistical findings

Motorway networks

The motorway network in the EU-27 exceeded 67 000 km in 2010, which gave a density around 15.9 km per thousand 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 (2 453 km), Castilla y León (2 195 km) and Castilla-La Mancha (1 772 km).

Map 10.1 shows the density of the motorway network in 2011; although the latest reference period available for some of the regions can vary considerably, this indicator remains relatively stable (other than during periods when new investment is being made in infrastructure). In general, the density of the motorway network was closely related to population density and, thus, with the degree of urbanisation. Despite having only a small motorway network (91 km), the island of Malta reported the highest motorway network density among all regions of the EU. In general, the densest motorway networks are 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 included:

- the German city-state regions of Bremen, Hamburg and Berlin (186 km, 107 km and 86 km per thousand km² respectively) as well as Düsseldorf (121 km per thousand km²) and the Saarland (93 km per thousand km²) — German data relate to 2008;
- the north-western part of England (138 km per thousand km² in Greater Manchester) and the West Midlands of England (90 km per thousand km²);
- the Randstad region in the west of the Netherlands (where densities reached 129 km, 128 km and 106 km per thousand km² in Zuid-Holland, Utrecht and Noord-Holland respectively), and the southern Dutch regions of Limburg and Noord-Brabant (100 km and 99 km per thousand km² respectively).

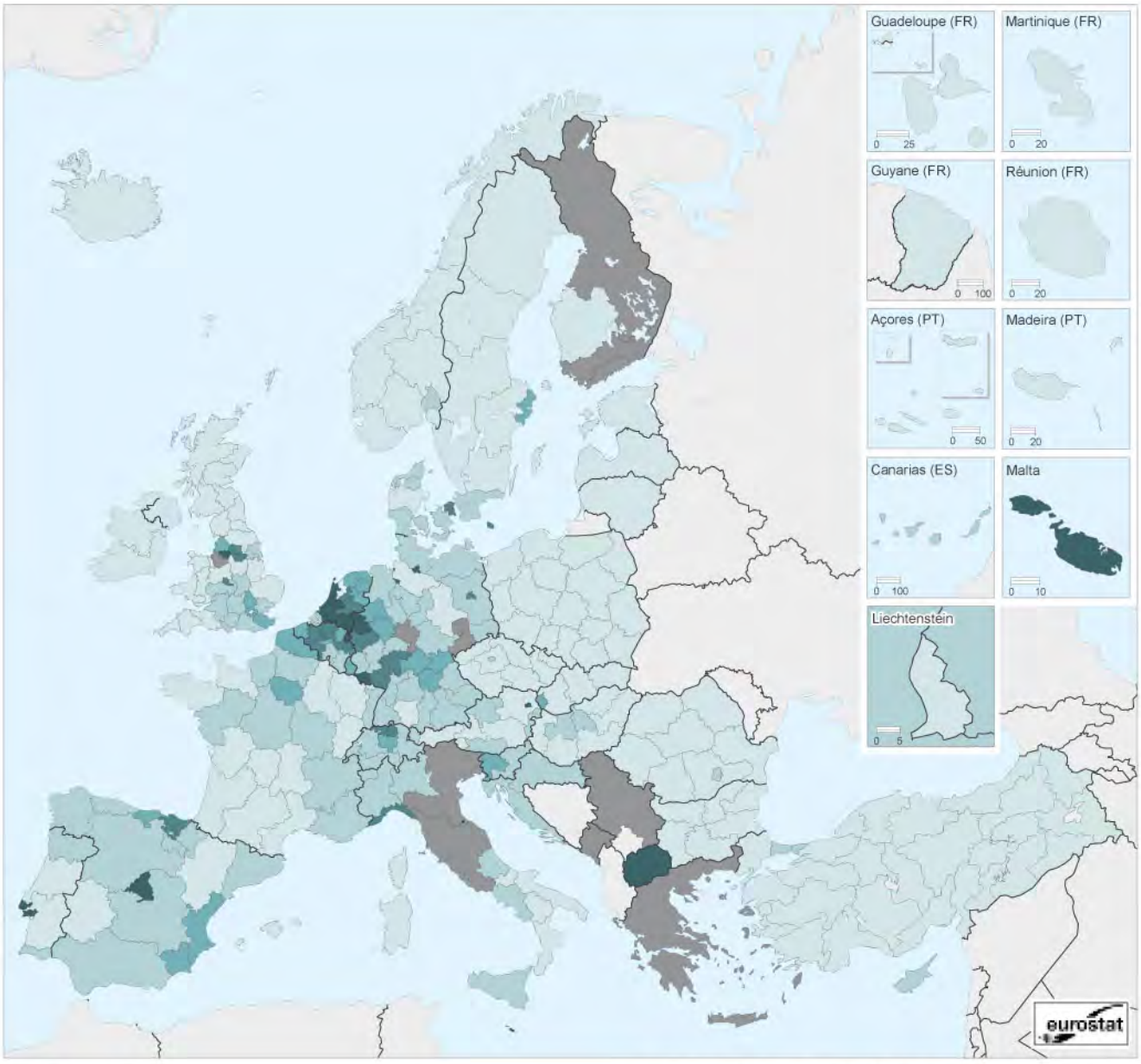
Many capital cities are surrounded by a ring of motorways in order to meet the high demand for road transport in these metropolitan areas; for example, Lisboa (222 km per thousand km², note data are from 2004), Wien (109 km per thousand km²) and the Comunidad de Madrid (98 km per thousand km²). Since 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 those 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 (77 km per thousand km²) and for Liguria in Italy (70 km per thousand 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, as mentioned above, the motorway density of Malta was the highest of all regions in the EU, while the motorway density of the Danish capital city region of Hovedstaden was also high (61 km per thousand km²) as to a lesser extent were Sjælland (Denmark), the Canarias (Spain), Cyprus and Sicilia (Italy), all with densities between 26 and 36 km per thousand km².

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.

Map 10.1: Density of motorway networks, by NUTS 2 regions, 2011 (1)
(km per thousand km²)



(km per thousand km²)
EU-27 = 16

- <= 20
- 20 – 40
- 40 – 60
- 60 – 90
- > 90
- Data not available

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

0 200 400 600 800 km

(1) EU-27, Luxembourg and Malta, 2010; Italy, Slovenia, Scotland (UKM) and the former Yugoslav Republic of Macedonia, 2009; Denmark, Germany, France and Hungary, 2008; Poland, 2006; Iceland, 2005; Portugal, 2004.

Source: Eurostat (online data codes: tran_r_net, road_if_motorwa and demo_r_d3area)

Overall, the EU-27 motorisation rate in 2009 was estimated at 473 passenger cars per thousand 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 thousand inhabitants. Within the western part of Europe, the capital city regions of Berlin (Germany) and Hovedstaden (Denmark) also had relatively low motorisation rates, both under 350 vehicles per thousand inhabitants. The Nord-Est region of Romania had the lowest motorisation rate in the whole of the EU-27, with 127 passenger cars per thousand inhabitants. Furthermore, Romanian regions accounted for the seven lowest motorisation rates across the EU-27 regions, with four of these regions reporting rates under 200 passenger cars per thousand inhabitants.

The highest regional motorisation rate within the EU-27 was in the Valle d'Aosta/Vallée d'Aoste region of Italy, with 1 053 passenger cars per thousand inhabitants — this was approximately eight times as high as in the Nord-Est region of Romania. All of the top 20 regions with the highest motorisation rates were in EU-15 Member States with half of them in Italy. A number of regions close to larger cities also reported high motorisation rates, suggesting a larger number of workers commuting by car. Examples of this included Flevoland in the Netherlands, Berkshire, Buckinghamshire and Oxfordshire in the United Kingdom, Attiki in Greece, as well as Burgenland and Niederösterreich in Austria. Several island regions also reported 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 and third highest motorisation rates of any regions within the Member States that joined the EU in 2004 or 2007 (the second highest was Lithuania). These relatively high figures for islands may, in part, be explained by a lack of alternative means for inland travel; for example, most of these islands have a relatively underdeveloped rail infrastructure or no rail services at all. Table 10.1 provides an overview of the region with the highest motorisation rate in each of the EU Member States, EFTA countries, and the acceding and candidate countries.

The east–west differences in the motorisation rates have narrowed, as illustrated by Figure 10.1 which shows the change in this rate between 2000 and 2010. Flevoland (the Netherlands) and Attiki (Greece) were the only EU-15 regions among the 10 regions that recorded the fastest growth for their respective motorisation rate, with six of the other regions from Poland, one from Romania and the last being Lithuania (one region at NUTS level 2). All 10 of the regions with the largest falls in the motorisation rate were from EU-15 Member States, mainly around German cities, but also the capital city regions of Belgium and France, as well as two island regions from France and Spain. Overall, the average motorisation rate increased in the EU-27 between 2000 and 2010 by 50 passenger cars per thousand inhabitants.

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 50 regions in the EU-27 with 1.0 or fewer public transport vehicles per thousand inhabitants at the end of 2011, all except two were located within EU-15 Member States: the exceptions were the two NUTS level 2 regions in Slovenia. The eight EU regions with more than 4.0 public transport vehicles per thousand inhabitants included: the capital city regions of Romania and Bulgaria, the island region of Ionia Nisia in Greece, Malta and Lithuania, and three regions in the United Kingdom. The highest ratio was 4.8 public transport vehicles per thousand inhabitants in Malta.

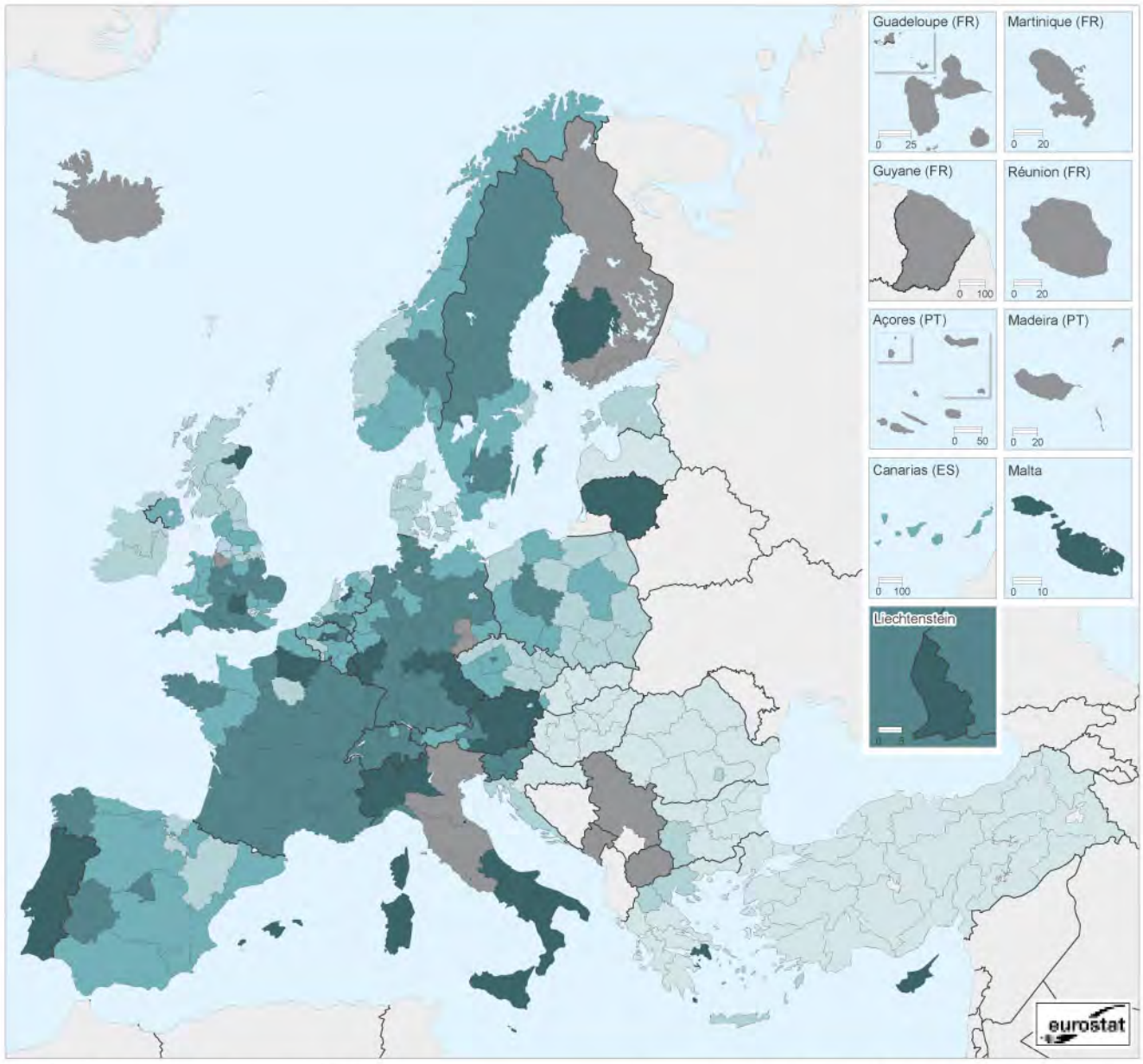
Among the EFTA countries, Iceland recorded 6.7 public transport vehicles per thousand inhabitants, higher than in any of the regions of the EU. Several Norwegian regions also had relatively high public transport equipment rates, with four of the seven Norwegian regions exceeding four vehicles per thousand inhabitants. Equipment rates were as high as 5.1 in Oslo og Akershus, which was also higher than in any EU region. Liechtenstein was the only EFTA region where the public transport equipment rate was below 1.0.

In the acceding and candidate countries for which regional data are available, 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 Kontinentalna Hrvatska at 1.0, the same level as recorded for the former Yugoslav Republic of Macedonia. By contrast, this ratio ranged in Turkey from 4.5 vehicles per thousand inhabitants in Mardin, Batman, Şırnak and Siirt to 13.5 in Trabzon, Ordu, Giresun, Rize, Artvin and 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. Table 10.1 provides an overview of the region with the highest equipment rate in each of the Member States, EFTA countries, and the acceding and candidate countries.

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, 58 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: seven of these regions were in each of Spain and Italy, six in France and three in Poland. The distribution of road 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.

Map 10.2: Motorisation rate, by NUTS 2 regions, 2010 (1)
(number of passenger cars per thousand inhabitants)



(number of passenger cars per thousand inhabitants)
EU-27 = 473

- <= 350
- 350 – 450
- 450 – 500
- 500 – 550
- > 550
- Data not available

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

0 200 400 600 800 km

(1) EU-27 and France, 2009; Denmark, 2008; Northern Ireland (UKN0), 2007; Portugal, by NUTS 1 region, 2003.
Source: Eurostat (online data codes: tran_r_vehst and road_eqs_carhab)

Figure 10.1: Motorisation rate, NUTS 2 regions with the highest and lowest rates of change, 2000–10 (1)
(difference between 2010 and 2000, based on number of passenger cars per thousand inhabitants)

(1) Ciudad Autónoma de Ceuta (ES63) and Ciudad Autónoma de Melilla (ES64), 2001–10; Romania, East Anglia (UKH1), 2002–10; Bulgaria, 2004–10; EU-27 and France, 2000–09; Northern Ireland (UKN0), 2000–07; Germany, break in series; London (UKI), Wales (UKL) and Scotland (UKM), NUTS level 1 regions; Slovenia, national level; Denmark, Chemnitz (DED4), Leipzig (DED5), Départements d'outre-mer (FR9), Nord-Est (ITH), Centro (ITI), Portugal, Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Pohjois- ja Itä-Suomi (FI1D), Cheshire (UKD6) and Merseyside (UKD7), not available.

Source: Eurostat (online data code: tran_r_vehst)

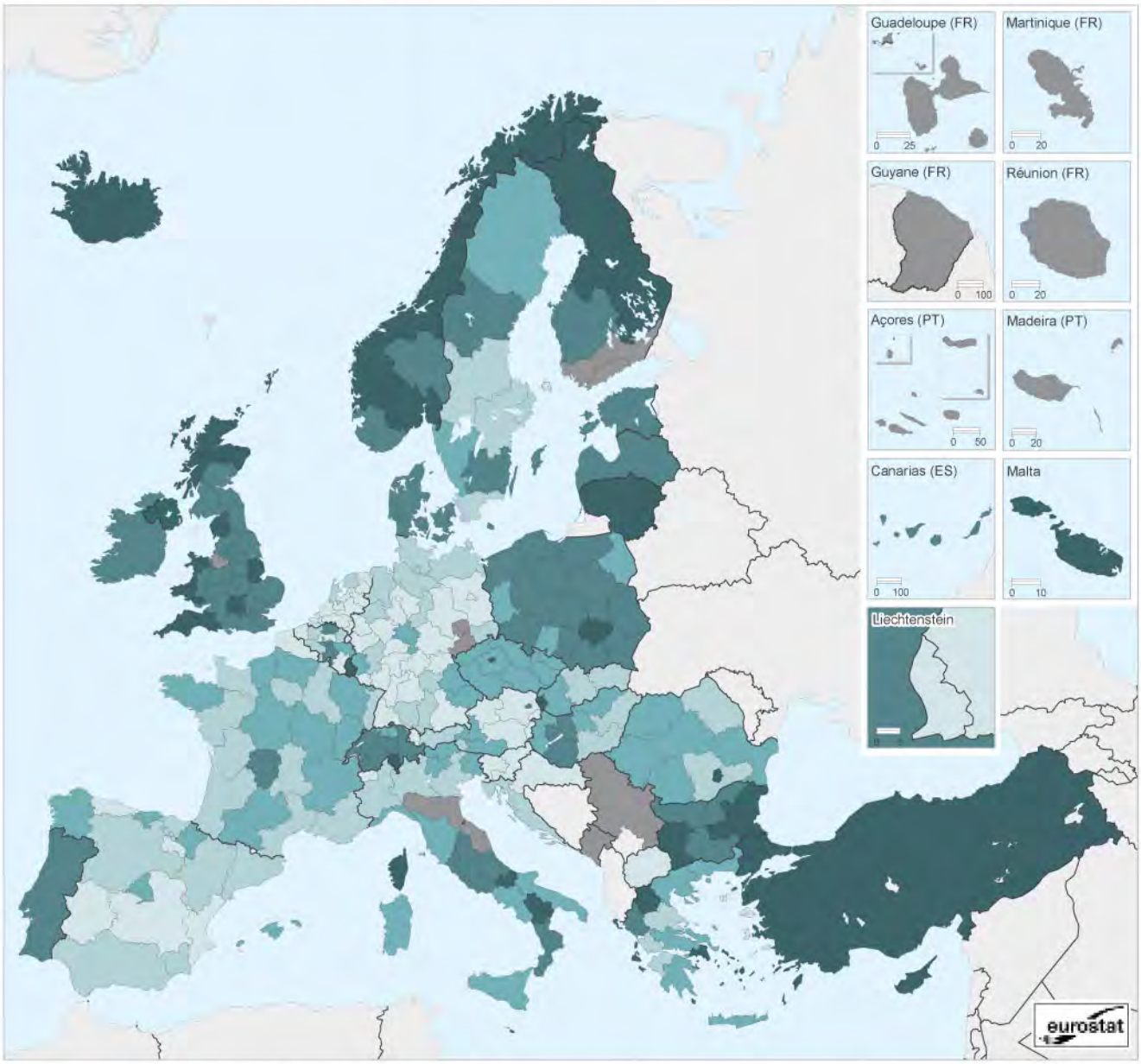
The two regions with by far the highest number of registered road freight vehicles were both located in Spain on the Mediterranean coast: Andalucía and Cataluña. These two regions play a key role in freight transport in the western Mediterranean, with direct ferry connections not only to the Spanish overseas regions of the Ciudades Autónomas de Ceuta y Melilla, but also from Andalucía to Morocco and Algeria, and from Cataluña to the Illes Balears and Italy. The region with the third highest number of road freight vehicles was the French capital city region of Île de France, while the fourth highest number 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 road freight vehicles were also economic centres containing capital cities or other major cities: Rhône-Alpes (including Lyon in France); the Comunidad de Madrid and the Comunidad Valenciana (both in Spain); and Mazowieckie (which includes the capital city of Warszawa in Poland).

Regional equipment rates for road freight vehicles (the average number of vehicles per inhabitant) depend on a range of 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. Other factors include the economic characteristics of the region, for example whether the regional economy is driven by agriculture, manufacturing, construction or services, and whether the region is located on key European and global transport corridors. Table 10.1 provides an overview of the region with the highest road freight equipment rate in each of the EU Member States, EFTA countries, and the acceding and candidate countries.

Reflecting these fundamental differences, there are huge disparities in the regional road freight equipment rates. The highest regional rates in 2011 were found in the Italian region of Valle d'Aosta/Vallée d'Aoste, where there were 256 road freight vehicles per thousand inhabitants. The 20 EU regions with the highest freight vehicle equipment rates were mainly registered in Greece, Spain and Austria, along with Valle d'Aosta/Vallée d'Aoste, Cyprus and the island region of Åland (in Finland). Mirroring the rankings for passenger cars, the lowest ratios of road freight vehicles to population were generally recorded in Romanian regions and the capital city regions of the United Kingdom and Germany.

Reflecting its mountainous terrain and reliance on short sea shipping, the equipment rate for road freight vehicles was

Map 10.3: Equipment rate for public transport vehicles (motor coaches, buses and trolleybuses), by NUTS 2 regions, 31 December 2011 (1)
(number of public transport vehicles per thousand inhabitants) (2)



(number of public transport vehicles per thousand inhabitants) (2)

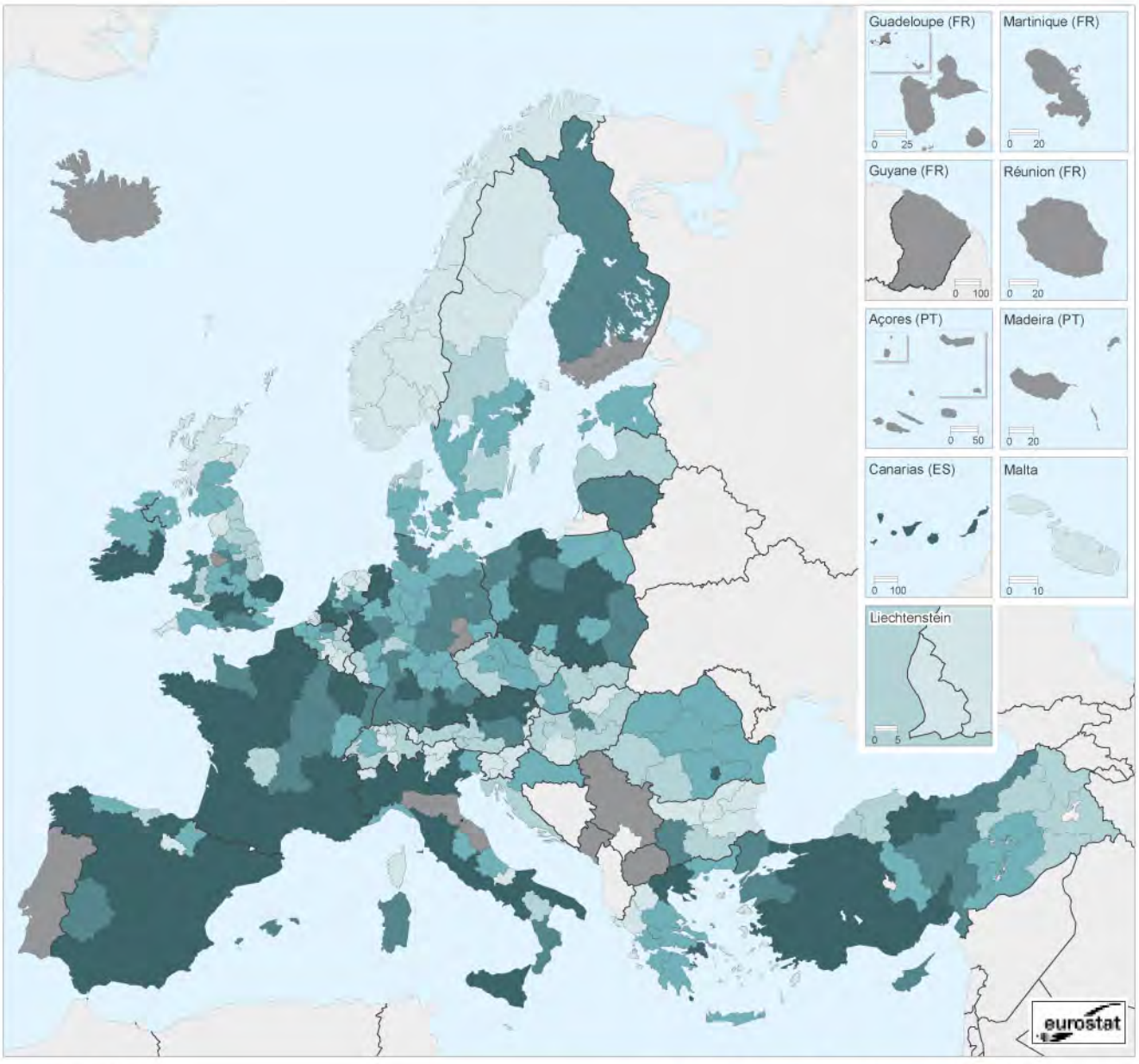
<= 1.0
1.0 – 1.5
1.5 – 2.0
2.0 – 3.0
> 3.0
Data not available

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

0 200 400 600 800 km

(1) Greece, Cyprus, Luxembourg and the United Kingdom (other than Northern Ireland (UKN0)), 31 December 2010; France and the former Yugoslav Republic of Macedonia, 31 December 2009; Denmark, 31 December 2008; Northern Ireland (UKN0), 31 December 2007; Switzerland, 31 December 2006; Iceland, 31 December 2005; Portugal, 31 December 2003; Départements d'outre-mer (FR9) and Portugal, by NUTS 1 regions; Denmark and Ireland, national level.
(2) Population data for 1 January of the year following the reference year for the vehicle stock data; Croatia and Turkey, population data for 1 January of the reference year for the vehicle stock data.
Source: Eurostat (online data codes: tran_r_vehst and demo_r_d2jan)

Map 10.4: Number of road freight vehicles, by NUTS 2 regions, 31 December 2011 (1)
(thousand vehicles)



(thousand vehicles)
EU-27 = 36 225

- <= 50
- 50 – 75
- 75 – 125
- 125 – 175
- > 175
- Data not available

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

0 200 400 600 800 km

(1) EU-27, based on available regional data; Greece, Luxembourg, Malta and the United Kingdom (other than Northern Ireland (UKN0)), 31 December 2010; France, 31 December 2009; Denmark and Ireland, 31 December 2008; Northern Ireland (UKN0), 31 December 2005; Greece, provisional.
Source: Eurostat (online data code: tran_r_vehst)

generally low in Norwegian regions. All seven Norwegian regions recorded rates lower than 26 vehicles per thousand inhabitants, ranking each of them below the fourth lowest rate recorded across EU regions; in fact, five Norwegian regions had equipment rates below the lowest ratio recorded in the EU. In Swiss regions, equipment rates were also generally low, below 50 vehicles per thousand inhabitants in all regions except for Ticino.

Both Croatian regions recorded relatively low road freight equipment rates, the highest being 40 vehicles per thousand inhabitants in Jadranska Hrvatska. By contrast, road freight equipment rates were somewhat higher in Turkey, with 19 out of 26 regions recording a rate above 50 vehicles per thousand inhabitants.

Road safety

The likelihood of a road accident can be linked to a number of factors, such as the extent of vehicle ownership (motorisation rate), the number of kilometres driven, the extent and quality of the road infrastructure, the characteristics of the vehicle stock (such as the average age and engine size, as well as the presence/absence of safety features), climatic and geographical conditions, population density and national regulations that apply to vehicles and drivers. The total death toll on the EU-27's roads fell from 75 400 in 1991 to an estimated 34 500 by 2009, a fall of 54.3 %. Nearly every EU Member State recorded a reduction in the number of deaths over this period; the exception was Malta which has very few road traffic deaths (while the 2009 value was exceptionally high). Among the EU Member States, the largest falls in the number of road deaths were registered in the Baltic Member States, Spain and Portugal.

Among the NUTS level 2 regions within the EU-27, the largest number of road fatalities in 2010 was in the Polish capital city region of Mazowieckie where 712 people were killed. Three other Polish regions were among the 15 regions with the highest number of road fatalities, which also featured four Italian regions, three French regions and two regions each from Romania and Spain. Table 10.2 shows various standardised figures, relating the number of road fatalities to the size of the population, stock of passenger cars and the extent of the road network. Although these standardisations adjust to some extent for differences in the size of regions, they should be interpreted with care. For example, road accidents may involve non-residents or vehicles not belonging to residents: other things being equal, regions on transit corridors or with many tourists may experience a higher frequency of accidents. The extremely high number of road fatalities in the two Romanian regions (Sud - Muntenia and Nord-Est) when compared with their respective number of cars is notable, as is the high number of fatalities relative to the extent of the road network in many Italian regions (in particular Lombardia).

While Mazowieckie had the highest number of road fatalities of any EU region, it ranked 11th (of 253 regions) in terms of its number of road fatalities relative to population. Flevoland (the Netherlands), which recorded a large increase in car ownership between 2000 and 2010, recorded the highest incidence, 217 fatalities per million inhabitants in 2011. Furthermore, five Greek regions featured in the top 10 regions in terms of the highest number of road fatalities relative to population.

The lowest number of accidents relative to population size was in Gelderland (the Netherlands), with just seven persons killed per million inhabitants. Several regions with low road fatalities relative to population size (20 per million inhabitants or less) were in or near to capital city regions, including Wien (Austria), Berlin (Germany), Stockholm (Sweden) and outer London (United Kingdom), while two were the Spanish Ciudades Autónomas de Ceuta and de Melilla. The last two were regions of the United Kingdom, both of which combined a major urban area with a large and sparsely populated area: Eastern Scotland (containing Edinburgh); and Northumberland and Tyne and Wear. The Norwegian capital city region of Oslo og Akershus recorded 11 road fatalities per million inhabitants, the lowest rate among the regions in the EFTA countries, while the neighbouring region of Hedmark og Oppland had the highest rate. Istanbul (Turkey) had just 17 fatalities per million inhabitants, the lowest rate among the regions of the acceding and candidate countries, while Kastamonu, Çankiri, Sinop (Turkey) and Jadranska Hrvatska (Croatia) had the highest rates, with 139 and 106 per million inhabitants respectively.

Air transport

The rapid growth of air transport has been one of the most significant developments in transport services 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. These changes have led to the rapid growth of several smaller regional airports which are generally less congested and charge lower landing fees than large airports in 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) in the EU-27 fell by 5.9 %. The number of passengers carried increased by 3.4 % in 2010 and by a further 5.8 % in 2011 to reach 821.6 million passengers, around 2.9 % above the pre-crisis peak level from 2008.

Tables 10.3 and 10.4 show the top 15 regions with the highest number of air passengers and volume of air freight and

Table 10.1: Transport equipment rates, by NUTS 2 regions, 31 December 2011
(number of vehicles per thousand inhabitants)

	Region with highest motorisation rate (1)		Region with highest public equipment rate (2)		Region with highest freight equipment rate (3)	
Belgium	Prov. Vlaams-Brabant (BE24)	567	Prov. Brabant Wallon (BE31)	2.6	Prov. West-Vlaanderen (BE25)	95
Bulgaria	Yugozapaden (BG41)	432	Yugozapaden (BG41)	4.2	Yugozapaden (BG41)	67
Czech Republic	Praha (CZ01)	517	Praha (CZ01)	3.2	Praha (CZ01)	96
Denmark	Sjælland (DK02)	400	Denmark (DK)	2.5	Nordjylland (DK05)	103
Germany	Saarland (DEC0)	572	Trier (DEB2)	1.9	Niederbayern (DED4)	119
Estonia	-	412	-	3.0	-	68
Ireland	Southern and Eastern (IE02)	425	-	2.2	Border, Midland and Western (IE01)	93
Greece	Attiki (EL30)	670	Ionia Nisia (EL22)	4.3	Kriti (EL43)	204
Spain	Illes Balears (ES53)	598	Canarias (ES70)	2.4	Canarias (ES70)	178
France	Corse (FR83)	607	Corse (FR83)	3.2	Corse (FR9)	126
Italy	Valle d'Aosta/Vallée d'Aoste (ITC2)	1 053	Basilicata (ITF5)	3.4	Valle d'Aosta/Vallée d'Aoste (ITH5)	256
Cyprus	-	551	-	3.6	-	161
Latvia	-	306	-	2.4	-	36
Lithuania	-	554	-	4.7	-	51
Luxembourg	-	657	-	3.9	-	74
Hungary	Közép-Magyarország (HU10)	334	Közép-Dunántúl (HU21)	2.8	Nyugat-Dunántúl (HU22)	52
Malta	-	577	-	4.8	-	110
Netherlands	Flevoland (NL23)	779	Friesland (NL) (NL12)	1.5	Flevoland (NL23)	119
Austria	Burgenland (AT11)	607	Wien (AT13)	2.3	Burgenland (AT) (AT11)	171
Poland	Wielkopolskie (PL41)	510	Świętokrzyskie (PL33)	3.1	Mazowieckie (PL12)	113
Portugal	Continente (PT1)	600	Continente (PT1)	2.2	:	:
Romania	Bucureşti - Ilfov (RO32)	444	Bucureşti - Ilfov (RO32)	4.4	Bucureşti - Ilfov (RO32)	80
Slovenia	Zahodna Slovenija (SI02)	535	Zahodna Slovenija (SI02)	1.0	Zahodna Slovenija (SI02)	51
Slovakia	Bratislavský kraj (SK01)	458	Bratislavský kraj (SK01)	3.3	Bratislavský kraj (SK01)	117
Finland	Åland (FI20)	686	Pohjois- ja Itä-Suomi (FI1D)	3.1	Åland (FI1B)	176
Sweden	Norra Mellansverige (SE31) and Mellersta Norrland (SE32)	525	Mellersta Norrland (SE32)	2.7	Mellersta Norrland (SE32)	81
United Kingdom	Berkshire, Buckinghamshire and Oxfordshire (UKJ1)	593	Highlands and Islands (UKM6)	4.5	West Midlands (UKD6)	89
Iceland	:	:	-	6.7	:	:
Liechtenstein	-	744	-	0.0	-	110
Norway	Hedmark og Oppland (NO02)	533	Oslo og Akershus (NO01)	5.1	Oslo og Akershus (NO01)	25
Switzerland	Ticino (CH07)	612	Ticino (CH07)	3.1	Ticino (CH07)	59
Montenegro	:	:	:	:	:	:
Croatia	Jadranska Hrvatska (HR03)	370	Jadranska Hrvatska (HR03)	1.4	Jadranska Hrvatska (HR03)	40
FYR of Macedonia	:	:	-	1.0	:	:
Serbia	:	:	:	:	:	:
Turkey	Ankara (TR51)	194	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane (TR90)	13.5	Balıkesir, Çanakkale (TR22)	100

(1) France, 2009; Denmark, 2008; Northern Ireland (UKN0), 2007; Portugal, by NUTS 1 regions, 2003; Chemnitz (DED4), Leipzig (DED5), Départements d'outre-mer (FR9), Nord-Est (ITH), Centro (ITI), Região Autónoma dos Açores (PT2), Região Autónoma da Madeira (PT3), Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Pohjois- ja Itä-Suomi (FI1D), Cheshire (UKD6) and Merseyside (UKD7), not available.

(2) Greece, Cyprus, Luxembourg and the United Kingdom (other than Northern Ireland (UKN0)), 31 December 2010; France and the former Yugoslav Republic of Macedonia, 31 December 2009; Denmark, 31 December 2008; Northern Ireland (UKN0), 31 December 2007; Switzerland, 31 December 2006; Iceland, 31 December 2005; Portugal, 31 December 2003; Portugal, by NUTS 1 regions; Denmark and Ireland, national level; Chemnitz (DED4), Leipzig (DED5), Départements d'outre-mer (FR9), Nord-Est (ITH), Centro (ITI), Região Autónoma dos Açores (PT2), Região Autónoma da Madeira (PT3), Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Pohjois- ja Itä-Suomi (FI1D), Cheshire (UKD6) and Merseyside (UKD7), not available.

(3) Greece, Luxembourg, Malta and the United Kingdom (other than Northern Ireland (UKN0)), 31 December 2010; France, 31 December 2009; Denmark and Ireland, 31 December 2008; Northern Ireland (UKN0), 31 December 2005; Greece, provisional; Chemnitz (DED4), Leipzig (DED5), Départements d'outre-mer (FR9), Emilia-Romagna (ITH5), Marche (ITI3), Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Cheshire (UKD6) and Merseyside (UKD7), not available.

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

Table 10.2: EU-27 regions with highest number of victims in fatal road accidents, by NUTS 2 regions, 2010

Region	Killed			
	Number (1)	Per million inhabitants (1)	Per million passenger cars (2)	Per thousand km of road or motorway (3)
Mazowieckie (PL12)	712	136	260	13
Lombardia (ITC4)	532	54	91	45
Lazio (ITI4)	425	:	109	39
Wielkopolskie (PL41)	405	118	221	10
Veneto (ITH3)	369	:	124	36
Île de France (FR10)	366	31	75	10
Rhône-Alpes (FR71)	366	58	113	4
Provence-Alpes-Côte d'Azur (FR82)	363	74	136	7
Śląskie (PL22)	347	75	162	13
Sud - Muntenia (RO31)	338	104	626	27
Andalucía (ES61)	327	40	87	14
Nord-Est (RO21)	324	87	667	23
Łódzkie (PL11)	322	127	268	12
Piemonte (ITC1)	320	72	114	21
Cataluña (ES51)	317	43	94	26

(1) Greece and Luxembourg, 2010; Denmark, 2008; Chemnitz (DED4), Leipzig (DED5), Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Emilia-Romagna (ITH5), Marche (ITI3), Cheshire (UKD6) and Merseyside (UKD7), not available.
(2) Selected French regions, 2008 or 2009.
(3) Selected Italian regions, 2010.
Source: Eurostat (online data codes: tran_r_acci, tran_r_vehst and tran_r_net)

mail in 2011: 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 tended to be capital city regions in western Europe and other regions with major cities, such as Frankfurt and Düsseldorf (Germany), Barcelona (Spain) and Milan (Italy). The two major exceptions were the Spanish island regions of Canarias and Illes Balears. The list is headed by Île-de-France, with a total of 87.8 million passengers for Paris-Charles de Gaulle and Paris-Orly airports in 2011, followed by Outer London (Heathrow) with 69.4 million passengers, Darmstadt (Frankfurt airport) with 56.3 million passengers, Noord-Holland (Schiphol Amsterdam airport) with 49.7 million passengers and Comunidad de Madrid (Madrid-Barajas airport) with 49.5 million passengers. These 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. The EFTA region with the highest number of air passengers was Zürich in Switzerland where 24.3 million passengers were carried in 2011: for comparison, this was slightly more than in the region of Düsseldorf, the 13th highest figure within the EU-27.

All of the top 15 regions for air passenger transport recorded a fall in passenger numbers between 2008 and 2009, but the vast majority recorded growth in 2010 and 2011. The regions with the strongest growth in 2010 and 2011 were Canarias, Oberbayern (Germany), Hovedstaden (Denmark) and Noord-Holland. Although not visible from Table 10.3, a significant number of smaller regional airports are among the fastest growing (in terms of passenger numbers), probably 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 an important contributor to the transport mix and accounts for a growing share of freight transport for articles with high added value, such as perishable goods (especially food) and express parcels — the growth of the latter being influenced in part by Internet shopping. Table 10.4 shows a ranking of airports based on their quantity of air freight and mail in 2011. Darmstadt was at the head of the top 15 EU-27 regions with 2.2 million tonnes, followed by Île-de-France and Outer London (both 1.6 million tonnes), and Noord-Holland (1.5 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 2011 for the Province/Provincie Liège (Belgium), Lombardia, Luxembourg, Köln and Leipzig (both Germany). As for air passengers, the EFTA region with the highest volume of air freight and mail was Zürich, where 315 000 tonnes were carried in 2011, more than the region with the 12th highest volume within the EU-27 (Oberbayern).

Table 10.3: EU-27 regions with highest number of air passengers, by NUTS 2 regions, 2008–11

Region	Main airports	Passengers, 2011 (thousand)	Annual rate of change (%)			
			2008	2009	2010	2011
Île de France (FR10)	Paris-Charles De Gaulle; Paris-Orly	87 842	0.8	– 4.5	0.4	5.7
Outer London (UKI2)	Heathrow, London City	69 388	– 1.4	– 1.5	– 0.2	5.5
Darmstadt (DE71)	Frankfurt	56 275	– 1.2	– 4.9	4.1	6.9
Noord-Holland (NL32)	Schiphol (Amsterdam)	49 690	– 0.7	– 8.2	3.7	10.1
Comunidad de Madrid (ES30)	Madrid-Barajas	49 532	– 1.6	– 4.8	3.9	– 0.5
Lazio (ITI4)	Leonardo da Vinci (Roma Fiumicino); Giovan Battista Pastine (Roma Ciampino)	42 146	4.8	– 3.5	6.1	4.1
Cataluña (ES51)	Barcelona El-Prat; Girona-Costa Brava; Reus	38 653	– 4.3	– 7.8	3.5	9.1
Oberbayern (DE21)	München	37 593	1.7	– 5.3	6.0	8.9
Lombardia (ITC4)	Malpensa; Orio Al Serio; Linate; Gabriele D'Annunzio (Brescia)	36 587	– 11.4	– 5.6	5.6	5.1
Surrey, East and West Sussex (UKJ2)	Gatwick	33 638	– 2.9	– 5.3	– 3.1	7.3
Canarias (ES70)	Gran Canaria; Tenerife Sur; Lanzarote; Fuerteventura; Tenerife Norte; La Palma; El Hierro	31 190	– 1.4	– 12.0	5.1	13.2
Illes Balears (ES53)	Palma De Mallorca; Ibiza; Menorca	30 265	– 2.2	– 6.2	1.5	8.3
Düsseldorf (DEA1)	Düsseldorf; Weeze (Niederrhein)	22 707	5.3	2.5	8.3	4.2
Southern and Eastern (IE02)	Dublin; Cork; Shannon; Kerry	22 658	0.0	– 12.6	– 12.3	1.1
Hovedstaden (DK01)	København; Bornholm	22 622	1.8	– 9.6	9.1	5.7

Source: Eurostat (online data code: tran_r_avpa_nm)

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 and then returned to more moderate growth of 1.7 % in 2011, as a total of 13.6 million tonnes of freight and mail were transported, some 3.5 % above the pre-crisis high. 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, the exceptions being Leipzig and the Province/Provincie Liège. In 2010, all of the top 15 regions recorded an increase in the quantity of air freight and mail, as did most in 2011. Particularly strong growth was recorded for Koblenz and Leipzig (both Germany).

Figure 10.2 contrasts the development over the last decade in air passenger transport with that for air freight and mail transport for the five largest regions (in 2011). These confirm the general upwards trend recorded for air transport, and the particularly strong impact of the financial and economic crisis for air freight. The development of air freight in the Leipzig region from 2007 onwards is particularly striking, reflecting the development of Leipzig Halle airport as a hub for the air traffic of the DHL international express mail services.

Rail transport

In general, the density of railway lines is high in western and central areas of the EU and lower in peripheral areas. The highest network densities can be found in the capital city regions of Germany, Belgium and the Czech Republic, followed by the city-state regions of Bremen and Hamburg. While these cities have traditionally had an extensive railway infrastructure due to their roles as capital cities or ports, the strikingly high values are to a large extent due to the small size of these regions within the NUTS classification combined with the fact that the density of urban infrastructure tends to be much higher than the density of inter-urban networks. The regions with the next densest rail networks were Severozápad in the north-west of the Czech Republic — which is at a major rail junction between the Berlin–Vienna and the Berlin–Sofia lines — and the mining and manufacturing region of Slaskie in Poland where rail freight plays an important role.

In total, 46 regions (of which 10 were capital city regions) had more than 90 km of railway lines per thousand km² of land area; these were spread across 12 different Member States, with 12 regions in Germany (NUTS level 1), eight each in

Table 10.4: EU-27 regions with the highest quantity of air freight and mail, by NUTS 2 regions, 2008–11

Region	Main airports	Freight and mail, 2011 (thousand tonnes)	Annual rate of change (%)			
			2008	2009	2010	2011
Darmstadt (DE71)	Frankfurt	2 215	– 2.7	– 10.5	20.6	– 2.4
Île de France (FR10)	Paris-Charles De Gaulle; Paris-Orly	1 592	– 3.1	– 13.5	6.3	18.3
Outer London (UKI2)	Heathrow	1 569	6.5	– 9.0	15.0	1.2
Noord-Holland (NL32)	Schiphol (Amsterdam)	1 549	– 3.6	– 17.3	16.8	0.7
Leipzig (DED5)	Leipzig Halle	744	400.0	18.4	25.3	16.6
Köln (DEA2)	Köln Bonn	727	– 19.0	– 4.4	16.2	13.9
Luxembourg (LU00)	Luxembourg	666	12.1	– 20.4	12.6	– 5.7
Lombardia (ITC4)	Malpensa; Orio Al Serio; Linate; Gabriele D'Annunzio (Brescia)	612	– 14.2	– 15.2	19.4	3.4
Province/Provincie Liège (BE33)	Liège	544	4.9	5.2	26.6	6.9
Comunidad de Madrid (ES30)	Madrid-Barajas	422	3.8	– 7.0	21.2	5.5
Province/Provincie Vlaams-Brabant (BE24)	Brussels	387	– 16.3	– 40.7	5.8	0.5
Oberbayern (DE21)	München	304	0.0	– 11.7	24.4	4.5
Leicestershire, Rutland and Northamptonshire (UKF2)	East Midlands	299	– 8.2	– 1.7	5.9	– 1.6
Essex (UKH3)	Stansted	230	2.2	– 7.4	8.0	0.0
Koblenz (DEB1)	Frankfurt-Hahn	222	8.9	– 13.9	57.1	34.5

Source: Eurostat (online data code: tran_r_avgo_nm)

Belgium and the Czech Republic, six in the Netherlands, three each in France and Hungary, and one each in Spain, Italy, Luxembourg, Poland, Romania and Slovakia. Among the EFTA countries, Switzerland (no regional data available) had the highest rail density, with 128 km of rail per thousand km², while the highest density among the regions of the acceding and candidate countries was less than half this: 61 km per thousand km² in Kontinentalna Hrvatska (Croatia).

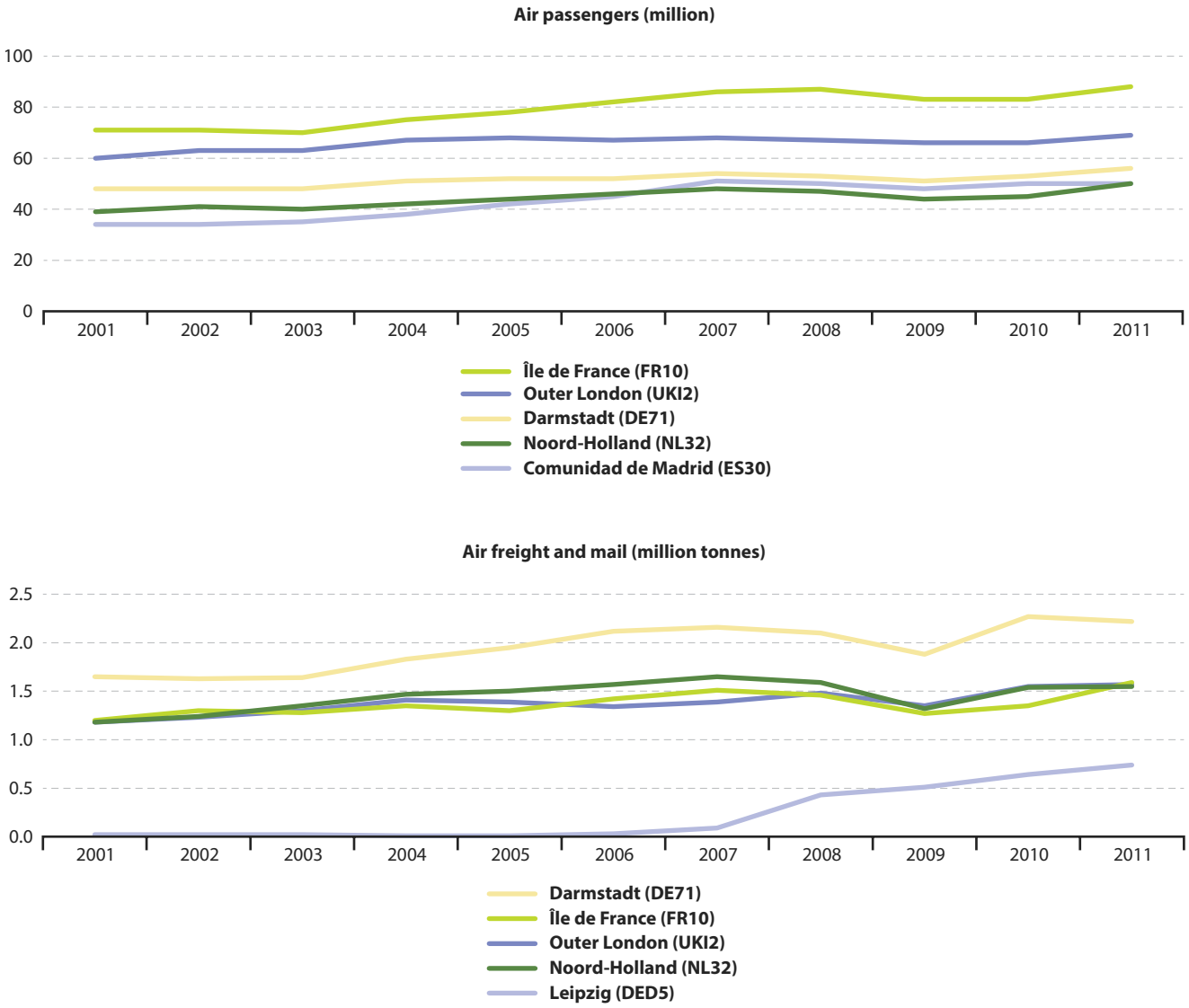
Maritime transport

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.

Table 10.5 identifies the regions within the EU-27 with the highest number of maritime passengers. By far the largest number of passengers (26.9 million) transported by sea in 2011 was recorded for the Greek region of Attiki, including the port of Piraeus near Athens. Five Italian regions figured in the top 15 regions, reflecting the fact that just over half of all maritime passenger transport along the EU's coast passed through ports in regions around the Mediterranean Sea. Among the Italian regions with the highest number of maritime passengers were the island regions of Sicilia and Sardegna and three other regions on the western and southern coasts of Italy. The high and similar passenger numbers for Kent in the United Kingdom and Nord – Pas-de-Calais in France reflect English Channel ferry crossings between these two regions. The Swedish and Finnish capital city regions of Stockholm and Helsinki-Uusimaa as well as Estonia contain major ports for Baltic Sea ferries as does the Swedish Sydsverige region which also has connections to the Danish capital city region of Hovedstaden. Rødby is the main port in the Danish region of Sjælland, connecting to Puttgarden which is located in the only German region in the top 15, Schleswig-Holstein — this region also includes the port of Kiel at the eastern end of the Kiel canal which connects the Baltic and North Seas. Only EU regions are included in Table 10.5, but for comparison it can be noted that the Croatian region of Jadranska Hrvatska, which includes Split and Zadar, as well as very many smaller ports spread across the Croatian islands, had an average of 13.3 million maritime passengers in 2011, which was slightly higher than in Kent (the second most important region in the EU (12.9 million passengers)).

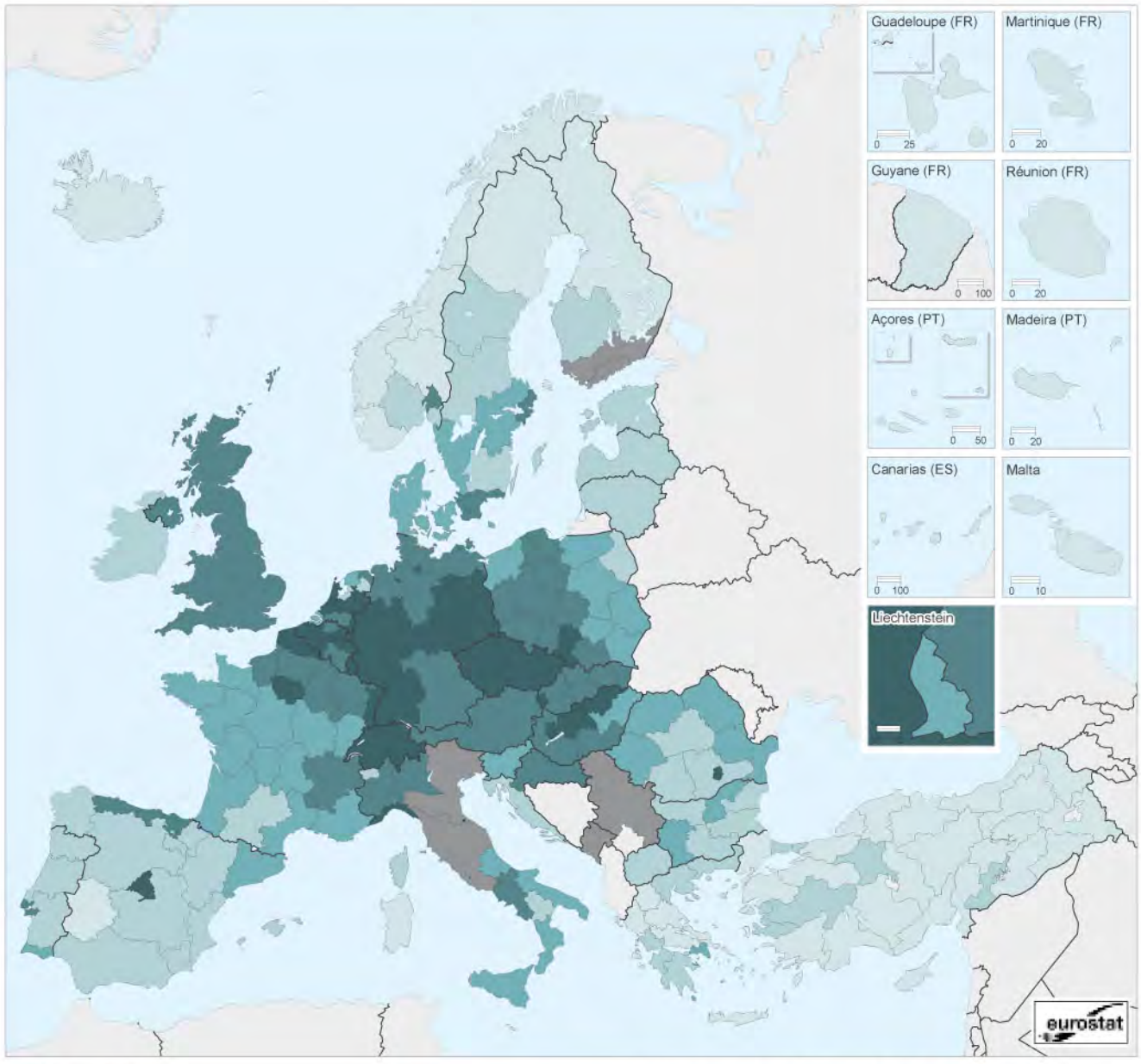
Developments in maritime passenger numbers over the last few years varied greatly between the regions: Attiki saw falling passenger numbers in each of the last 4 years (2008 to 2011), as did the two Danish regions (Hovedstaden and Sjælland). By contrast, Helsinki-Uusimaa was the only one of the top 15 regions to record an increase in passenger numbers each year. Some regions experienced particularly volatile trends in the development of passenger numbers, notably Toscana, Sardegna, Sicilia, Calabria and Estonia.

Figure 10.2: Developments for the top five EU-27 regions with the highest number of air passengers and highest quantity of air freight and mail, by NUTS 2 regions, 2001–11



Source: Eurostat (online data codes: tran_r_avpa_nm and tran_r_avgo_nm)

Map 10.5: Density of rail networks, by NUTS 2 regions, 2011 (1)
(km per thousand km²)



(km per thousand km²)

- <= 20
- 20 – 40
- 40 – 60
- 60 – 90
- > 90
- Data not available

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Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

(1) Greece, Luxembourg and Switzerland, 2010; Italy, the United Kingdom and the former Yugoslav Republic of Macedonia, 2009; Belgium, Denmark, Germany, France, Hungary and Iceland, 2008; Portugal, 2007; Poland, 2006; Germany, by NUTS 1 regions; Denmark, Ireland, Austria, Slovenia, United Kingdom and Switzerland, national level.
Source: Eurostat (online data code: tran_r_net)

Table 10.5: EU-27 regions with highest number of maritime passengers, by NUTS 2 regions, 2008–11

Region	Ports with more than 200 thousand passengers per year	Passengers, 2011 (thousand)	Annual rate of change (%)			
			2008	2009	2010	2011
Attiki (EL30)	Paloukia Salaminas, Perama, Piraeus, Rafina, Aegina (001), Rio (080), Poros Trizinias (076), Faneromeni Salaminas, Megara, Galatas Trizinias	26 946	– 1.6	– 3.9	– 4.0	– 7.2
Kent (UKJ4)	Dover	12 879	– 3.4	– 5.5	0.6	– 3.2
Nord - Pas-de-Calais (FR30)	Calais, Dunkerque	12 664	– 2.1	– 6.2	0.9	– 3.1
Sydsverige (SE22)	Helsingborg, Ystad, Trelleborg, Malmö, Karlskrona	12 484	– 0.8	– 11.1	– 6.6	0.5
Campania (ITF3)	Napoli, Capri, Pozzuoli, Porto D'Ischia, Sorrento, Procida, Casamicciola, Castellammare Di Stabia, Salerno, Amalfi, Positano	12 180	5.6	5.9	– 0.9	– 2.0
Sicilia (ITG1)	Messina, Palermo, Trapani, Milazzo, Favignana, Lipari, Vulcano Porto	11 679	5.1	– 7.3	4.9	– 19.4
Schleswig-Holstein (DEF0)	Puttgarden, Kiel, Dagebuell, Föhr I., Amrun I., Luebeck, Norstrand I., List/Sylt, Helgoland I., Pellworm I., Buesum, Hoernum/Sylt	11 133	– 4.3	– 3.1	2.5	– 5.1
Stockholm (SE11)	Stockholm, Grisslehamn, Kappelskar	10 964	2.1	3.4	– 11.1	0.7
Hovedstaden (DK01)	Helsingør (Elsinore), Københavns Havn, Ronne, Hundested	10 791	– 0.8	– 11.9	– 8.3	– 1.9
Sjælland (DK02)	Rødby (Færgehavn), Sjaellands Odde, Gedser, Taars, Rorvig, Kalundborg, Kragenaes	10 605	– 4.6	– 7.1	– 1.9	– 3.1
Helsinki-Uusimaa (FI1B)	Helsinki	10 295	4.6	1.2	8.5	5.0
Eesti (EE00)	Tallinn, Kuivastu, Virtsu, Heltermaa, Rohuküla, Patareisadam	10 108	10.5	– 0.4	39.0	6.3
Sardegna (ITG2)	Olbia, La Maddalena, Palau, Porto Torres, Carloforte, Golfo Aranci, Portovesme, Santa Teresa Di Gallura, Calasetta	8 801	– 5.7	5.4	– 12.0	– 4.2
Calabria (ITF6)	Reggio Di Calabria	7 704	– 2.1	9.2	– 10.5	– 22.1
Toscana (ITI1)	Piombino, Portoferraio, Livorno, Porto Santo Stefano, Isola Del Giglio, Rio Marina	6 934	28.5	– 9.2	– 19.8	3.2

Source: Eurostat (online data code: tran_r_mapa_nm)

The total quantity of freight handled in EU ports in 2010 was 3.64 billion tonnes, indicating the important role maritime freight transport plays, particularly in extra-EU trade. Maritime freight transport increased by 5.7 % in quantity terms in 2010, having fallen 12.1 % in 2009, reflecting the impact of the financial and economic crisis. Table 10.6 identifies the regions within the EU-27 handling the largest quantities of maritime freight transport, and can be contrasted with Table 10.5 which provides a similar analysis for maritime passenger transport. Handling of maritime freight within the EU-27 is clearly focused on ports in the North Sea regions.

The region of Zuid-Holland in the Netherlands, with the port of Rotterdam, handled by far the largest quantity of maritime freight; 378 million tonnes in 2011, more than double the quantity of the second-ranked region, Antwerpen in Belgium, which in turn was more than three times the quantity of the third-ranked region of Hamburg (Germany); all three of these regions were on the North Sea. The French regions of Haute-Normandie (including the ports of Le Havre and Rouen) and Provence-Alpes-Côte d'Azur (including Marseille) handled the largest quantity of maritime freight on the North-East Atlantic and Mediterranean coastlines respectively. The largest quantities of maritime freight handled in EU coastal regions on the Baltic coast were in Latvia, while the Sud-Est region of Romania had the highest quantity of freight on the EU's Black Sea coast, its 37 million tonnes in 2011 ranking 31st among the EU regions. Vestlandet in Norway recorded the highest level of maritime freight in 2011 among the EFTA coastal regions, its 70 million tonnes of freight was just above the quantity recorded for Bremen (Germany), the 12th ranked EU coastal region. Among the regions within the acceding and candidate countries, the Turkish region of Hatay, Kahramanmaras, Osmaniye (including the Mediterranean port of İskenderun) recorded 90 million tonnes of maritime freight in 2011, higher than in all but three of the EU coastal regions.

Recent developments in maritime freight transport show greater similarity between the top regions than was the case for maritime passenger transport. In particular, the downturn

in the level of maritime freight transport in 2009 as a consequence of the global financial and economic crisis was visible in all of the top regions, as was the pick-up in 2010 in most regions. Developments in 2011 were more varied, with the two Dutch regions of Noord- and Zuid-Holland and Andalucía in Spain experiencing relatively large falls, whereas Bremen, the Comunidad Valenciana (Spain) and Latvia all recorded double-digit growth.

Data sources and availability

Regional data on road and railway infrastructure, inland waterways, vehicle stocks and road accidents are currently collected by EU Member States, EFTA, and acceding and candidate countries on a voluntary basis via annual questionnaires. Data for the road transport of goods, as well as air, rail and maritime transport for passengers and goods, are derived directly from statistics 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 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 the transportation 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

Table 10.6: EU-27 regions with the highest quantity of goods transported by sea, by NUTS 2 regions, 2008–11

Region	Ports with more than 1 million tonnes of freight per year	Freight, 2011 (thousand tonnes)	Annual rate of change (%)			
			2008	2009	2010	2011
Zuid-Holland (NL33)	Rotterdam, Vlaardingen, Dordrecht	377 884	2.4	– 7.5	12.6	– 7.2
Prov. Antwerpen (BE21)	Antwerpen	168 547	3.5	– 17.0	12.6	5.3
Hamburg (DE60)	Hamburg	114 368	0.6	– 20.3	10.3	9.4
Haute-Normandie (FR23)	Le Havre, Rouen	87 247	2.0	– 7.2	– 1.2	– 4.3
Provence-Alpes-Côte d'Azur (FR82)	Marseille	84 643	0.6	– 13.1	2.0	2.6
Sicilia (ITG1)	Augusta, Catania, Gela, Lipari, Milazzo, Messina, Palermo, Porto Empedocle, Pozzallo, Santa Panagia, Termini Imerese, Trapani	84 619	– 6.6	– 15.8	22.4	– 0.1
Andalucía (ES61)	Málaga, Sevilla, Algeciras, Huelva, Almeria, Cádiz	81 317	– 5.7	– 14.6	6.8	– 8.5
Noord-Holland (NL32)	Amsterdam, Velsen/Ijmuiden	81 093	16.2	– 12.3	5.0	– 10.1
East Yorkshire and Northern Lincolnshire (UKE1)	Grimsby and Immingham, Rivers Hull and Humber, Hull, Goole, Trent River	79 831	– 1.8	– 15.7	– 0.1	4.2
Comunidad Valenciana (ES52)	Valencia, Castellón de la Plana, Alicante	77 817	6.4	– 6.8	9.3	16.0
Liguria (ITC3)	Genova, La Spezia, Savona	71 850	– 1.4	– 8.2	– 4.0	2.3
Bremen (DE50)	Bremerhaven, Bremen	68 782	7.2	– 15.1	9.6	16.4
Cataluña (ES51)	Barcelona, Tarragona	65 822	– 3.7	– 6.7	– 2.7	– 1.4
Latvija (LV00)	Rīga, Ventspils, Liepaja	65 394	0.8	– 2.3	– 2.6	14.6
West Wales and The Valleys (UKL1)	Milford Haven, Port Talbot, Holyhead	59 809	– 1.4	– 1.1	15.0	8.2

Source: Eurostat (online data code: tran_r_mago_nm)

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 according to Commission Regulation (EC) No 158/2007 as regards a list of Community airports and are aggregated to NUTS level 2 regions. Regional air transport data cover main airports, in other words those registering more than 150 000 passenger units (per year), where a passenger unit is either a passenger or 100 kilogrammes of freight and mail.

In a similar vein, rail and maritime transport statistics also provide information on passenger and freight movements by NUTS level 2 region. The collection of data for rail transport is based on Commission Regulation (EC) No 1192/2003 on rail transport statistics, which foresees the collection (every 5 years) of passenger data in relation to national, transit and international passengers and for freight in relation to the weight of the goods being transported. The collection of maritime transport statistics is based on a European Commission Decision (2008/861/EC) on statistical returns in respect of carriage of goods and passengers by sea. The information is collected for a list of the most important sea ports in the EU and then aggregated to NUTS level 2 regions. A main port is a statistical port which has annual movements of no less than 200 000 passengers or recording more than 1 million tonnes of cargo.

Context

An efficient and well-functioning passenger and freight transport system is vital for enterprises and for the population at large. 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 consumption) and the right of citizens to travel freely throughout the EU (for both work and pleasure).

Transport infrastructure is one of the most visible examples of what can be achieved at a regional level with aid from structural and cohesion funds, as enhancing accessibility is a key determinant for strengthening regional economies. Regional investment initiatives cover transport strategies that aim to strike a balance between road, rail and sustainable transport modes, while promoting clean transport in urban areas.

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 and the economy at large, while minimising adverse environmental effects. 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, intelligent transport 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 (for example by highlighting a list of airlines that are banned from flying within the EU).

In March 2011, the European Commission adopted a White Paper titled '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.

In October 2011, the European Commission made a proposal for a regulation establishing the 'Connecting Europe Facility' (COM(2011) 665 final), which seeks to provide support for the creation of transport, energy and telecommunications infrastructure to interconnect Europe. In the transport sector, a Europe-wide 'core' network has been identified with corridors carrying freight and passenger traffic with high efficiency and low emissions. The conclusions of the European Council meeting on 7–8 February 2013 foresees, under the multiannual financial framework, an allocation of EUR 23.1 billion for transport during the period 2014–20 in order to complete missing links and alleviate bottlenecks.

11

Science and technology

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

Intramural R & D expenditure (GERD) amounted to EUR 256.6 billion across the EU-27 in 2011; this equated to an average of EUR 511 per inhabitant. A decade before, in 2001, R & D expenditure per inhabitant had stood at EUR 370 per inhabitant. There was a steady increase in expenditure per inhabitant during the last decade, aside from a minor contraction in 2009 (which may be linked to lower levels of activity during the financial and economic crisis).

The EU-27 had an R & D intensity of 2.03 % in 2011, in other words expenditure on R & D was equivalent to 2.03 % of gross domestic product (GDP). In the period between 2001 and 2007 there was little change in the EU-27's R & D intensity, as the level of expenditure in relation to GDP lay within a relatively restricted range from a low of 1.82 % to a high of 1.88 %. There followed successive increases, as R & D intensity rose from 1.85 % in 2007 to 1.92 % in 2008 and by a further 0.1 percentage points in 2009 (to reach 2.02 %). Thereafter, there was another period of relative stability as the EU-27's R & D intensity was 2.01 % in 2010 and 2.03 % in 2011.

Map 11.1 shows that 30 of the 260 EU regions for which data are available had an R & D intensity above 3.00 % in 2010. As such, they exceeded the 3 % target set by the Barcelona Council in 2002 and met the objectives of the Europe 2020 strategy. Among these 30 regions, 10 were in Germany, five in the United Kingdom, four in Sweden, three in Denmark and two each in Belgium, France, Austria and Finland. Together, these 30 regions accounted for 38.4 % of all R & D expenditure in the EU-27. Figure 11.1 summarises some information about these R & D-intensive regions. As can be seen, national R & D intensities (shown by the size of the bubbles) were highest among the Nordic countries and these also had the most widespread R & D-intensive regions in that a large proportion of their regions had an R & D intensity above 3.00 % (note that data are only available for three out of five Finnish regions).

The German R & D-intensive 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 (as measured by their level of R & D expenditure, rather than their R & D intensity), as together they accounted for 13.4 % of all R & D expenditure in the EU-27 in 2009. The other German regions with R & D intensity above 3.00 %, from west to east, were Braunschweig (with an R & D intensity of 7.99 % — the highest value in the EU-27), Berlin and Dresden; these three regions together contributed 3.4 % to total R & D expenditure in the EU-27.

The most R & D-intensive region in the United Kingdom in 2009 was East Anglia (5.57 % — this region includes the area around Cambridge, which has a science park that benefits from close ties with the nearby university). The other R & D-intensive regions (with intensity above 3.00 %) were also in southern England and together these five British regions contributed 4.1 % to total R & D expenditure in the EU-27 in 2009.

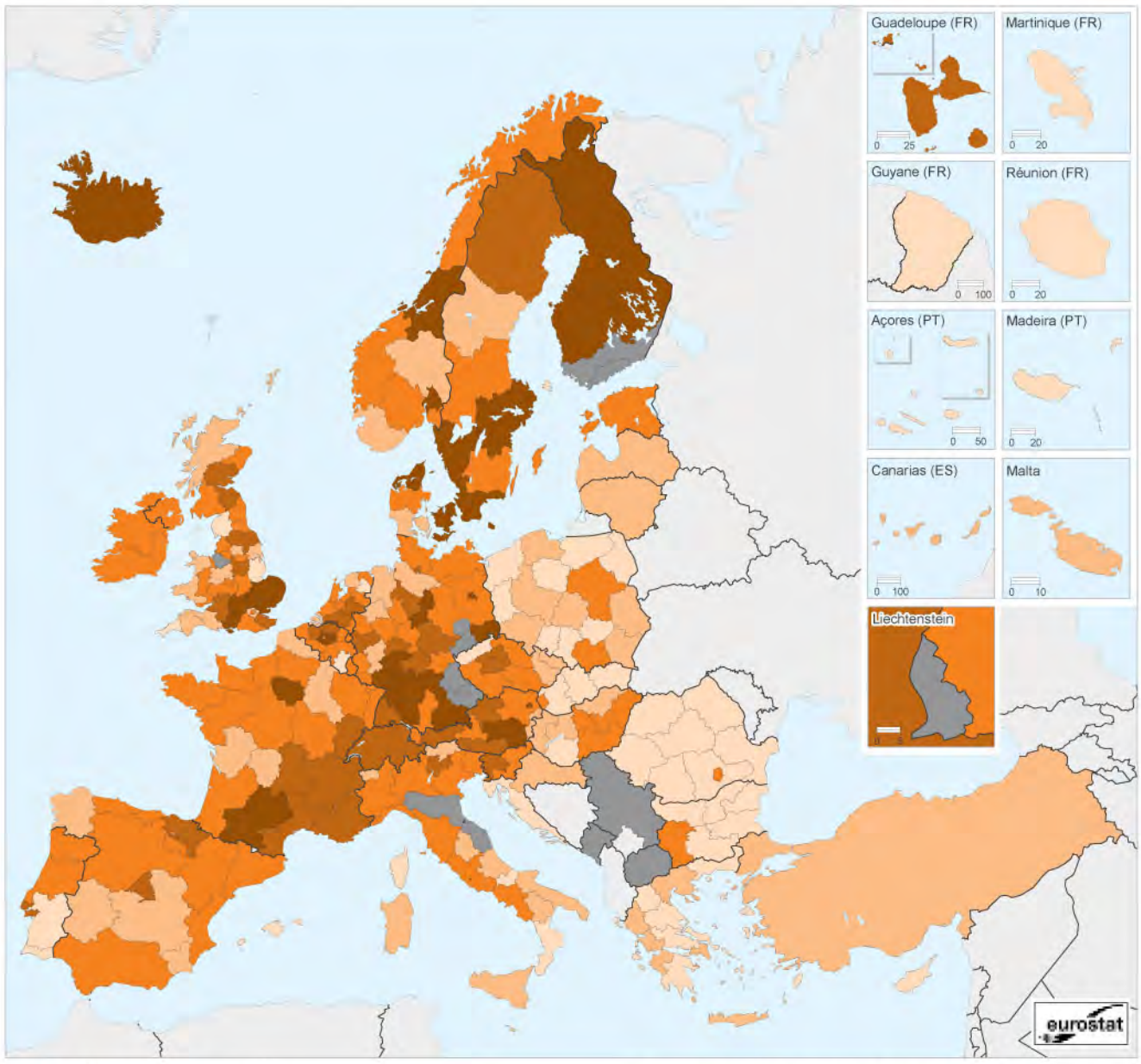
Nine of the regions where R & D intensity was over 3 % were located in the Nordic Member States, where the highest R & D intensity was 5.31 % in the Danish capital city region of Hovedstaden. The three Danish and four Swedish regions with R & D intensity above 3.00 % collectively contributed 6.5 % to total R & D expenditure in the EU-27 in 2009 while the two Finnish regions contributed 1.2 % in 2010.

The two Belgian regions with relatively high R & D intensity in 2009 were the Province/Provincie du Brabant Wallon, which was the second most R & D-intensive region in the EU (7.66 % of GDP), and the neighbouring Province/Provincie Vlaams-Brabant (3.56 %). 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. In France, the highest R & D intensity in 2009 was recorded in the Midi-Pyrénées region (4.40 %); this area includes a cluster of R & D-intensive enterprises related to aerospace manufacturing, centred on Toulouse. The second highest R & D intensity in France was recorded in the capital city region of Île de France (3.02 %). The overall level of R & D expenditure in these two regions was high, particularly in the Île de France, which recorded by far the highest level of R & D expenditure among any of the NUTS level 2 regions in the EU; it alone contributed 7.1 % to total R & D expenditure in the EU-27 in 2009, and together with the region of Midi-Pyrénées the share of these two regions was 8.5%. In Austria, the most R & D-intensive regions were Wien (3.93 %) and Steiermark (3.87 %), contributing 1.8 % to total R & D expenditure in the EU-27 in 2009.

Among EFTA countries, Norway had two regions where R & D intensity was above 3.00 % while Iceland had one; no regional data are available for Switzerland where the national rate was 2.87 % in 2008.

Turkey (no regional data available) had an R & D intensity of 0.84 % in 2010, while the Croatian region of Kontinentalna Hrvatska had an R & D intensity of 0.99 %, far above the intensity recorded for the other Croatian region of Jadranska Hrvatska (0.24 %).

Map 11.1: R & D intensity, by NUTS 2 regions, 2010 (1)
(total R & D expenditure as a % of GDP)



(total R & D expenditure as a % of GDP)
EU-27 = 2.01

- <= 0.50
- 0.50 – 1.00
- 1.00 – 2.00
- 2.00 – 3.00
- > 3.00
- Data not available

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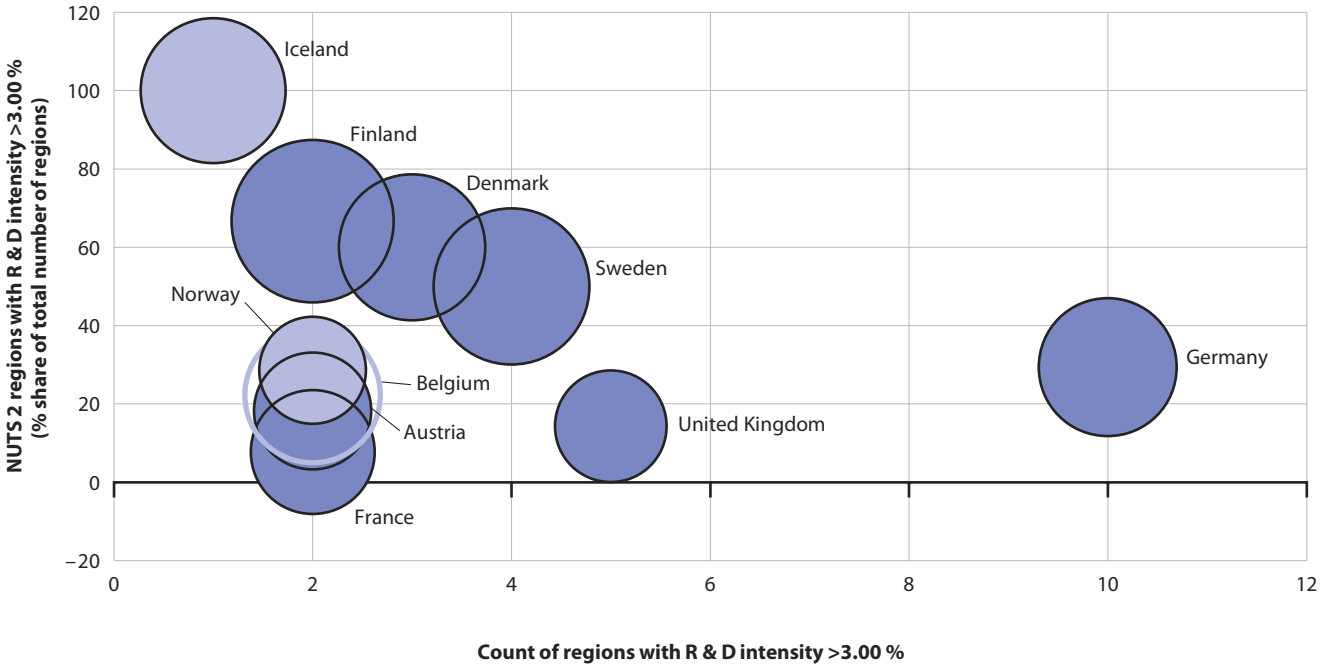
Cartography: Eurostat — GISCO, 05/2013

0 200 400 600 800 km

(1) Belgium, Denmark, Germany, France (except Martinique (FR92), Guyane (FR93) and Réunion (FR94)), the Netherlands, Austria, Sweden, the United Kingdom and Iceland, 2009; Switzerland, 2008; Greece, 2005; Martinique (FR92), Guyane (FR93) and Réunion (FR94), 2002; Switzerland and Turkey, national level.
Source: Eurostat (online data codes: rd_e_gerdreg and nama_r_e2gdp)

Figure 11.1: Regions with R & D intensity greater than 3.00 %, by NUTS 2 regions, 2010 (1)



(1) The size of the bubble reflects national R & D intenstity; countries that are not shown do not have any regions with R & D intensity greater than 3.00 %; Belgium, Denmark, Germany, France (except Martinique (FR92), Guyane (FR93) and Réunion (FR94)), the Netherlands, Austria, Sweden, the United Kingdom and Iceland, 2009; Switzerland, 2008; Greece, 2005; Martinique (FR92), Guyane (FR93) and Réunion (FR94), 2002; Niederbayern (DE22), Oberpfalz (DE23), Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Cheshire (UKD6) and Merseyside (UKD7), not available.

Source: Eurostat (online data codes: rd_e_gerdreg, nama_r_e2gdp and rd_e_gerdtot)

Figure 11.2 summarises the spread of R & D intensities among the regions within each country. The highest and lowest regional R & D intensities are shown by the ends of each bar, while the vertical line within each bar provides information on the national average and the green circles present the level of R & D intensity for each capital city region.

As noted above, the two regions with the highest levels of R & D intensity were located in Germany (Braunschweig) and in Belgium (Province/Provincie du Brabant Wallon). This may explain, at least in part, why these two countries recorded the widest range of regional R & D intensities. Furthermore, the highest regional levels of R & D intensity in Germany and Belgium were between 5 and 6 percentage points above their respective national averages and their highest regional levels of R & D intensity were also considerably above the R & D intensity of each capital city region; this pattern was also true in the United Kingdom and, to a lesser degree, in the Czech Republic, Ireland, Greece, France, Italy, the Netherlands and Sweden.

Those EU Member States with relatively low levels of national R & D intensity tended to display a narrow range of values for R & D intensity across their regions; this was particularly true for Romania, Bulgaria, Greece, Slovakia and Ireland. In half of the 20 EU Member States for which data are available, the capital city region recorded the highest level of R & D intensity; this was the case for Bulgaria, Denmark, Spain, Hungary, Austria, Poland, Portugal, Romania, Slovenia and Slovakia.

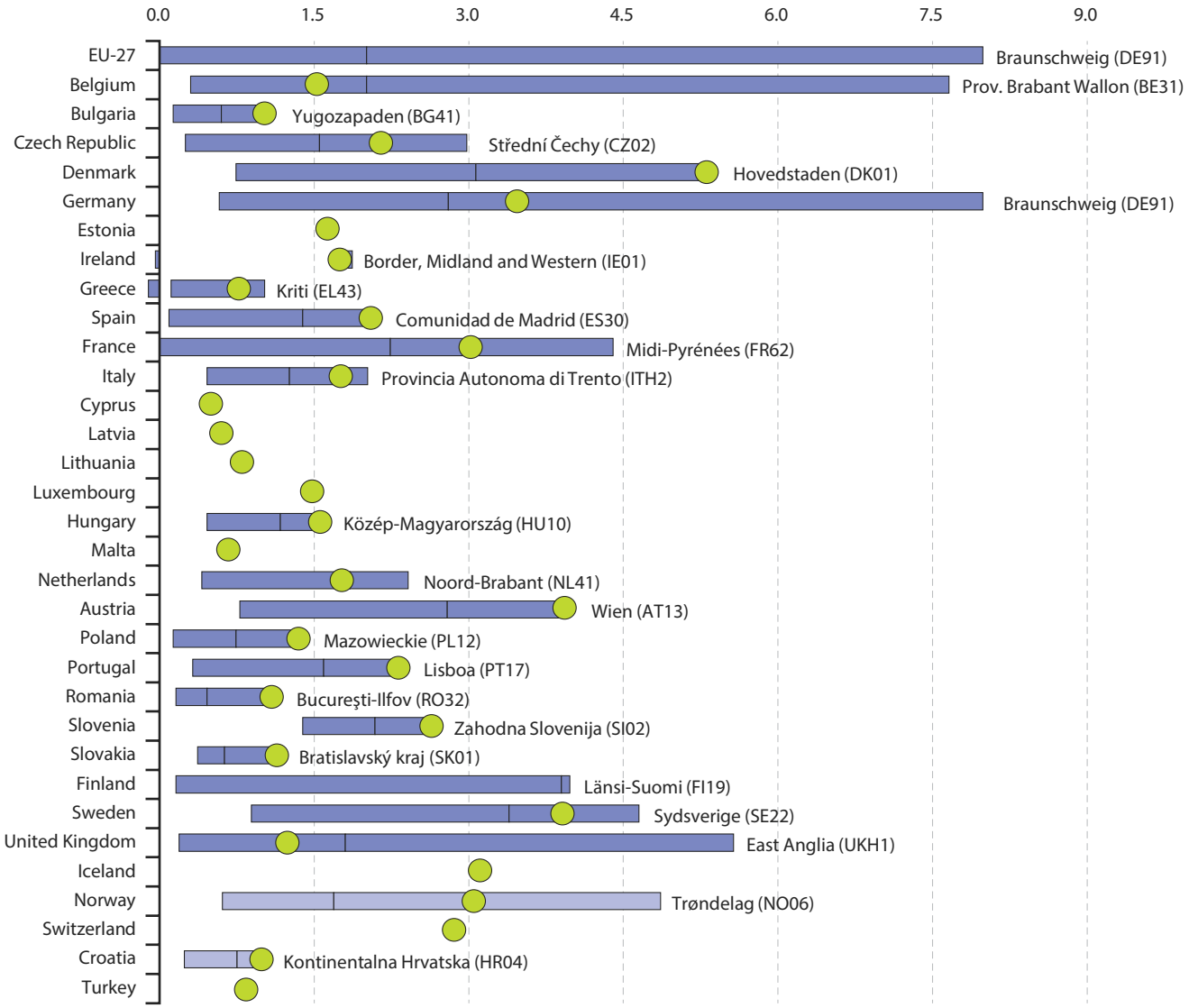
Researchers

Researchers are directly employed within 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'. There were an estimated 2.32 million researchers active across the EU-27 in 2009. Their number has grown at a steady pace in recent years, rising from 1.79 million in 2003, with an average rate of growth equal to 4.4 % per year between 2003 and 2009.

An alternative unit of measure for labour input adjusts the number of researchers to take account of different working hours and working patterns. Taking these into account, there were 1.59 million full-time equivalent researchers in the EU-27 in 2009.

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 was estimated to be 1.07 % in 2009. The regional information for this indicator is generally provided for 2010, although there are a number of exceptions to this rule, principally: Belgium, Denmark, Germany,

Figure 11.2: Regional disparities in R & D intensity, by NUTS 2 regions, 2010 (1)
(R & D expenditure as a % share of GDP)



(1) The graph shows the range from the highest to the lowest region for each country; the black vertical line is the average (mean); the green circular marker is the capital city (for those countries where there is no regional breakdown, the national average is used as the value for the capital region); the name of the region with the highest value is also included; Belgium, Denmark, Germany, France (except Martinique (FR92), Guyane (FR93) and Réunion (FR94)), the Netherlands, Austria, Sweden, the United Kingdom and Iceland, 2009; Switzerland, 2008; Greece, 2005; Martinique (FR92), Guyane (FR93) and Réunion (FR94), 2002; Niederbayern (DE22), Oberpfalz (DE23), Chemnitz (DED4), Leipzig (DED5), Emilia-Romagna (ITH5), Marche (ITI3), Helsinki-Uusimaa (FI1B), Etelä-Suomi (FI1C), Cheshire (UKD6) and Merseyside (UKD7), not available.

Source: Eurostat (online data codes: rd_e_gerdreg and nama_r_e2gdp)

Luxembourg, the Netherlands, Austria, Sweden, the United Kingdom, Iceland and the former Yugoslav Republic of Macedonia, where the latest reference period is 2009; Switzerland, where the latest reference period is 2008; Greece, where the latest reference period is 2005; and France, where the latest reference period is 2001.

The distribution of researchers was relatively concentrated in a few clustered regions where research intensity was high. As a result, there was a skewed distribution with 170 of the 252 regions for which data are available reporting a share of researchers in total employment that was below the EU-27 mean of 1.07 %, while the median share across all NUTS level 2 regions was 0.77 %.

This pattern could be seen in most of the EU Member States, with a small number of regions recording a relatively high share of researchers in total employment — often far above national averages. There were 20 NUTS level 2 regions in the EU where the share of researchers in total employment rose above 2.0 %. The highest share was recorded in North Eastern Scotland (4.65 %) and this was much higher than in the second ranked region, namely the Slovakian capital city region of Bratislavský kraj (3.73 %).

Among the 20 regions with the highest proportion of researchers in total employment, Germany and the United Kingdom each provided four regions, Belgium had three, Denmark and Finland each had two, while there was a sole region from the Czech Republic, Austria, Portugal, Slovakia and Sweden. The majority of these countries were represented by their capital city region, as these accounted for 8 of the 20 regions, the only exceptions being Germany (where the proportion of researchers in total employment stood at 1.82 % in Berlin) and Finland (where no data are available for Helsinki-Uusimaa).

At the other end of the range, researchers accounted for less than 0.5 % of total employment in 65 NUTS level 2 regions across the EU. These regions were often on the geographic periphery in relatively under-populated areas, for example two regions at the extremities of the United Kingdom — the Highlands and Islands (of Scotland) and Cornwall and Isles of Scilly (in South-West England).

Among EFTA countries, researchers accounted for more than 2.0 % of total employment in Iceland (data are for 2009) and the two Norwegian regions of Trøndelag and Oslo og Akershus (the capital city region) in 2010. The proportion of Swiss researchers in total employment was 1.08 %, which was very close to the EU-27 average. By contrast, the relative importance of researchers was considerably lower in the acceding and candidate countries with a 0.88 % and 0.65 % share in the two Croatian regions of Kontinentalna Hrvatska and Jadranska Hrvatska, a 0.55 % share in Turkey (only national level data available) and a 0.29 % share for the former Yugoslav Republic of Macedonia.

Human resources in science and technology

Investment in research, development, education and skills are key policy areas for the EU, as they are widely 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 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 subgroup of persons who meet both of these criteria are referred to as core HRST.

There were 44.3 million persons in the EU-27 considered as core HRST in 2011. Map 11.3 presents the ratio of core HRST to the economically active population (often referred to as the labour force). Some 18.4 % of the EU-27 labour force were categorised as core HRST in 2011. There were 54 out of a total of 258 NUTS level 2 regions for which data are available across the EU where the share of core HRST exceeded 22 %. The highest share, by some distance, was recorded for Inner London (41.3 %), while the Province/Provincie du Brabant Wallon (Belgium), Luxembourg (covered by the whole country at NUTS level 2), Hovestaden (the capital city region of Denmark) and Stockholm (the capital city region of Sweden) were the only regions to report shares of between 30 % and 40 %.

Beyond a concentration in most capital city regions, there were also relatively high shares of core HRST in the labour force across a number of regions close to capital cities — for example Province/Provincie Vlaams-Brabant in Belgium, Brandenburg in Germany, Utrecht in the Netherlands, and Berkshire, Buckinghamshire and Oxfordshire in the United Kingdom. The remaining regions that displayed relatively high shares of core HRST were characterised as being largely urbanised, industrial areas — for example, Hamburg, Dresden, Karlsruhe and Stuttgart in Germany, and the País Vasco in Spain.

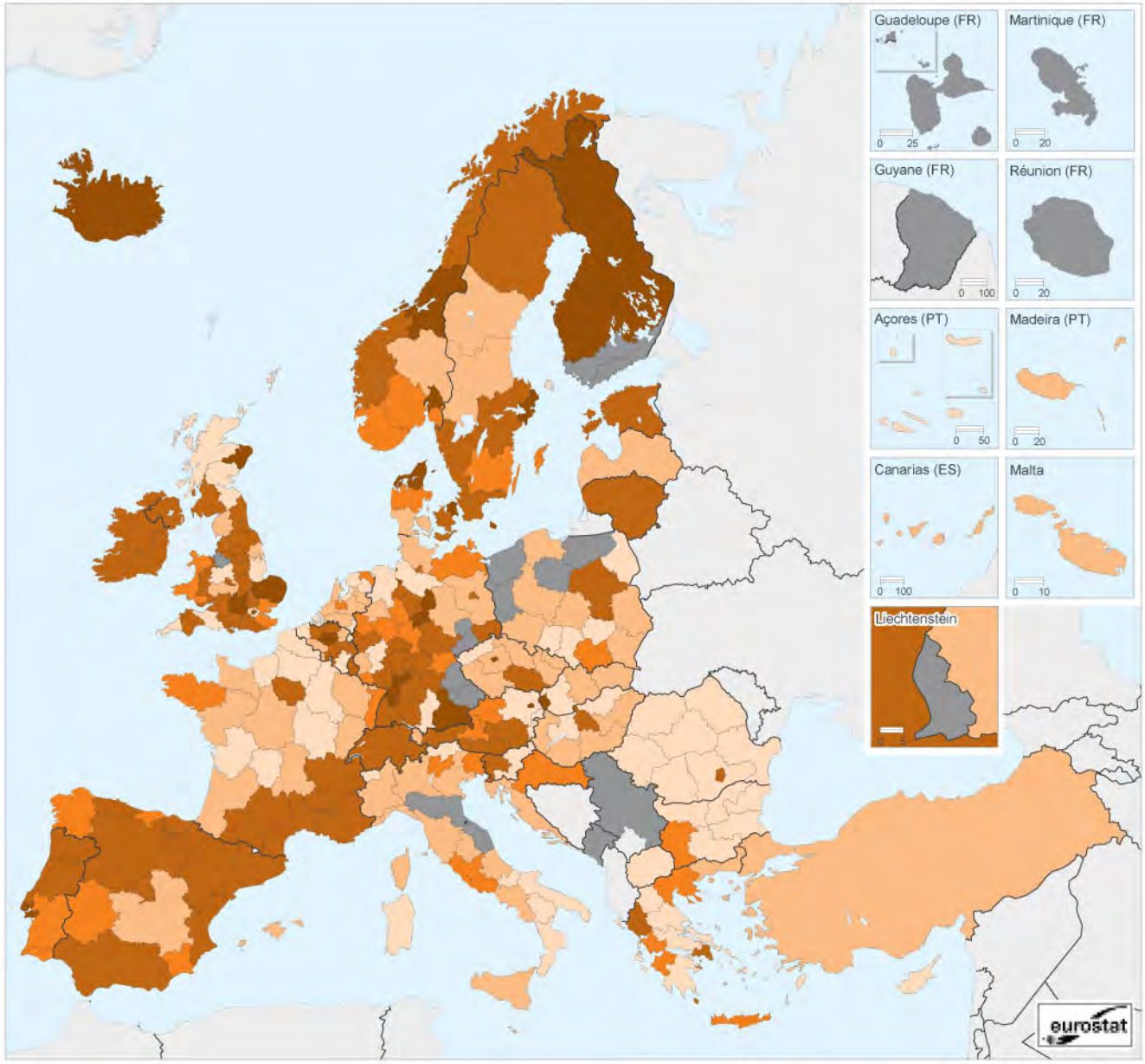
There were several clusters of regions with relatively high shares of core HRST in the labour force. These included a cluster running from southern Germany into Switzerland and up the Rhine, a cluster that stretched from Luxembourg through Belgium and into the west and north of the Netherlands, and a cluster that ran from south-west France into north-east Spain. More generally, most regions in the Nordic Member States reported a high proportion of core HRST in their labour force.

There were nine NUTS level 2 regions where the share of core HRST in the labour force was below 10 %. These were widely distributed across southern and eastern Europe, ranging from the Portuguese islands of the Região Autónoma dos Açores, through the Ciudad Autónoma de Ceuta (Spain), to northern Italy (Valle d'Aosta/Vallée d'Aoste and Provincia Autonoma di Bolzano/Bozen), three regions in Romania (Nord-Est, Sud – Muntenia and Sud-Est) and finally the north-western Czech region of Severozápad.

Among the EFTA countries, the highest share of core HRST in the labour force was recorded in the Norwegian capital city region of Oslo og Akershus (34.6 %), which was above that recorded in all of the EU-27 regions except for Inner London. Three other Norwegian regions and three Swiss regions recorded shares of core HRST above 22 %, the highest being in the Swiss region of Zürich (27.1 %).

The importance of core HRST in relation to the labour force was lower than the EU-27 average across each of the acceding and candidate countries. The highest shares of core HRST were recorded in the Turkish capital region of Ankara (16.4 %), while two Croatian regions of Jadranska Hrvatska and Kontinentalna Hrvatska, İzmir (Turkey) and the former Yugoslav Republic of Macedonia (one region at this level of the NUTS) were the only other regions to record shares in double-digits. The 24 remaining Turkish regions each reported shares of core HRST that were below 10 %, falling to a low of 4.9 % for the southern region of Gaziantep, Adıyaman, Kilis.

Map 11.2: Share of researchers in total persons employed, by NUTS 2 regions, 2010 (1)
(%)



(%)
EU-27 = 1.07

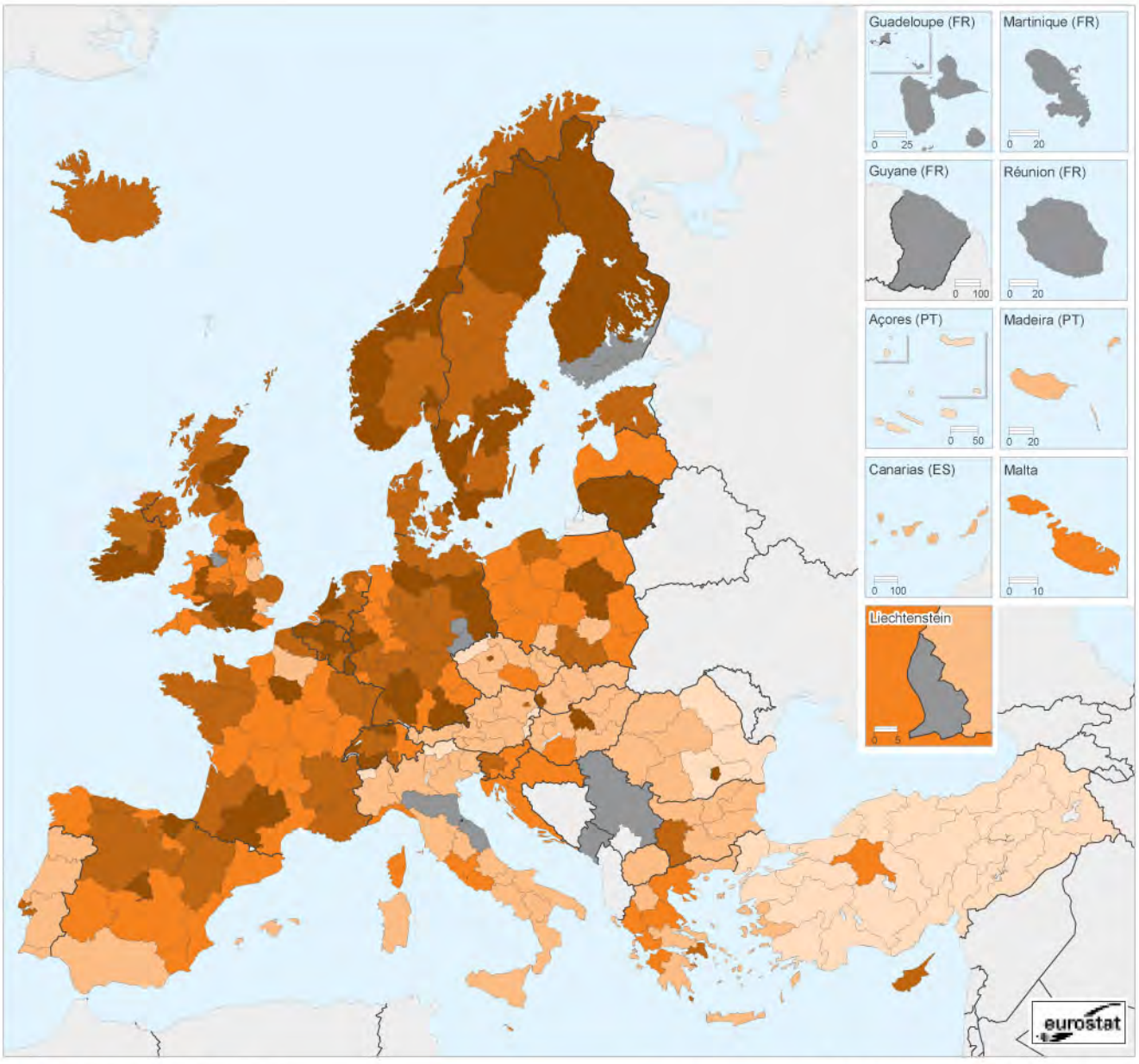
- <= 0.50
- 0.50 – 0.75
- 0.75 – 1.00
- 1.00 – 2.00
- > 2.00
- Data not available

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

0 200 400 600 800 km

(1) EU-27, Belgium, Denmark, Germany, Luxembourg, the Netherlands, Austria, Sweden, the United Kingdom, Iceland and the former Yugoslav Republic of Macedonia, 2009; Switzerland, 2008; Greece, 2005; France, 2001; Switzerland and Turkey, national level; EU-27, Ireland, the Netherlands and the United Kingdom, estimates.
Source: Eurostat (online data code: rd_p_persreg)

Map 11.3: Human resources in science and technology core (HRSTC), by NUTS 2 regions, 2011 (1)
(% of the economically active population)



(% of the economically active population)
EU-27 = 18.4

- <= 10.0
- 10.0 – 14.0
- 14.0 – 18.0
- 18.0 – 22.0
- > 22.0
- Data not available

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

0 200 400 600 800 km

(1) Turkey, 2010.
Source: Eurostat (online data code: hrst_st_rcat)

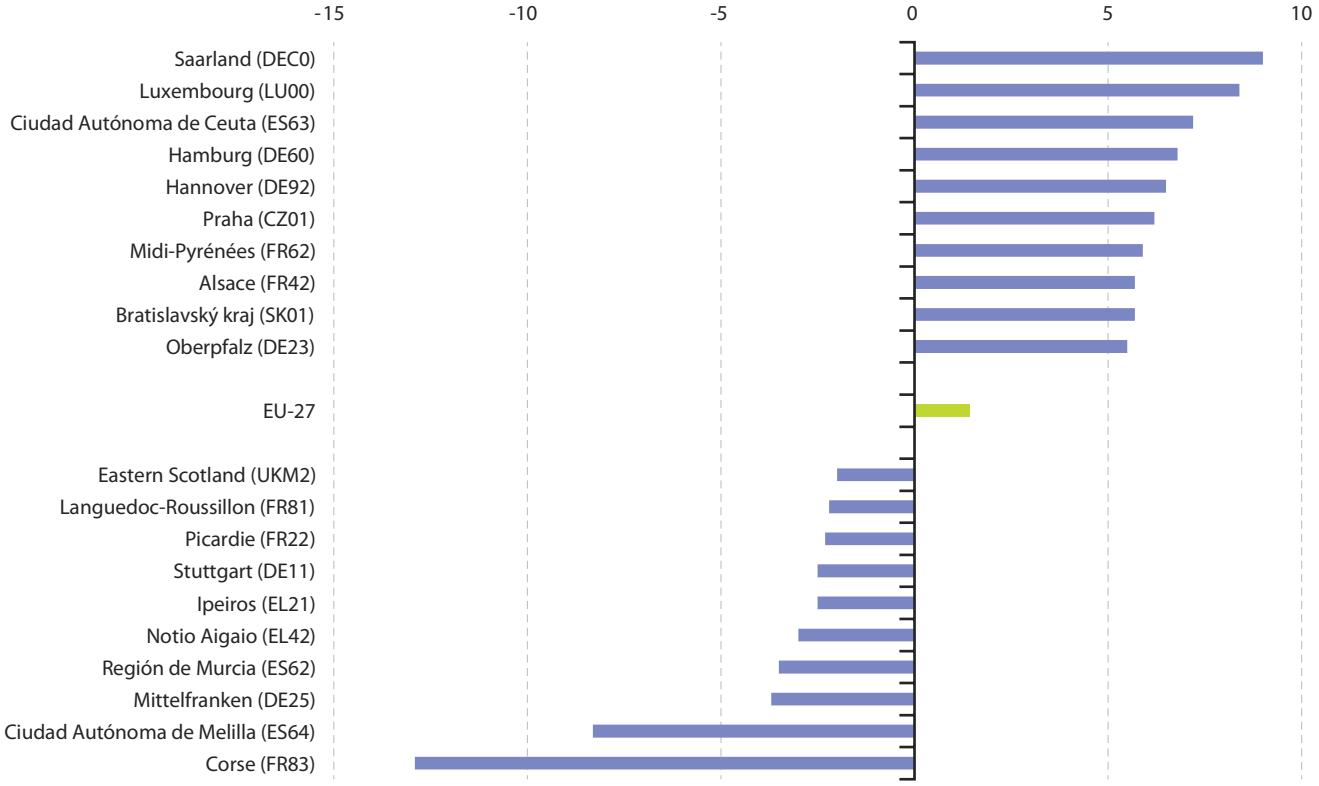
Figure 11.3 shows the 10 regions within the EU that experienced the most rapid growth in their respective shares of core HRST relative to their labour force between 2006 and 2010 (measured in percentage point terms); note this temporal comparison has not been extended to cover 2011 due to a break in series between 2010 and 2011.

During the period 2006–10, the proportion of human resources in core HRST rose across the whole of the EU-27 from 15.5 % to 16.9 %. Three of the regions with the most rapid growth in core HRST were clustered around the border area where Germany, France and Luxembourg meet: namely, Saarland (Germany), Luxembourg (one region at NUTS level 2) and Alsace (France). Among the 10 regions with the fastest growth there were three more from Germany, namely the regions including the northern cities of Hamburg and Hannover and the south-eastern region of Oberpfalz (which borders onto the Czech Republic). Continuing over the border, another region with rapid growth in core HRST was Praha (the capital city region of the Czech Republic), and the same was also true for the capital city region (Bratislavský kraj) of its neighbour Slovakia. The top 10 was completed by the south-western French region of the Midi-Pyrénées and the Ciudad Autónoma de Ceuta (Spain).

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 69.6 % of total employment in the EU-27 in 2011, while manufacturing accounted for 15.7 % of total employment (a share that has consistently fallen in recent years as the European economy has become increasingly based on tertiary activities).

Figure 11.3: Human resources in science and technology core (HRSTC) as a percentage of the economically active population, NUTS 2 regions with the highest and lowest rates of change, 2006–10 (1)
(percentage points difference between 2010 and 2006)



(1) Denmark, 2007–10; Ciudad Autónoma de Melilla (ES63), Corse (FR83) and Valle d'Aosta/Vallée d'Aoste (ITC2), data lacks reliability due to reduced sample size, but publishable.
Source: Eurostat (online data code: hrst_st_rcat)

Looking more closely at the high-tech areas of the economy, there were 5.9 million persons employed across the EU-27 within high-tech knowledge-intensive services in 2011, and a further 2.4 million working in the high-technology manufacturing sector. These figures equated to 2.7 % and 1.1 % respectively of the total EU-27 workforce in 2011, such that when combined these high-tech sectors accounted for 3.8 % of EU-27 employment.

Figure 11.4 shows the regional disparities in the high-tech sectors' share of total employment in 2011. This figure plots the highest and lowest regional employment shares, as well as the national average and the share of each capital city region. Among those countries that have more than one NUTS level 2 region, the employment share of high-tech sectors varied quite substantially — with the highest ranges being recorded for those EU Member States where at least one region had a relatively high proportion of employment concentrated within high-tech sectors.

Urban regions, especially capital city regions or regions situated close to capitals, often exhibited the highest shares of employment in high-tech sectors. All of the 24 multi-region countries shown in Figure 11.4 reported that the employment share of high-tech sectors in their capital city region was above the national average. Furthermore, in 18 of these 24 countries, the capital city region had the highest regional share of employment in high-tech sectors; the exceptions were Belgium, Germany, the Netherlands, the United Kingdom, Switzerland and Turkey.

Considering the 223 NUTS level 2 regions in the EU-27 for which data are available for 2011, the share of employment in high-tech sectors was highest in Berkshire, Buckinghamshire and Oxfordshire (where there is a high propensity for enterprises engaged in information and communications technology and life sciences to locate along the M4 corridor to the west of London in the United Kingdom), followed by the Province/Provincie Brabant Wallon (which includes a large science park in Louvain-la-Neuve, just to the south of Brussels, Belgium) and the capital city regions of Hovedstaden (Denmark), Praha (the Czech Republic), Stockholm (Sweden) and Île de France (France). These were the only regions where 8 % or more of total employment in 2011 was in high-tech sectors.

Unlike for other science, technology and innovation indicators, the share of total employment in high-tech sectors was generally not characterised by clusters of regions. Rather, the highest shares of employment in high-tech sectors in 2011 were from 12 different Member States: the United Kingdom was the only Member State with multiple regions in the top 15, as besides Berkshire, Buckinghamshire and Oxfordshire, a relatively high proportion of those employed in the southern English regions of Bedfordshire and Hertfordshire, Inner London, and Hampshire and Isle of Wight worked in high-tech sectors.

Among those countries with no regional breakdown available, Malta (5.7 %), Finland (5.6 %) and Estonia (4.1 %) were the only Member States to report employment in high-tech sectors above the EU-27 average; this was also the case in Iceland (5.2 %).

Ireland was the only multi-region EU Member State to report that even its lowest regional share of employment in high-tech sectors was above the EU-27 average (3.8 %), as 4.9 % of those employed in the Border, Midland and Western region worked in high-tech sectors. The same was true in Switzerland, as Ostschweiz (4.2 %) recorded the lowest regional share of employment in high-tech sectors across the seven level 2 Swiss regions.

There were six regions in the EU where 1 % or less of total employment was in high-tech sectors in 2011. Three of these regions were in Romania (Sud-Est, Nord-Est and Sud-Vest Oltenia), while there was a single region from each of Greece (Dytiki Ellada), Spain (Región de Murcia) and Poland (Swietokrzyskie). There were 19 regions in Turkey where the share of employment in high-tech sectors did not rise above 1 %.

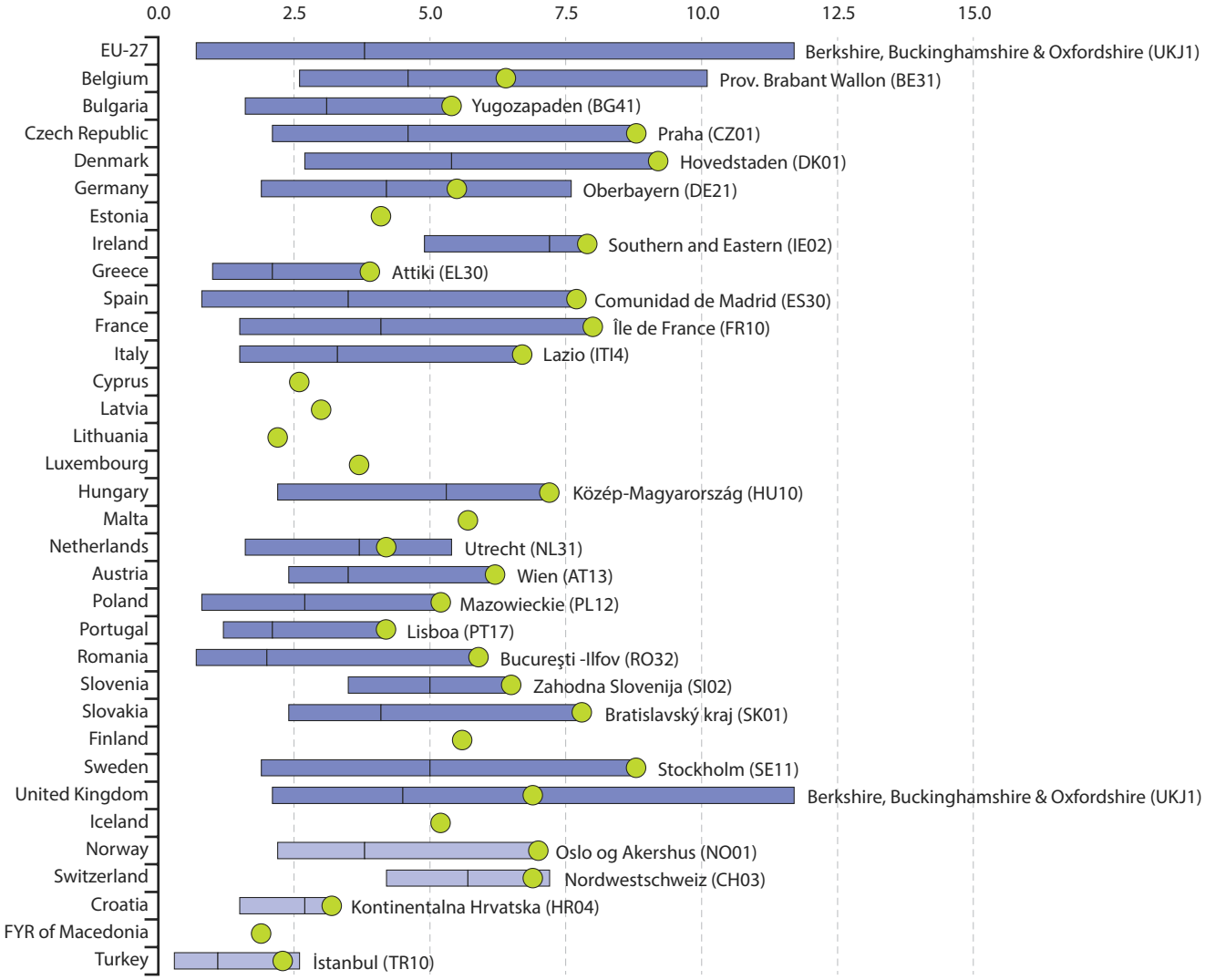
Patents

Patent counts can provide a measure of invention and innovation and a time series of data is available for an analysis by region. However, care should be taken in 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. Patent applications tend to be clustered geographically in a limited number of regions and this is especially true for high-tech activities.

Regional statistics for patent applications to the European Patent Office (EPO) 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.

Across the EU-27, there were in excess of 55 000 patent applications made to the EPO in 2009, equivalent to an average of 111.0 per million inhabitants. Map 11.4 shows that technological activity in the form of patent applications was very much concentrated in the centre of the EU. There were 158 NUTS level 3 regions in the EU (out of a total of 1 199 regions with data available) that had more than 250.0 patent applications per million inhabitants in 2009 and 26 of these regions had more than 500.0 patent applications per million inhabitants. Among the top 26 regions were 24 German regions as well as one region each from France and the Netherlands. The high degree of innovative activity in these 26 regions had a considerable impact on the EU-27 average. By contrast, the distribution of regions was heavily skewed in favour of those with relatively low levels of innovative activity,

Figure 11.4: Employment in high-tech sectors as a share of total employment, highest and lowest NUTS 2 regions, 2011 (1)
(%)



(1) High-tech sectors = high-technology manufacturing plus high-tech knowledge-intensive services (KIS); the graph shows the range from the highest to the lowest region for each country; the black vertical line is the average (mean); the green circular marker is the capital city (for those countries where there is no regional breakdown, the national average is used as the value for the capital region); the name of the region with the highest value is also included; the graph is based on available information (some regions are unreliable or not available); the latest data for some regions refers to 2008, 2009 or 2010.
Source: Eurostat (online data code: htec_emp_reg2)

as witnessed by the median value of 60.9 patent applications per million inhabitants across all NUTS level 3 regions in the EU, far below the EU-27 mean of 111.0.

The highest number of patent applications per million inhabitants was recorded in the German region of Erlangen, Kreisfreie Stadt (1 435.8), while the third highest number (1 228.9) was registered in the neighbouring Bavarian region of Erlangen-Höchstadt. Erlangen is home to a number of research institutes, a university and various offices of the Siemens engineering group. The second highest number of patent applications relative to population size) in 2009 was recorded in the Dutch region of Zuidoost-Noord-Brabant (1 381.3), while Heidenheim in Germany (1 059.2) was the only other region to report more than 1 000 patent application per million inhabitants. The one French region in the group of 26 regions that reported above 500.0 patent applications per million inhabitants was Isère (513.8) in the south-east of France; this region includes Grenoble where a number of large semiconductor and IT-related enterprises are located.

Aside from Germany, the Netherlands and France, the highest ratio of patent applications per million inhabitants in the

remaining EU Member States was recorded in the western Austrian region of Rheintal-Bodenseegebiet (442.2 patent applications per million inhabitants). Continuing down the ranking, the next Member States to figure were Denmark (Nordsjælland, 345.2), Sweden (Västmanlands län, 343.5), the United Kingdom (Cambridgeshire CC, 336.5) and Finland (Helsinki-Uusimaa, 307.9).

There were 26 NUTS level 3 regions in the EU reporting 1.0 patent applications per million inhabitants or less. These were spread across eight different EU Member States, with the highest number of regions from Romania (10 regions), Poland (six), Portugal (three), Bulgaria and Spain (both two), while there was a single region with one patent application per million inhabitants or less from each of Greece, Hungary and Lithuania.

The concentration of patent activity in central Europe extended beyond the EU's borders, with both Liechtenstein (1 202.3 patent applications to the EPO per million inhabitants) and Switzerland (393.3) reporting a much higher degree of patent activity than the EU-27 average in 2009. By contrast, the concentration of patent applications to the EPO made from Iceland (65.9 per million inhabitants) and Norway (89.0) was well below the EU-27 average, and this ratio fell considerably lower for the acceding and candidate countries for which data are available, as there was an average of 6.2 patent applications per million inhabitants in Croatia and 4.0 applications per million inhabitants in Turkey.

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 datasets, analysis (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 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 the EU LFS and structural business statistics (SBS)). The technology level of manufacturing activities is defined in terms of their R & D intensity (the ratio of R & D expenditure relative to value added).

For manufacturing, four groups are identified, depending on the level of R & D intensity: high, medium-high, medium-low and low-technology manufacturing sectors. High-technology manufacturing covers the manufacture of: basic pharmaceutical products and pharmaceutical preparations; computer, electronic and optical products; and air and spacecraft and related machinery.

For services, the activities are classified into knowledge-intensive services (KIS) and less knowledge-intensive services (LKIS). The former is then divided into high-tech knowledge-intensive services, knowledge-intensive financial services, knowledge-intensive market services (other than high-tech and financial services), and other knowledge-intensive services. High-tech knowledge-intensive services include motion pictures, video and television programme production, sound recording and music publishing activities, programming and broadcasting, telecommunications, computer programming, consultancy and related activities, information service activities, and research and development.

Data on patent applications to the 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.

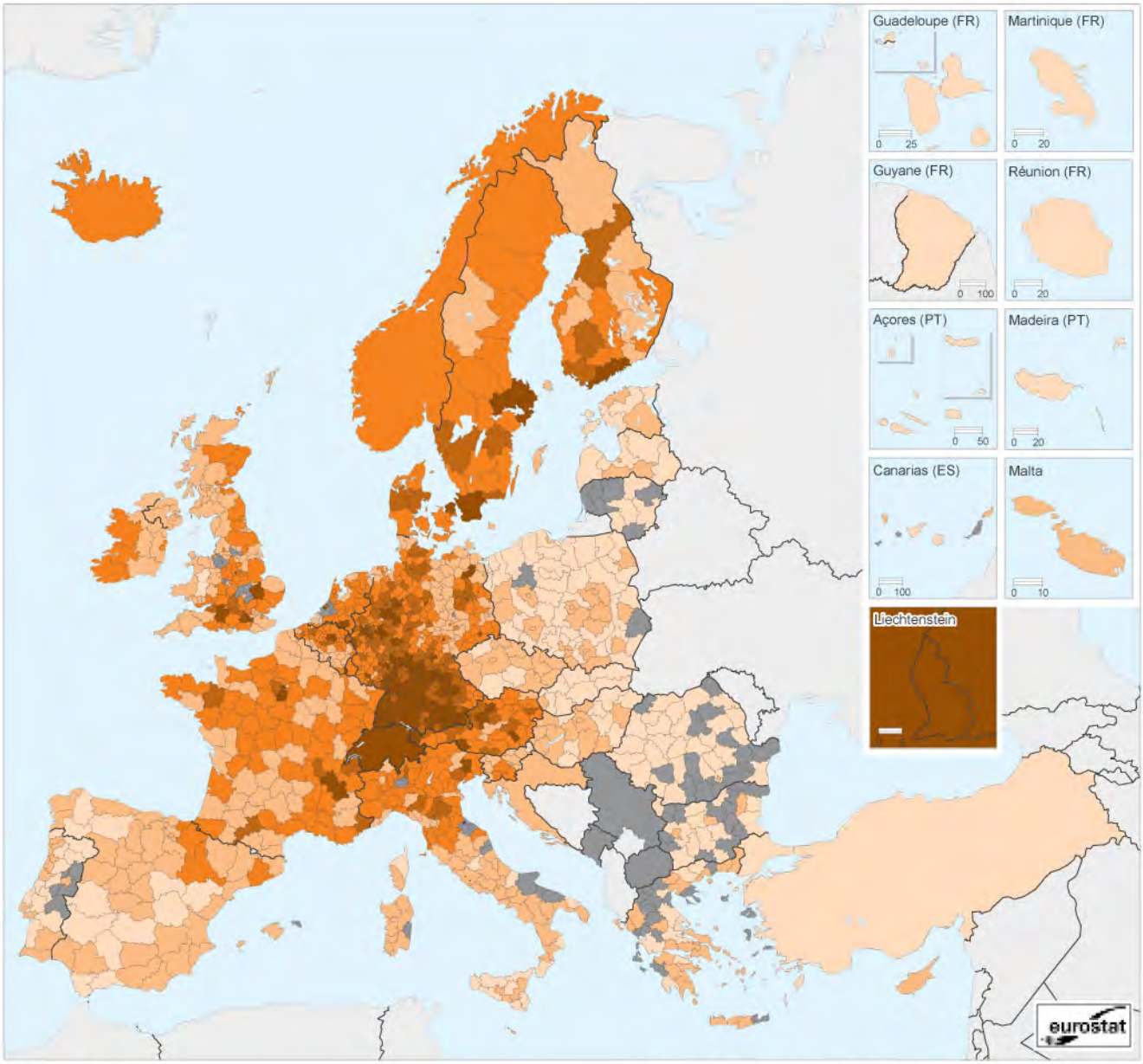
Context

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, among others, potentially resolve 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; it runs from 2007 to 2013 and has a budget of EUR 50.5 billion, with an additional amount of up to EUR 5.25 billion for nuclear research and training activities to be carried out under the Euratom Treaty.

Europe's research efforts have often been described as being fragmented along national and institutional lines. The European research area (ERA) was launched at the Lisbon European Council in March 2000 and aims to ensure open and

Map 11.4: Patent applications to the EPO, by NUTS 3 regions, 2009 (1)
(per million inhabitants)



(per million inhabitants)
EU-27 = 111.0

- <= 5.0
- 5.0 – 50.0
- 50.0 – 150.0
- 150.0 – 250.0
- > 250.0
- Data not available

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

0 200 400 600 800 km

(1) Provisional; EU-27, estimate; for a limited number of regions the latest data is for 2006, 2007 or 2008; Iceland, Liechtenstein, Norway, Switzerland, Croatia and Turkey, national level and estimates.

Source: Eurostat (online data code: pat_ep_rtot)

transparent trade in scientific and technical skills, ideas and know-how; it sets out to create a unified research area that is open to the world that promotes the free movement of researchers, knowledge and technology. In May 2008, the ERA was relaunched 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. A European Commission communication titled 'A reinforced European research area partnership for excellence and growth' (COM(2012) 392 final) is designed to ensure the completion of the ERA by 2014, focusing on five key priority areas for reform:

- more effective national research systems;
- optimal transnational cooperation and competition;
- an open labour market for researchers;
- gender equality and gender mainstreaming in research, and;
- optimal circulation and transfer of scientific knowledge.

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; it is hoped that the promotion of innovation will turn ideas into jobs, green growth and social progress. The innovation union seeks to use public sector intervention to stimulate the private sector and to remove bottlenecks which stop ideas from 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.

To avoid an 'innovation divide' between the strongest innovating regions in the EU and other regions, the European Commission intends to assist EU Member States to use the remaining Structural Funds programmed for 2007–13 for research and innovation projects. In 2011, the European Commission launched a research programme on public sector and social innovation and a pilot study for developing a European public sector innovation scoreboard.

Horizon 2020 is the framework programme for research and innovation after 2013, providing a simplification of existing innovation funding by building upon the previous framework programmes for research and technological development as well as the competitiveness and innovation framework programme (CIP) and the European Institute of Innovation and Technology (EIT). As such, Horizon 2020 will be the financial instrument for implementing the innovation union, and it is planned to have a budget of EUR 80 billion for the period 2014–20. In November 2011 the European Commission adopted a communication on 'Horizon 2020 — The framework programme for research and innovation' (COM(2011) 808 final), which is designed to promote research and innovation in the EU in support of the Europe 2020 strategy. The framework is composed of proposals for a series of implementing regulations in the following areas:

- a framework programme for research and innovation (2014–20);
- a set of rules for participation and dissemination in Horizon 2020;
- a specific programme for implementing Horizon 2020, and;
- a proposal for research and training programmes in relation to the Euratom Treaty for the period 2014–18.

12

Focus on European cities

Part of the Europe 2020 strategy focuses on sustainable and socially inclusive growth within the cities and urban areas of the European Union (EU). These are often major centres for economic activity and employment, as well as transport network hubs. Apart from their importance for production, cities are also focal points for the consumption of energy and other materials, and are responsible for a high share of total greenhouse gas emissions. Furthermore, cities and urban regions often face a range of social difficulties, such as crime, poverty, social exclusion and homelessness. The Urban Audit assesses socioeconomic conditions across cities in the EU, Norway, Switzerland, Croatia and Turkey, providing valuable information in relation to Europe's cities and urban areas.

Main statistical findings

Cities are the home of most work places, businesses and tertiary education institutions and often serve as hubs for intercity and suburban transport networks. This chapter presents indicators reflecting the structure of the population, the use of transport within cities and urban areas, as well as information about the number of tourists and the satisfaction (of residents) with cultural facilities. The indicators presented are just a few examples of the wide range of data available from the Urban Audit.

Living in cities and urban areas

Based on an urban–rural typology, 42.5 % of the EU-27's population lived in predominantly urban regions as of 1 January 2012, and a further 35.3 % 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 dataset includes data for more than 600 cities in the EU, of which only four capital cities had more than 3 million inhabitants, namely London (the 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 had a population of between 1 and 2 million inhabitants, of which 11 were capital cities. 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).

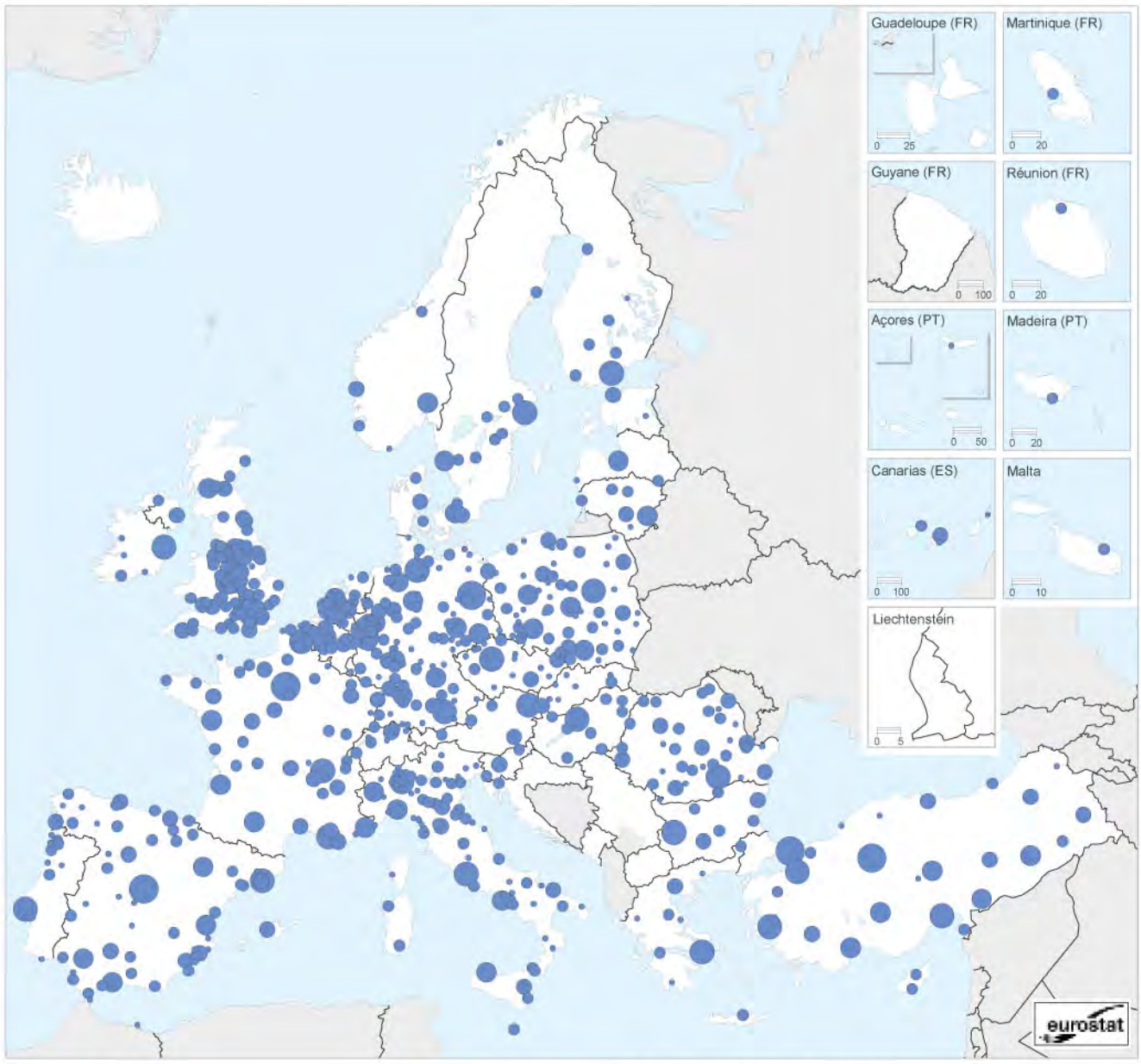
There were 36 cities with a population of between half a million and 1 million inhabitants, including the following capital cities: Amsterdam (the Netherlands), Riga (Latvia), Vilnius (Lithuania) and København (Denmark). A further 85 cities were in the next tier, with populations ranging between a quarter of a million and half a million, including Bratislava, Tallinn and Ljubljana, the capital cities of Slovakia, Estonia and Slovenia. Only two capital cities figured in the tier of 128 cities with 150 000 to 250 000 people, namely Lefkosia (Cyprus) and Valletta (Malta). The Urban Audit also provides results from a further 331 smaller cities in the EU, with fewer than 150 000 inhabitants, including the smallest capital city, namely Luxembourg.

Within each size category mentioned (more than two million inhabitants, between 1 and 2 million, between half a million and one million, between a quarter and half a million, between 150 000 and 250 000, less than 150 000) the aggregated population of all the cities covered by the Urban Audit was quite similar, between 22.5 million and 31.4 million for each category. The entire population of the 606 EU Urban Audit cities was 160.6 million persons: Urban Audit information for 2011 is available for most of these.

In Norway and Switzerland, the largest cities were Oslo with 599 000 persons and Zürich with 373 000. Bergen in Norway was the only other city with more than 250 000 persons, while Trondheim in Norway as well as Genève and Basel in Switzerland each had more than 150 000 inhabitants. Among the acceding and candidate countries the data availability is relatively complete for Turkey, although dating from 2004. The largest Turkish city, İstanbul, had 9.9 million inhabitants, larger than any city within the EU, while Ankara and İzmir also belonged to the group of cities with more than 2 million inhabitants. Two more Turkish cities (Bursa and Adana) had more than a million inhabitants, five more had more than half a million inhabitants.

Figure 12.1 analyses the nationality of the population in a selection of Urban Audit cities, distinguishing between nationals of the country, nationals of EU Member States and, finally, nationals of non-member countries. For the same 10 selected cities, the two parts of the figure contrast the situation in 2011 with that 20 years earlier in 1991; note that the graph for 1991 has been sorted in the same order as that for 2011 to aid comparison between these two periods. In most of these cities, the share of non-nationals grew, the only exceptions being Bratislava in Slovakia, where there was almost no change, and Liège in Belgium and Frankfurt am Main in Germany where the share of the national population increased by 3.1 and 7.0 percentage points respectively. The largest increases in the non-national populations among these 10 cities were in Luxembourg, Barcelona, Milano and Praha — each rising by more than 10.0 percentage points. In Milano this large increase was mainly due to an increase in nationals of non-member countries, whereas in Luxembourg it was due to an increase in nationals of other EU Member

Map 12.1: Total resident population in the Urban Audit core cities, 2011 (1)
(inhabitants)



(inhabitants)
- <= 100 000
- 100 000 – 250 000
- 250 000 – 500 000
- 500 000 – 1 000 000
- 1 000 000 – 3 000 000
- > 3 000 000

Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 04/2013

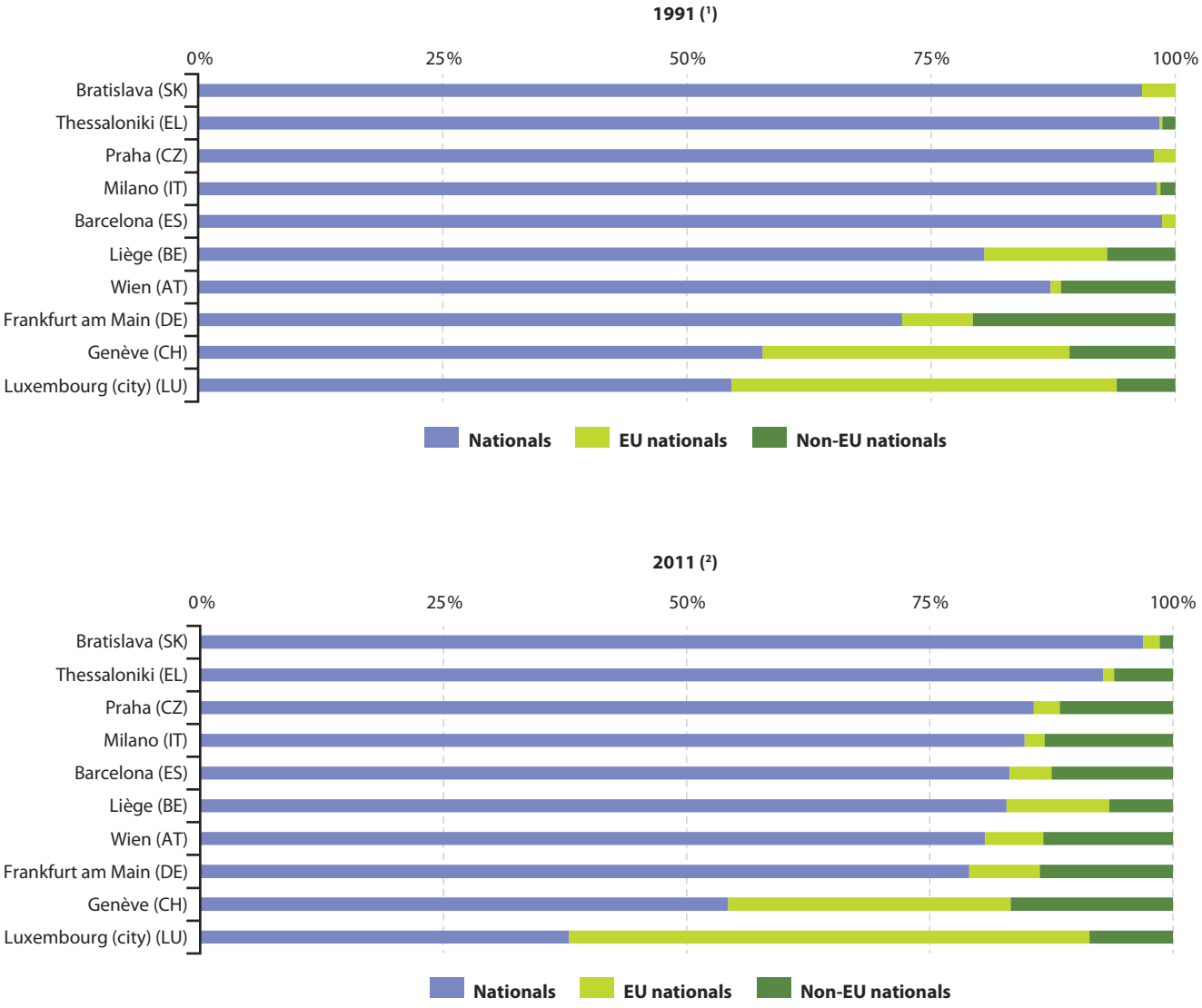
0 200 400 600 800 km

(1) For some cities an alternative reference period has been used, the exceptions are too lengthy to document; the information presented in the map relates to the most recent data available for each city.
Source: Eurostat (online data code: urb_icity)

States. In 2011, nationals of EU Member States other than Luxembourg were in a majority (53.5 %) in Luxembourg city, whereas in all of the other cities presented nationals of the country concerned were in a majority, albeit a relatively small one in Genève, Switzerland.

The subject of foreigners in cities is continued in Figure 12.2, but this looks at perceptions towards foreigners among all residents. The survey was conducted in 2012 and results are available for a total of 78 cities from all EU Member States as well as Iceland, Norway, Switzerland, Croatia and Turkey.

Figure 12.1: Breakdown of population by nationality in selected Urban Audit core cities, 1991 and 2011
(% share of total population)



(1) Barcelona (ES), Praha (CZ) and Bratislava (SK), EU nationals and non-EU nationals are combined.
(2) Milano (IT), 2010; Thessaloniki (EL), 2009; Luxembourg (city) (LU), Wien (AT) and Bratislava (SK), 2008; Frankfurt am Main (DE), 2007.
Source: Eurostat (online data code: urb_icity)

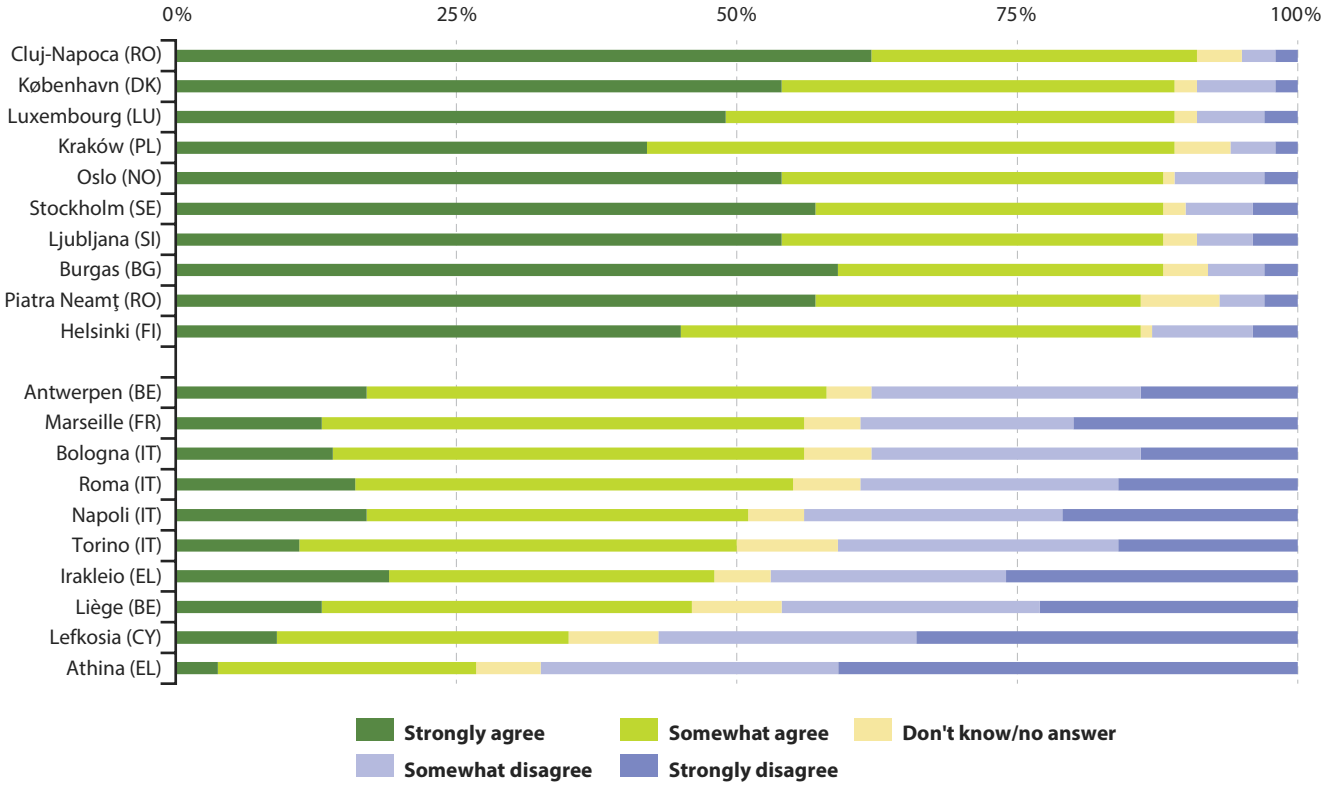
Concerning foreigners, the question asked was whether foreigners are good for the city, with respondents' answers classified as agreeing or disagreeing, and with these further distinguished between those holding stronger or weaker opinions.

The cities selected for inclusion in Figure 12.2 were those with the largest and the smallest share of respondents agreeing (strongly or somewhat) that foreigners are good for the city. The positive views ranged from 91 % in Cluj-Napoca (Romania) to 27 % in Athina, the Greek capital.

Among the 10 cities where residents' perception of foreigners was that they were good for the city were the capital cities of four Nordic countries: København (Denmark), Oslo (Norway), Stockholm (Sweden) and Helsinki (Finland). There were two other capital cities, namely Luxembourg and Ljubljana (Slovenia), as well as three cities in eastern Europe, Kraków (Poland), Burgas (Bulgaria) and Piatra Neamț (Romania). Information on the share of inhabitants that are non-nationals is not available for all of these cities, but among these cities with a large majority viewing the presence of foreigners positively was Luxembourg, with a majority of non-nationals, and Burgas, where nationals made up 99.7 % (2008 data) of the population.

Among the 10 cities with the lowest proportion of respondents viewing the presence of foreigners positively were two Greek cities (including the capital city), the capital city of Cyprus, two Belgian cities, four cities spread across Italy (including the capital city) and the French port city of Marseille. In four of these the proportion of respondents with positive views of foreigners fell below 50 %. Furthermore, as a proportion of respondents did not express an opinion, the proportion of respondents viewing the presence of foreigners negatively exceeded 50 % in Lefkosia (Cyprus) and Athina (Greece). Again, some information is available on the presence of foreigners in these cities where less than half of the population viewed the presence of foreigners positively: in Irakleio the share of nationals in the population was 96.0 % and in Athens it was 82.6 % (both 2008), while the analysis in Figure 12.1 shows that the share of nationals in Liège had increased between 1991 and 2011 from 79.8 % to 82.9 %.

Figure 12.2: Perception regarding the presence of foreigners and whether it is good for the city, selected Urban Audit cities, 2012 (1)
(%)

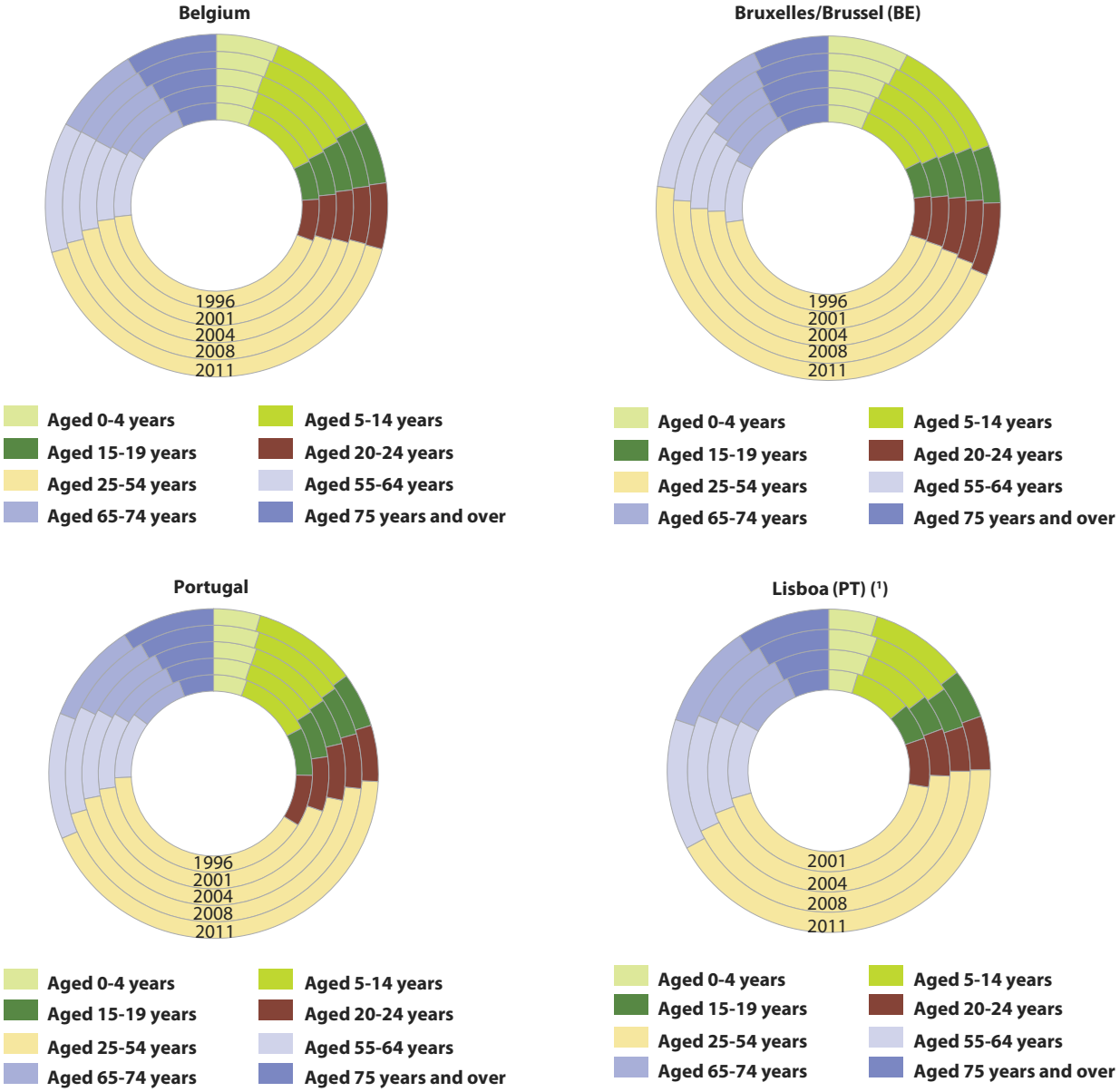


(1) Athina (EL), Paris (FR), Lisboa (PT), Manchester (UK) and Newcastle-upon-Tyne (UK), kernel city.
Source: Eurostat (online data code: urb_percep)

Age and old age

Figure 12.3 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, with a more stable share for persons of working age. The second example, namely for Lisboa and Portugal, shows how the developments in the capital city reflect the overall developments in the country as a whole. The share of older persons (aged 65 or more) in the population increased in Lisboa and in Portugal as a whole, while the share of younger persons (aged less than 15) decreased in Portugal; the share of working age persons (15–64 years) increased in Portugal through until 2004 after which it decreased, whereas in Lisboa the share fell across the whole time series.

Figure 12.3: Age structure of the population for Bruxelles / Brussel and Lisboa compared with Belgium and Portugal, 1996–2011
(% share of total population)



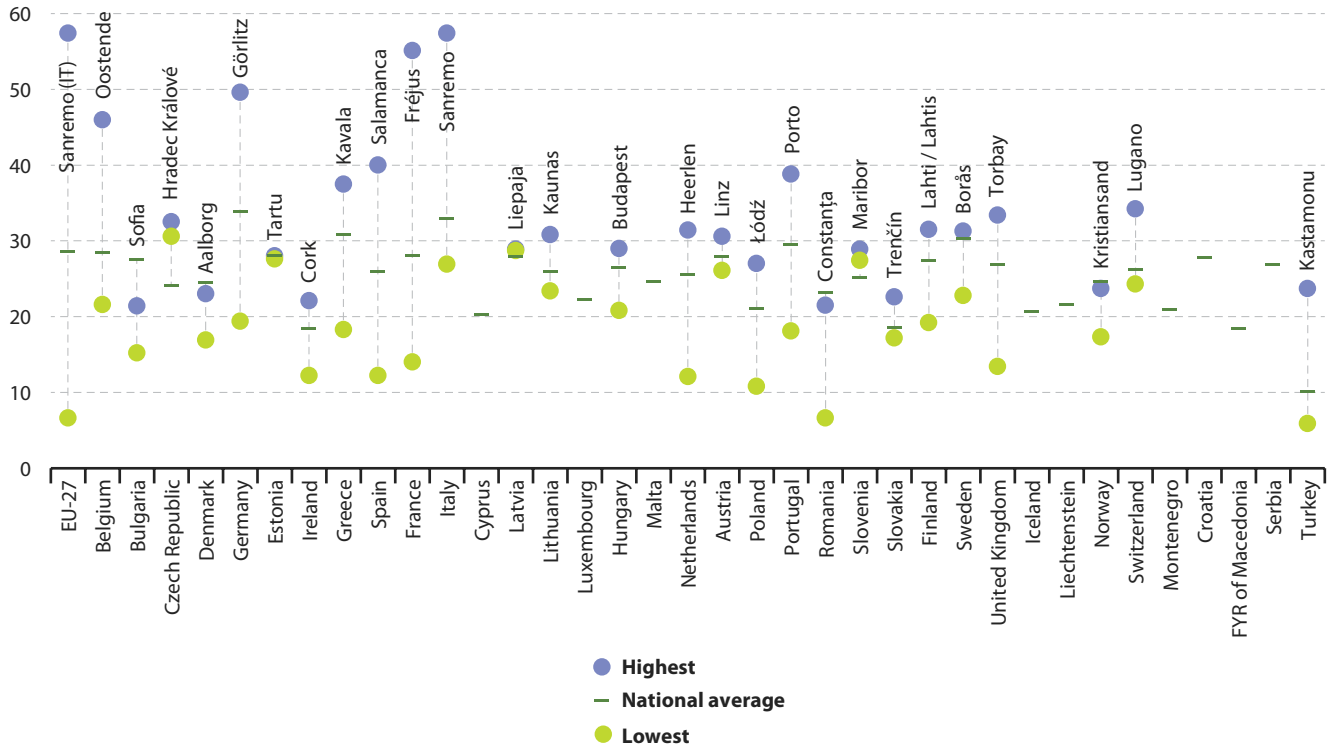
(1) 1996, not available.
Source: Eurostat (online data code: urb_icity)

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 602 Urban Audit cities in the EU and 42 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 (57 cities) and Germany (37 cities), with six cities in Spain, four in France, three in Belgium, and one each in Greece and Portugal. The largest cities with an old-age dependency rate above 35.0 % were Roma (the only capital city with an old-age dependency ratio in excess of 35.0 %), Milano and Torino in Italy, followed by Essen, Dresden and Leipzig in Germany, Genova in Italy and Nice in France. There were 19 cities where the old-age dependency ratio exceeded 50.0 %, all of which were in Italy — except for Fréjus in the south of France (55.1 %, 2009 data). At the top of the ranking was Sanremo in Italy, with an old-age dependency ratio of 57.4 %.

The lowest old-age dependency ratio among cities within the EU was 6.6 % in Slatina (Romania) and two other Romanian cities — Botoşani and Târgu Jiu — had the second and third lowest rates. In total there were 115 cities with an old-age dependency rate of 20 % or less: 29 were in Romania, 26 in the United Kingdom, 19 in Poland, eight in the Netherlands, six each in Bulgaria, Spain and Slovakia, three each in France and Ireland, and the remaining nine were spread across Denmark, Germany, Greece, Cyprus, Luxembourg Portugal and Finland. In amongst these cities with relatively low old-age dependency rates were seven capital cities: London (the United Kingdom) — the largest city, Dublin (Ireland) and Helsinki (Finland) with more than 1 million inhabitants, Amsterdam (the Netherlands) and København (Denmark) with more than half a million inhabitants, as well as Lefkosia (Cyprus) and Luxembourg. The largest cities with an old-age dependency ratio of 20.0 % or less that were not capital cities were Manchester and Bristol in the United Kingdom.

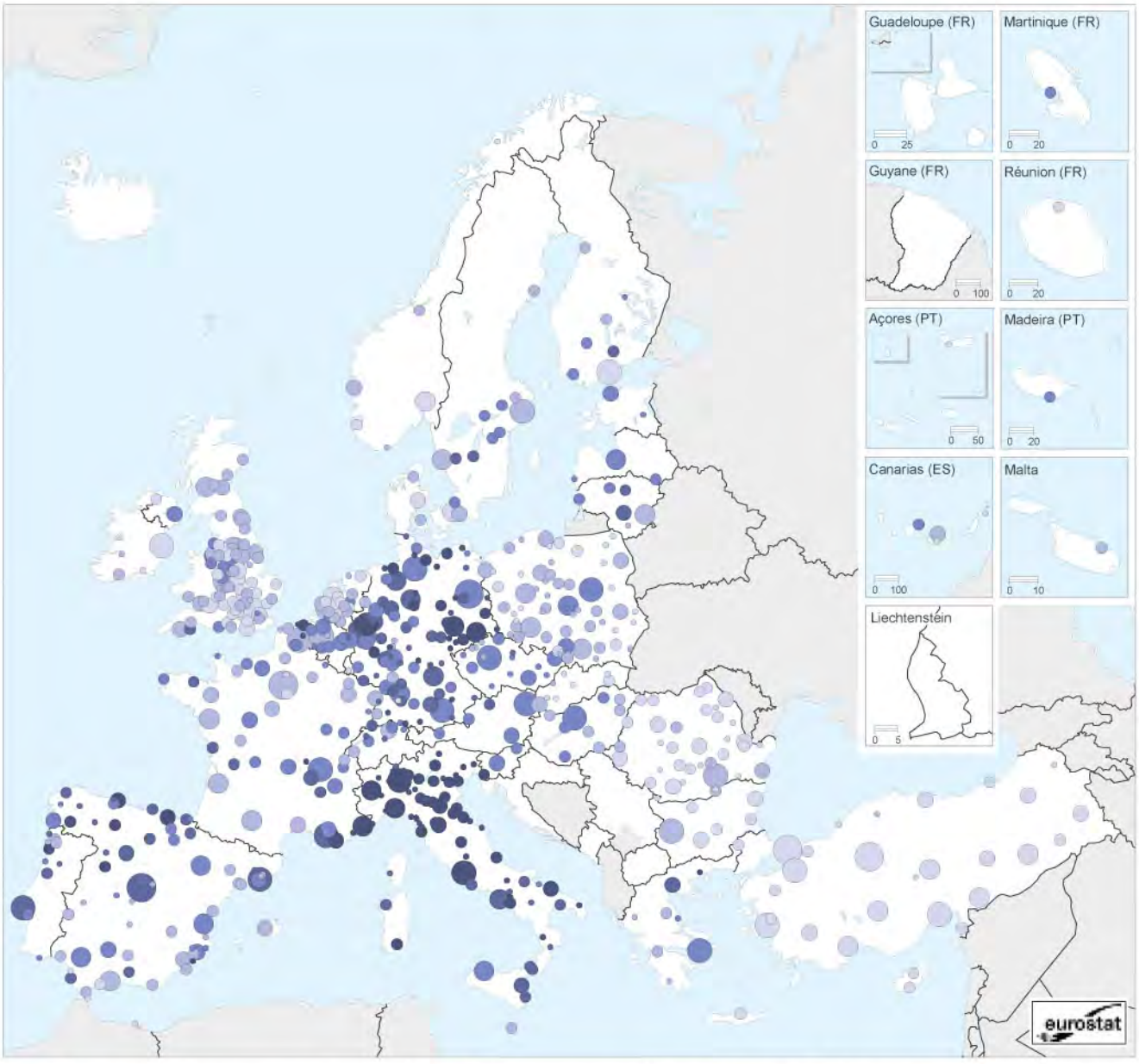
Figure 12.4 summarises the range of old-age dependency ratios among the Urban Audit cities in each Member State and compares this with the national average. The largest ranges can be seen in France, Italy, Germany, Spain and Belgium. In a few Member States — the Czech Republic, Denmark, Romania and Slovenia — the national average lies outside the range for the Urban Audit cities, indicating that there is a substantial difference in this ratio between Urban Audit cities and the rest of the country; this was also the case in Norway.

Figure 12.4: Old-age dependency ratio in the Urban Audit core cities, 2011 (1)
(%, persons aged 65 years and over compared with persons aged 20–64 years)



(1) Greece, France, Austria and the United Kingdom, 2009; Bulgaria, Estonia, Latvia, Slovenia and Helsinki (FI), 2008; Denmark, Ireland and Turkey, 2004; Dublin (IE), Athina (EL), Paris (FR), Lisboa (PT), Helsinki (FI) and Stockholm (SE), kernel city; the name of the city with the highest value is also included (note that this may be lower than the national average as only a small sample of cities are surveyed by the urban audit).
Source: Eurostat (online data code: urb_icity)

Map 12.2: Old-age dependency ratio in the Urban Audit core cities, 2011 (1)
(%, persons aged 65 years and over/persons aged 20–64 years)



(1) For some cities an alternative reference period has been used, the exceptions are too lengthy to document; the information presented in the map relates to the most recent data available for each city.

Source: Eurostat (online data code: urb_icity)

Transport

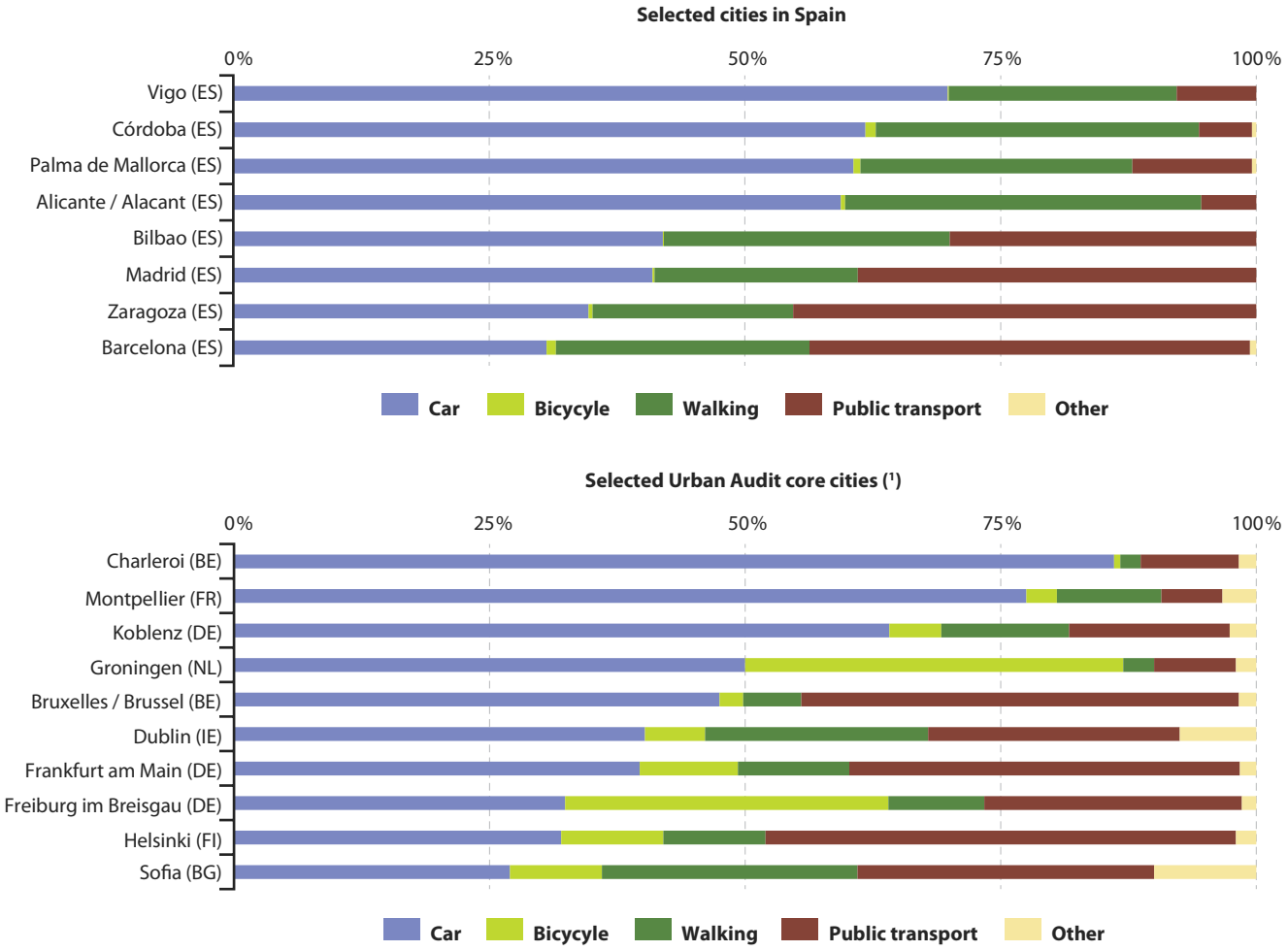
Means of transport for working in cities

The data presented in Figure 12.5 concern the use of walking and three other means of transport in Urban Audit cities. The analysis compares these eight Spanish cities with 10 cities in other countries, mainly in western Europe but also including one Nordic city (Helsinki in Finland) and one eastern city (Sofia in Bulgaria).

The Spanish cities are equally split between four cities where passenger cars are used by a clear majority of people for travelling to work. The Spanish cities with a relatively high share of car use tend to have a correspondingly low share of public transport use. Bicycle use in all of the Spanish cities is minimal, peaking at 1.0 % in Córdoba, while walking is used by between one fifth and one third of the inhabitants of these Spanish cities as a means of going to and from work.

Among the other selected cities, two stand out because of the very high use of bicycles to travel to work: Groningen in the Netherlands (where public policies actively support public transport, pedestrian areas and cycling), and Freiburg im Breisgau (in Baden-Württemberg in south-west Germany) which is reputed to be the sunniest city in Germany and renowned for its efforts for sustainable urban living — including biking. Two of the four capital cities, Bruxelles/Brussel (Belgium) and Helsinki, have a relatively high share of public transport use, as does Frankfurt. The other two capital cities, Dublin (Ireland) and Sofia, have a high share of people who walk to work. The three remaining cities show relatively high car usage for travelling to work, particularly in Charleroi (86.1 %).

Figure 12.5: Transport for journeys to work, by means of transport, in selected Urban Audit core cities, 2008 (% share of all journeys)



(1) Dublin (IE), 2004; Montpellier (FR) and Groningen (NL), 2003.
Source: Eurostat (online data code: urb_icity)

Public transport

The data presented in Figure 12.6 concern satisfaction with public transport services. These data come from the same 2012 perception survey that was used for opinions concerning the presence of foreigners. Results are available for 69 cities across the EU; these are ranked based on their share of inhabitants that considered themselves to be satisfied with public transport services. In 13 of these cities, more than four fifths of respondents indicated their satisfaction with public transport services and these included two cities in each of France, Austria, Finland and Sweden, as well as one city each in Germany, Spain, Luxembourg, the Netherlands and Slovenia. The highest levels of satisfaction were in the Finnish city of Oulu / Uleåborg and the Swedish city of Malmö where 90.0 % of respondents were very or rather satisfied. Less than half of the respondents were satisfied with public transport services in nine of the EU cities surveyed, including three Italian cities, two Greek cities, and one city each in Bulgaria, Germany, Lithuania and Romania: five of these were capital cities, namely Sofia (Bulgaria), Athina (Greece), Roma (Italy), Vilnius (Lithuania) and Bucureşti (Romania). The lowest satisfaction among those EU cities covered by Figure 12.6 was recorded in Napoli (Italy), where just over one fifth of respondents expressed their satisfaction with public transport services, which is around half the proportion that were not at all satisfied.

Passenger cars in cities and urban areas

As already shown, the use of the car for travel to and from work remains common in many cities, even where other modes of transport are used extensively; of course, passenger cars are also used for a range of other purposes. Map 12.3 analyses the motorisation rate within cities, in other words the level of car ownership relative to the number of inhabitants. Out of the 272 EU cities presented in the map, there were 15 where the motorisation rate exceeded 600 registered cars per thousand inhabitants, all except one of which were in Italy — Luxembourg was the sole exception. The highest motorisation rates were 709 and 708 per thousand inhabitants in the Italian cities of Potenza and Roma. By contrast, 27 cities had motorisation rates of 300 registered cars per thousand inhabitants or less: eight of these were in Slovakia, six in the United Kingdom, three in the Netherlands and the remaining 10 spread across Denmark, Germany, Estonia, France, Latvia, Hungary and Poland. Among these 27 cities were the capital cities of Denmark, Germany, Estonia, France, the Netherlands and Slovakia.

Road accidents

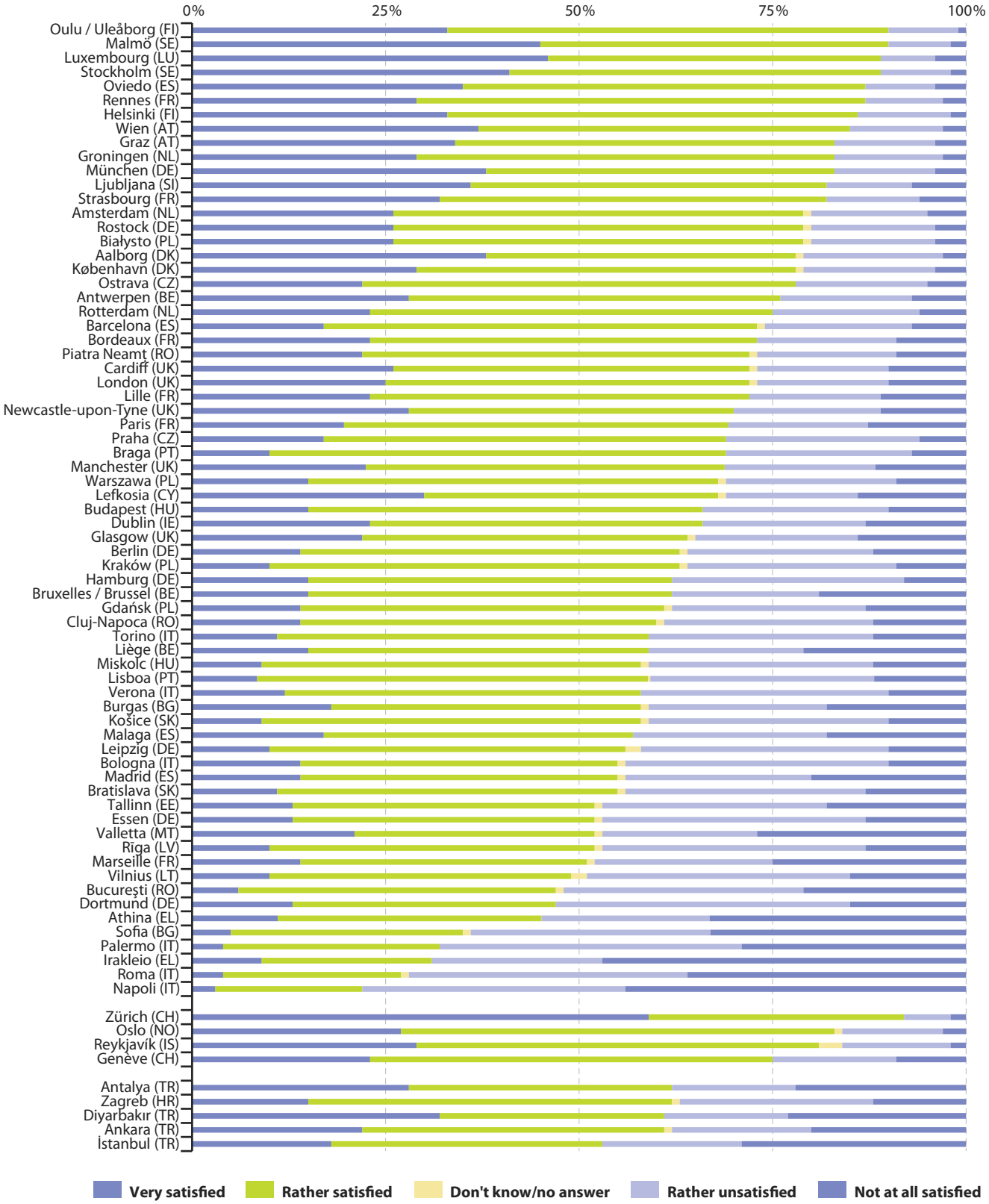
As well as congestion, pollution and cost, one of the negative aspects of road transport is traffic accidents. Figure 12.7 summarises the incidence of fatal road traffic accidents relative to population size (per 10 000 inhabitants). The highest incidence of such accidents was reported for Stara Zagora in Bulgaria, where there were 2.6 deaths per 10 000 inhabitants in 2008, while Timisoara, Braila and Giurgiu (all in Romania) were the only other cities to report more than 2.0 deaths per 10 000 inhabitants. Leicester and Cambridge in the United Kingdom and Uppsala in Sweden reported rates of 0.0 deaths per 10 000 inhabitants as did Kristiansand in Norway and St Gallen and Luzern in Switzerland. The rate of fatal road accidents in all Urban Audit cities was lower than the national average in Estonia, Ireland, Greece, Latvia, Lithuania, Hungary, Poland, Slovenia and Finland, a situation that was repeated in Norway — this may well be influenced by a number of factors, such as the type and quality of roads in urban areas and lower average speeds.

Cost of public transport and taxis

Two indicators related to transport costs are provided in Figure 12.8, one for a monthly public transport ticket and one for a 5 km taxi ride. The prices are presented in euro and therefore do not reflect differences in purchasing power, nor is information available on the extent of the public transport network that can be accessed. Four cities reported monthly public transport ticket prices above EUR 100.00, three of which were in the United Kingdom and the fourth, with the highest price of all, in the Netherlands (Heerlen). Two of the other cities featuring in the top 10 were also from these two Member States, along with three German cities and one Danish city; Berlin (Germany) was the only capital city in the top 10. Among the 10 Urban Audit core cities that displayed the lowest monthly public transport ticket prices, nine were in Romania, including the capital city, and one in Estonia. Four of these cities reported monthly public transport ticket prices below EUR 10.00.

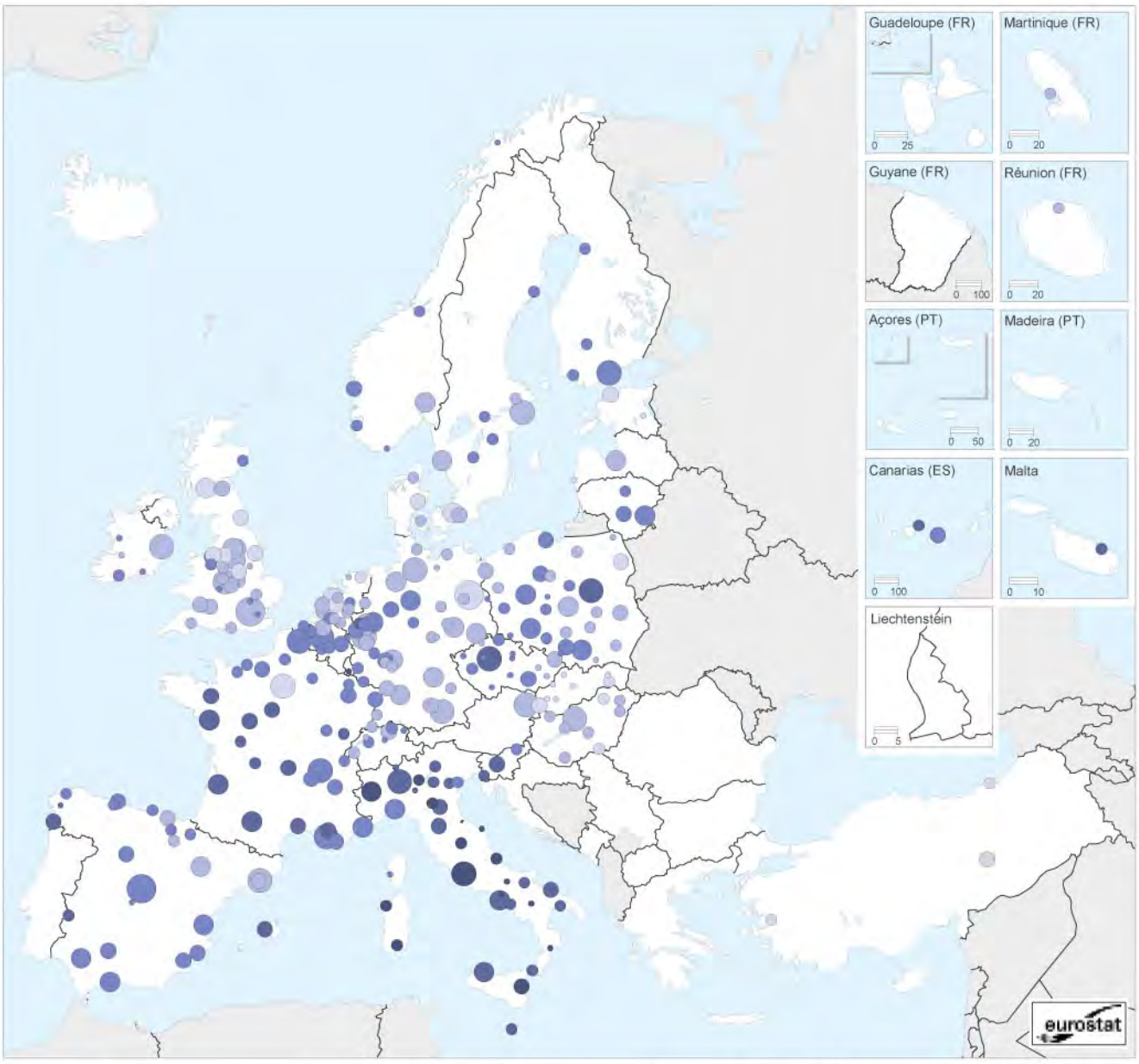
For a 5 km taxi ride to the city centre, Venezia in Italy was by far the most expensive city among the Urban Audit cities, the tariff of EUR 41.80 explained, at least in part, by the nature of the city with its canals and the type of transport that requires. Beyond this exceptional case, the most expensive taxi ride was EUR 16.00 in Utrecht (the Netherlands) — indeed, 4 out of the 10 most expensive cities for such a taxi journey were from the Netherlands, two from Italy and the others from Sweden, Finland, the United Kingdom and Germany; included in these were the capital cities of the Netherlands and Finland. Whereas Romanian cities dominated the list of the 10 cheapest public transport tickets, this position was taken by Bulgaria for taxi journeys: Bulgarian cities, including the capital city, took the first eight places in terms of the cheapest 5 km taxi rides, with a Polish and a Latvian city completing the list.

Figure 12.6: Satisfaction wth public transport services in selected Urban Audit cities, 2012 (1)
(%)



(1) Athina (EL), Paris (FR), Lisboa (PT), Manchester (UK) and Newcastle-upon-Tyne (UK), kernel city.
Source: Eurostat (online data code: urb_percep)

Map 12.3: Number of registered cars in the Urban Audit core cities, 2008 (1)
(per thousand inhabitants)



Registered cars
(per thousand inhabitants)

- <= 300
- 300 – 400
- 400 – 500
- 500 – 600
- > 600

Population of the core city
(inhabitants)

- <= 100 000
- 100 000 – 250 000
- 250 000 – 500 000
- 500 000 – 1 000 000
- 1 000 000 – 3 000 000
- > 3 000 000

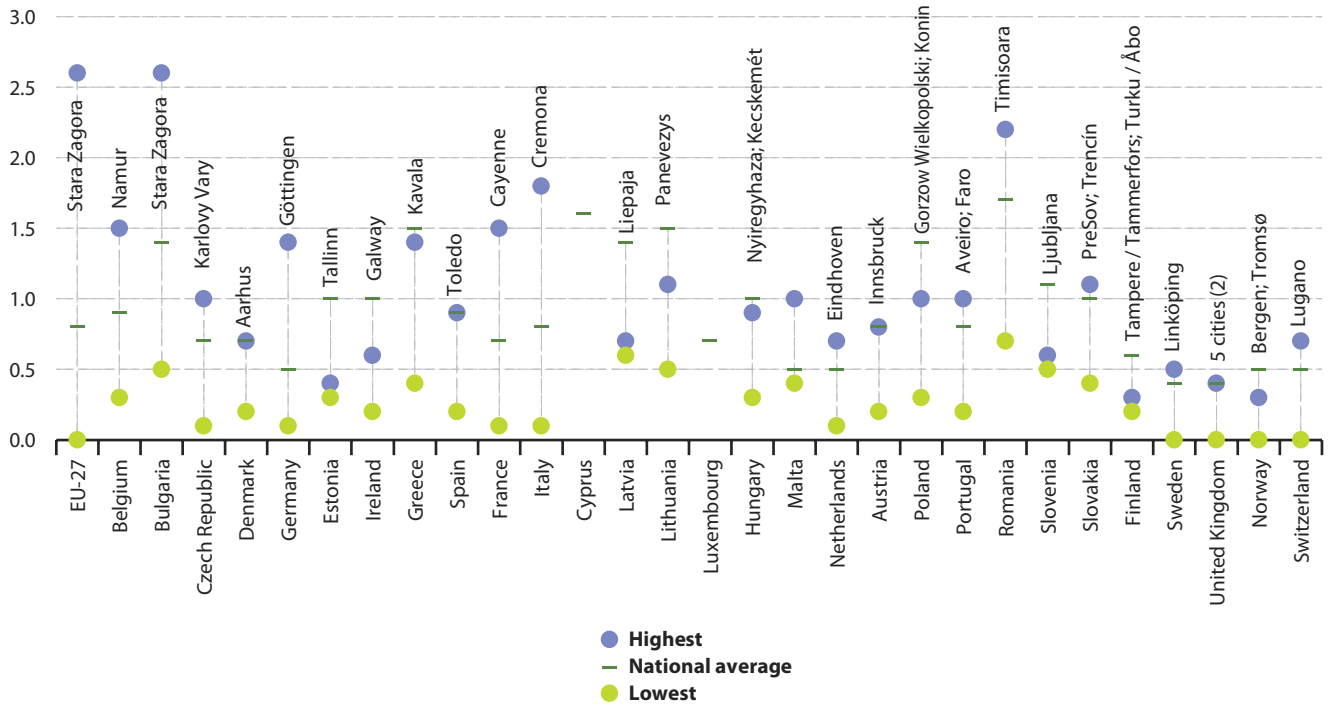
Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 04/2013

0 200 400 600 800 km

(1) Czech Republic and Germany, 2011; EU-27 and Malta, 2009; France, 2006; Dublin (IE), 2005; Ireland (except Dublin) and Turkey, 2004; Denmark, 2003; EU-27, estimate; Dublin (IE), Helsinki (FI) and Stockholm (SE), kernel city.

Source: Eurostat (online data code: urb_icity)

Figure 12.7: Number of deaths in road accidents in the Urban Audit core cities, 2008 (1)
(per 10 000 inhabitants)



(1) Czech Republic, 2011; Malta, 2009; Ireland and Greece, 2005; Denmark, France, Cyprus and the Netherlands, 2004; Dublin (IE), Athina (EL), Paris (FR), Lisboa (PT), Helsinki (FI) and Stockholm (SE), kernel city; the name of the city with the highest value is also included (note that this may be lower than the national average as only a small sample of cities are surveyed by the urban audit).
(2) Bradford; Belfast; Gravesham; Portsmouth; Wolverhampton.
Source: Eurostat (online data codes: urb_icity and road_ac_death)

Tourism

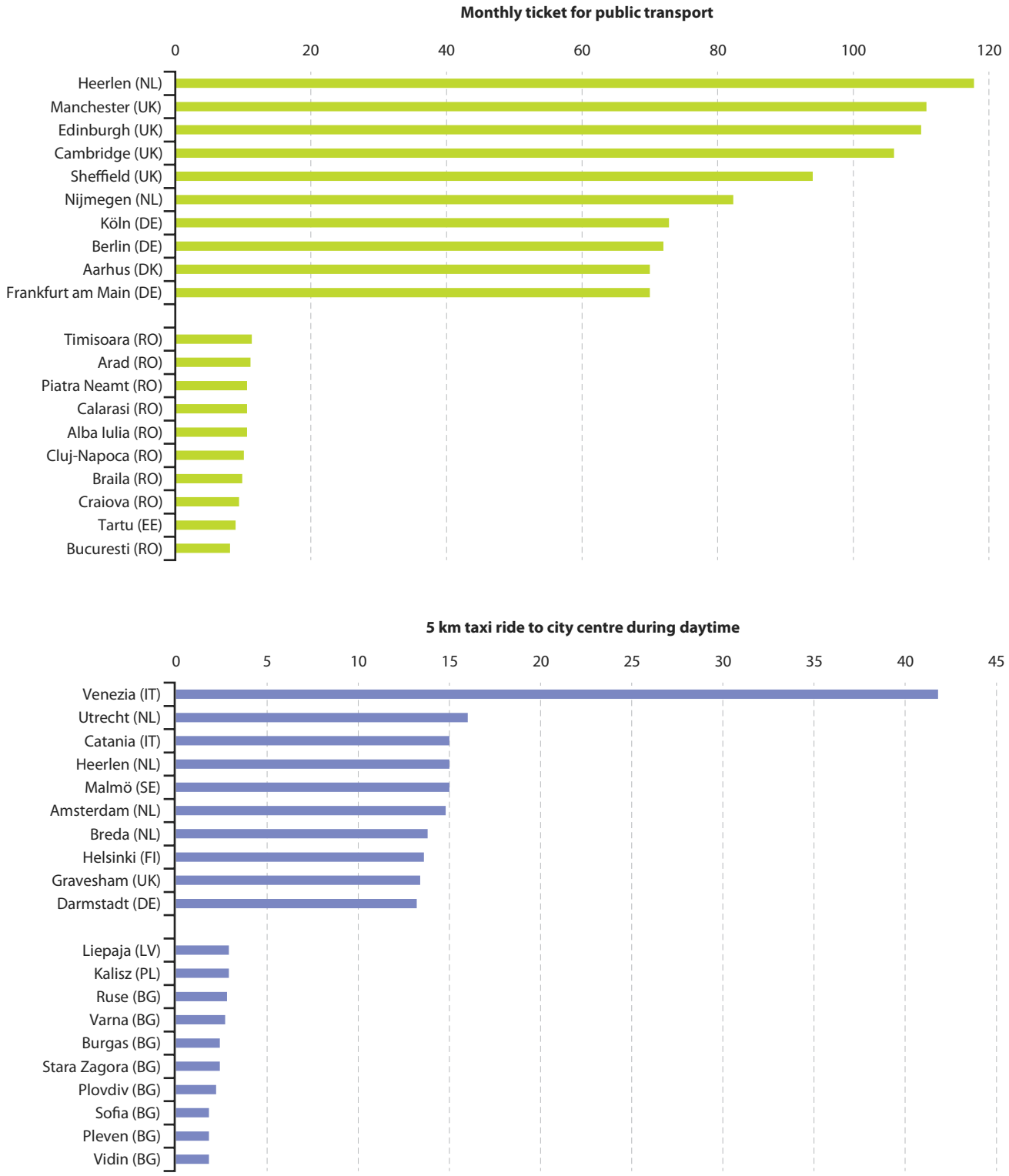
Although many holidaymakers head for rural areas, for example alongside coastlines and in mountainous regions (in summer and winter), cities are also important destinations for holidaymakers — note that they are also important destinations for business visitors who are also included in tourism statistics. Across the EU as a whole, the number of overnight stays by tourists (from all origins) averaged 4.8 per resident in 2011. Map 12.4 shows the same indicator for 457 Urban Audit cities within the EU and 16 cities in Norway and Switzerland. The top destination cities, by this measure, were Rimini in Italy (61.7 nights per resident), Marbella in Spain (56.3), and Karlovy Vary in the Czech Republic and Funchal in Portugal (both 34.1). Within the EU there were a further nine cities that reported more than 15.0 overnight stays per resident, four of which were in Italy, two in France and one each in Spain, Malta and the United Kingdom. By far the largest of all of these cities was Paris in France, followed by Edinburgh in the United Kingdom and Palma de Mallorca in Spain. The region of Luzern reported 14.6 overnight stays per resident, the highest ratio in Switzerland whereas the highest in Norway was 8.2 overnights stays in Tromsø.

Cultural facilities

The data presented in Figure 12.9 concern perceptions about cultural facilities in Urban Audit cities; these data come from the 2012 perception survey — the results are presented for 78 cities, of which 69 are in the EU.

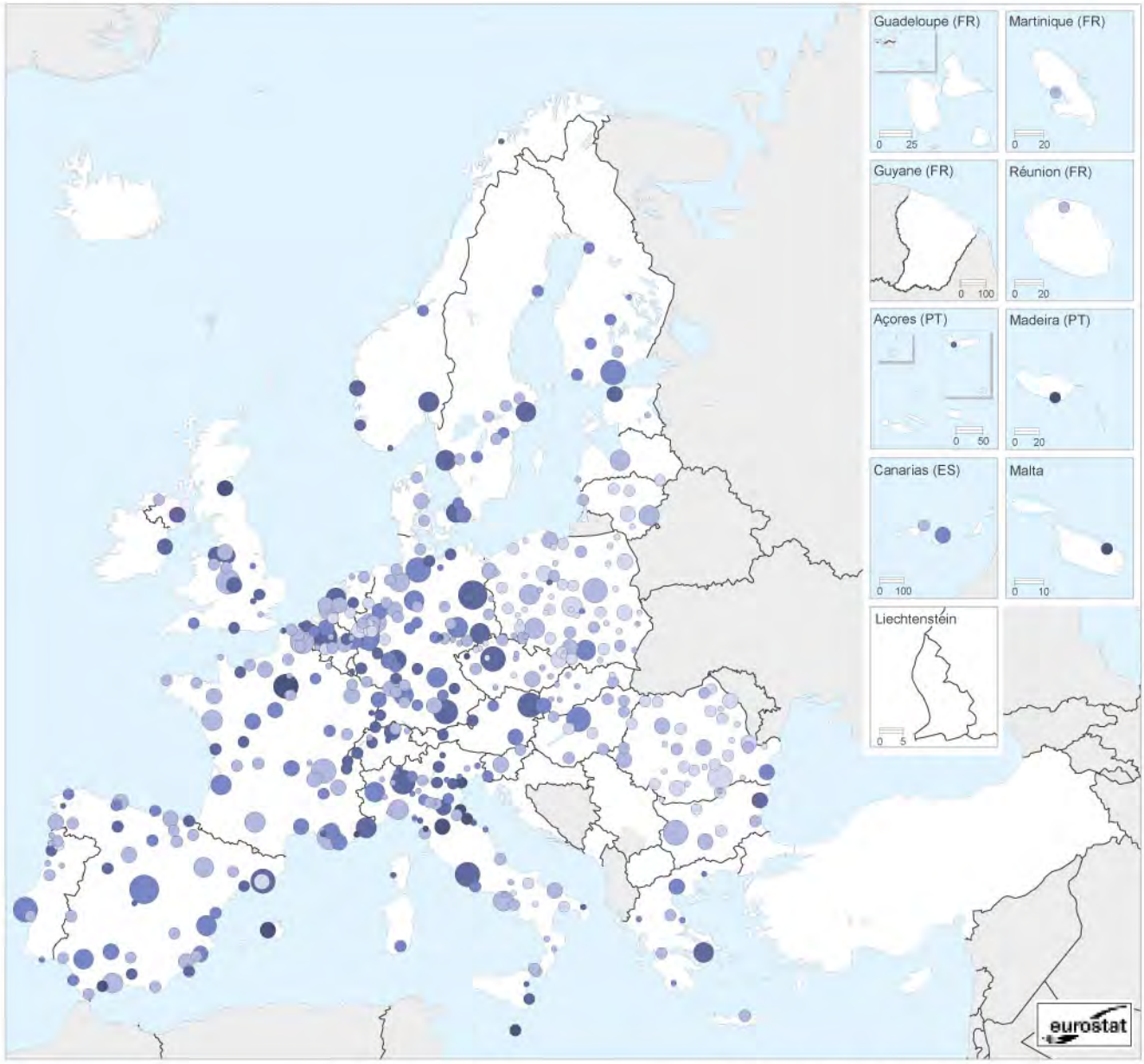
More than half of the respondents in every EU city, except for the Maltese capital, were very or somewhat satisfied with the cultural facilities that were on offer in their city, a situation that was repeated in all of the cities from EFTA countries and acceding and candidate countries. The share in Valletta (Malta) that were satisfied was particularly low (37%), although this can be partly explained by the particularly high proportion of interviewees that did not express an opinion (17%). More than 90% of respondents in 13 EU Urban Audit cities indicated their satisfaction with cultural facilities on offer in their city, reaching 95% or higher in the Finnish and Austrian capitals of Helsinki and Wien, as well as the southern Austrian city of Graz. Denmark, Germany, the Netherlands, Austria and Finland each had two cities and the Czech Republic, Sweden and the United Kingdom each had a single city where more than 90% of respondents were satisfied with their cities' cultural facilities; 6 of these 13 cities were capital cities. The cultural facilities in Zürich (Switzerland) and Oslo (Norway) were also considered to be satisfactory by more than 90% of respondents.

Figure 12.8: Highest and lowest transport costs in the Urban Audit core cities, 2008 (1)
(EUR)



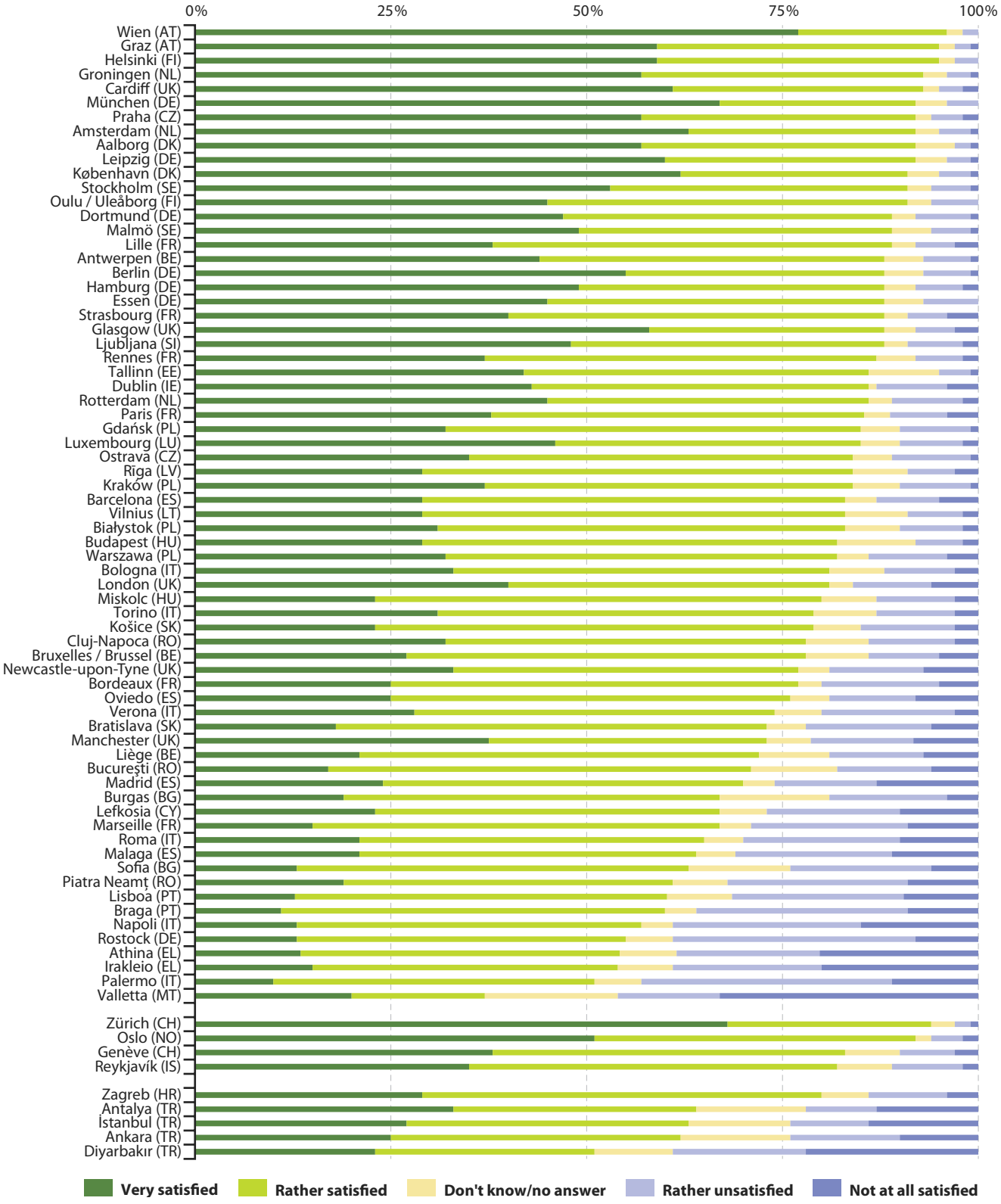
(1) Based on those cities for which data are available; Estonia and Romania, 2009; Edinburgh (UK) and Cambridge (UK), 2006; Aarhus (DK), Amsterdam (NL), Utrecht (NL), Heerlen (NL), Breda (NL), Nijmegen (NL) and Sheffield (UK), 2004; Helsinki (FI), kernel city.
Source: Eurostat (online data code: urb_icity)

Map 12.4: Number of tourist overnight stays in registered accommodation in the Urban Audit core cities, 2011 (1)
(nights per resident population)



(1) For some cities an alternative reference period has been used, the exceptions are too lengthy to document; the information presented in the map relates to the most recent data available for each city.
Source: Eurostat (online data code: urb_icity)

Figure 12.9: Satisfaction with cultural facilities (such as concert halls, theatres, museums and libraries) in Urban Audit cities, 2012 (1)
(%)



(1) Athina (EL), Paris (FR), Lisboa (PT), Manchester (UK) and Newcastle-upon-Tyne (UK), kernel city.
Source: Eurostat (online data code: urb_percep)

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 and Urban Policy.

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; the production of the maps that accompany this chapter reflects 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 is also defined for some cities based on commuter flows. These zones include the core city and the so-called 'commuter belt' around it.

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. 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 disparities, local administration, educational qualifications, the environment, climate, travel patterns, the information society and cultural infrastructure. Data availability differs from domain to domain: for example, figures relating to 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 collection exercise. The last survey took place in 2012 and included 78 cities in the EU, EFTA countries, Croatia and Turkey. Survey data were collected through telephone interviews for samples of 500 people in each city.

Context

An analysis of urban development reveals a contrasting picture: on the one hand, urban areas are a focus for economic activity and deliver a range of private and public services (education, healthcare and transportation hubs); on the other hand, these cities are often linked to environmental degradation and congestion, and may be centres of poverty or social exclusion.

Europe 2020

Within the context of cities and urban development, the European Commission has stated that 'it is crucial that all levels of governance be aware of the need to implement effectively the Europe 2020 strategy'. As such, regional policy and urban development play a central role in the EU's policy to achieve a smart, sustainable and inclusive economy. Three flagship projects within the Europe 2020 strategy — the digital agenda, the innovation union and youth on the move — address a series of urban challenges: for example, exploiting the full potential of information and communication technology; and the development of innovation partnerships for smarter and cleaner urban mobility. The promotion of green, energy-efficient cities can also play a valuable role in implementing the Europe 2020 strategy. Finally, social exclusion and segregation are predominantly urban phenomena — and while cities offer the most employment opportunities, they also report some of the highest unemployment rates.

To assist regional authorities and cities, the Committee of the Regions — in close cooperation with the European Commission — released a handbook on the Europe 2020 strategy for cities and regions that provides explanations on how local and regional authorities can contribute to the implementation of the strategy through adopting best practices and territorial pacts — agreements between different tiers of government (local, regional, national) — to coordinate and synchronise policy agendas so as to focus actions and financial resources on the Europe 2020 strategy goals and targets. In addition, the Committee of Regions has also set up a monitoring platform, composed of a group of over 160 cities, to monitor how Europe 2020 is implemented on the ground in cities and urban areas.

Sustainable investment

Suburbanisation, congestion and the risks of poverty, social exclusion and unemployment are challenges faced by many cities. Complex issues such as these require integrated solutions in terms of urban planning and regeneration, alongside the development of infrastructure, transport services, housing, training and labour market measures.

Urban development issues have been integrated, to a large extent, into regional and national programmes supported by structural and cohesion funds. The Leipzig charter on sustainable European cities, agreed in 2007, demonstrates the EU's further commitment to making urban areas healthy, attractive and sustainable places to live and work. Moreover, the exchange of best practice and networking between urban planners and other local experts is facilitated by the Urbact II programme, which promotes sustainable urban development through funding initiatives in relation to: active inclusion; urban renewal; disadvantaged neighbourhoods; human capital and entrepreneurship; innovation and creativity; low-carbon urban environments; metropolitan governance; port cities; and quality sustainable living.

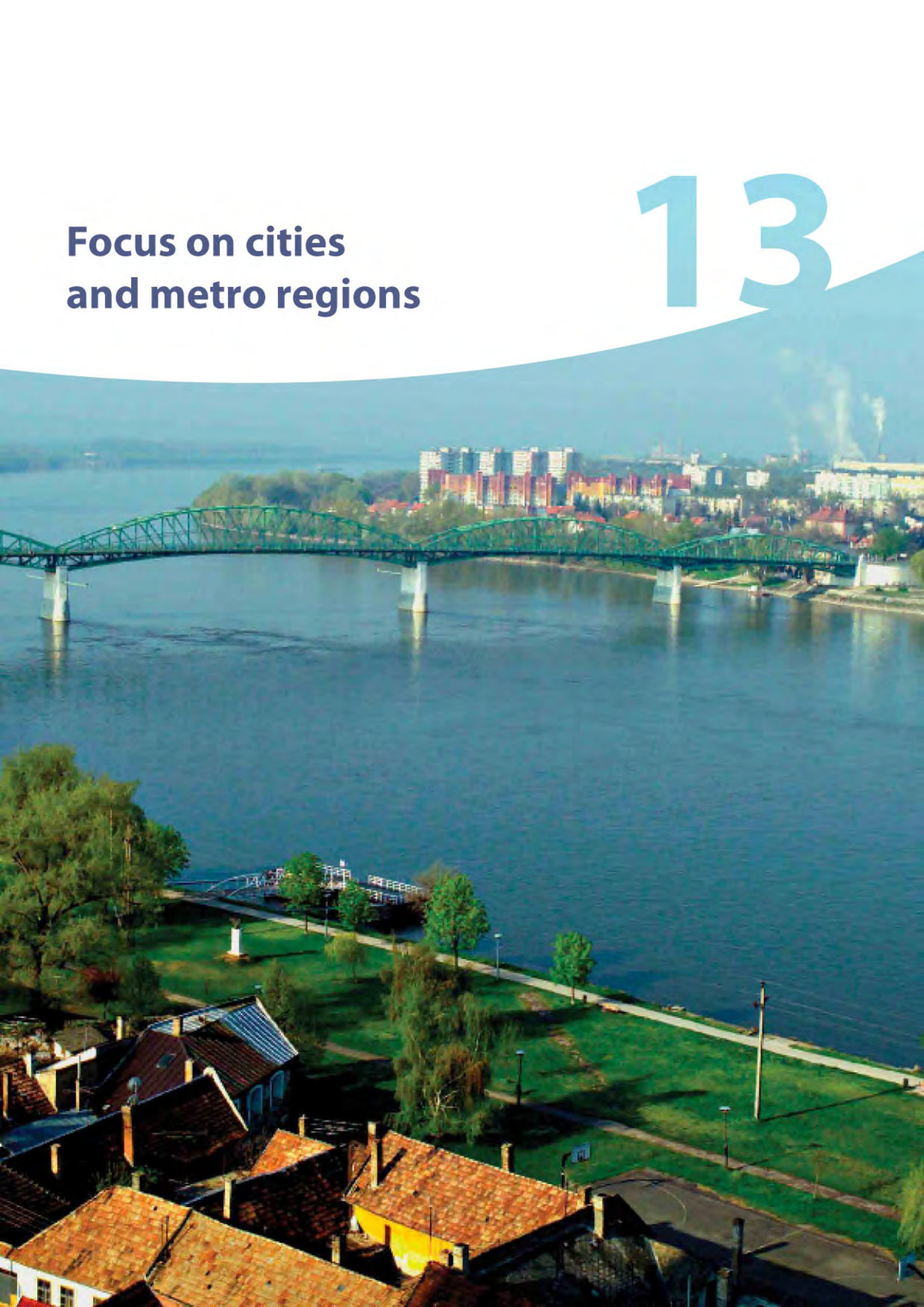
The joint European support for sustainable investment in city areas (Jessica) initiative was launched in 2009 by the

European Commission's Directorate-General for Regional and Urban Policy. It promotes sustainable urban development and regeneration through financial engineering mechanisms in cooperation with the European Investment Bank, the Council of Europe Development Bank and the European Investment Fund. The initiative provides support to finance projects in areas such as: urban infrastructure; heritage and cultural sites; redevelopment of brownfield sites; the creation of new commercial floor space; university buildings; or energy efficient improvements.

All of these initiatives seek to find a way to decouple economic growth from the use of resources, supporting a shift towards a low-carbon economy, promoting energy efficiency, increasing the use of renewable energy sources and modernising transport systems.

13

Focus on cities and metro regions



This chapter describes two linked typologies which have been developed to cover, without any overlaps or omissions, the whole geographical territory of the European Union (EU), Iceland, Norway, Switzerland and Croatia at the local and regional level. The typologies cover:

- the definition of a city and its commuting zone, and;
- a typology of metro regions.

As opposed to the typologies presented in the territorial typologies chapter of the 2012 edition of Eurostat's regional yearbook (the degree of urbanisation and the urban–rural regional typology) which rely mainly on population density, the two typologies presented in this chapter add a functional dimension. They are both forms of functional urban areas and are based on the flows of people commuting to work in a city.

Main statistical findings

Larger urban zones: a city and its commuting zone

Definition of a city

The new city definition works in four basic steps and is based on the presence of an 'urban centre', a new spatial concept based on high-density population grid cells.

Step 1: all grid cells with a density of 1 500 inhabitants per km² or more are selected (image 1 of Figure 13.1).

Step 2: the contiguous ([1]) high-density cells are then clustered, gaps ([2]) are filled and only the clusters with a population of at least 50 000 inhabitants (image 2 of Figure 13.1) are kept as an 'urban centre'.

Step 3: all the municipalities (local administrative units level 2 (LAU2)) with at least half their population inside the urban centre are selected as candidates to become part of the city (image 3 of Figure 13.1).

Step 4: the city is defined ensuring that:

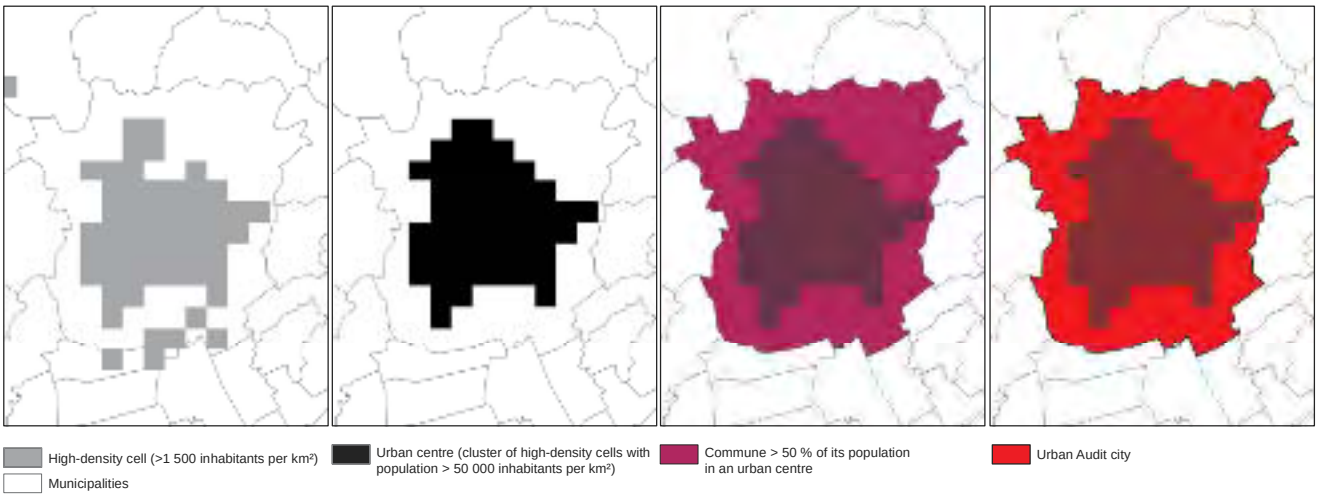
- there is a link to the political level;
- at least 50 % of the population lives in an urban centre, and;
- at least 75 % of the population of the urban centre lives in a city (image 4 of Figure 13.1).

In most cases, as for example in Graz (in Austria), the last step is not necessary as the city normally consists of a single municipality that covers the entire urban centre and the vast majority of the city's residents live in that urban centre.

For 33 urban centres stretching far beyond the city, a 'greater city' level was created to improve international comparability (for more details see the Directorate-General for Regional and Urban Policy's publication 'Regional focus: Cities in Europe — The new OECD–EC definition', L. Dijkstra and H. Poelman, January 2012).

To ensure that the above definition identified all relevant centres, national statistical authorities were consulted and minor adjustments were made where needed and consistent with this approach.

Figure 13.1: Defining a city — high-density cells, urban centre and city (Graz, Austria)



([1]) Contiguity for high-density clusters does not include the diagonal (in other words, cells with only the corners touching).
([2]) Gaps in the high-density cluster are filled using the majority rule iteratively. The majority rule means that if at least five out of the eight cells surrounding a cell belong to the same high-density cluster it will be added. This is repeated until no more cells are added.

Identification of a commuting zone

Once all cities have been defined, a commuting zone can be identified based upon commuting patterns using the following steps:

- if 15 % of employed persons living in one city work in another city, these cities are treated as a single city (image 1 of Figure 13.2);
- all municipalities with at least 15 % of their employed residents working in a city are identified (image 2 of Figure 13.2);
- municipalities surrounded ([6]) by a single functional area are included and non-contiguous municipalities are dropped (image 3 of Figure 13.3).

The larger urban zone (LUZ) consists of the city and its commuting zone.

For more details on the sources and reference years for the commuting zones, see 'Regional focus', January 2012.

A typology of metro(politan) regions

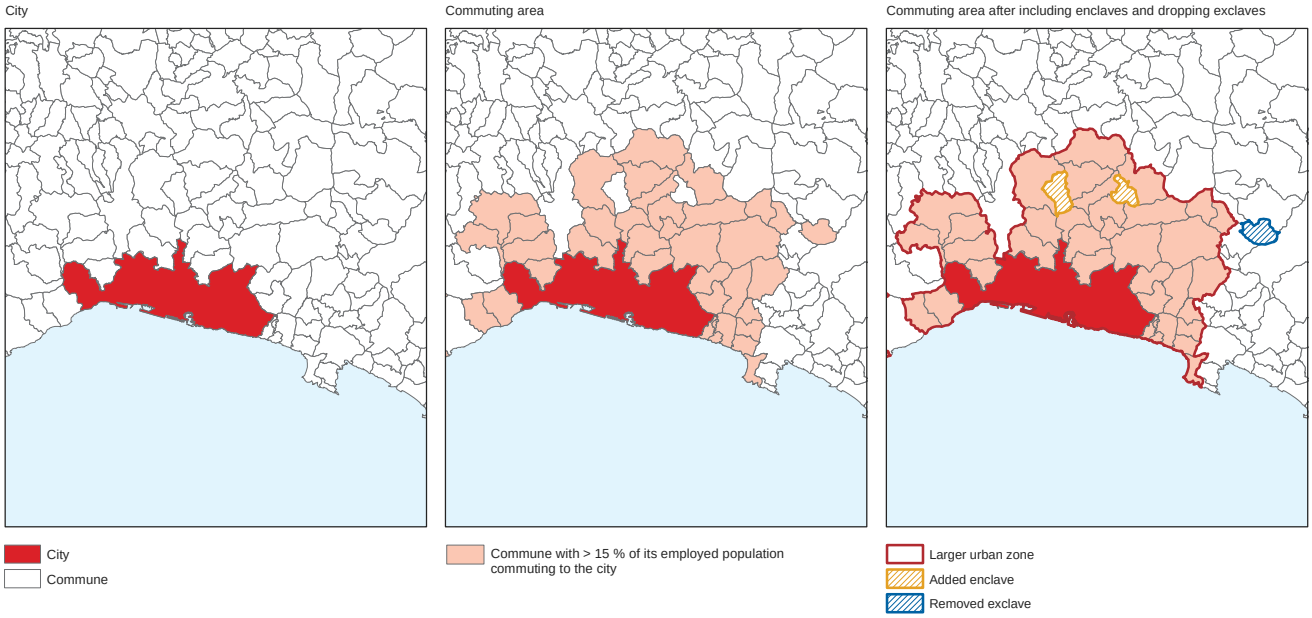
Metro regions are NUTS level 3 approximations of the larger urban zones (city and commuting zones) of 250 000 or more inhabitants following the definition described above. Each metro region consists of one or more NUTS level 3 regions and is named after the principal larger urban zone inside its boundaries.

The typology distinguishes three types of metro regions:

- capital metro regions; second-tier metro regions;
- smaller metro regions.

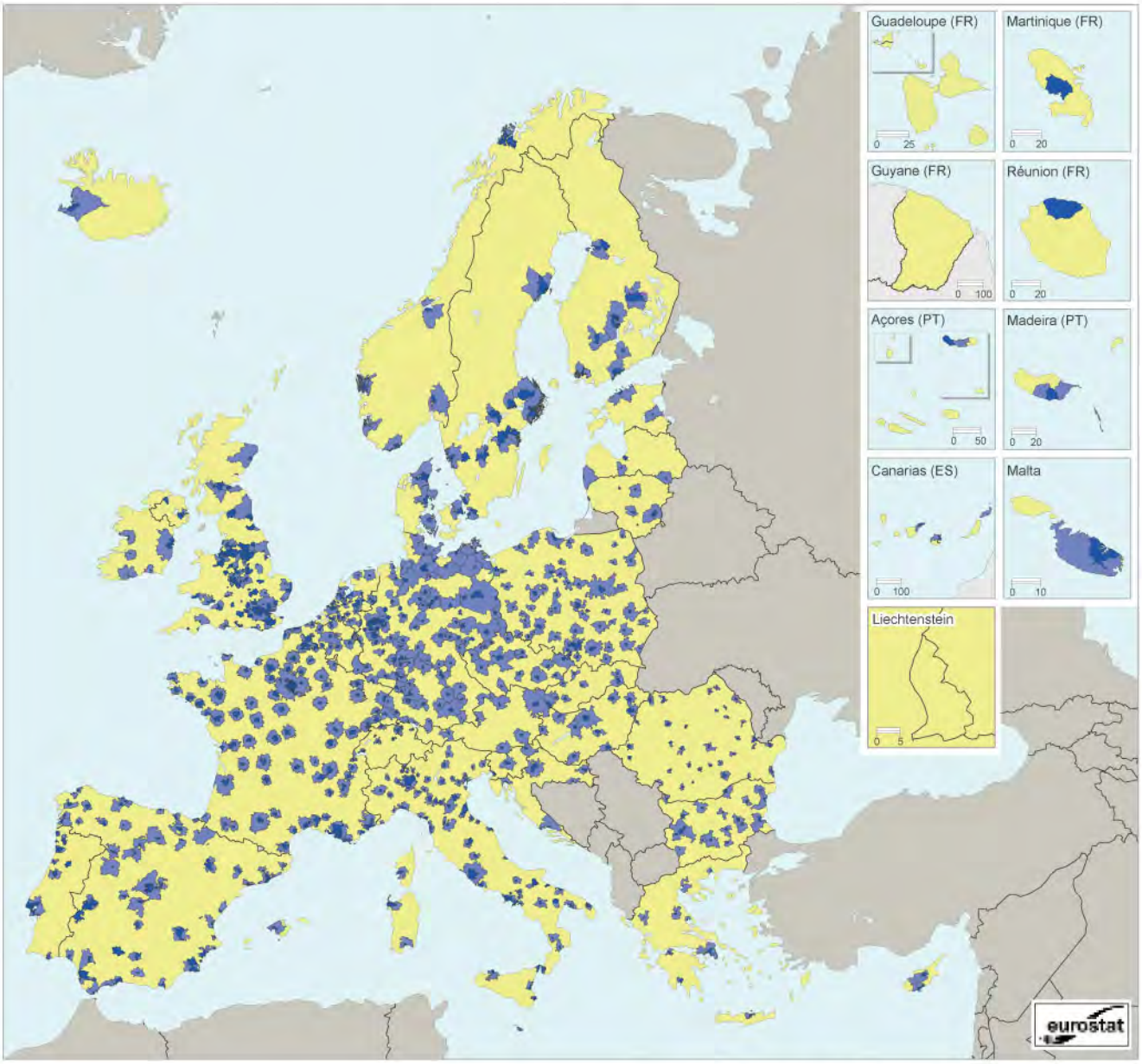
The capital metro region includes the national capital. Second-tier metro regions are the group of largest cities in a country, excluding the capital. For this purpose, a fixed population threshold could not be used. As a result, a natural break served the purpose of distinguishing the second-tier from the smaller metro regions. The regions which do not belong to a metro region are simply called non-metro regions. This typology can be simplified even further by grouping all individual metro regions together into metro regions.

Figure 13.2: How to define a city and its commuting zone (Genova, Italy)



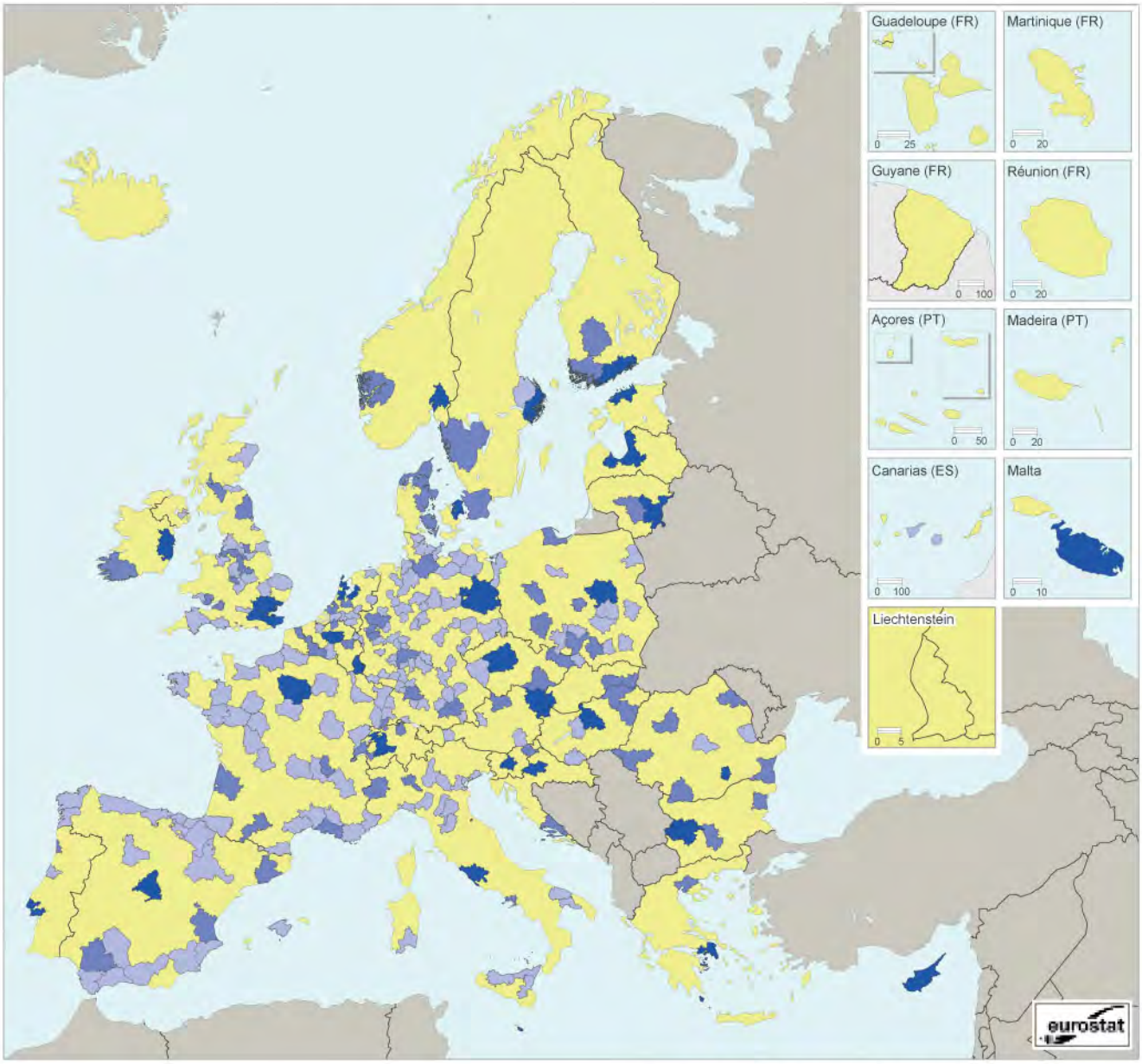
([3]) 'Surrounded' is defined as sharing 100 % of its land border with the functional area.

Map 13.1: Urban Audit cities and larger urban zones, 2012 (1)



(1) Based on population grid from 2006.
Source: Directorate-General for Regional and Urban Policy

Map 13.2: Typology of metro regions, 2012 (1)



(1) Based on population grid from 2006 and NUTS 2010.
Source: Eurostat, Directorate-General for Regional and Urban Policy

The boundaries of a larger urban zone do not necessarily coincide with those of NUTS level 3 regions. Therefore, NUTS level 3 regions in which at least 50 % of the regional population lives inside a given larger urban zone were selected as the components of the metro region related to that larger urban zone. In some cases, the NUTS level 3 approximation of the larger urban zone is very good. In others cases, the metro region may be larger or smaller than the larger urban zone. Each larger urban zone is represented by at least one NUTS level 3 region, even if that NUTS level 3 region has less than 50 % of its population inside the larger urban zone.

Links between the definition of a city and its commuting zone and the degree of urbanisation typology

The first building block of the city definition described above is the urban centre and this is identical to the one used in the degree of urbanisation typology. As a result, the city (or densely populated area) as defined in the degree of urbanisation is identical to the city definition described here. The two maps below show the two local typologies for the area of the Polish–Slovakian border.

The difference arises in the second building block. The city definition identifies contiguous areas which have strong commuting flows. These are the commuting zones (see Figure 13.3).

The degree of urbanisation identifies towns and suburbs (or intermediate density areas) and rural areas (or thinly populated areas) based on population density. As a result, these two categories partially overlap with the commuting zones. The towns and suburbs category will occur both inside commuting zones (in this case they are more likely to be suburbs) and outside (in this case they are towns). Rural areas fall primarily outside commuting zones, but some rural areas have developed a strong commuting relationship with a nearby city and thus can also be found in some commuting zones.

No link between metro regions and the urban–rural regional typology

The two local level typologies have one type in common, namely cities, whereas the two regional typologies each have different types. The typology of metro regions divides NUTS level 3 regions into metro and non-metro regions while the urban–rural typology divides NUTS level 3 regions into predominantly urban, intermediate and predominantly rural regions.

Despite the absence of an identical type or class of region, the two regional typologies are quite similar:

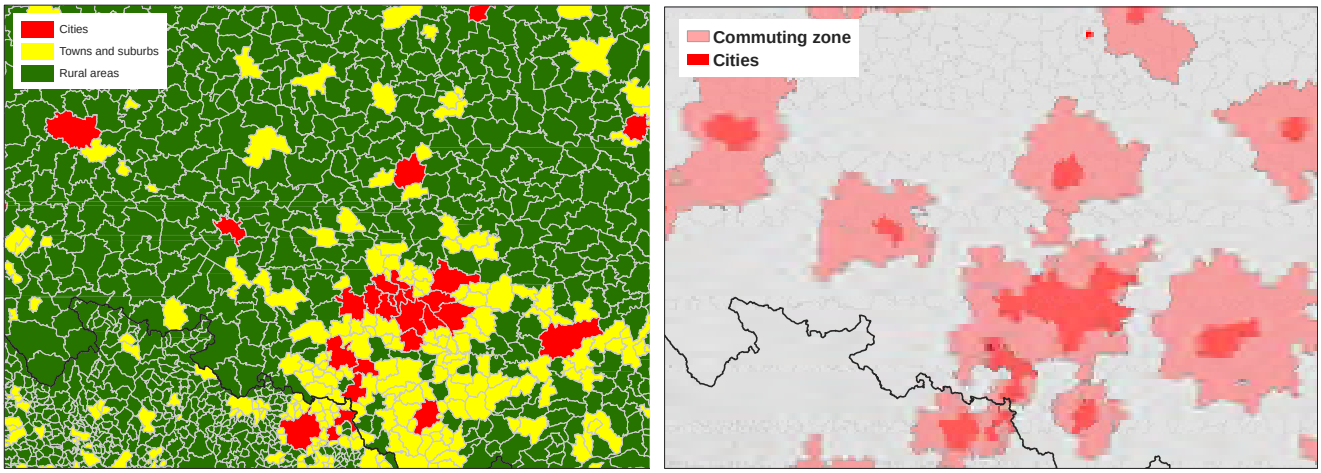
- most urban regions are metro regions and vice versa;
- most rural regions are non-metro and vice versa;
- intermediate regions are split between metro and non-metro regions.

Figure 13.4 shows the classification of regions close to the Polish–Slovakian border and contains examples of the most common links between these two regional typologies. The differences arise from three main sources: a different logic, different size thresholds, and; a different number of classes.

The different logic behind the two typologies can be described as morphological and functional. The urban–rural typology depends more on the population size and density, which in turn is determined by urban form. So this is a variant of the morphological definition. The typology of metro regions relies on the presence of an urban centre and of functional economic ties to this centre.

The two typologies use quite different size thresholds. Metro regions are related to cities plus commuting zones of at least

Figure 13.3: Cities and commuting zones compared with the degree of urbanisation on the Polish–Slovakian border



250 000 inhabitants. Urban regions represent urban centres of 50 000 or more inhabitants (which also define cities) and/or urban clusters of 5 000 or more inhabitants (which also define towns and suburbs).

The urban–rural typology has three types of region, while the typology of metro regions has only two.

Due to these differences, some urban regions will become non-metro regions because the city and its commuting zone are too small (or do not have a city). Some rural regions can become part of a metro region if they have strong commuting links to a city in that or a neighbouring region.

Data sources and availability

These two typologies — the definition of a city and its commuting zone and the typology of metro regions — have been developed to benefit from three different data sources: the Urban Audit, survey data using the degree of urbanisation and NUTS level 3 data.

The Urban Audit collects a limited number of key indicators for individual cities and their larger urban zone (city plus commuting zone) annually. This new definition ensures high international comparability both within Europe and — through cooperation with the OECD — outside of Europe.

Surveys using the degree of urbanisation can provide data points for all cities in a country. Usually the sample inside cities is sufficient to provide reliable estimates for the headline indicators, in other words the key indicators that refer to the entire population. This source cannot however provide data for the commuting zone and in most cases the sample is also too small to provide figures for individual cities. The main exception is labour force survey data for cities that are also NUTS level 2 regions, such as Inner and Outer London in the United Kingdom, the Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest in Belgium, Wien in Austria or Praha in the Czech Republic.

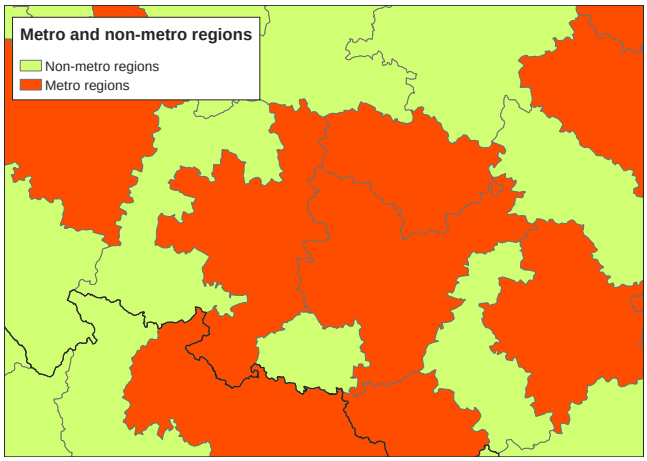
The metro regions allow an analysis of NUTS level 3 data. This is particularly useful to analyse changes in GDP and employment (by sector). This facilitates an assessment of the differences in GDP per inhabitant, labour productivity and employment shares and their changes over time. In addition, several other data collections are available for metro regions including patent data, population change and net migration.

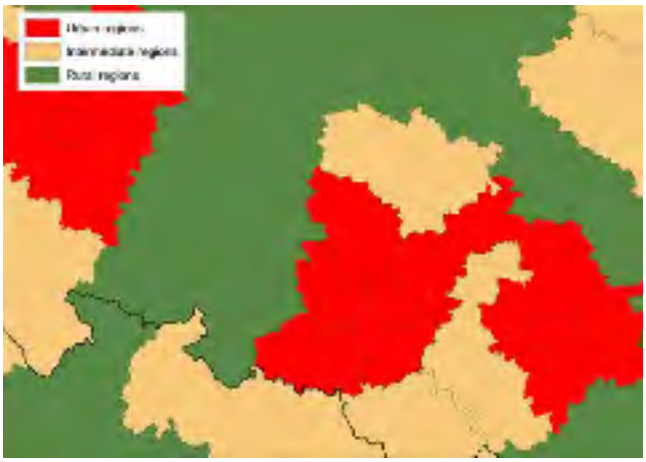
Context

The European Commission has introduced typologies based on population size, density and commuting flows to monitor the situation and developments in cities and metro regions.

The Lisbon Treaty included territorial cohesion alongside economic and social cohesion as an objective for the EU. This concept was presented in the 'Green Paper on territorial cohesion: turning territorial diversity into strength' (COM(2008) 616 final) and the background summarised in the sixth progress report on cohesion (2009). The fifth cohesion report explains the main issues related to territorial cohesion and how these could be incorporated into policy proposals. One of the main issues is the need for data on different territorial levels, particularly for lower (more detailed) geographical levels. The city definition and the typology of metro regions provide new insights into developments at the local and the regional level and improve data availability by linking and simplifying the number of territorial definitions.

Figure 13.4: Metro and non-metro regions and a typology of urban–rural regions on the Polish–Slovakian border





14

Focus on income and living conditions

European Union (EU) policies aim to substantially reduce the number of people at risk of poverty or social exclusion, thereby creating a more inclusive society. This chapter looks at a range of income and living conditions indicators: the analysis is presented according to different levels of population density, covering seven indicators that are used to monitor social inclusion and social protection. It is based on a classification of regions according to their degree of urbanisation, determined by their population density and total population; this results in three unique area types — densely populated (urban) areas, intermediate density areas and thinly populated (rural) areas.

Main statistical findings

People at risk of poverty or social exclusion

The number of people at risk of poverty or social exclusion is a headline indicator used to measure progress in meeting the goals of the Europe 2020 strategy, namely to have at least 20 million fewer people at risk of poverty or social exclusion by 2020. The indicator is a Boolean combination of three sub-indicators: the at-risk-of-poverty rate, the severe material deprivation rate and the share of people living in households with very low work intensity. A person is described as being at risk of poverty or social exclusion if he/she satisfies the criteria for at least one of these sub-indicators. The first sub-indicator — the at-risk-of-poverty rate — is a relative poverty indicator, as it measures the share of the population with an income that is less than 60 % of the national median disposable income. As a result, someone who is below the poverty line in Luxembourg (a country with a high median income) may not be considered as being at risk of poverty if he/she was living in Bulgaria (where the poverty line is based on a much lower level of median income) and receiving the same income. The second indicator is an absolute measure of poverty, as it measures — in the same way across all EU Member States — the proportion of the population who cannot afford at least four out of a list of nine items that are considered as being essential for everyday living (see 'Data sources and availability' for the full list and more information). The third indicator measures exclusion from the labour market: the work intensity of a household is defined as the ratio of the months worked by working-age household members compared with the theoretical number of months that could have been worked in the same period (if all working-age household members had worked full-time); any household with a ratio below 0.2 is considered as being a household with very low work intensity.

In 2011, some 24.2 % of the EU-27 population — or 119.6 million persons — were estimated to be at risk of poverty or social exclusion. This ratio peaked at 29.3 % of the population in thinly populated areas of the EU, with a rate that was considerably higher than those recorded for either densely populated areas (23.3 %) or intermediate density areas (21.0 %). These differences (by degree of urbanisation) suggest that the at-risk-of-poverty rate has a strong geographical dimension (in other words, a location effect) and that the differences in the ratios observed do not exclusively depend on personal characteristics such as education, employment status, household type and age.

In some of the most economically developed EU Member States — for example, Belgium, the United Kingdom, Austria, France, Malta, Luxembourg, Sweden and the Netherlands — densely populated areas were less inclusive, as they recorded the highest proportion of people at risk of poverty or social exclusion (when compared with intermediate density and thinly populated areas in the same country); the same was true in Iceland.

By contrast, in 19 of the EU Member States, principally those that joined the EU in 2004 or 2007 (excluding Malta), but also Spain, Greece, Ireland (data for 2010), Italy, Portugal, Germany, Denmark and Finland, thinly populated areas accounted for the highest proportion of people who were at risk of poverty or social exclusion. The proportion of people living in intermediate density areas who were at risk of poverty or social exclusion was always lower than in at least one of the other area types. Intermediate density areas recorded the lowest risk of poverty or social exclusion in nine of the Member States: Belgium, Denmark, Germany, France, Italy, Luxembourg, Malta, Austria and Sweden. The presence of some of the largest Member States within this list (principally Germany, France and Italy) explains, to a large extent, why intermediate density areas had the lowest risk of poverty or social exclusion across the whole of the EU-27.

The highest risk of poverty or social exclusion within densely populated areas was recorded in Bulgaria (38.6 %), despite this being by far the lowest proportion of people at risk in Bulgaria for the three types of area (that are detailed in Figure 14.1). Indeed, Bulgaria recorded the highest risk of poverty or social exclusion for each of the three degrees of urbanisation, 54.7 % for intermediate density areas and 57.7 % for thinly populated areas. Bulgaria also recorded the widest range between at-risk-of-poverty or social exclusion rates for the three different degrees of urbanisation (a difference of 19.1 percentage points between thinly and densely populated areas). There were also considerable differences between the rates reported across Romania (19.0 percentage points), while relatively large gaps (10.0 percentage points or more) were also evident in Lithuania, Spain, Poland and Hungary — where the highest risk of poverty or social exclusion was consistently recorded for thinly populated areas and the lowest risk was registered in densely populated areas. By contrast, the risk of poverty or social exclusion was 11.4 percentage points higher in the densely populated areas of Austria than it was in intermediate density

areas, for which the lowest proportion of the population was at risk according to this indicator. A similar pattern was observed in Belgium, with a difference of 10.1 percentage points between the high for densely populated areas and the low for intermediate density areas.

The risk of poverty or social exclusion, as a function of the degree of urbanisation, did not vary greatly in the three EFTA countries for which data are available (Iceland, Norway and Switzerland). The largest difference in the risk of poverty or social exclusion was recorded in Switzerland, where thinly populated areas recorded a rate that was 4.5 percentage points higher than for intermediate density areas.

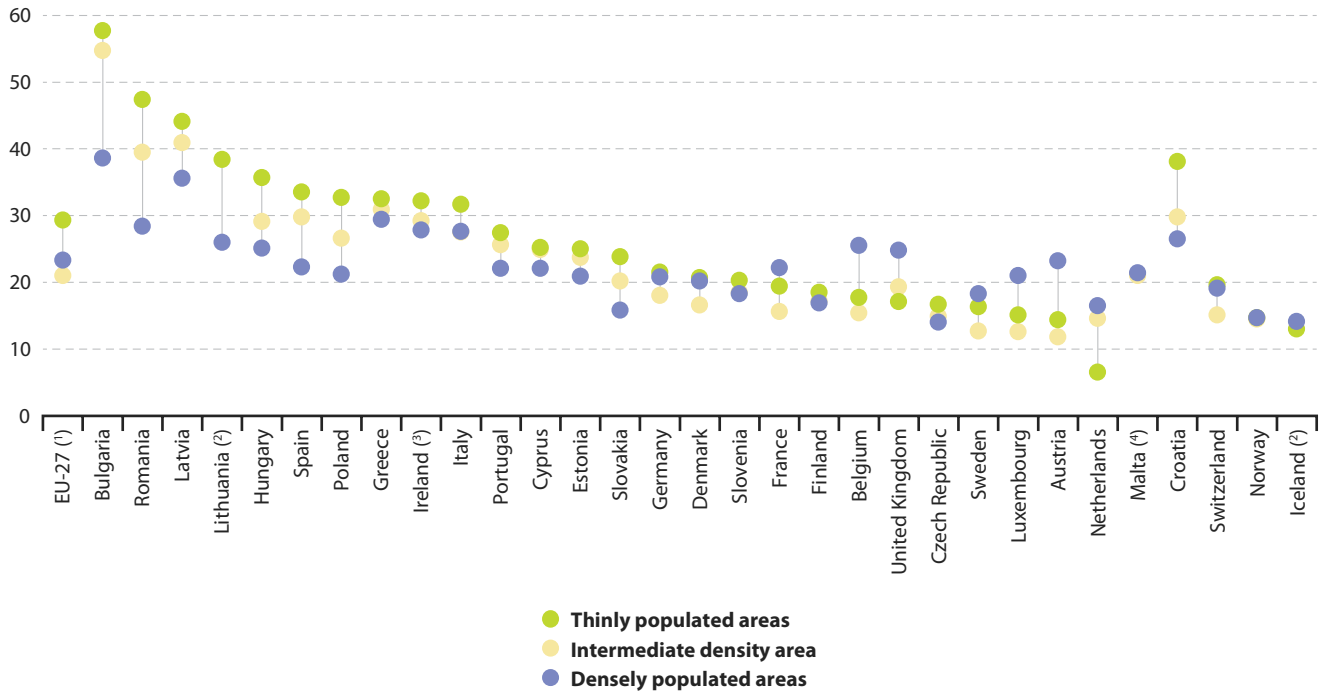
The range was wider in Croatia, where thinly populated areas recorded the highest risk of poverty or social exclusion (38.1 %), which was 11.1 percentage points more than in densely populated areas.

People at risk of poverty

Figure 14.2 presents a similar analysis (to that of Figure 14.1) but focuses on the at-risk-of-poverty rate, which was estimated to be 16.9 % for the EU-27 population in 2011. In other words, there were 83.6 million persons in the EU-27 who were at risk of poverty. The highest proportion of persons who were at risk of poverty was recorded for those living in thinly populated areas (21.1 %). This was 5.4 percentage points higher than the corresponding share for densely populated areas, which, in turn, was 0.6 percentage points higher than for intermediate density areas.

It is important to note that the at-risk-of-poverty rate reflects low levels of income in comparison with other residents of the same country. Furthermore, it does not take into account differences in the cost of living within and between different countries. With this in mind, Bulgaria recorded the highest proportion of its population — among the EU Member States — being at risk of poverty for both thinly populated areas (31.8 %) and intermediate density areas (25.5 %). However, the highest shares of the population at risk of poverty in densely populated areas were recorded in Italy (18.9 %) and Belgium (18.8 %). Those living in urban, densely populated areas in Belgium, the United Kingdom, Luxembourg, Austria, France, Sweden, Malta and the Netherlands faced a higher risk of poverty than those living in either intermediate or thinly populated areas — thereby supporting the premise that some of the most economically developed EU Member States recorded a higher risk of poverty within their urban, densely populated areas, while the majority of the EU Member States that joined the EU in 2004 or 2007 (with the

Figure 14.1: People at risk of poverty or social exclusion, by degree of urbanisation, 2011
(%)



(1) Estimates.
(2) Intermediate urbanised areas, not applicable (including real zero).
(3) 2010.
(4) Thinly populated areas, not available.
Source: Eurostat (online data code: ilc_peps13)

notable exception of Malta) were characterised as having a higher risk of poverty in their thinly populated, rural areas.

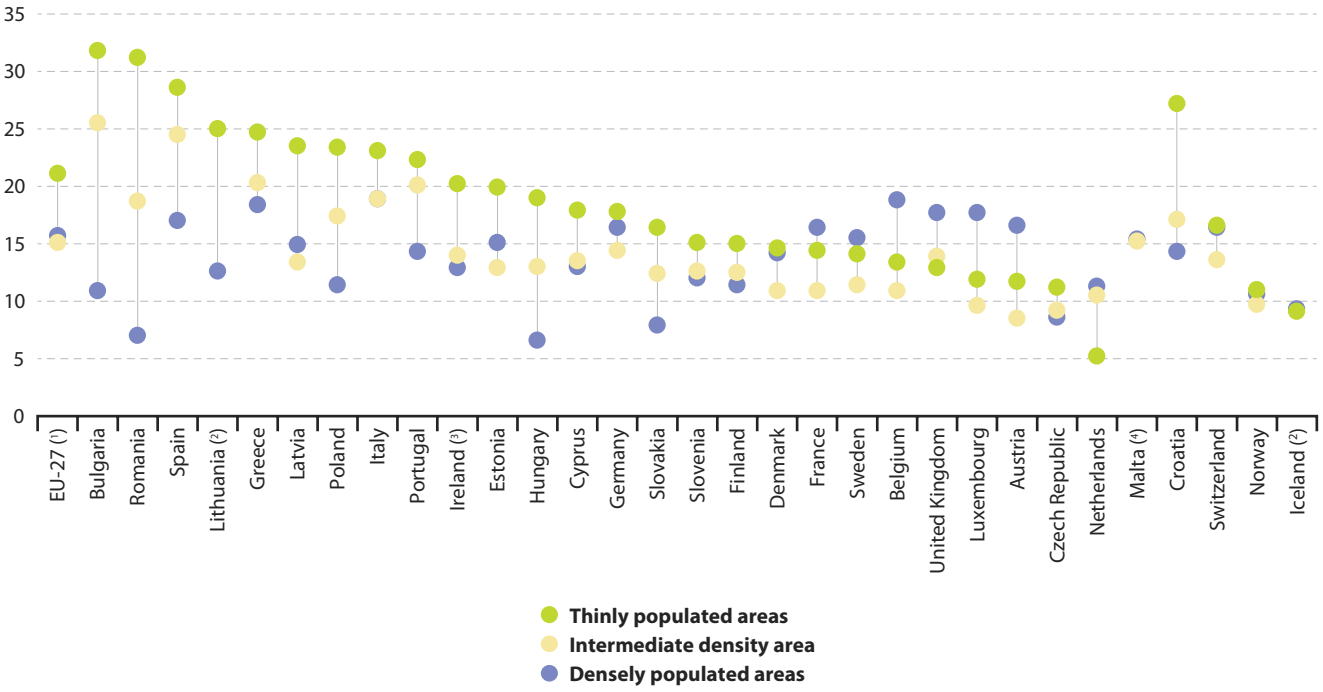
While the risk of poverty tended to be higher within the thinly populated areas of those Member States that joined the EU in 2004 or 2007, these countries were also characterised as having a larger difference between at-risk-of-poverty rates in the three different types of area. The widest range was recorded in Romania, where 31.2 % of those living in thinly populated areas were at risk of poverty, compared with only 7.0 % in densely populated areas — in other words, the rate in thinly populated areas was around 4.5 times as high as that in densely populated areas. However, given that the at-risk-of-poverty rate is not adjusted for differences in cost of living between the different types of area, this figure may be overestimated. There were also quite large absolute differences between the rates recorded in the three different types of area in Bulgaria, Hungary, Poland, Lithuania, Spain and Latvia. Generally, these differences were recorded (as for Romania) on the basis of a comparison between highs for thinly populated areas and lows for densely populated areas — the only exception was Latvia, where the lowest at-risk-of-poverty rate was recorded for intermediate density areas.

Severe material deprivation rate

Figure 14.3 shows an analysis of the severe material deprivation rate by degree of urbanisation in 2011. The highest proportion of persons facing severe material deprivation was recorded in thinly populated areas of the EU-27 (12.3 %), while the rates for densely populated areas (8.4 %) and intermediate density areas (6.2 %) were considerably lower. There were 16 Member States where severe material deprivation affected less than 10 % of the population, irrespective of the type of area they lived in. Among these, there was a tendency for urban regions to record the highest proportion of persons facing severe material deprivation; this was most notably the case in Austria and Belgium. The Czech Republic and Denmark were the only Member States (where severe material deprivation affected less than 10 % of the population) to report that thinly populated areas had a higher proportion of persons facing severe material deprivation.

There were seven Member States where the share of the population facing severe material deprivation was between 10 % and 20 %. At the upper end of the range, at least 20 % of the total population was affected by severe material deprivation

Figure 14.2: At-risk-of-poverty rate, by degree of urbanisation, 2011
(%)



(1) Estimates.
(2) Intermediate urbanised areas, not applicable (including real zero).
(3) 2010.
(4) Thinly populated areas, not available.
Source: Eurostat (online data code: ilc_li43)

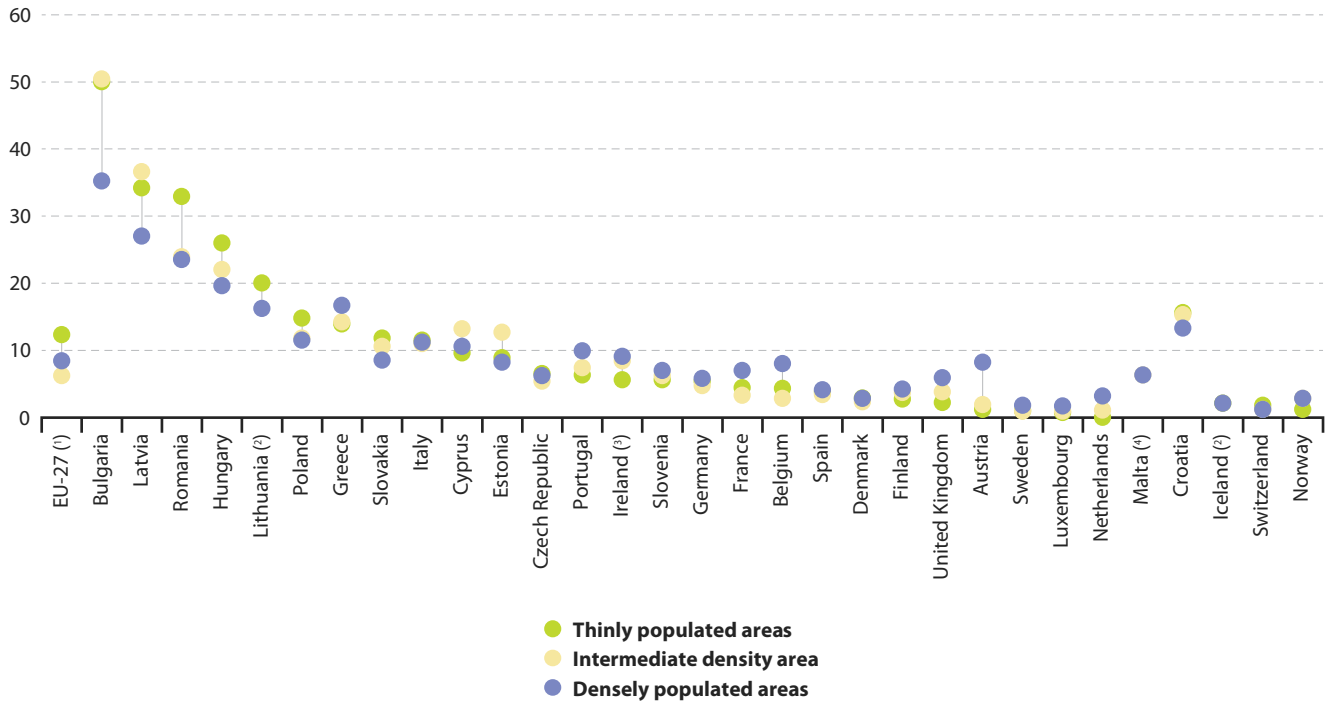
in Bulgaria, Latvia, Romania and Hungary. Within these four countries, this phenomenon was most prevalent in either thinly populated or intermediate areas. Around half of the population living in thinly populated and intermediate areas in Bulgaria faced severe material deprivation. In Latvia the share was just over one third for both thinly populated and intermediate areas, while a similar proportion (just under a third) of the population living in thinly populated areas of Romania also faced this type of deprivation. In Hungary, the highest share was recorded for those living in thinly populated areas, where just over a quarter of the population was facing severe material deprivation.

People living in households with very low work intensity

Figure 14.4 provides information in relation to the share of people living in households with very low work intensity, in other words those households that are, to a high extent, excluded from the labour market. Across the EU-27 in 2011, an estimated 1 in 10 (10.0 %) of the population aged 0–59 were living in households with very low work intensity. An analysis by degree of urbanisation suggests that densely populated areas in the EU-27 recorded the highest proportion of the population aged 0–59 living in households with very low work intensity (11.0 %). By contrast, about 9.3 % of people from thinly populated areas were living in households with very low work intensity, which was 0.4 percentage points higher than the corresponding share for those living in intermediate density areas.

The pattern experienced within the EU-27 resulted from a higher than average share of households with very low work intensity among those living in the densely populated areas of Belgium, Austria, France, Germany, the Netherlands, Malta, Sweden, the United Kingdom and Greece. The contribution of these Member States outweighed the reverse situation, whereby the risk of very low work intensity was higher in thinly populated or intermediate areas — this was often the situation in many of the Member States that joined the EU in either 2004 or 2007. Indeed, in this latter group of countries, the highest proportion of people living in households with very low work intensity was often recorded for thinly populated areas, for example, in Bulgaria, Lithuania, Hungary and Slovakia, as well as in Croatia. The proportion of people living in households with very low work intensity in these countries was at least 3.0 percentage points higher

Figure 14.3: Severe material deprivation rate, by degree of urbanisation, 2011
(%)



(1) Estimates.
(2) Intermediate urbanised areas, not applicable (including real zero).
(3) 2010.
(4) Thinly populated areas, not available.
Source: Eurostat (online data code: ilc_mddd23)

for thinly populated areas than for either of the other two area types. The same was true, although to a lesser degree (no more than 1.3 percentage points difference), in Estonia, Cyprus, Denmark, Italy, Latvia and Poland.

In Romania, Spain, Ireland (data for 2010) and Finland, those living in intermediate density areas faced the greatest risk of being in a household with very low work intensity. Almost one in four (24.2 %) persons aged 0–59 in intermediate density areas in Ireland were living in a household with very low work intensity, while the corresponding proportions for people living in densely populated and thinly populated areas were also exceptionally high, at more than 20.0 %. By contrast, although 22.0 % of those living in intermediate density areas in Romania were living in a household with very low work intensity in 2011, this was at least three times as high as for those living in either thinly or densely populated areas.

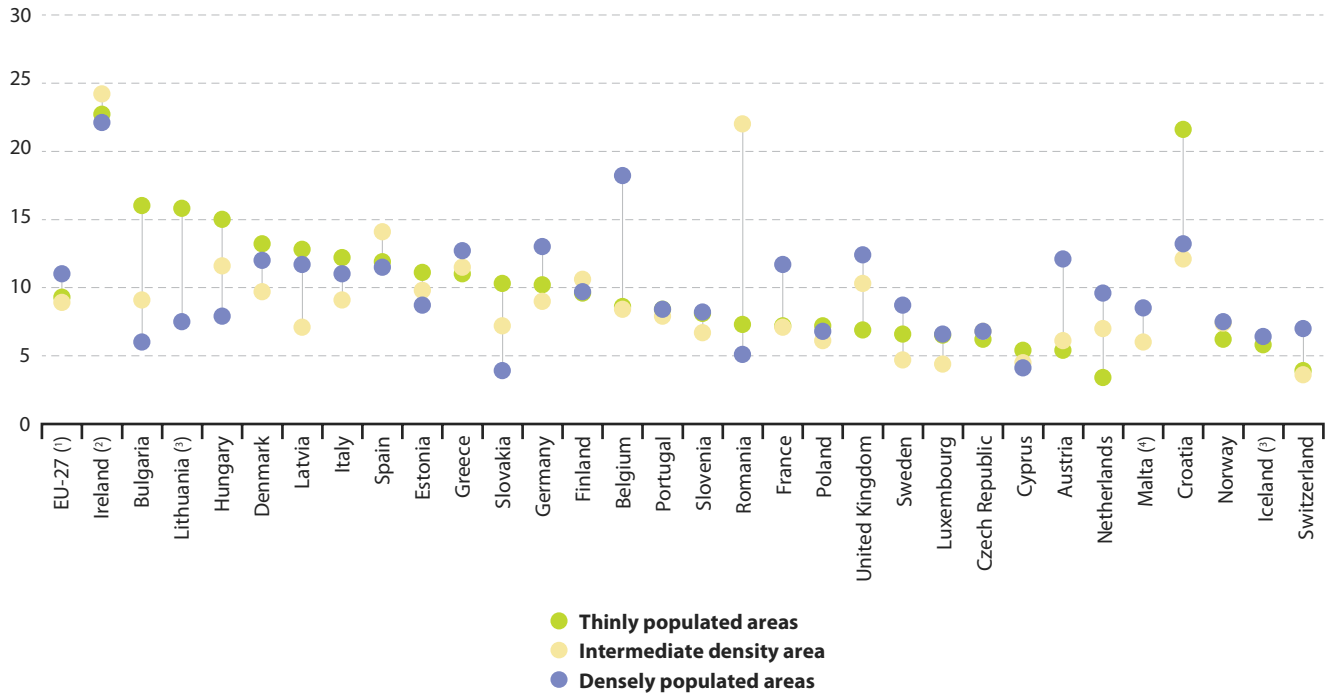
Overcrowded households

The proportion of people living in an overcrowded household stood at an estimated 17.1 % within the EU-27 in 2011. An analysis by degree of urbanisation shows that the highest share was recorded for thinly populated areas, where in excess of one in four (22.1 %) persons faced overcrowding. This was considerably higher than the corresponding shares recorded for those living in densely populated areas (17.8 %) and especially for those living in intermediate density areas (11.3 %). Figure 14.5 shows that a high proportion of persons lived in overcrowded households (irrespective of the degree of urbanisation) in Romania, Poland, Hungary, Latvia, Bulgaria and Slovakia, as well as in Croatia. Among the three types of area, densely populated areas were associated with the highest overcrowding rate across most of the EU Member States. There were only five exceptions, although four of these featured among the six Member States with the highest overcrowding rates. In Romania, Latvia, Hungary and Cyprus those living in intermediate density areas recorded the highest overcrowding rates, while in Poland the highest share was recorded for those living in thinly populated areas.

Overburden of housing costs

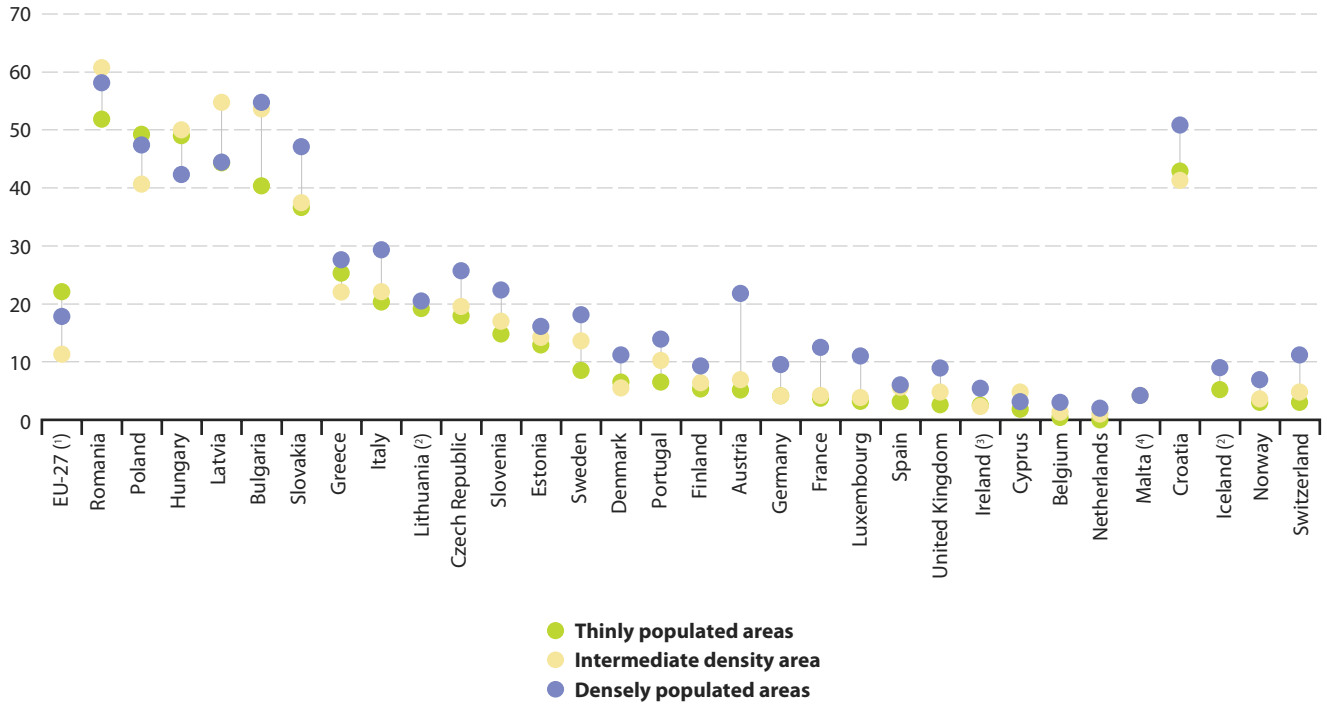
Figure 14.6 presents information on the burden of housing costs. The average share of the EU-27 population that was overburdened by housing costs in 2011 was 11.5 %; this is the share of the population living in households where total

Figure 14.4: People living in households with very low work intensity, by degree of urbanisation, 2011
(%, persons aged 0–59)



(1) Estimates.
(2) 2010.
(3) Intermediate urbanised areas, not applicable (including real zero).
(4) Thinly populated areas, not available.
Source: Eurostat (online data code: ilc_lvhl23)

Figure 14.5: Overcrowding rate, by degree of urbanisation, 2011
(%)



(1) Estimates.
(2) Intermediate urbanised areas, not applicable (including real zero).
(3) 2010.
(4) Thinly populated areas, not available.
Source: Eurostat (online data code: ilc_lvho05d)

housing costs (net of housing allowances) represent more than 40 % of disposable income (net of housing allowances). The share for those living in densely populated areas of the EU-27 was higher, reaching 13.4 %, while the housing cost overburden rate was close to 1 in 10 for both intermediate density areas (10.0 %) and thinly populated areas (9.7 %). In the majority of the EU Member States the proportion of people who were overburdened by housing costs was highest in densely populated areas (which may be linked to higher average house/flat prices and therefore mortgage repayments, as well as rents in urban areas). The exceptions were Hungary, Spain, Latvia, Bulgaria and Malta, where the highest proportion of the population that was overburdened by housing costs was recorded in intermediate density areas, as well as in Romania and Slovakia where the highest rates were recorded in thinly populated areas; this was also the case in Croatia.

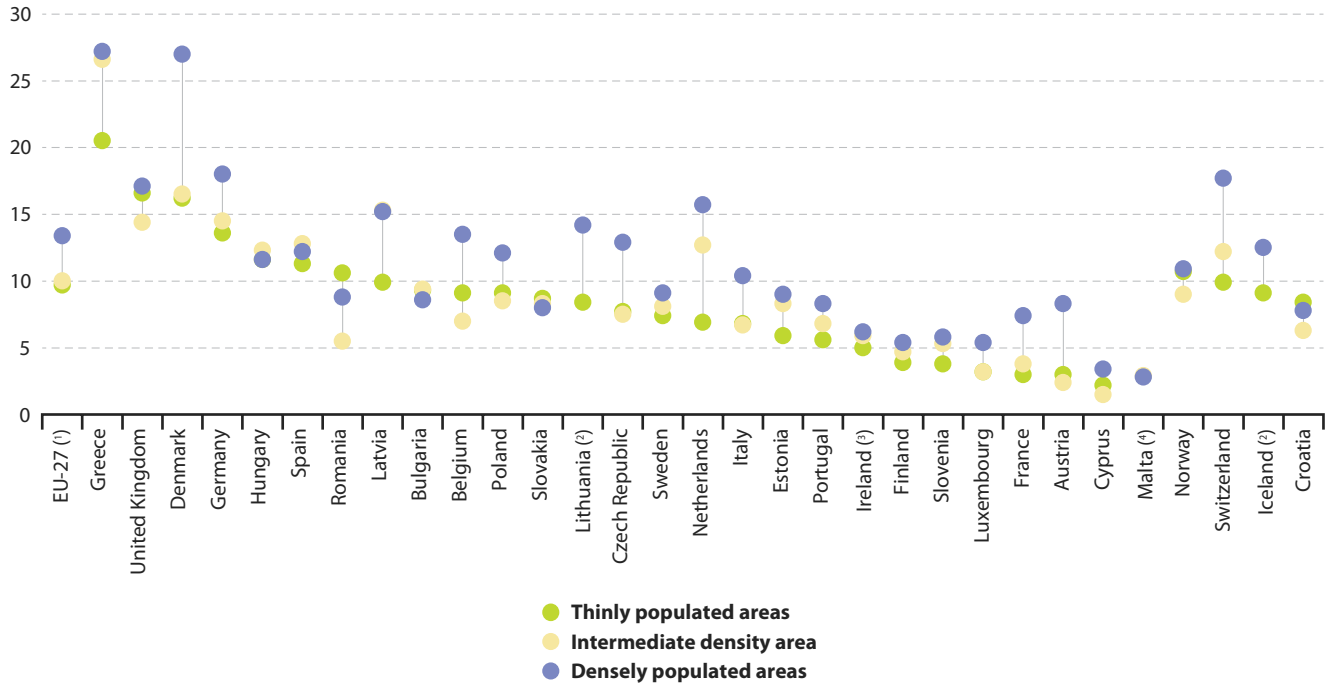
The widest range across the three types of area was recorded in Denmark, where those living in densely populated areas were 1.6 times as likely to face the burden of housing costs as in the other two types of area. There were also relatively broad ranges in the Netherlands and in Greece: as a considerably smaller proportion of those living in rural, thinly populated areas reported being overburdened by housing costs; the same pattern was also observed in Switzerland. By contrast, the opposite pattern was recorded in Romania and Slovakia, as well as in Croatia, as the housing cost overburden rate was highest for those living in rural, thinly populated areas.

Severe housing deprivation

A complementary analysis related to housing is shown in Figure 14.7, which presents information on those facing severe housing deprivation. The severe housing deprivation rate is defined as the percentage of the population living in a dwelling which is considered as overcrowded, while also exhibiting at least one of the housing deprivation measures; the latter is a measure of poor amenities and is calculated by referring to those households with: a leaking roof; no bath/shower and no indoor toilet; or a dwelling that is considered as being too dark.

Just over 1 in 20 persons (5.5 %) in the EU-27 faced severe housing deprivation in 2011. An analysis by degree of urbanisation for the three types of area suggests that severe housing deprivation was most prevalent in thinly populated areas of the EU-27 (8.7 % of this population), while 5.0 % of those living in densely populated areas faced this type of deprivation.

Figure 14.6: Housing cost overburden rate, by degree of urbanisation, 2011
(%)



(1) Estimates.
(2) Intermediate urbanised areas, not applicable (including real zero).
(3) 2010.
(4) Thinly populated areas, not available.
Source: Eurostat (online data code: ilc_lvho07d)

The latter figure was 1.5 percentage points above the proportion of people living in intermediate density areas in the EU-27 who were facing severe housing deprivation (3.5 %).

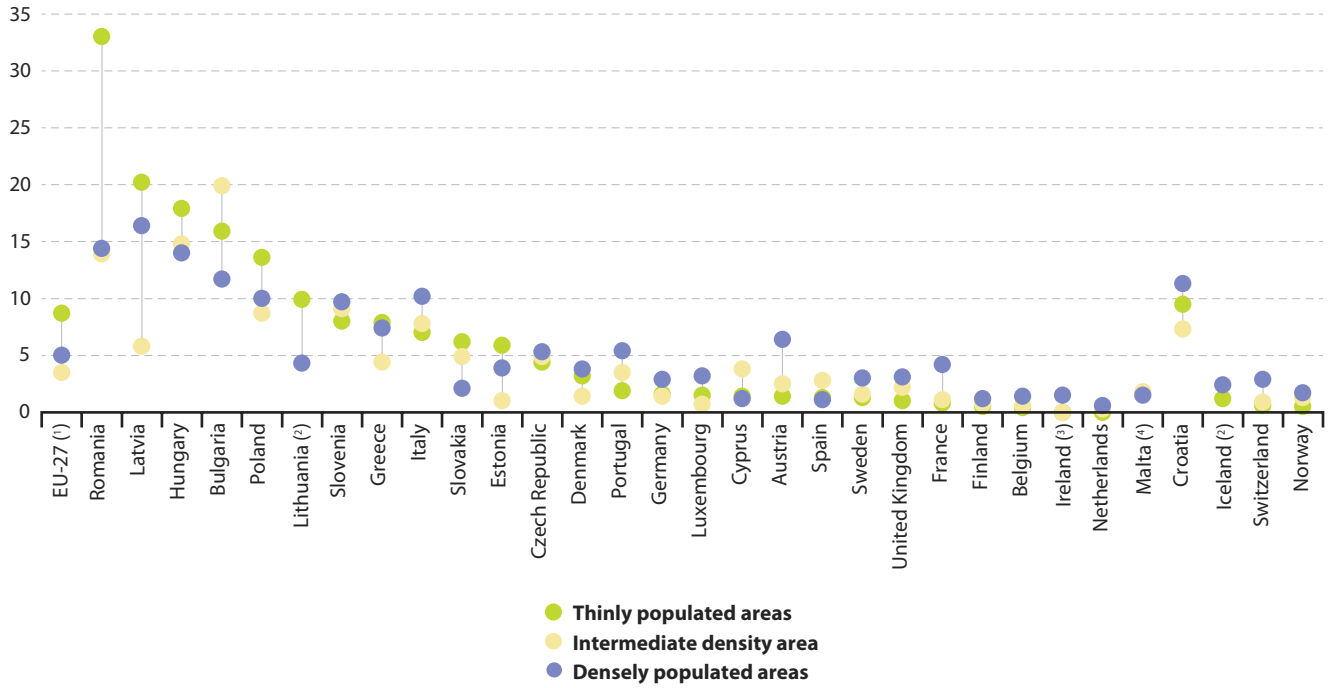
In the majority of the EU Member States there was little variation between severe housing deprivation rates when analysed by degree of urbanisation. However, a considerably higher share (33.0 %) of people living in thinly populated areas of Romania recorded severe housing deprivation than in either densely populated (14.4 %) or intermediate density areas (13.9 %). There was also a wide gap in Latvia, where those living in thinly populated areas were almost 3.5 times as likely as those living in intermediate density areas to state that they faced severe housing deprivation. Thinly populated areas also recorded the highest degree of severe housing deprivation in Hungary, Poland, Lithuania, Greece, Slovakia and Estonia, whereas densely populated areas tended to record the highest severe housing deprivation rates in those countries where the rate remained relatively low overall (mainly EU-15 Member States). Bulgaria, Cyprus and Malta were the only Member States in which intermediate density areas recorded the highest severe housing deprivation rate.

A comparison summarising indicators across the whole of the EU

This final section of analysis attempts to identify similarities/dissimilarities among the seven indicators presented for income and living conditions, depending on rates and shares according to the degree of urbanisation. It looks briefly at the situation for the EU-27 average and then identifies different groups of countries that have similar patterns in relation to the distribution of the seven indicators. It draws some broad conclusions for the EU Member States collectively which differ from the patterns observed for the EU-27 as a whole.

Across the whole of the EU-27 in 2011, thinly populated areas recorded the highest shares or rates for five of the seven income and living conditions indicators presented in this chapter. As such, thinly populated areas in the EU-27 were generally the type of area that was most vulnerable to the threat of poverty and exclusion. The two exceptions concerned the share of the population living in households with very low work intensity and the share of the population that was overburdened by

Figure 14.7: Severe housing deprivation rate, by degree of urbanisation, 2011
(%)



(1) Estimates.
(2) Intermediate urbanised areas, not applicable (including real zero).
(3) 2010.
(4) Thinly populated areas, not available.
Source: Eurostat (online data code: ilc_mdho06d)

housing costs — which affected a higher proportion of the population living in densely populated areas. Densely populated areas across the whole of the EU-27 had the second highest shares or rates for the five remaining income and living conditions indicators. Consequently, people living in intermediate areas were the least likely to face the issues summarised by these income and living conditions indicators, as the lowest rates or shares for six out of the seven measures were recorded in this type of area. The only exception was the housing cost overburden rate, where the EU-27 average was higher in intermediate density areas than in thinly populated areas.

In very broad terms it can be concluded that, with the exception of an overburden from housing costs and facing very low work intensity, people in thinly populated areas in the EU-27 were most likely to face the kind of difficulties associated with living conditions and income that are presented in this chapter, while those in intermediate density areas were the least likely to face these difficulties.

A comparison summarising indicators across the Member States

While this conclusion holds for the EU-27 as a whole, a great variety of situations were observed across the individual Member States. Poverty and social exclusion tended to be more prevalent in the thinly populated areas of those Member States that joined the EU in 2004 or 2007 and values in these countries were often considerably higher than for the two other types of area. As such, they had a relatively high impact on the EU-27 average, which tended to conceal the opposite situation in the EU-15 Member States, where poverty, social exclusion and especially housing issues were more prevalent among the population living in densely populated areas.

A comparison summarising all indicators by EU Member State shows that densely populated areas in Belgium, France, Luxembourg, the Netherlands, Austria, Sweden and the United Kingdom had the highest shares and ratios for all seven income and living conditions indicators, while these urban areas also ranked first for a majority of the seven indicators in Germany, Ireland (data for 2010), Greece, Portugal, Slovenia and Finland, as well as in Iceland, Norway and Switzerland. By contrast, densely populated areas had the lowest (or joint lowest) values for all seven indicators in Hungary and the lowest values for six of the seven indicators in Bulgaria and Slovakia. As for the EU-27 as a whole, intermediate density areas had the lowest (or joint lowest) values for six of the seven indicators in Denmark and Germany. Relatively high shares and rates for thinly populated areas were particularly common in Poland and Slovakia where these rural areas

had the highest values for six of the seven income and living conditions indicators. By contrast, thinly populated areas had the lowest values for all seven indicators in the Netherlands and the lowest values for six of the seven indicators in the United Kingdom as well as Iceland.

The Czech Republic was the only EU Member State where none of the three types of area (according to the degree of urbanisation) recorded the highest or lowest rates for a majority of the seven income and living conditions indicators. Rather, poverty and social exclusion (and its sub-dimensions) was concentrated in thinly populated areas (other than the incidence of very low work intensity), while housing issues were more prevalent in densely populated urban areas.

The risk of income-related poverty was most prevalent among thinly populated areas in the majority of the EU Member States. By contrast, densely populated areas had the highest severe material deprivation rates and the highest prevalence of housing issues in a majority of the Member States, despite the fact that the EU-27 average was highest in thinly populated areas for three of these four indicators. As such, the share of people living in households with very low work intensity was the only indicator for which there was no clear pattern by type of area, as in 12 Member States the highest (or joint highest) values for this indicator were recorded in densely populated areas, for 11 Member States in thinly populated areas and for the remainder in intermediate density areas.

Data sources and availability

There are a range of different territorial typologies that may be used to analyse the spatial distribution of socioeconomic indicators. Traditionally, these were determined by population size and population density based on local administrative units at level 2 (LAU2) — in other words, communes, municipalities or local authorities. More recently, territorial typologies have used a population grid made up of 1 km² grid cells in order to define clusters or groups, which can then be aggregated to areas (LAU2) or regions (NUTS level 3).

Degree of urbanisation

The degree of urbanisation defines three types of area, using a criterion of geographical contiguity in combination with a minimum population threshold. In order to group the cells, three different rules for contiguity (contiguous cells are those which are neighbouring or adjoining cells) are applied to create clusters. The European Commission currently defines the degree of urbanisation, using population grid cells, as follows.

- Densely populated areas (alternatively referred to as cities, urban centres or urban areas): at least 50 % of the population lives in high-density clusters (in addition, each high-density cluster should have at least 75 % of its population in densely populated LAU2s). High-density clusters are contiguous grid cells of 1 km² with a population density of at least 1 500 inhabitants per km² and a minimum population of 50 000 persons.
- Intermediate density area (alternatively referred to as towns and suburbs or small urban areas): less than 50 % of the population lives in rural grid cells (where rural grid cells are those outside of urban clusters) and less than 50 % live in high-density clusters.
- Thinly populated areas (alternatively referred to as rural areas): more than 50 % of the population lives in rural grid cells.

Analysing data by different territorial levels — such as a classification by degree of urbanisation — provides a unique insight into developments at local levels and highlights differences between different types of area.

Statistics on income and living conditions

EU statistics on income and living conditions (EU-SILC) is the main European data source containing information relating to income, living conditions and social inclusion. The reference population for EU-SILC includes all private households and their current members residing in the territory (of the surveying country) at the time of data collection. Persons living in collective households and in institutions are generally excluded from the target population. All household members are surveyed, but only those aged 16 and above are interviewed. The survey was conducted on a total sample of 217 720 households across the EU in 2011.

As multi-dimensional concepts, poverty and social exclusion cannot easily be measured through statistics: as such, EU-SILC includes objective and subjective aspects in both monetary and non-monetary terms for households and individuals. These indicators may be analysed in conjunction with data from other domains (for example, demography, education and training, health, labour market or housing statistics) to study social inclusion in a more comprehensive way.

Indicator definitions

The at-risk-of-poverty or social exclusion rate is a composite indicator which combines information for the at-risk-of-poverty rate, severe material deprivation rate and the share of people living in households with very low work intensity. A person is considered to be at risk of poverty or social exclusion if he/she belongs to at least one of these categories.

The at-risk-of-poverty rate is the share of people with an equivalised disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income.

Material deprivation refers to a state of economic strain, defined as the enforced inability (due to a lack of resources and not because of choice) to pay for a range of goods and services; these items are considered by most people to be desirable or even necessary in order to have an adequate quality of life (in the European context). The severe material deprivation rate is defined as the enforced inability of households to pay for at least four of the following list of items: rent, mortgage or utility bills; keeping the home adequately warm; facing unexpected expenses; eating meat or other sources of protein every second day; going on a 1 week holiday away from home per year; ownership of a colour television set; ownership of a washing machine; ownership of a car; ownership of a telephone.

The share of people living in households with very low work intensity is defined as the proportion of the population aged 0–59 living in a household having a work intensity below the threshold of 0.20. The work intensity of a household is the ratio of the total number of months that all working-age household members have worked during the income reference year in relation to the total number of months the same household members could theoretically have worked in the same period. A working-age person is a person aged 18–59, with the exclusion of students aged 18–24; households composed only of children, of students aged less than 25 and/or people aged 60 or over are excluded. All persons aged 60 or over are excluded from the computation of this indicator regardless of their household type.

The overcrowding rate is defined as the percentage of the population living in an overcrowded household. A person is considered to be living in an overcrowded household if the household does not have at its disposal a minimum number of rooms equal to: one room for the household; one room per couple in the household; one room for each single person aged 18 or above; one room per pair of single people of the same gender aged 12–17; one room for each single person aged 12–17 and not included in the previous category; one room per pair of children aged less than 12.

The housing cost overburden rate is the percentage of the population living in households where total housing costs ('net' of housing allowances) represent more than 40 % of household disposable income ('net' of housing allowances).

The severe housing deprivation rate is defined as the percentage of the population living in a dwelling which is considered as overcrowded (see above), while also exhibiting at least one out of three housing deprivation items. The housing deprivation items are: a leaking roof, damp walls, floors, foundation, or rot in window frames or floor; no bath or shower in the dwelling and no indoor flushing toilet for the sole use of the household; and a dwelling that is too dark.

Context

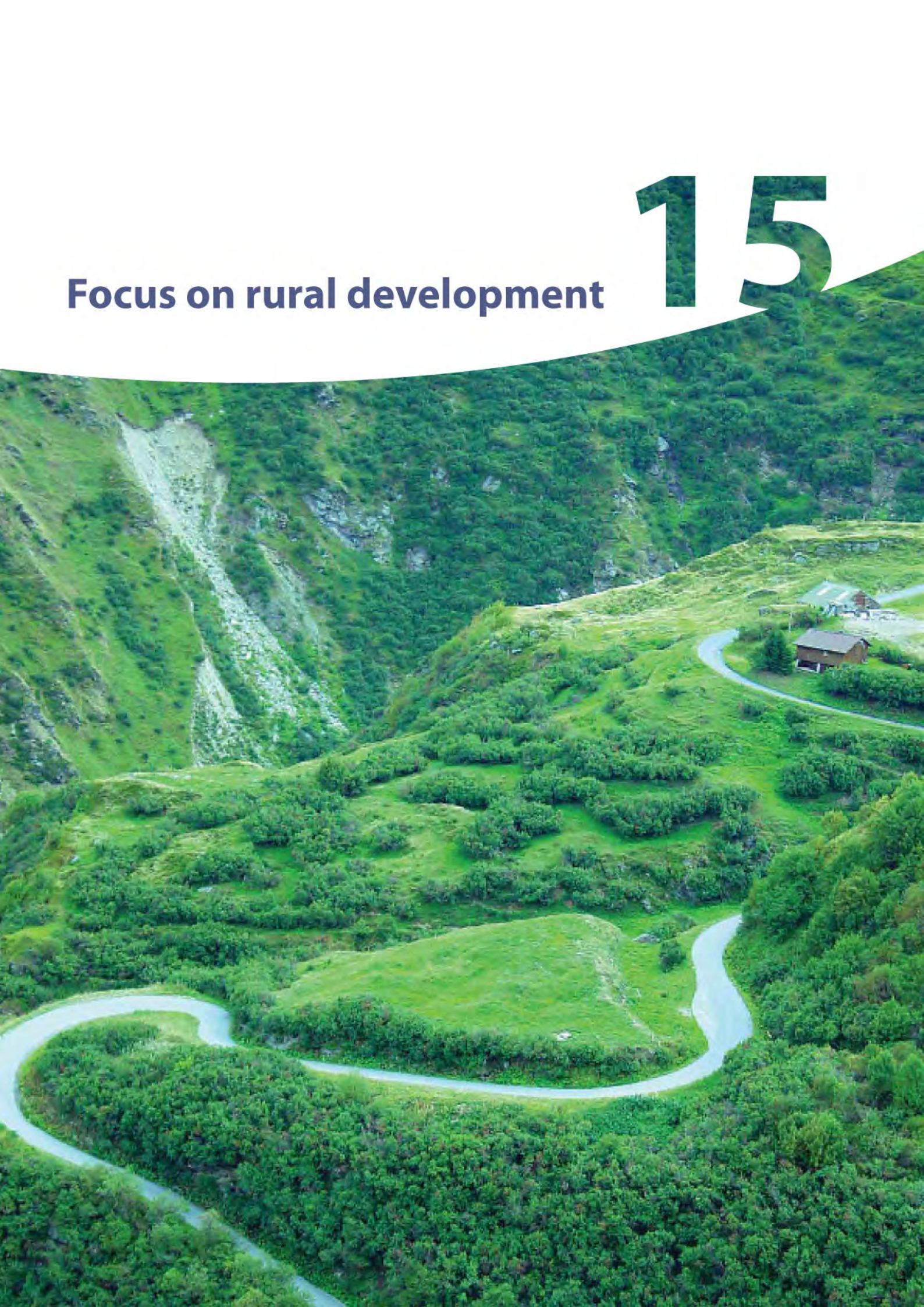
The EU seeks to promote territorial cohesion alongside economic and social cohesion, as detailed in the 'Seventh progress report on economic, social and territorial cohesion' (COM(2011) 776 final). 'The European platform against poverty and social exclusion: A European framework for social and territorial cohesion' (COM(2010) 758 final) is one of the seven flagship initiatives of the Europe 2020 strategy. Its goals are to: ensure economic, social and territorial cohesion; guarantee respect for the fundamental rights of people experiencing poverty and social exclusion, and enable them to live in dignity and take an active part in society; and mobilise support to help people integrate in the communities where they live, get training and help them to find a job and have access to social benefits.

In order to monitor progress towards these aims, at the Laeken European Council in December 2001, European Heads of State or Government endorsed a first set of common statistical indicators relating to social exclusion and poverty that were subject to a continuing process of refinement by an indicators sub-group that is part of the social protection committee. These indicators are an essential element in the open method of coordination to monitor the progress of EU Member States in the fight against poverty and social exclusion; some of them are included in this chapter.

In the context of the Europe 2020 strategy, the European Council adopted in June 2010 a headline target on social inclusion, namely for the EU-27 as a whole to have at least 20 million fewer people at risk of poverty or social exclusion by 2020.

The main EU instrument for supporting employability, fighting poverty and promoting social inclusion is the European Social Fund (ESF). This structural instrument invests directly in people and their skills and aims at improving their labour market opportunities. Yet some of the most vulnerable citizens who suffer from extreme forms of poverty are too far removed from the labour market to benefit from these social inclusion measures.

15 Focus on rural development



Rural development is an important policy area, covering areas such as: farming and forestry; land use; the management of natural resources; and economic diversification in rural communities. Rural areas are important to the European economy insofar as they provide a wide range of foodstuffs and raw materials. Furthermore, rural areas are generally places of natural beauty and offer a wide range of recreational activities, while forested areas provide one means of combating climate change.

In contrast, many of the European Union's (EU's) rural areas face a common challenge — namely, their capacity to create high-quality, sustainable jobs has fallen behind that of urban areas. Generally, incomes are lower in rural regions than in towns or cities and there are fewer job opportunities and these are in a narrower range of economic activities. These differences between regions have, in some cases, resulted in land abandonment and considerable outward flows of rural populations. This chapter highlights the structure of rural populations, developments within rural labour markets and an analysis of economic activity in rural areas between the primary sector (dominated by agriculture and forestry) and the tertiary sector (where tourism plays an increasingly important role).

Main statistical findings

More than half (51.3 % in 2012) of the EU's land area is within regions classified as being predominantly rural; these areas were inhabited by 112.1 million people — more than one fifth (22.3 %) of the EU-27's population. Just under two fifths (38.7 %) of the area and more than one third (35.3 %) of the EU's population were living in intermediate regions in 2012, while predominantly urban regions made up just one tenth (10.0 %) of the land area but accounted for more than two fifths (42.4 %) of the population.

These three types of region are defined according to an urban–rural typology which classifies each NUTS level 3 region to one and only one of the three types of region; Map 15.1 shows which regions fall into each of the three types. It should be noted that, as population levels and population density change over time, regions can move from one type to another, which can also happen if regional boundaries change. The analyses presented in this chapter are based on a recent revision of the typology using the NUTS 2010 classification.

Among the EU-27 Member States, Cyprus, Luxembourg and Malta do not have any predominantly rural regions: Cyprus and Luxembourg have only one NUTS level 3 region each and in both cases this is classified as intermediate; Malta has two NUTS level 3 regions, both of which are classified as predominantly urban regions. Ireland has only predominantly urban regions and predominantly rural regions but no intermediate regions, while Slovenia has no predominantly urban regions. All of the other 22 Member States have at least one NUTS level 3 region in each of the three urban–rural region types.

Focus on the population in predominantly rural regions

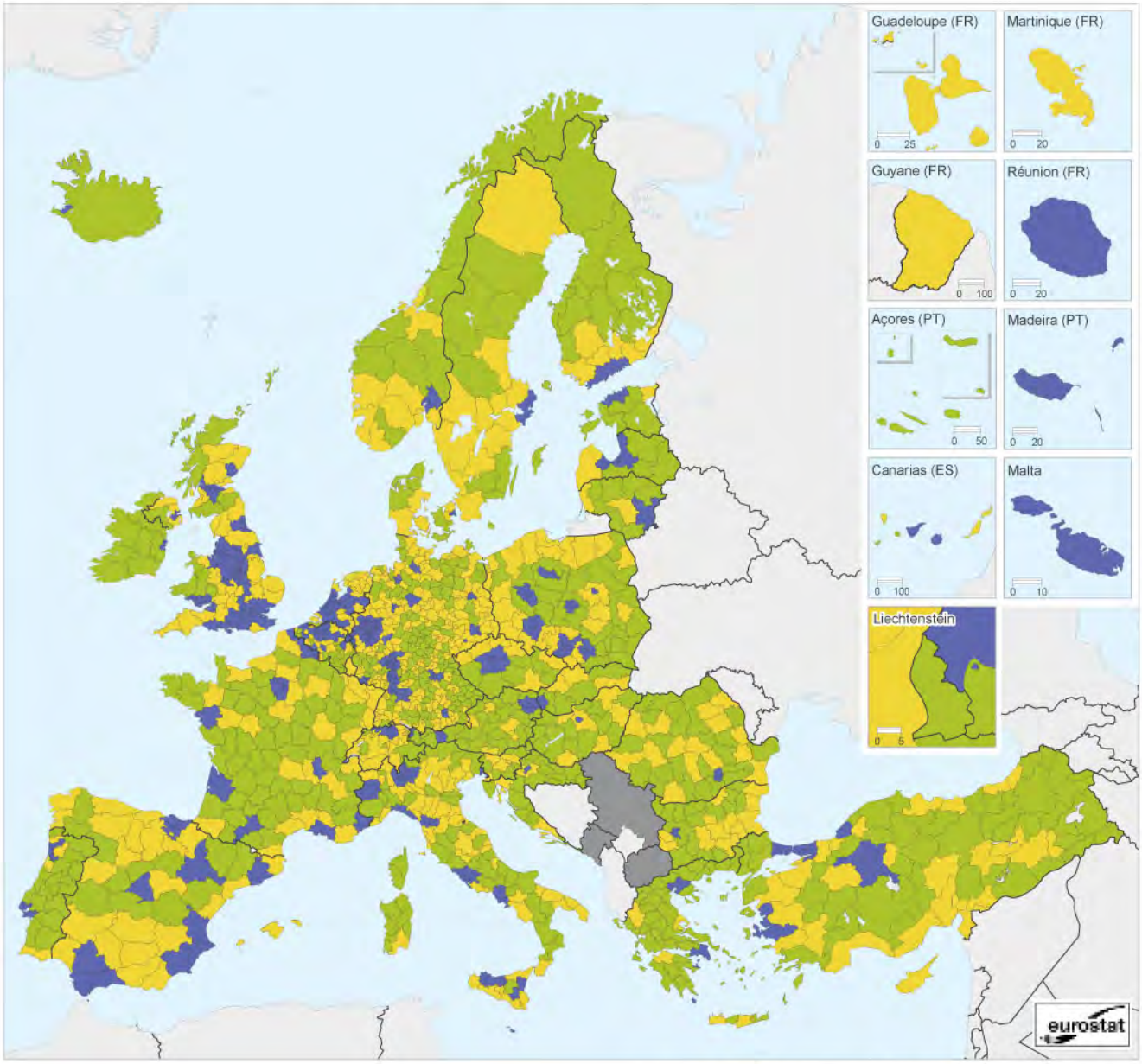
A summary of the distribution of the population between the three types of regions as of the start of 2012 is presented in Figure 15.1. Although the average share of the population in predominantly rural regions was 22.3 % in the EU-27, the share in most Member States was higher than this: the EU-27 average was strongly influenced by low shares in some of the largest Member States, notably the Netherlands (0.6 %), the United Kingdom (2.9 %, 1 January 2011), Spain (7.4 %, 1 January 2011) and Belgium (8.6 %) — as well as to a lesser extent by Sweden (16.2 %), Germany (16.4 %, 1 January 2011) and Italy (20.2 %). Of the five largest (in population terms) Member States, France was the only one with a share (29.9 %) of the population in predominantly rural regions that was above the EU-27 average. The highest share of the population living in predominantly rural regions was recorded for Ireland (72.4 %). A relatively large proportion of the population lived in predominantly rural regions in many of the central and eastern European countries that joined the EU in 2004 or 2007, ranging from close to one third of the population in the Czech Republic and Poland to more than a half (50.3 %) in Slovakia; also falling within this range were Austria, Greece, Finland and Portugal.

The four EFTA countries had very different population structures according to this typology. Liechtenstein is composed solely of a predominantly rural region, whereas predominantly rural regions in Switzerland were home to just 7.3 % of the population. The proportion of the population in predominantly rural regions was above the EU-27 average in each of Iceland (36.3 %) and Norway (29.3 %); this was also the case in the acceding and candidate countries for Turkey (30.8 %) and to a much greater extent for Croatia (56.7 %).

Population change

Predominantly rural regions in the EU-27 have experienced limited population growth or decline in recent years. In 2008 and 2009, predominantly rural regions in the EU-27 recorded growth of 0.2 % and 0.1 %, whereas intermediate and predominantly urban regions both recorded growth between 0.4 % and 0.7 % — predominantly urban regions growing slightly faster than intermediate regions. In 2010, the EU-27's population in predominantly rural regions remained unchanged and then fell by 0.1 % in 2011, while in both years

Map 15.1: Urban–rural typology, by NUTS 3 regions (1)



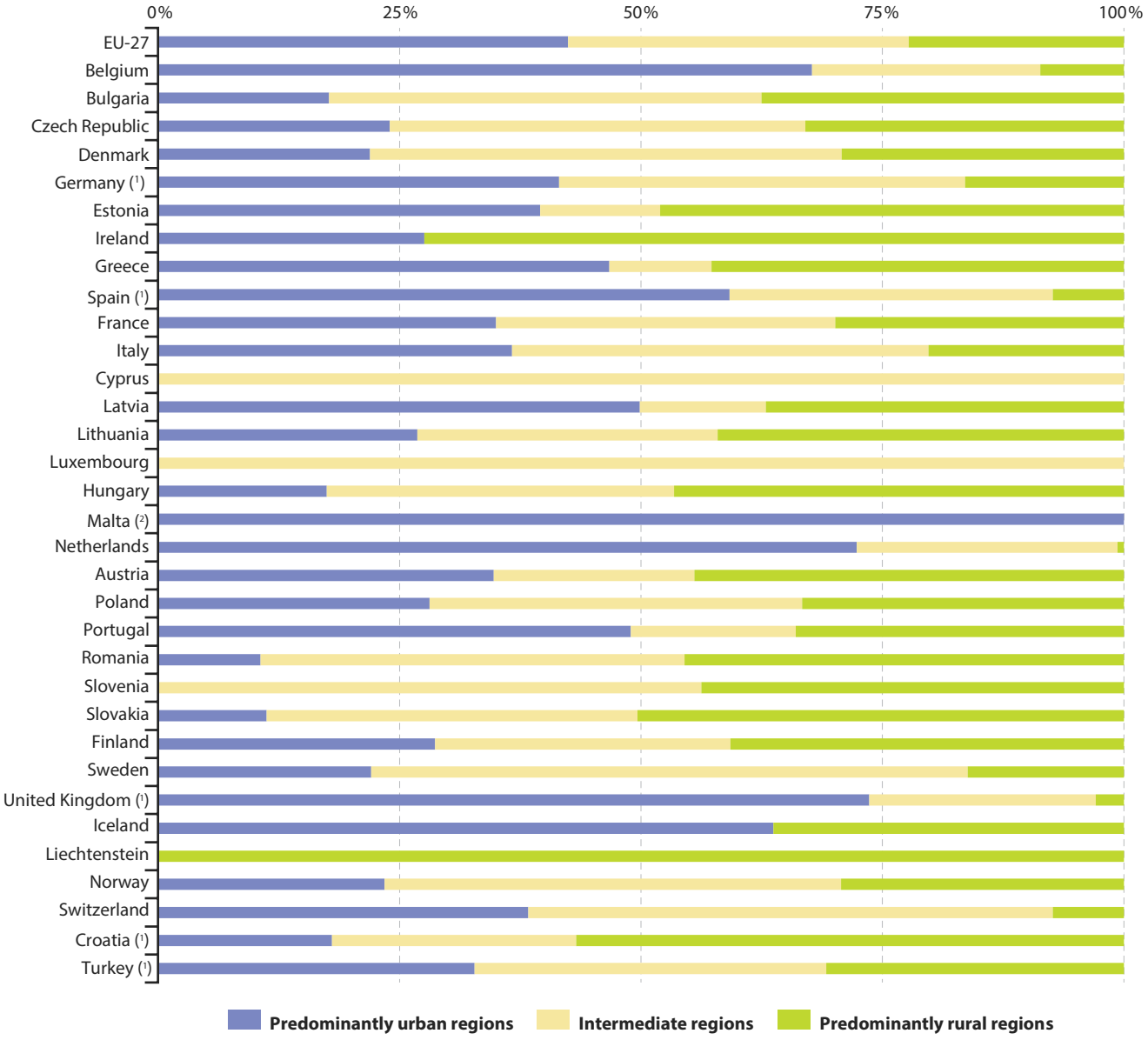
Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 05/2013

Predominantly urban regions (rural population: <20 % of the total population)
Intermediate regions (rural population: 20–50 % of total population)
Predominantly rural regions (rural population: >50 % of total population)
Data not available

0 200 400 600 800 km

(1) Based on population grid from 2006 and NUTS 2010.
Source: Eurostat, JRC, EFGS, REGIO-GIS

Figure 15.1: Population structure, by urban–rural typology, 1 January 2012
(% of total population)



(1) 1 January 2011.
(2) 1 January 2010.
Source: Eurostat (online data codes: urt_gind3 and demo_r_gind3)

intermediate regions recorded growth of 0.2 % and predominantly urban regions growth of 0.5 %.

The most recent population and population change information for predominantly rural regions is provided in Table 15.1 — generally the data are for 1 January 2012 but in some cases they refer to 1 January 2011. France had by far the largest population in predominantly rural regions, a total of 19.5 million persons, equivalent to 17.4 % of the EU-27 total. Germany, Poland, Italy and Romania had the next largest populations in predominantly rural regions and, together with France, these five Member States were home to 60.5 % of the EU-27's population in predominantly rural regions.

Predominantly rural regions experienced growth in 2011 in nine EU Member States (as well as in the United Kingdom in

2010); most of these were EU-15 Member States, although the population of predominantly rural regions also grew in Slovakia and Slovenia. The strongest population growth in predominantly rural regions was recorded in Belgium (7.9 per thousand) and France (5.3 per thousand). By contrast, the sharpest declines in population in predominantly rural regions were recorded in Lithuania (– 20.1 per thousand) and Latvia (– 20.0 per thousand), followed at about half this rate by Bulgaria (– 9.9 per thousand). Among the EU-15 Member States, Portugal recorded the fastest decline in the population of predominantly rural regions, down 5.4 per thousand, ahead of Germany (2010) where the population fell by 4.5 per thousand.

At a more detailed level, there were contrasting developments in most Member States, except for the Netherlands which had just one predominantly rural region (where the population fell). In nearly every Member State there was at least one NUTS level 3 region with a falling rural population; Belgium was the only exception, with all predominantly rural regions experiencing population growth. Equally, there were some predominantly rural populations that grew in each of the Member States, other than in the Baltic Member States, Bulgaria and Romania. Across the whole of the EU, the predominantly rural region with the fastest population growth in 2011 was Fokida in Greece, where the population rose by 19.5 per thousand, while the fastest population decline was reported for Šiaulių apskritis in Lithuania (– 22.7 per thousand).

Among the EFTA countries, all predominantly rural regions except for the one Icelandic region recorded population growth in 2011, with growth reaching 21.9 per thousand in Freiburg, Switzerland. Overall, Croatia's predominantly rural regions recorded a decline in population whereas those in Turkey experienced growth. The regional variation in Turkey was extremely large, from a decline of 79.6 per thousand in Tunceli in eastern Anatolia to growth of 109.1 per thousand in Bilecik close to the Marmara Sea.

Population structure

When compared with the total population, the population in predominantly rural regions tends to have less people of working age, more older people and more young people aged 10–19. This general pattern can be seen for men and women — see Figure 15.2. Among the working age population the difference between predominantly rural regions and the total population was most notable between the ages of 25 and 49 for women and between 30 and 59 for men. Among older people the differences were most notable for the age groups between 70 and 84 for women and from 75 upwards for men.

It is projected that consistently low birth rates and higher life expectancy will transform the shape of the EU-27's age pyramid in the coming decades. Probably the most important change will be the marked transition towards a much older population structure and this development is already becoming apparent in several EU Member States. As a result, the proportion of people of working age in the EU-27 is shrinking while the relative number of those retired is expanding. The share of older persons in the total population will increase significantly in the coming decades, as a greater proportion of the post-war baby-boom generation reaches retirement. This will, in turn, lead to an increased burden on those of working age to provide for the social expenditure required by the ageing population for a range of related services.

Across the EU-27, some 17.8 % of the population was aged 65 or over at the beginning of 2012. The highest share for any region in 2012 was 33.9 % in the rural Portuguese region of Pinhal Interior Sul. In fact, the 10 regions with the highest shares of persons aged 65 or over included eight that were predominantly rural regions, one intermediate region (Dessau-Roßlau, Kreisfreie Stadt in Germany) and one predominantly urban region (Trieste in Italy). The predominantly rural regions with the highest shares of persons aged 65 or over were concentrated in the centre of Portugal, with one other Portuguese region (Alto Trás-os-Montes) further to the north, two regions in mainland Greece (Grevena and Evrytania) and one in north-western Spain (Ourense). By contrast, the only predominantly rural region among the 10 regions with the lowest share of persons aged 65 or more in the population was the Irish Mid-East region, with a share of 9.3 %; the lowest share among all of the regions was 4.4 % in the French overseas region of Guyane.

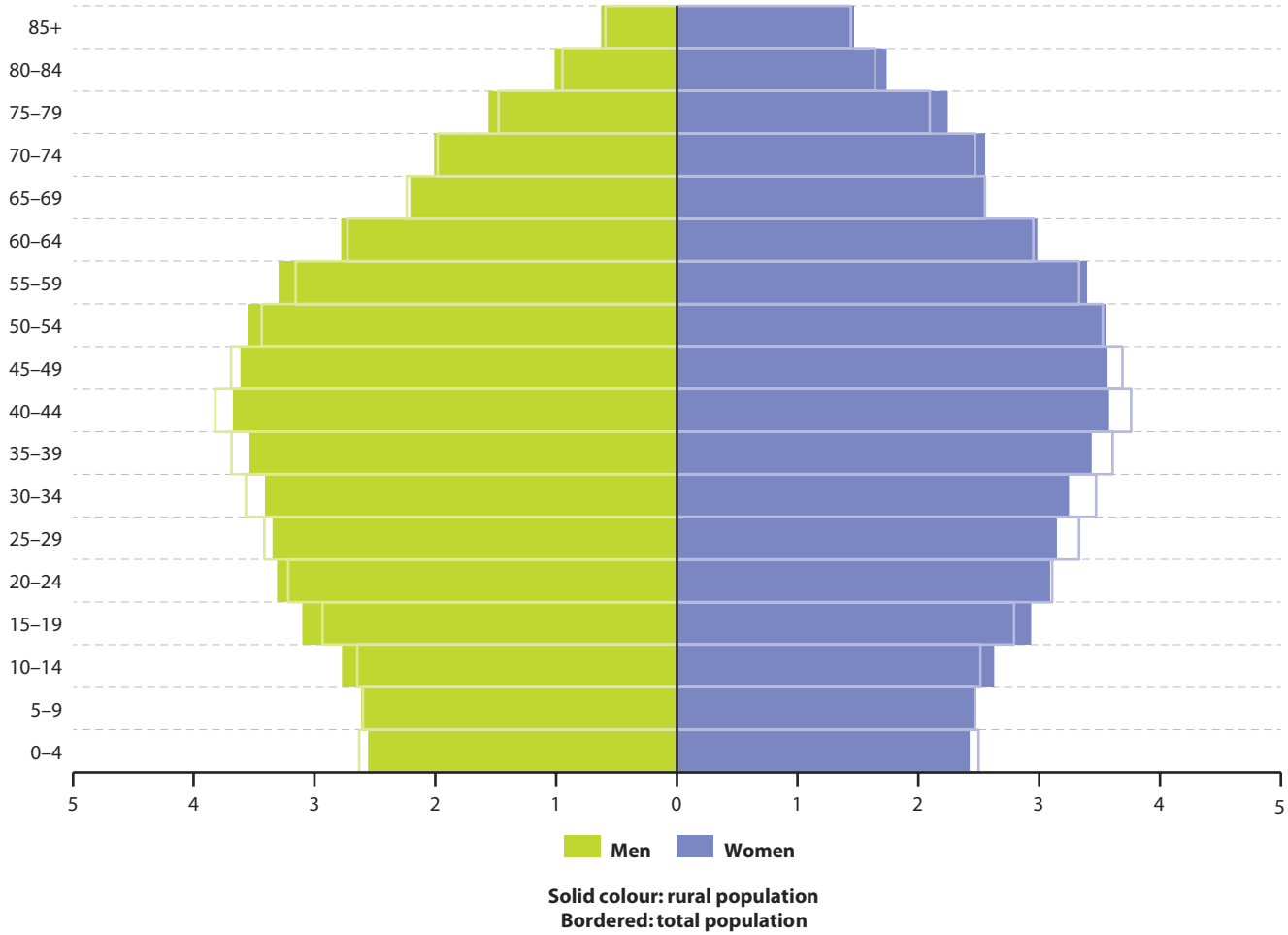
Map 15.2 provides a regional analysis of persons aged 65 and over as of the beginning of 2012, identifying regions by their type and whether the share of persons aged 65 or more was above or below the EU-27 average. Around one third of the regions had shares below the EU-27 average, indicating that these regions were generally larger or had particularly low shares. For all three types of region, the number of regions where the share of persons aged 65 or more was above the EU-27 average was greater than the number where the share was lower. However, for urban regions this difference was relatively small (167 regions above the EU-27 average compared with 149 regions below the average) whereas for the other two types of regions the difference was far greater. In other words, a predominantly urban region was much more likely to have a share of persons aged 65 or more in the population that was below the EU-27 average than were either an intermediate or a predominantly rural region. This observation is reinforced by the information provided in Table 15.2, where it can be seen that the share of persons aged 65 or more in the population in rural regions was above the national average in all of the EU Member States except for Belgium and

Table 15.1: Population and population change in rural regions, 1 January 2012 and 2011

	Population, 1 January 2012 (2)	Crude rates of change, 2011				
		Crude rate of population change (3)	Region with the highest population change (4)		Region with the lowest population change (4)	
	(thousand)	(per thousand inhabitants)				
EU-27 (1)	112 061.9	:	Fokida (EL245)	19.5	Šiaulių apskritis (LT006)	– 22.7
Belgium	958.4	7.9	Arr. Neufchâteau (BE344)	14.5	Arr. Ieper (BE253)	3.5
Bulgaria	2 748.4	– 9.9	Blagoevgrad (BG413)	– 5.3	Vidin (BG311)	– 17.1
Czech Republic	3 463.9	– 0.2	Plzeňský kraj (CZ032)	0.8	Zlínský kraj (CZ072)	– 1.8
Denmark	1 629.9	– 1.8	Nordjylland (DK050)	0.3	Bornholm (DK014)	– 11.8
Germany	13 428.1	– 4.5	Landshut, Kreisfreie Stadt (DE221)	15.7	Elbe-Elster (DE407)	– 15.2
Estonia	643.2	– 1.5	Lõuna-Eesti (EE008)	– 1.0	Lääne-Eesti (EE004)	– 2.2
Ireland	3 320.2	3.4	Midland (IE012)	12.2	Border (IE011)	– 4.8
Greece	4 821.2	– 1.9	Fokida (EL245)	19.5	Ileia (EL233)	– 8.1
Spain	3 394.1	– 0.3	Toledo (ES425)	4.6	Zamora (ES419)	– 10.9
France	19 524.0	5.3	Haute-Corse (FR832)	11.1	Aube (FR212)	– 1.1
Italy	12 308.4	0.8	Olbia-Tempio (ITG29)	9.1	Oristano (ITG28)	– 5.2
Cyprus	-	–	-	:	-	:
Latvia	756.8	– 20.0	Vidzeme (LV008)	– 18.4	Latgale (LV005)	– 21.5
Lithuania	1 265.2	– 20.1	Telšių apskritis (LT008)	– 16.4	Šiaulių apskritis (LT006)	– 22.7
Luxembourg	-	–	-	:	-	:
Hungary	4 637.9	– 5.9	Győr-Moson-Sopron (HU221)	4.1	Nógrád (HU313)	– 14.9
Malta	-	–	-	:	-	:
Netherlands	106.3	– 2.4	Zeeuwsch-Vlaanderen (NL341)	– 2.4	Zeeuwsch-Vlaanderen (NL341)	– 2.4
Austria	3 754.1	0.7	Nordburgenland (AT112)	6.9	Unterkärnten (AT213)	– 5.7
Poland	12 838.0	– 1.3	Nowosądecki (PL215)	3.7	Łomżyński (PL344)	– 5.5
Portugal	3 581.6	– 5.4	Região Autónoma dos Açores (PT200)	1.4	Pinhal Interior Sul (PT166)	– 13.4
Romania	9 715.2	– 4.5	Suceava (RO215)	– 1.0	Teleorman (RO317)	– 11.6
Slovenia	899.4	0.6	Notranjsko-kraška (SI018)	1.9	Koroška (SI013)	– 1.8
Slovakia	2 721.0	0.8	Prešovský kraj (SK041)	2.7	Banskobystrický kraj (SK032)	– 1.3
Finland	2 200.9	1.6	Åland (FI200)	12.3	Kainuu (FI1D4)	– 9.5
Sweden	1 532.7	– 0.6	Kronobergs län (SE212)	3.9	Jämtlands län (SE322)	– 3.1
United Kingdom	1 813.1	2.8	West and South of Northern Ireland (UKN05)	11.0	Powys (UKL24)	– 1.8
Iceland	116.0	– 1.1	Landsbyggð (IS002)	– 1.1	Landsbyggð (IS002)	– 1.1
Liechtenstein	36.5	9.0	Liechtenstein (LI000)	9.0	Liechtenstein (LI000)	9.0
Norway	1 460.4	7.3	Aust-Agder (NO041)	13.1	Sogn og Fjordane (NO052)	4.3
Switzerland	584.5	13.4	Freiburg (CH022)	21.9	Graubünden (CH056)	4.0
Croatia	2 502.5	– 6.1	Zadarska županija (HR033)	3.9	Ličko-senjska županija (HR032)	– 14.7
Turkey	22 706.8	8.3	Bilecik (TR413)	109.1	Tunceli (TRB14)	– 79.6

(1) Based on available data for Member States.
(2) Germany, Spain, the United Kingdom, Croatia and Turkey, 1 January 2011.
(3) Germany, Spain, the United Kingdom, Croatia and Turkey, 2010.
(4) Excluding rural regions in Mecklenburg-Vorpommern (DE8) and Canarias (ES7); the United Kingdom, Croatia and Turkey, 2010.
Source: Eurostat (online data codes: demo_r_gind3 and demo_r_d3avg)

Figure 15.2: Population pyramids, EU, 1 January 2010 (1)
(% of total population)



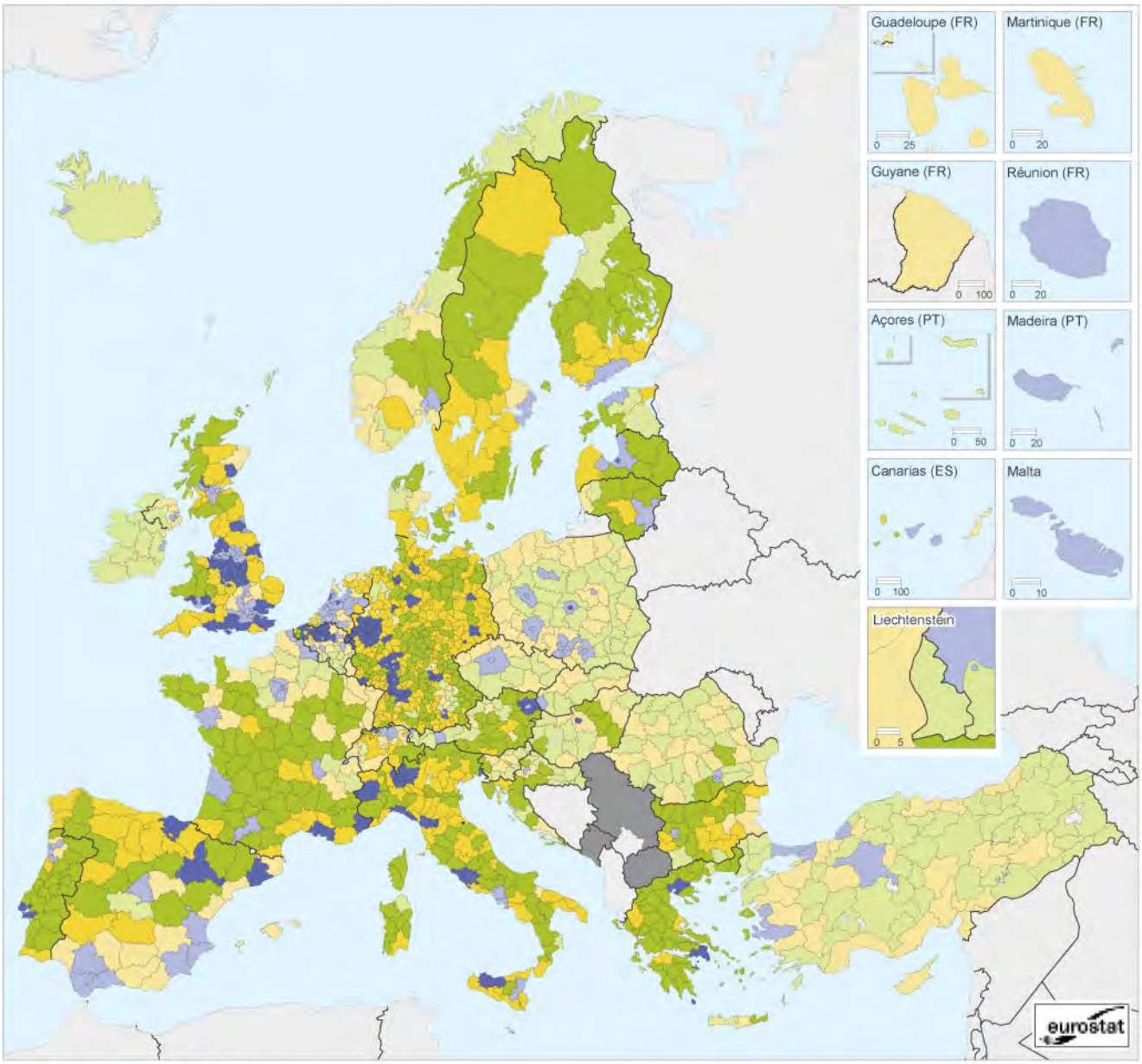
(1) Spain and France, 1 January 2009; Ireland, 1 January 2006; excluding Greece and the United Kingdom.
Source: Eurostat (online data codes: demo_r_pjangroup and demo_pjangroup)

Poland. The largest (in percentage point terms) differences between the shares for rural and national populations were observed for the Netherlands (5.5 percentage points), Spain (4.9), Portugal (3.8), France (3.2) and the United Kingdom (3.0). The general pattern of higher shares in rural regions was repeated in Iceland and Norway, but not in Switzerland, where the share of older persons was lower in rural regions; Liechtenstein has only one region and that is rural so the national and rural shares are the same. Equally, both Croatia and Turkey had higher shares of older persons in their rural populations than their national averages.

The old-age dependency ratio — calculated for the purposes of this publication as the percentage ratio of persons aged 65 or more to persons aged 15–64 — was 28.2 % across the rural regions of the EU-27 as of the start of 2012; this can be compared with a 29.2 % ratio for all types of region. The fact that predominantly rural regions had a relatively low old-age dependency ratio but a relatively high share of persons aged 65 or more in their total population suggests that there was a lower share of young people in the population in predominantly rural regions (15.4 %) than across all types of region (21.1 %).

Comparing the national averages for old-age dependency ratios in the rural regions of the EU Member States, these ranged from 36.8 % in Portugal to an average of 17.8 % in Slovakia; the Turkish average was even lower at 12.3 %. As well as these large differences between rural averages for each Member State, there was also a quite diverse range of old-age dependency ratios within the predominantly rural regions of individual Member States — see Table 15.2. The largest range was reported for Portugal, where there was a 20.6 percentage point gap between the old-age dependency ratios of Pinhal Interior Sul (33.9 %) and the Região Autónoma dos Açores (13.3 %). Differences in excess of 10 percentage points were also observed for Greece, Spain, Germany, France and the United Kingdom, as well as for Turkey.

Map 15.2: Share of persons aged 65+ in total population, by NUTS level 3 region and by urban–rural typology, 1 January 2012 (1)
(% of the EU-27 average, EU-27=100)



(% of the EU-27 average, EU-27=100)
EU-27 = 17.8

Above the EU-27 average
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions
- Data not available

Below the EU-27 average
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions

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

0 200 400 600 800 km

(1) Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7), the United Kingdom, Croatia and Turkey, 1 January 2011; Malta, 1 January 2010.
Source: Eurostat (online data code: demo_r_pjanaggr3)

Table 15.2: Old-age population in rural regions, 1 January 2012
(%)

	Share of persons aged 65+ in the national population (2)	Share of persons aged 65+ in rural regions (2)	Old-age dependency ratio (65+/15–64) in rural regions (2)	Rural region with the highest share of persons aged 65+ (3)		Rural region with the lowest share of persons aged 65+ (3)	
EU-27 (1)	17.8	18.6	28.2	Pinhal Interior Sul (PT166)	33.9	Zeeuwsch-Vlaanderen (NL341)	21.7
Belgium	17.3	16.7	25.6	Arr. Ieper (BE253)	19.6	Arr. Bastogne (BE342)	14.4
Bulgaria	18.8	20.0	29.9	Vidin (BG311)	25.9	Blagoevgrad (BG413)	16.4
Czech Republic	16.2	16.5	24.0	Zlínský kraj (CZ072)	16.8	Jihočeský kraj (CZ031)	16.2
Denmark	17.3	19.0	29.9	Bornholm (DK014)	23.8	Vestjylland (DK041)	17.7
Germany	20.6	20.7	31.6	Suhl, Kreisfreie Stadt (DEG04)	26.6	Vechta (DE94F)	15.0
Estonia	17.2	17.6	26.3	Lääne-Eesti (EE004)	18.3	Kesk-Eesti (EE006)	17.0
Ireland	11.9	12.1	18.5	West (IE013)	13.2	Mid-East (IE022)	9.3
Greece	19.7	21.8	33.9	Grevena (EL131)	29.3	Dodekanisos (EL421)	14.8
Spain	17.1	21.9	33.7	Ourense (ES113)	28.4	Toledo (ES425)	16.7
France	17.1	20.3	32.8	Creuse (FR632)	26.2	Ain (FR711)	15.2
Italy	20.6	21.6	33.0	Alessandria (ITC18)	25.9	Crotone (ITF62)	17.3
Cyprus	12.8	-	-	-	:	-	:
Latvia	18.6	19.0	28.4	Vidzeme (LV008)	19.6	Zemgale (LV009)	17.9
Lithuania	18.1	19.4	29.4	Utenos apskritis (LT009)	21.4	Telšių apskritis (LT008)	17.1
Luxembourg	14.0	-	-	-	:	-	:
Hungary	16.9	17.0	24.8	Békés (HU332)	19.1	Szabolcs-Szatmár-Bereg (HU323)	14.0
Malta	16.5	-	-	-	:	-	:
Netherlands	16.2	21.7	34.5	Zeeuwsch-Vlaanderen (NL341)	21.7	Zeeuwsch-Vlaanderen (NL341)	21.7
Austria	17.8	18.1	27.0	Mittelburgenland (AT111)	21.1	Tiroler Oberland (AT334)	14.6
Poland	13.8	13.5	19.1	Łomżyński (PL344)	16.1	Pilski (PL411)	11.4
Portugal	19.4	23.3	36.8	Pinhal Interior Sul (PT166)	33.9	Região Autónoma dos Açores (PT200)	13.3
Romania	15.0	15.7	22.8	Teleorman (RO317)	21.8	Satu Mare (RO115)	12.4
Slovenia	16.8	17.3	25.0	Goriška (SI023)	18.2	Jugovzhodna Slovenija (SI017)	15.8
Slovakia	12.8	12.8	17.8	Nitriansky kraj (SK023)	14.1	Prešovský kraj (SK041)	11.1
Finland	18.1	19.5	30.6	Etelä-Savo (FI1D1)	24.2	Pohjois-Pohjanmaa (FI1D6)	15.2
Sweden	18.8	21.6	34.5	Kalmar län (SE213)	23.0	Västerbottens län (SE331)	19.5
United Kingdom	16.6	19.7	31.2	Powys (UKL24)	23.4	West and South of Northern Ireland (UKN05)	13.0
Iceland	12.6	13.3	20.3	Landsbyggð (IS002)	13.3	Landsbyggð (IS002)	13.3
Liechtenstein	14.4	14.4	20.6	Liechtenstein (LI000)	14.4	Liechtenstein (LI000)	14.4
Norway	15.4	17.4	27.0	Hedmark (NO021)	19.4	Finnmark (NO073)	15.1
Switzerland	17.2	16.2	23.9	Jura (CH025)	18.5	Freiburg (CH022)	14.2
Croatia	17.1	17.5	26.1	Ličko-senjska županija (HR032)	22.6	Međimurska županija (HR046)	15.3
Turkey	7.2	7.9	12.3	Sinop (TR823)	15.7	Hakkari (TRB24)	2.8

(1) Based on available data for Member States.
(2) Germany, Spain, the United Kingdom, Croatia and Turkey, 1 January 2011.
(3) Excluding rural regions in Mecklenburg-Vorpommern (DE8) and Canarias (ES7); the United Kingdom, Croatia and Turkey, 2010.
Source: Eurostat (online data code: demo_r_pjanaggr3)

The share of women in the EU-27's population was 51.2% as of the beginning of 2012. Among the 1294 NUTS level 3 regions there were 466 regions (just over one third of the total) where the share of women was higher than the EU average. In all three types of regions within the urban–rural typology the number of regions where the share of women in the population was above the EU-27 average was smaller than the number of regions where it was below the average. Nevertheless, relative to the total number of regions of each type, the number of predominantly rural regions where the share of women was above average was relatively low, as 143 out of 482 (29.7%) predominantly rural regions reported shares of women above the EU-27 average. For intermediate regions there were 189 out of 496 (38.1%) regions with above average shares of women in the population, while for urban regions above average shares were observed in 134 out of 316 (42.4%) regions. These figures suggest a flow of women out of predominantly rural regions into predominantly urban regions and/or a movement of men in the other direction.

The highest share of women in the population for any of the NUTS level 3 region was 55.9% in Rīga (Latvia). Shares above 53.0% were reported for 34 NUTS level 3 regions, spread across nine EU Member States. The majority of these regions with particularly high shares of women in the population were in the Baltic Member States: nine in Lithuania, six in Latvia and five in Estonia (there was a relatively large difference in life expectancy between men and women in these countries). The remaining regions were in Poland (five regions), Germany (four regions), France (two overseas regions), and Hungary, Portugal and Romania (one region each). These regions were fairly evenly split between the three types of regions, with 13 of them classified as predominantly rural regions, among which Panevėžio apskritis in Lithuania had the highest share of women (54.1%).

In 133 of the 1294 regions in the EU-27, men were in the majority, in other words the share of women was less than half. In just 22 regions the share of women was 49.0% or less, mainly in Greece (13 regions) and Spain (seven regions), with one region each in the Netherlands and the United Kingdom. Most (14) of these regions with particularly low shares of women in the population were predominantly rural regions, with the predominantly rural region of Evros in Greece reporting the lowest share (47.7%) of all regions.

Focus on the labour market in predominantly rural regions

Economically active population

The distribution of the economically active population by type of region was very similar to the distribution of the population as a whole. As such, the weights of predominantly rural regions in the economically active population aged 25 years or over and in the total population were very close. As Figure 15.3 shows, the share of the active population in predominantly rural regions varied considerably from country to country: in the Netherlands, the United Kingdom and Spain predominantly rural regions accounted for less than 10% of the economically active population, while at the other end of the scale predominantly rural regions in Ireland accounted for over 70% of the economically active population.

Women in the labour force

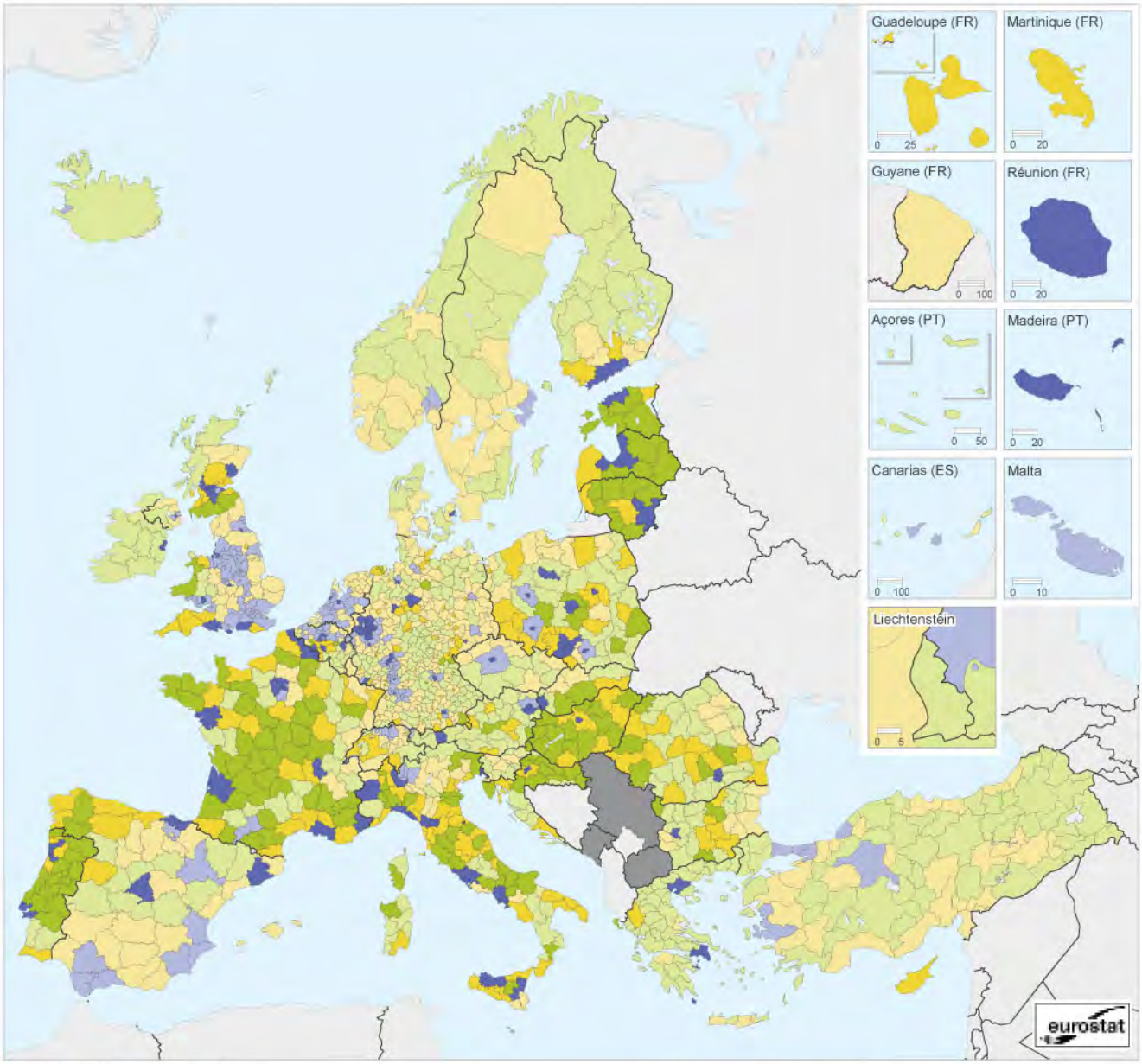
Based on an analysis of the share of women in the labour force (aged 25 or over) it can be seen that, on average, women play a smaller role in the labour force of predominantly rural regions than in the whole economy. This pattern was observed for most EU Member States (Belgium and France, not available; Cyprus, Luxembourg and Malta, no predominantly rural regions) as only Bulgaria, the United Kingdom and the Czech Republic reported a higher share of women in the labour force within predominantly rural regions (than their respective national averages for the whole economy). In the other EU Member States, the differences between national averages and shares for predominantly rural regions were relatively small, only exceeding 1.0 percentage point in Estonia, Greece, Spain, Latvia, Lithuania, the Netherlands, Austria, Portugal, Poland and Romania. However, when compared with the other types of region the share of women in the economically active population in predominantly rural regions was generally lower. Figure 15.4 shows that only in Bulgaria, the Czech Republic, the United Kingdom and Slovakia was the share of women in the labour force in predominantly rural regions higher than in either of the other two types of region.

Employment and unemployment

Employment rates for persons aged 20–64 in the three different types of regions are presented in Figure 15.5. In half of the EU Member States for which data are available and which have at least two types of regions, predominantly rural regions generally had a lower employment rate than the other types of regions. In seven EU Member States intermediate regions had the lowest employment rates while in Greece, Spain and Austria predominantly rural regions had a higher employment rate than both intermediate and predominantly urban regions.

In several central and eastern EU Member States the difference between the employment rate in predominantly rural regions and predominantly urban regions was particularly high, notably in Bulgaria (12.8 percentage points difference), as well as Slovakia (10.9), Finland (8.4), Estonia (7.3), Lithuania (7.1), Hungary (5.7) and Romania (6.6). In most of the remaining Member States the differences between the employment rates for predominantly rural regions and those for intermediate regions were less pronounced, while employment rates were very homogenous for all types of regions in Denmark, Spain, Italy and Poland.

Map 15.3: Share of women in total population, by NUTS level 3 region and by urban–rural typology, 1 January 2012
(% of the EU-27 average, EU-27=100)



(% of the EU-27 average, EU-27=100)

Above the EU-27 average
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions

Below the EU-27 average
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions

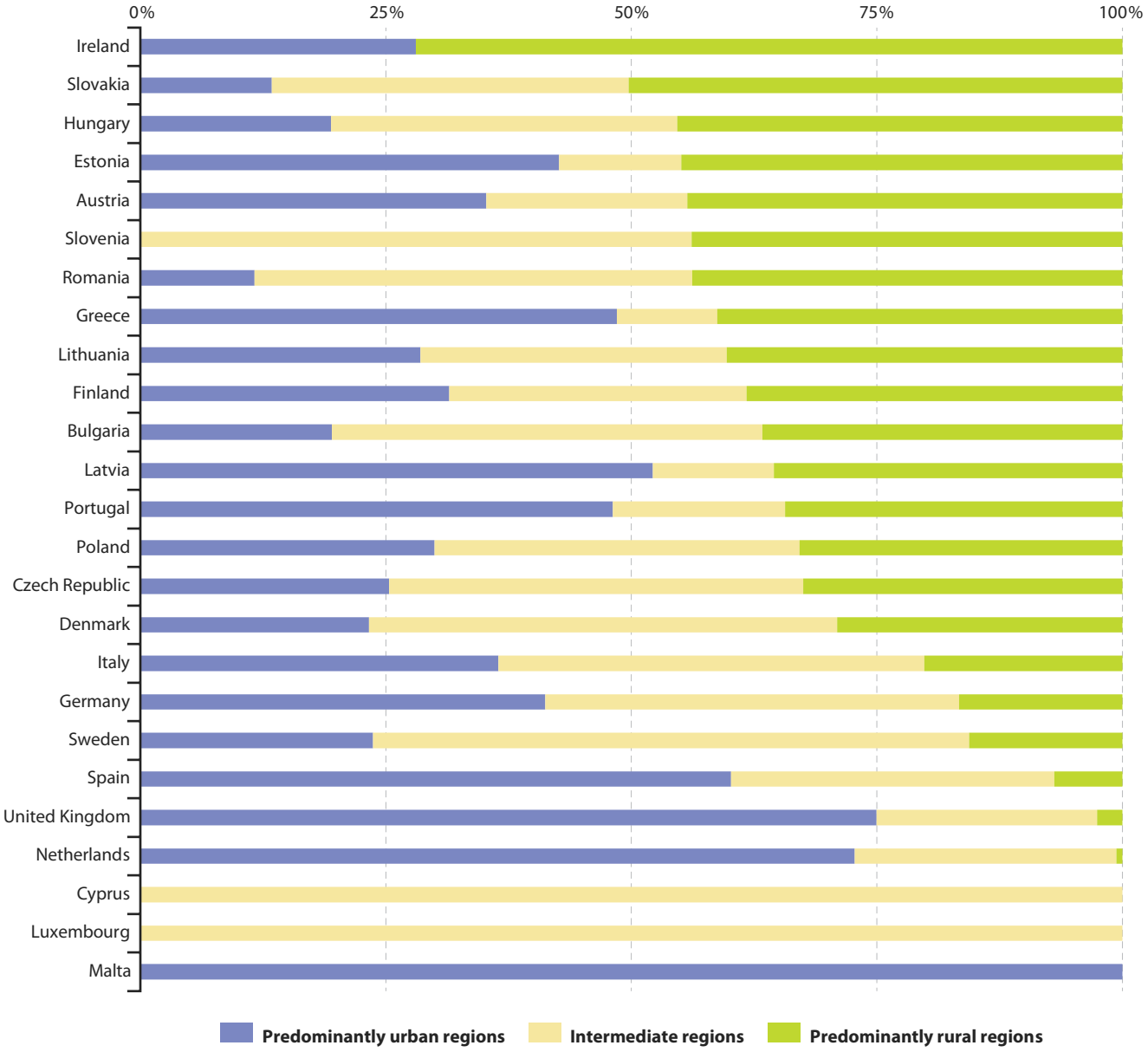
Data not available

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

0 200 400 600 800 km

(1) Mecklenburg-Vorpommern (DE8), Illes Balears (ES53), Canarias (ES7) and Turkey, 2011; Malta, 2010; Belgium, Czech Republic, Ireland, Greece, Spain (except Illes Balears (ES53) and Canarias (ES7)), France, Italy, Latvia, Luxembourg, Hungary, Austria, Poland, Portugal, Romania, United Kingdom, Liechtenstein, Switzerland and Croatia, provisional.
Source: Eurostat (online data code: demo_r_pjanaggr3)

Figure 15.3: Economically active population, persons aged 25 and over, by urban–rural typology, 2011 ([1])
(% of active population)



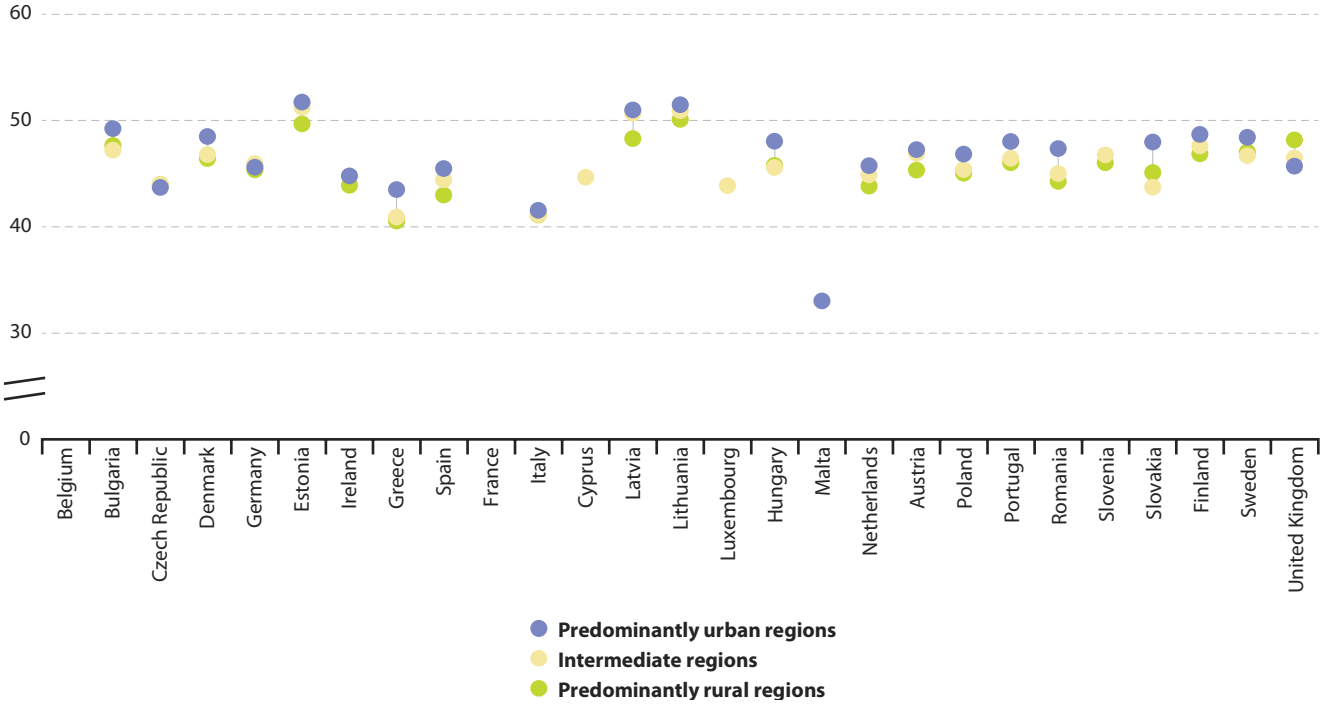
([1]) Belgium and France, not available; Germany, 2010.
Source: Eurostat (online data codes: urt_lfp3pop and lfst_r_lfp3pop)

Table 15.3: Economically active population in rural regions, persons aged 25 and over, 2011

	Economically active population of rural regions	Share of women in the active population of rural regions	Share of women in the national active population
	(thousand)	(%)	
EU-27	:	:	45.5
Belgium	:	:	45.4
Bulgaria	1 128.2	47.6	47.0
Czech Republic	1 586.5	44.0	43.9
Denmark	715.2	46.4	47.1
Germany (1)	6 156.7	45.3	45.9
Estonia	280.3	49.7	50.7
Ireland	1 371.1	43.9	44.1
Greece	1 917.5	40.5	42.0
Spain	1 466.3	43.0	44.9
France	:	:	48.0
Italy	4 722.9	41.1	41.3
Cyprus	0.0	-	47.2
Latvia	364.7	48.3	50.9
Lithuania	596.9	50.1	51.1
Luxembourg	0.0	-	43.8
Hungary	1 806.0	45.8	46.2
Malta	0.0	-	33.0
Netherlands	44.5	43.8	45.5
Austria	1 653.6	45.3	46.3
Poland	5 328.6	45.0	45.7
Portugal	1 750.8	46.0	47.0
Romania	3 934.7	44.3	45.0
Slovenia	409.0	46.0	46.4
Slovakia	1 252.0	45.1	45.0
Finland	902.6	46.9	47.7
Sweden	680.7	47.0	47.1
United Kingdom	689.8	48.2	45.9

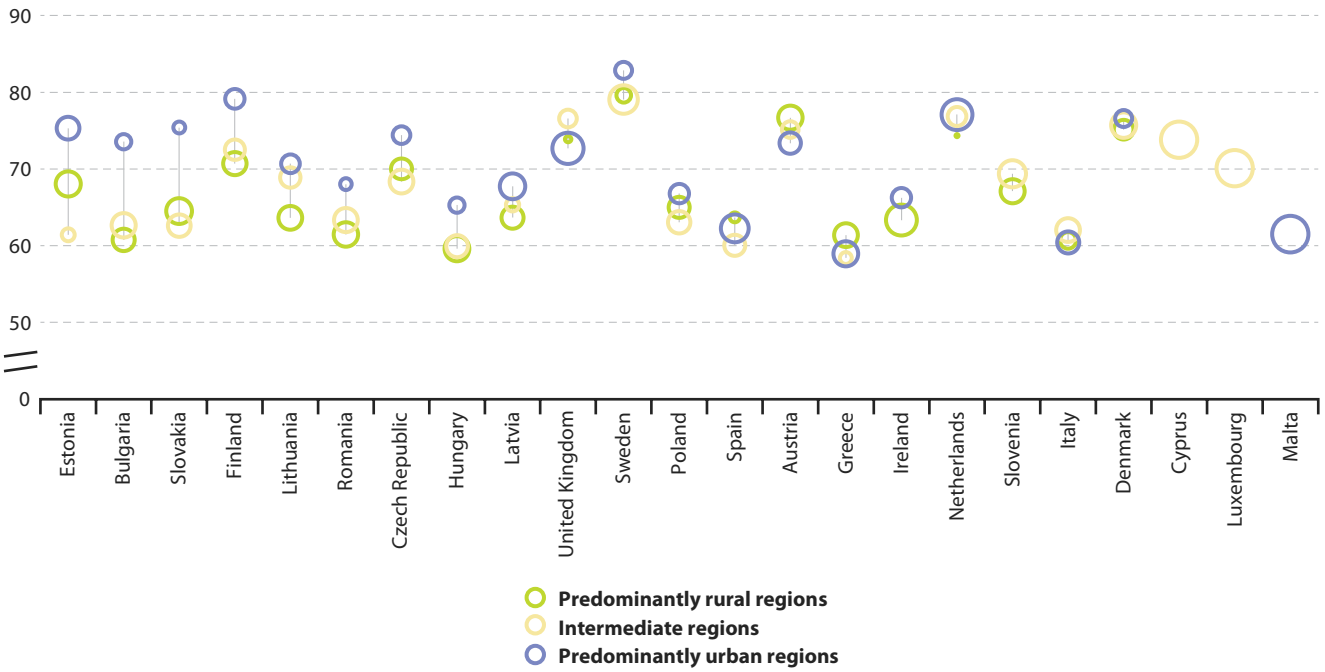
(1) 2010.
Source: Eurostat (online data codes: urt_lfp3pop and lfst_r_lfp3pop)

Figure 15.4: Share of women in the economically active population, persons aged 25 and over, by urban–rural typology, 2011 (1)
(% of active population)



(1) Belgium and France, not available; Germany, 2010.
Source: Eurostat (online data code: urt_lfp3pop)

Figure 15.5: Employment rate, persons aged 20–64, by urban–rural typology, 2011 (1)
(%)



(1) Belgium, Germany, France and Portugal, not available; Czech Republic, 2010; the size of the bubble reflects the share in total population of each type of region.
Source: Eurostat (online data codes: urt_lfe3emprt and urt_pjanaggr3)

Figure 15.6 presents unemployment rates in the three different types of regions. The highest unemployment rate for predominantly rural regions was recorded in Spain, at 16.2 %, while double-digit rural unemployment rates were also observed in Bulgaria, Estonia, Ireland, Greece, Latvia, Lithuania, Hungary and Slovakia. In Denmark, Germany, Greece, Spain and the Netherlands, rural unemployment rates were lower than in the other two types of region.

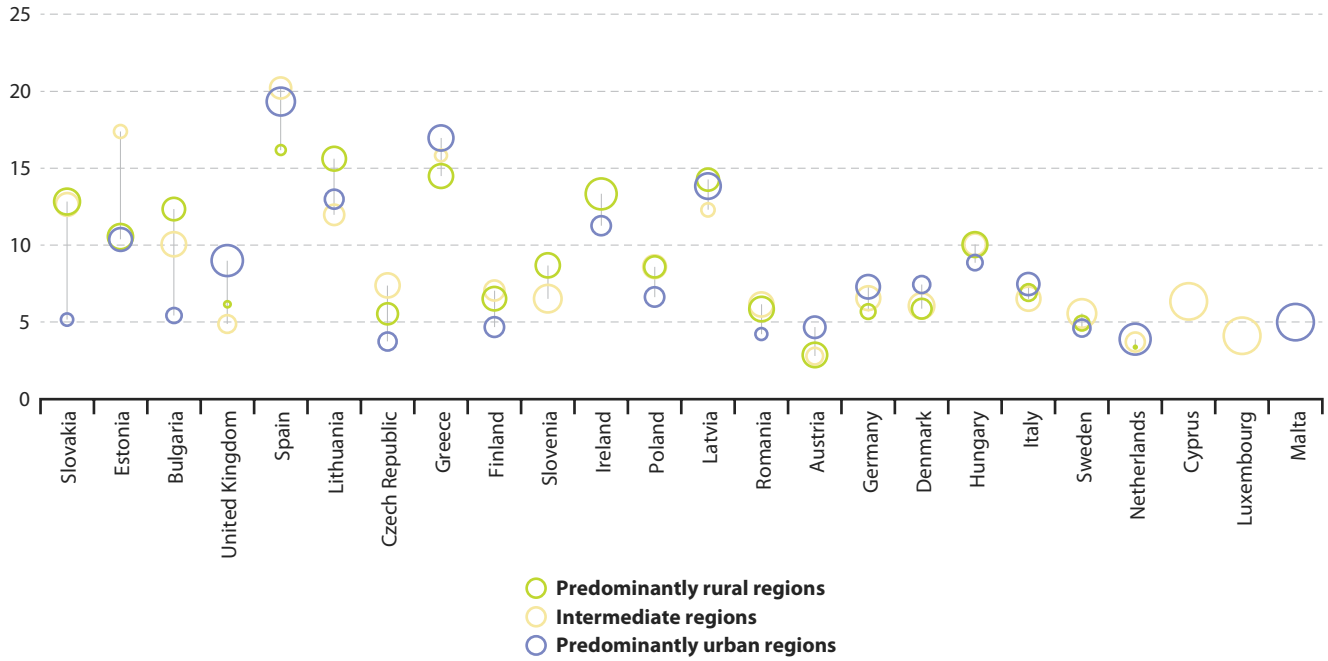
Only Ireland and some central and eastern EU Member States recorded higher unemployment rates in predominantly rural regions than in the other types of regions. By contrast, predominantly urban regions observed the highest unemployment rates in some western and southern Member States. The highest differences between unemployment rates in the different types of regions were recorded in Bulgaria, Estonia and Slovakia.

Focus on the economy in predominantly rural regions

In 2010, predominantly urban regions accounted for approximately 54.3 % of GDP within the EU-27, while intermediate regions contributed around 29.2 % and predominantly rural regions the remaining 15.3 %. Compared with 10 years earlier, this gap between predominantly rural regions and predominantly urban regions closed slightly, as the share accounted for by predominantly urban regions fell 1.2 percentage points while the shares of the two other types of regions increased by 0.6 percentage points each.

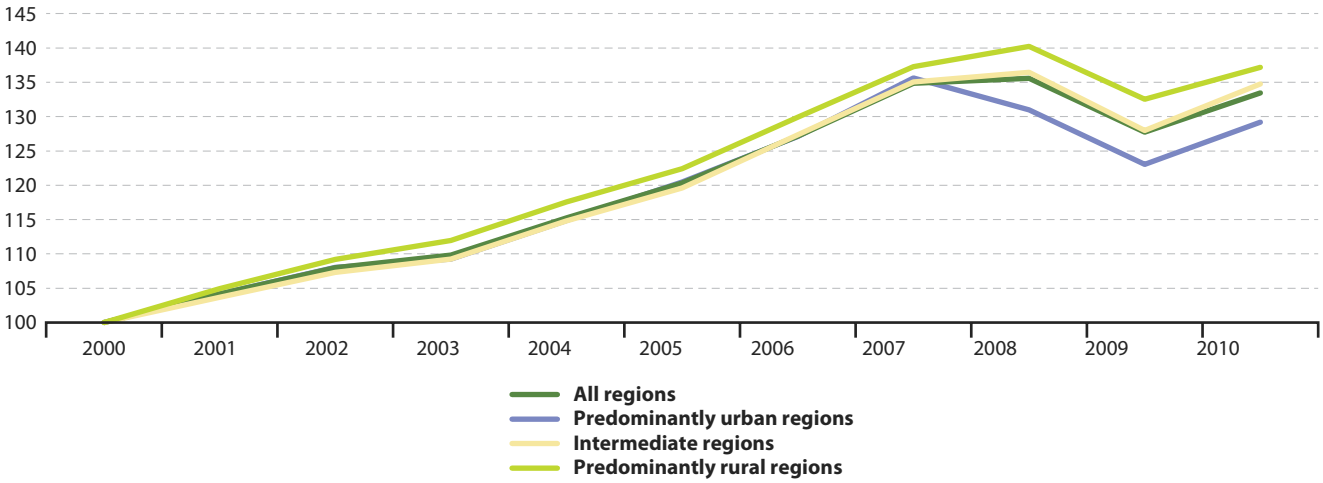
Figure 15.7 shows how GDP in the three types of regions developed between 2000 and 2010; note that these data are presented in current prices and so are not adjusted for the impact of inflation. As noted above, measured in absolute terms the urban–rural gap in GDP remained significant, but narrowed slightly during the last decade. Between 2000 and 2007, GDP growth in predominantly rural regions slightly outpaced that in the two other types of region. A major change in developments occurred in 2008 as the impact of the financial and economic crisis was particularly strongly felt in predominantly urban regions where GDP fell on average by 3.4 %; in 2008, intermediate regions (1.0 %) and predominantly rural regions (2.2 %) continued to experience growth. In 2009, the downturn intensified with all three types of region experiencing a reduction in output, although the contraction was stronger for intermediate regions (– 6.2 %) and predominantly urban regions (– 6.1 %) than it was for predominantly rural regions (– 5.5 %). In 2010, all types of regions returned to growth, albeit less than the falls experienced in 2009, ranging from 3.5 % growth for predominantly rural regions to 5.0 % growth for predominantly urban regions and 5.3 % growth for intermediate regions. Over the period 2000–10, average growth for predominantly rural regions was 3.2 % per year, ahead of intermediate regions (3.0 %) and predominantly urban regions (2.6 %). It can be concluded that the development of GDP in predominantly rural regions was stronger than for either of the other types of regions and that it was somewhat less volatile during the recent crisis.

Figure 15.6: Unemployment rate, persons aged 25 or more, by urban–rural typology, 2011 (1)
(%)



(1) Belgium, France and Portugal, not available; Germany, 2010; the size of the bubble reflects the share in total population of each type of region.
Source: Eurostat (online data codes: urt_lfu3rt, urt_pjanaggr3, lfst_r_lfu3pers and lfst_r_lfp3pop)

Figure 15.7: Gross domestic product (GDP), by urban–rural typology, EU-27, 2000–10 ([1])
(2000=100)



([1]) The analysis according to the urban–rural typology excludes: Brandenburg (DE4), Städteregion Aachen (DEA2D), Bautzen (DED2C), Görlitz (DED2D), Meißen DED2E), Sächsische Schweiz-Osterzgebirge (DED2F), Chemnitz (DED4), Leipzig (DED5), Piemonte (ITC1), Liguria (ITC3), Lombardia (ITC4), Sud (ITF), Isole (ITG), Veneto (ITH3), Friuli-Venezia Giulia (ITH4), Emilia-Romagna (ITH5), Centro (ITI), Agglomeratie Leiden en Bollenstreek (NL337), Oost-Zuid-Holland (NL338), Groot-Rijnmond (NL339) and Zuidoost-Zuid-Holland (NL33A).
Source: Eurostat (online data code: urt_e3gdp)

Focus on agriculture and tourism in rural regions

The importance attached to the structure and composition of rural economies reflects their diversity and is a consequence of the scale of diversification from and within primary activities such as agriculture, forestry and fisheries. Employment challenges across the EU's rural areas are related at least in part to the diversity of the local economy.

Services have been the major driver of growth within the EU during recent decades. However, their share of regional GDP (note that data are not available for the vast majority of Italian regions) was much lower in 2010 in predominantly rural regions (64.8 %) than in intermediate regions (68.7 %) or predominantly urban regions (78.6 %). By contrast, the shares of the other broad sectors were higher for predominantly rural regions — 23.7 % from industry, 7.1 % from construction and 4.4 % from agriculture, forestry and fisheries — than for the two other types of regions. Services contributed more than half of total value added in predominantly rural regions in all of the Member States in 2010, except for the Netherlands and Romania, both of which had relatively large industrial sectors while Romania's agriculture, forestry and fisheries sector was one of the largest (in terms of its contribution to total value added) — see Table 15.4. In four Member States, the share of services in total value added was over 70.0 % in predominantly rural regions, reaching 73.1 % in Denmark.

While agriculture, forestry and fisheries was the smallest of the four broad sectors presented in Table 15.4 for predominantly rural regions across the whole of the EU, this situation was not repeated in all of the Member States. In the predominantly rural regions of Bulgaria, Estonia, Ireland, Greece, Latvia, Lithuania, Poland and Romania, the contribution of agriculture, forestry and fisheries to total value added in 2010 was greater than that of construction; this was also the case in Croatia. The highest contributions of agriculture, forestry and fisheries to value added in predominantly rural regions were recorded in Bulgaria (11.2 %), Latvia and Romania (both 11.0 %). By contrast, agriculture, forestry and fisheries contributed as little as 2.4 % of value added in predominantly rural regions in Germany and Ireland.

Agricultural, forestry and fisheries labour force

In 2010, the regular agricultural labour force in the EU-27 was around 25.0 million people, very many of them working on a part-time and/or seasonal basis. The agricultural labour input in the EU-27 in 2012 was estimated at 10.1 million annual working units: one annual working unit is equivalent to one person working full-time for a whole year. The level of labour input in 2012 was around 25 % lower than it had been 10 years earlier — an average fall of 2.9 % per year. The largest overall reductions in agricultural employment over this 10-year period were in Slovakia (– 58.9 %) and Estonia (– 56.2 %), while agricultural labour input also fell by 30.0 % or more in Bulgaria, Latvia, Romania, the Czech Republic, Hungary, Sweden, Greece and Denmark, as well as in Norway. The only EU Member States that reported an increase in their agricultural labour input over this period were Malta (14.0 %) and Ireland (4.6 %).

Table 15.4: Gross value added in rural regions, 2010
(% share of total value added)

	Agriculture, forestry and fisheries	Industry	Construc-tion	Services	Rural region with the highest share of value added in agriculture, forestry and fisheries	Rural region with the highest share of value added in services
EU-27 (1)	4.4	23.8	7.1	64.7	Silistra (BG325)	Evrytania (EL243)
Belgium	3.2	16.7	8.2	71.9	Arr. Diksmuide (BE252)	Arr. Philippeville (BE353)
Bulgaria	11.2	31.1	5.7	52.0	Silistra (BG325)	Vidin (BG311)
Czech Republic	2.8	36.3	8.1	52.8	Kraj Vysočina (CZ063)	Olomoucký kraj (CZ071)
Denmark	3.2	17.6	6.2	73.1	Vestjylland (DK041)	Bornholm (DK014)
Germany	2.4	28.6	6.6	62.4	Rügen (DE80H)	Suhl, Kreisfreie Stadt (DEG04)
Estonia	8.2	24.3	7.3	60.2	Kesk-Eesti (EE006)	Lõuna-Eesti (EE008)
Ireland	2.4	32.6	2.3	62.6	South-East (IE024)	Midland (IE012)
Greece	7.4	17.4	4.6	70.6	Pella (EL124)	Evrytania (EL243)
Spain	7.1	16.6	14.0	62.2	Cuenca (ES423)	La Gomera (ES706)
France	4.2	16.5	7.3	72.0	Lozère (FR814)	Corse-du-Sud (FR831)
Italy	:	:	:	:	:	:
Cyprus	-	-	-	-	-	-
Latvia	11.0	23.6	5.5	59.8	Zemgale (LV009)	Latgale (LV005)
Lithuania	7.1	28.6	7.0	57.3	Marijampolės apskritis (LT004)	Tauragės apskritis (LT007)
Luxembourg	-	-	-	-	-	-
Hungary	6.5	34.4	4.9	54.2	Békés (HU332)	Somogy (HU232)
Malta	-	-	-	-	-	-
Netherlands	3.1	46.2	5.5	45.2	Zeeuwsch-Vlaanderen (NL341)	Zeeuwsch-Vlaanderen (NL341)
Austria	3.3	27.1	8.7	60.9	Weinviertel (AT125)	Tiroler Oberland (AT334)
Poland	8.5	26.9	8.3	56.3	Ostrołęcko-siedlecki (PL122)	Przemyski (PL324)
Portugal	5.6	21.1	6.5	66.8	Baixo Alentejo (PT184)	Região Autónoma dos Açores (PT200)
Romania	11.0	34.1	8.3	46.5	Ialomiţa (RO315)	Călăraşi (RO312)
Slovenia	4.1	29.3	7.2	59.4	Notranjsko-kraška (SI018)	Podravska (SI012)
Slovakia	4.7	31.3	9.5	54.5	Banskobystrický kraj (SK032)	Banskobystrický kraj (SK032)
Finland	5.6	24.2	7.4	62.8	Etelä-Savo (FI1D1)	Åland (FI200)
Sweden	4.5	26.9	5.3	63.3	Jämtlands län (SE322)	Gotlands län (SE214)
United Kingdom	3.1	18.5	8.9	69.5	Herefordshire, County of (UKG11)	Eilean Siar (Western Isles) (UKM64)
Norway	4.0	16.6	7.2	54.6	Finnmark (NO073)	Troms (NO072)
Croatia	9.1	23.8	7.7	59.4	Virovitičko-podravska županija (HR048)	Zadarska županija (HR033)

(1) Excluding Italy.
Source: Eurostat (online data code: nama_r_e3vab95r2)

Table 15.5 presents a similar analysis to that in Table 15.4 but focused on employment; it should be noted that this analysis is for 2009 and that data are not available for either Germany or Italy (and hence no EU aggregate has been produced). Again services dominated the analysis, providing employment for more than half the workforce in predominantly rural regions in all Member States except for Poland, Bulgaria and Romania. The employment share of agriculture, forestry and fisheries in predominantly rural regions tended to be higher than the equivalent value added share, although this was not the case in Estonia or Sweden. In some of the Member States the difference between the value added and employment contributions was particularly large, notably in Romania, Bulgaria, Poland, Portugal and Greece, where the difference was more than 10 percentage points; the employment shares of agriculture, forestry and fisheries in the predominantly rural regions of these Member States were so high that they were greater than the shares recorded for either industry or construction, and in the case of Romania the employment share of agriculture, forestry and fisheries in the predominantly rural regions was also higher than that recorded for services. By contrast, agriculture, forestry and fisheries provided less than 5.0 % of employment in the predominantly rural regions of Sweden, the Netherlands, Denmark, Belgium and Slovakia. Agriculture, forestry and fisheries contributed 4.4 % to the rural economy's total value added in 2010 (excluding nearly all Italian regions) and 15.6 % of rural employment in 2009 (excluding Germany and nearly all Italian regions). Looking from another perspective, predominantly rural regions accounted for 42.4 % of the added value in agriculture, forestry and fisheries across the EU and for 54.9 % of employment in this sector; this underlines not only the importance of this sector for predominantly rural regions but also the importance of predominantly rural regions for this sector.

Map 15.4 presents more detailed information on the relative importance of agriculture, forestry and fisheries in regional employment. For the EU-27 as a whole, agriculture, forestry and fisheries provided 5.21 % of employment in 2012, down from 5.37 % in 2009 (the year for which regional data are presented in the map). Unsurprisingly, employment in this sector is particularly concentrated in predominantly rural regions. Among the 750 regions in the map some 325 were predominantly rural regions, and among these 264 had a higher employment share for agriculture, forestry and fisheries than the EU-27 average. By contrast, there were only 12 (out of 188) predominantly urban regions and 95 (out of 237) intermediate regions with an above average employment share in agriculture, forestry and fisheries.

The highest shares of agriculture, forestry and fisheries in total employment at the NUTS level 3 were mainly in Romania: Ialomiţa had the highest share (63.6 %) while seven other Romanian regions had shares over 50.0 %. Following on from these regions were Silistra in Bulgaria (49.4 %) and Alto Trás-os-Montes in Portugal (47.8 %), before four more Romanian regions. The highest shares of agriculture, forestry and fisheries in employment among intermediate regions were 45.0 % and 44.0 % in the Romanian regions of Bacău and Iaşi, the 17th and 19th highest shares respectively. Among predominantly urban regions the highest share was 26.2 % in the Polish region of Krakowski, which was the 74th highest share. The lowest share of agriculture, forestry and fisheries among predominantly rural regions was 0.5 % in the Spanish island region of El Hierro. In 12 regions there was no employment in agriculture, forestry and fisheries, 10 of which were predominantly urban regions and two were intermediate regions (Swindon and Plymouth in the United Kingdom); nine of these regions with no employment in agriculture, forestry and fisheries were in the United Kingdom and the other was the Danish capital city region of Byen København.

Agricultural secondary activities

Whilst the share of agriculture, forestry and fisheries in rural economies has declined, the importance of diversification in rural economies has grown. In the EU-27 as a whole, around 5.2 % of farms had at least one other source of income (referred to as other gainful activities) — see Table 15.6. This share ranged from less than 5.0 % in Italy, Poland, Malta, Spain, Greece, Bulgaria, Romania, Cyprus and Lithuania (where it was just 0.8 %) to more than one third in Sweden, Austria and Denmark (where it reached 52.0 %), while among those Member States that joined the EU in 2004 or 2007 the highest proportions of agricultural holdings with other gainful activities were recorded in Slovenia (16.8 %), the Czech Republic (15.0 %) and Estonia (13.5 %). The overall EU-27 average is strongly influenced by the low proportion of agricultural holdings in Italy, Poland and Romania that had other gainful activities, while each of these three Member States had a very high overall number of holdings — together they accounted for well over half (58.2 %) of the 12.0 million holdings across the EU-27; note that many of these were very small in size and employed the equivalent of less than a single, full-time person.

When considered in terms of their economic weight (based on the standard output), agricultural holdings that undertake secondary activities were more important than suggested by a simple count, as they generated 18.9 % of agricultural standard output in the EU-27. In some Member States, the relative importance of secondary activities was quite different whether measured in terms of the number of holdings or their output, for example: while only 1.1 % of holdings in Bulgaria and Romania had a secondary activity, those that did accounted for 13.5 % and 9.6 % respectively of total standard output, while in Lithuania those agricultural holdings with secondary activities (0.8 % of the total) generated 7.4 % of standard output.

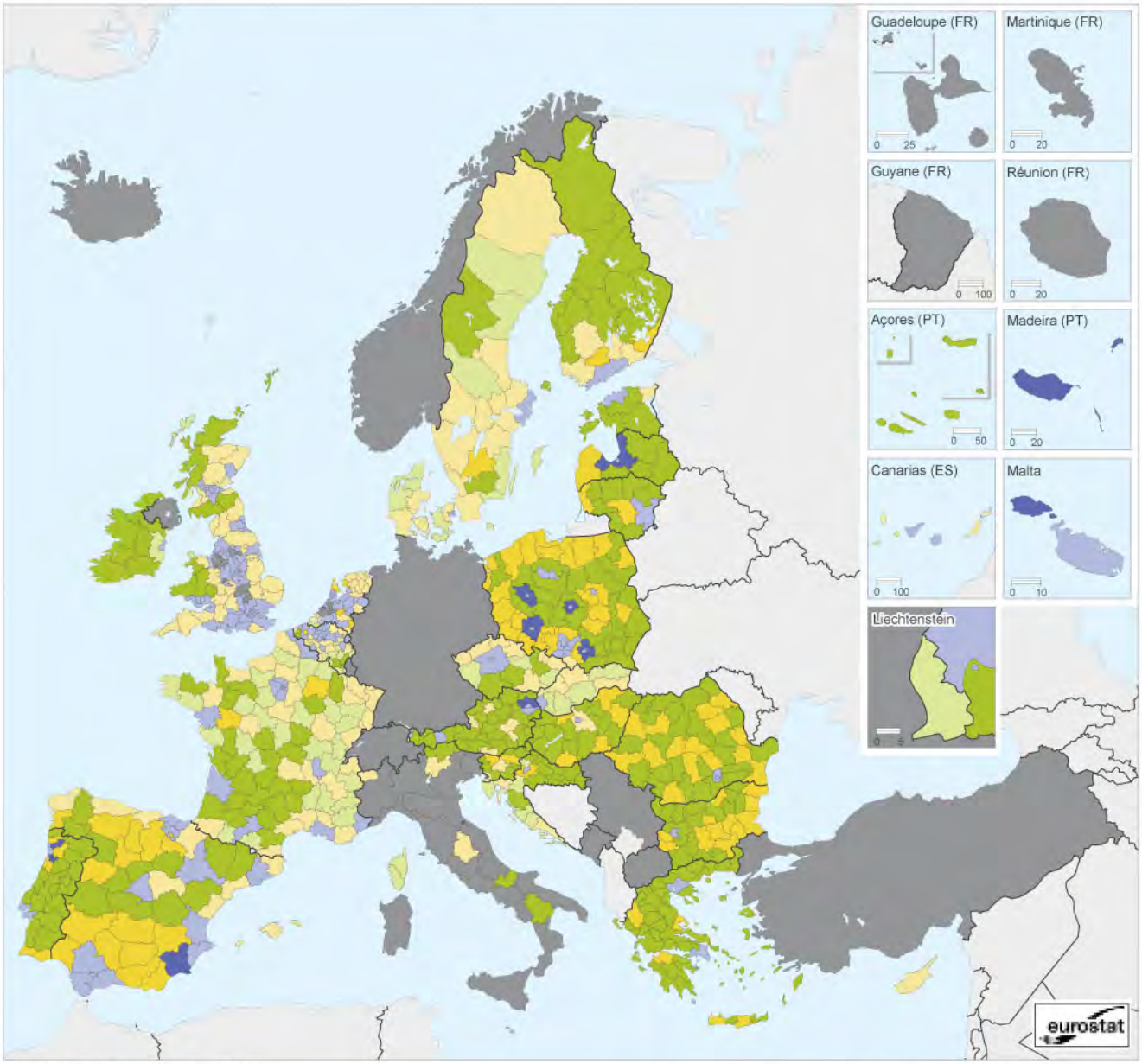
Table 15.6 gives an indication of the various types of secondary gainful activities that were practised by agricultural

Table 15.5: Employment in rural regions, 2009
(% share of total employment)

	Agriculture, forestry and fisheries	Industry	Construc-tion	Services (1)	Rural region with the highest share of employment in agriculture, forestry and fisheries	Rural region with the highest share of employment in services
EU-27	:	:	:	:	Ialomiţa (RO315)	El Hierro (ES703)
Belgium	4.7	13.4	8.5	73.5	Arr. Diksmuide (BE252)	Arr. Arlon (BE341)
Bulgaria	30.7	23.6	5.3	40.5	Silistra (BG325)	Vidin (BG311)
Czech Republic	5.5	31.6	8.9	53.9	Kraj Vysočina (CZ063)	Olomoucký kraj (CZ071)
Denmark	4.6	16.8	8.1	70.5	Bornholm (DK014)	Bornholm (DK014)
Germany	:	:	:	:		
Estonia	7.6	22.9	10.1	59.3	Kesk-Eesti (EE006)	Lõuna-Eesti (EE008)
Ireland	7.2	15.4	9.5	67.8	South-East (IE024)	South-West (IE025)
Greece	22.8	10.7	8.0	58.6	Rodopi (EL113)	Dodekanisos (EL421)
Spain	8.6	12.1	11.1	68.2	Lugo (ES112)	El Hierro (ES703)
France	5.2	16.8	7.7	70.3	Gers (FR624)	Hautes-Alpes (FR822)
Italy	:	:	:	:		
Cyprus	-	-	-	-		
Latvia	15.3	15.5	8.0	61.3	Vidzeme (LV008)	Latgale (LV005)
Lithuania	15.8	18.9	9.0	56.3	Tauragės apskritis (LT007)	Panevėžio apskritis (LT005)
Luxembourg	-	-	-	-		
Hungary	11.2	29.3	7.2	52.3	Békés (HU332)	Szabolcs-Szatmár-Bereg (HU323)
Malta	-	-	-	-		
Netherlands	4.1	21.1	6.7	68.1	Zeeuwsch-Vlaanderen (NL341)	Zeeuwsch-Vlaanderen (NL341)
Austria	11.7	20.1	8.2	59.9	Oststeiermark (AT224)	Sankt Pölten (AT123)
Poland	27.0	21.1	7.4	44.5	Łomżyński (PL344)	Stargardzki (PL423)
Portugal	23.4	14.4	9.9	52.3	Alto Trás-os-Montes (PT118)	Região Autónoma dos Açores (PT200)
Romania	39.0	22.0	6.3	32.7	Ialomiţa (RO315)	Mureş (RO125)
Slovenia	12.5	28.0	9.1	50.5	Pomurska (SI011)	Podravska (SI012)
Slovakia	4.8	25.5	9.5	60.2	Nitriansky kraj (SK023)	Banskobystrický kraj (SK032)
Finland	8.5	18.8	7.5	65.2	Etelä-Pohjanmaa (FI194)	Åland (FI200)
Sweden	3.3	14.9	7.1	74.7	Kronobergs län (SE212)	Jämtlands län (SE322)
United Kingdom (2)	6.9	11.6	9.2	72.4	Orkney Islands (UKM65)	Eilean Siar (Western Isles) (UKM64)
Liechtenstein	0.9	33.7	7.6	57.8	Liechtenstein (LI000)	Liechtenstein (LI000)
Croatia	7.9	25.6	9.8	56.8	Virovitičko-podravska županija (HR048)	Dubrovačko-neretvanska županija (HR037)

(1) Estonia (some regions), Spain, France, Malta and Austria: calculated as the difference between the sum of the other three categories and 100 %.
(2) Excluding West and South of Northern Ireland.
Source: Eurostat (online data code: nama_r_e3emp95r2)

Map 15.4: Share of agriculture, forestry and fisheries in total employment, by NUTS 3 regions and by urban–rural typology, 2009 (1)
(% of the EU-27 average, EU-27=100)



(% of the EU-27 average, EU-27=100)

Above the EU-27 average
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions
- Data not available

Below the EU-27 average
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions

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

0 200 400 600 800 km

(1) Départements d'outre-mer (FR9) and Northern Ireland (UKN), by NUTS 1 regions; Italy, by NUTS 2 regions.
Source: Eurostat (online data code: nama_r_e3emp95r2)

holdings in 2010. Note that the shares indicated in the table do not show the relative importance of the secondary activity, but the overall importance of the holdings that undertake that activity among all holdings with secondary activities. For example, agricultural holdings that also offered tourism services accounted for 12.5 % of the standard output of holdings with any secondary activity in the EU-27. As holdings may undertake multiple secondary activities, the shares for individual activities cannot be aggregated. Particularly common secondary activities included contractual work, forestry, processing farm products and renewable energy production.

Table 15.6: Other gainful activities for agricultural holdings, 2010

	Holdings with other gainful activities (% of total number of holdings)	Tourism	Processing farm products	Renewable energy production	Forestry work	Wood processing	Acquaculture	Contractual work	Handicrafts	Others
		(standard output of holdings having the specified activity as a share of the standard output for all holdings with other gainful activities) (%) (1)								
EU-27	5.2	12.5	18.7	18.7	:	2.0	1.0	39.1	0.9	23.6
Belgium	7.8	14.5	18.1	18.5	4.2	1.9	1.0	36.7	4.8	23.3
Bulgaria	1.1	0.8	13.4	0.0	1.7	0.1	2.5	76.8	0.1	17.7
Czech Republic	15.0	11.5	20.1	10.4	2.5	5.5	1.4	77.6	6.5	1.9
Denmark	52.0	2.9	2.6	10.7	67.8	0.0	0.0	38.8	3.0	16.2
Germany	30.8	6.6	16.5	49.4	18.2	3.6	0.5	36.0	0.2	13.3
Estonia	13.5	5.7	17.0	0.5	19.5	2.9	0.7	51.4	0.9	23.5
Ireland	9.2	10.0	2.6	2.2	34.3	1.5	0.8	27.7	0.9	28.1
Greece	1.4	3.9	46.4	0.9	1.8	1.4	0.6	49.2	0.6	2.6
Spain	2.1	15.6	23.6	11.3	7.9	0.7	0.3	25.6	1.2	21.8
France	9.4	18.0	31.3	3.7	1.1	1.2	0.5	42.0	0.6	10.3
Italy	4.7	23.5	26.0	11.5	4.6	1.9	0.2	25.9	0.3	34.7
Cyprus	1.0	0.0	88.4	0.0	0.0	0.0	0.0	11.5	0.0	0.0
Latvia	5.0	7.3	39.4	1.7	24.4	4.1	21.5	26.5	0.9	17.4
Lithuania	0.8	3.4	43.4	0.2	2.8	1.9	0.2	14.3	2.8	36.1
Luxembourg	24.1	18.0	12.1	31.4	11.5	7.4	0.0	60.0	0.0	18.9
Hungary	8.2	6.7	32.2	1.2	10.1	0.6	1.7	73.8	0.1	48.5
Malta	2.2	0.0	56.8	0.0	0.0	0.0	0.0	43.7	0.0	0.0
Netherlands	24.6	9.8	7.4	20.4	0.0	0.0	0.2	22.3	0.0	60.6
Austria	37.3	13.8	21.8	15.6	63.9	1.2	0.5	18.5	0.6	3.1
Poland	3.3	8.8	13.7	1.1	1.9	1.3	12.3	18.9	0.5	54.3
Portugal	5.0	14.2	17.7	0.0	50.6	1.7	0.0	21.5	0.3	14.2
Romania	1.1	1.0	67.6	0.3	0.5	0.7	0.2	21.7	0.1	19.8
Slovenia	16.8	5.2	22.5	1.3	67.0	2.9	0.1	11.7	0.9	4.9
Slovakia	5.9	7.0	27.5	0.2	0.8	2.2	1.2	63.2	8.2	50.1
Finland	26.5	9.7	6.9	5.9	6.4	2.5	0.3	58.6	1.0	34.7
Sweden	33.8	14.4	10.3	9.3	:	2.4	0.6	71.3	1.3	13.6
United Kingdom	17.5	26.7	7.6	3.0	8.5	2.5	1.7	55.4	0.6	24.4
Norway	54.7	7.8	4.4	2.4	50.4	22.3	:	55.1	1.2	10.2
Switzerland	44.5	10.1	19.7	10.1	38.2	13.5	0.1	38.6	2.5	50.3
Croatia	5.9	16.0	47.1	0.0	0.0	11.6	1.3	40.0	1.7	4.6

(1) Reading note: agricultural holdings that also offered tourism services as another gainful activity accounted for 12.5 % of the standard output of all holdings with any secondary activity in the EU-27. As holdings may undertake multiple secondary activities the shares for individual activities cannot be aggregated.

Source: Eurostat (online data code: ef_ogadsexage)

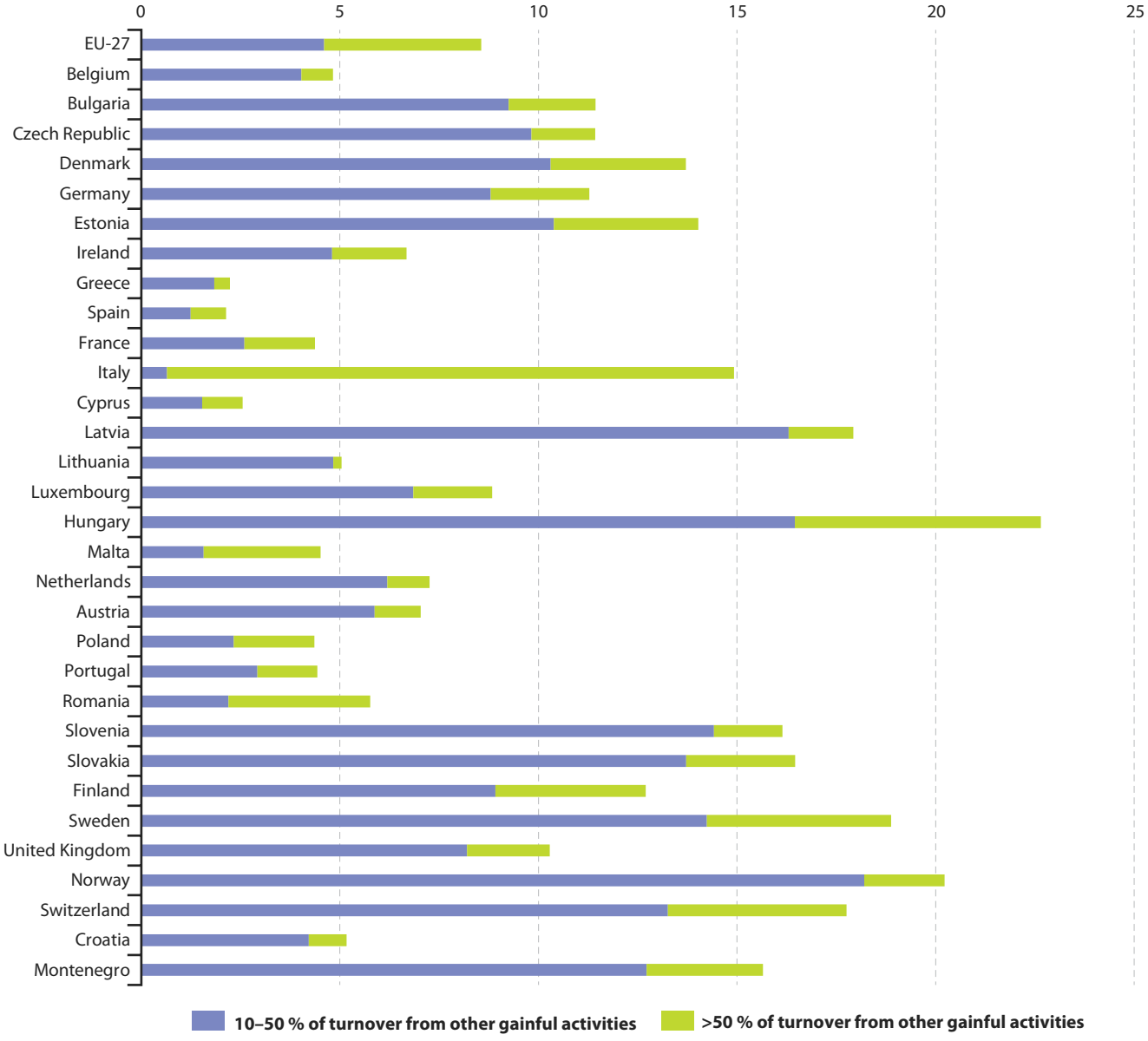
As noted above, 18.9 % of all standard output in the EU-27 was generated by agricultural holdings with secondary activities. Figure 15.8 gives further analysis of this figure, and shows that a total of 8.6 % of all standard output was generated by holdings where secondary activities generated at least 10 % of turnover, among which 4.0 % of all standard output was generated by holdings where secondary activities generated more than half of turnover. Hungary had the highest proportion of standard output generated by holdings where at least 10 % of turnover was from secondary activities, while Italy had by far the highest proportion of standard output generated by holdings where secondary activities generated more than half of turnover.

Tourism

While some tourism, such as city visits, is clearly associated with urban areas, much of it is based in rural areas, for example alongside coastlines, in mountainous regions (in summer and winter) or by rivers and lakes. As such, tourism and its related activities, notably construction, distributive trades, food and beverage services and transport services, can play an important role in rural economies.

The distribution of tourism supply between the three types of regions is presented in Figure 15.9. In 2011, just over two fifths (42.5 %) of the number of bed places in all collective

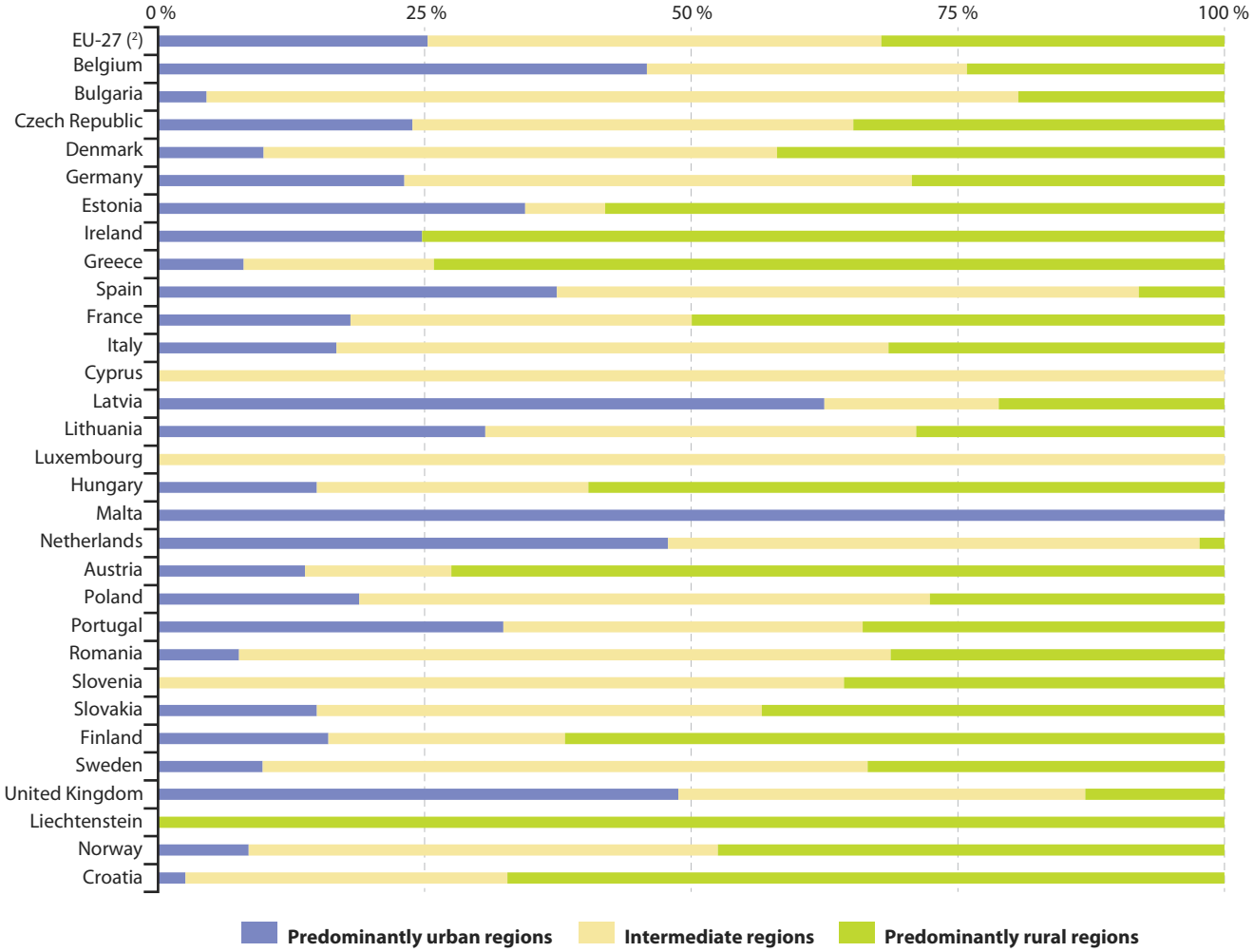
Figure 15.8 Gross value added in rural regions, 2010
(% share of total value added)



(1) Excluding Italy.
Source: Eurostat (online data code: nama_r_e3vab95r2)

accommodation establishments (hotels, campsites and others) in the EU-27 were in intermediate regions, just under one third (32.2 %) in predominantly rural regions and the remaining quarter (25.3 %) in predominantly urban regions. As such, the share of bed places in predominantly rural regions was considerably higher than the equivalent share of the population (as of 1 January 2012), which was 9.9 percentage points lower at 22.3 %, providing some evidence as to the attractiveness of rural areas for holidaymakers; note also that a higher proportion of bed places in collective accommodation establishments in urban regions (compared with rural regions) may well be linked to supply for business customers rather than holidaymakers. Equally, the share of bed places in intermediate regions was higher (7.3 percentage points) than the share of intermediate regions in the total population (35.3 %) and, as a result, predominantly urban regions' share of bed places was considerably lower (17.2 percentage points) than its population share (42.4 %). This overall pattern of relatively high shares for predominantly rural regions was repeated in 16 of the 24 EU Member States with predominantly rural regions. The Member States where predominantly rural regions had a particularly high share of bed places in comparison with their share of the population were Greece, Austria, Finland and France, all of which reported that the share of bed places in predominantly rural regions was at least 20.0 percentage points above the equivalent share of the population. Unsurprisingly, these four Member States were among the seven Member States where at least half of all bed places were in predominantly rural regions. The ranking of the largest shares in predominantly rural regions was headed by Ireland (75.2 %), ahead of Greece (74.1 %) and Austria (72.5 %). Predominantly rural regions' share of the total number of bed places was at least 10.0 percentage points lower than their share of the population in Lithuania, Romania, Latvia and most of all Bulgaria (18.2 percentage points lower).

Figure 15.9: Employment in rural regions, 2009
(% share of total employment)



(1) Estonia (some regions), Spain, France, Malta and Austria: calculated as the difference between the sum of the other three categories and 100 %.
(2) Excluding West and South of Northern Ireland.
Source: Eurostat (online data code: nama_r_e3emp95r2)

The development in the number of bed places between 2007 and 2011 — in other words, from a period just before the financial and economic crisis started through to the latest available data — is shown in Map 15.5. The average change for the EU-27 was an increase of 2.36 %. A distinction is made between the three types of regions and, for each of these, between regions where the rate of change was above or below the EU-27 average.

There were 10 regions where the number of bed places more than doubled from 2007–11, among which four were predominantly rural regions: Lefkada and Preveza in Greece, Powys in the United Kingdom and Silistra in Bulgaria. The highest growth recorded in any region was in one of these predominantly rural regions, namely on the Greek island of Lefkada where the number of bed places increased from 6 000 to 19 800. The number of bed places grew by more than the EU-27 average in a total of 246 predominantly rural regions and grew by less than the EU-27 average in a further 34 such regions. By contrast, the number of bed places fell in a total of 175 predominantly rural regions, among which 71 regions recorded falls of 10.0 % or more, 25 of these registering reductions of 20.0 % or more. The three largest contractions in the number of bed places in predominantly rural regions were in the Somme region of France (– 57.3 %), the German region of Dillingen an der Donau (– 43.7 %, 2007–10) and the French region of the Meuse (– 42.7 %).

For the EFTA and acceding and candidate countries this analysis is only available for Norwegian and Croatian regions. In the predominantly rural Croatian region of Medimurska zupanija the number of bed places more than doubled, while in Norway the largest increase in bed places was 9.1 % in Nord-Trøndelag. Five Croatian and three Norwegian predominantly rural regions recorded a contraction in their respective number of bed places, only two of which were larger than – 10.0 %, namely, the Croatian regions of Zadarska zupanija (– 20.0 %) and Sibensko-kninska zupanija (– 42.1 %).

Data sources and availability

Urban–rural typology

Eurostat regional statistics are the basis for the information presented in this chapter. For most regional analyses, data are collected at a specific regional level (of the NUTS classification). By contrast, the statistics presented in this chapter have been produced by first classifying the full set of NUTS level 3 regions according to the extent that they are urban or rural: this classification is known as the urban–rural typology.

The typology uses a three-step approach in order to determine urban or rural areas for NUTS level 3 regions, namely: identify rural populations at the level of the 1 km² grid cells; classify NUTS level 3 regions according to the share of population for each type of grid cell; and then adjust the classification based on the presence of cities.

For grid cells to be considered as urban they should fulfil two conditions: a population density of at least 300 inhabitants per km² and a minimum population of 5 000 inhabitants in contiguous (neighbouring or adjoining) cells above the density threshold; all remaining cells are considered as rural. Having established which grid cells fall into which category, the next step is to classify the NUTS level 3 regions into one of three groups:

- predominantly rural regions/rural regions: where the rural population accounts for 50 % or more of the total population;
- intermediate regions: where the rural population accounts for between 20 % and 50 % of the total population;
- predominantly urban regions/urban regions: where the rural population accounts for less than 20 % of the total population.

Those NUTS level 3 regions which are smaller than 500 km² are combined, for classification purposes, with one or more of their neighbours. The results are then checked against a final criterion: namely, the size of any cities within each particular region. A region classified as predominantly rural becomes intermediate if it contains a city of more than 200 000 inhabitants which represents at least 25 % of the region's total population. A region classified as intermediate becomes predominantly urban if it contains a city of more than 500 000 inhabitants representing at least 25 % of the regional population total.

The latest classification exercise was carried out in 2012 and featured three important changes compared with the previous exercise (conducted in 2010):

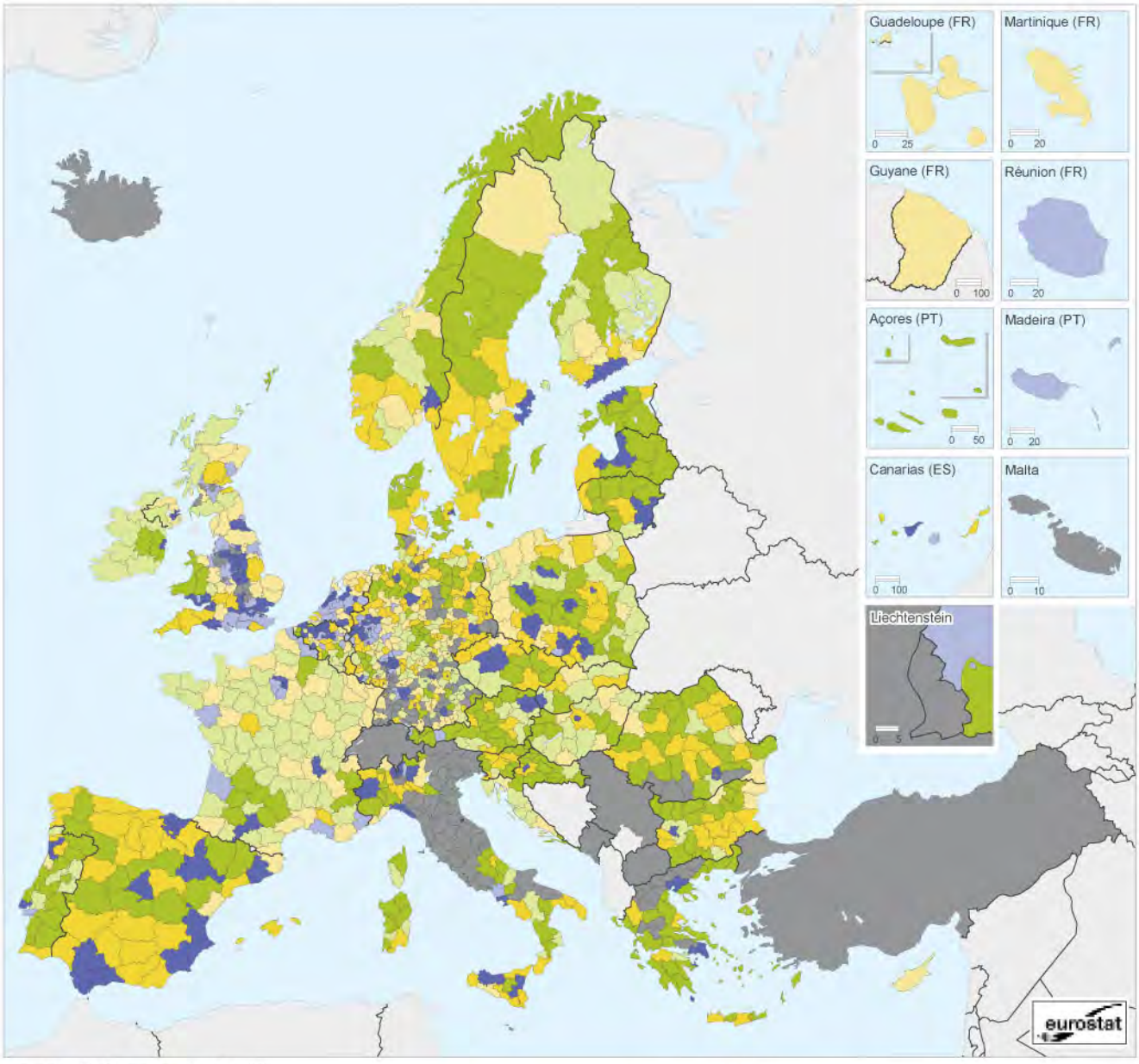
- the introduction of the NUTS 2010 classification;
- the availability of a more accurate population grid;
- a re-evaluation of the presence of major cities, using a harmonised list of cities from the Urban Audit.

Context

Regional issues for rural areas

In the future, rural areas may face additional or increased risks from natural disasters due to climate change — for example, recurrent droughts, storms, floods and fires. Natural resources and varied landscapes may also be jeopardised by the abandonment of land previously used for agricultural purposes, through, for example: an increased risk of forest fires (where grazing has ceased or cultivated strips have

Map 15.5: Number of bed places in hotels, campsites and other collective accommodation establishments, by NUTS 3 regions and by urban–rural typology, overall change, 2007–11 (1)
(% of the EU-27 average, EU-27=100)



(% of the EU-27 average, EU-27=100)
EU-27 = 2.36

Above the EU-27 average
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions

Below the EU-27 average
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions

Data not available

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

0 200 400 600 800 km

(1) Sigmaringen (DE149), Kulmbach (DE24B), Neustadt an der Weinstraße, Kreisfreie Stadt (DEB36) and Steinburg (DEF0E), 2008–11; Neckar-Odenwald-Kreis (DE127), Regensburg, Kreisfreie Stadt (DE232), Erlangen, Kreisfreie Stadt (DE252), Nürnberg, Kreisfreie Stadt (DE254), Dillingen an der Donau (DE277), Barnim (DE405), Elbe-Elster (DE407), Oberhavel (DE40A), Oberspreewald-Lausitz (DE40B), Spree-Neiße (DE40G), Teltow-Fläming (DE40H), Uckermark (DE40I), Darmstadt, Kreisfreie Stadt (DE711), Ludwigshafen am Rhein, Kreisfreie Stadt (DEB34), Pirmasens, Kreisfreie Stadt (DEB37), Worms, Kreisfreie Stadt (DEB39), Burgenland (DEE08) and Botosani (RO212), 2007–10.

Source: Eurostat (online data code: tour_cap_nuts3)

been abandoned); soil erosion (where terraces are not maintained); or a decline in biodiversity. Indeed, the fragmentation of farmland, forests and other habitats provides a threat to biodiversity across Europe.

Land abandonment is closely linked to population dynamics, with rural areas in mountainous or peripheral regions seeing their local populations decline due to demographic ageing and the outward migration of younger persons, linked with a lack of economic and social opportunities. In contrast, other rural areas increasingly serve as residential areas for large towns or cities. In doing so they may be subject to increased environmental pressures without benefiting fully from the economic activity of their residents — who may generate added value in neighbouring (urban) regions.

Many commentators have indicated that rural areas — particularly those in remote places — will increasingly need to diversify their range of economic and social opportunities in order to remove a range of disparities with urban areas, including employment potential, income levels or access to services. One specific area where policymakers are promoting considerable rural investment is with respect to the development of new transport, information and communication infrastructures.

Policies

The EU's rural development policy is set out in Council Regulation (EC) No 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD). During the period 2007–13, rural development policy focused on improving the:

- competitiveness of agriculture and forestry;
- environment and the countryside by means of support for land management;
- quality of life in rural areas and encouraging the diversification of the rural economy.

Rural development policy has adopted a strategic approach:

- for the EU, strategic guidelines set priorities for rural development which reflect EU policy priorities, particularly with respect to growth, jobs and sustainable development;
- each EU Member State submits a national strategy plan ensuring that its proposals for using EU aid for rural development are consistent with the strategic guidelines and that EU, national and regional priorities are coherent;
- the EU Member States and the European Commission closely monitor and evaluate the results of strategies and programmes.

More information about present and planned future rural development policies is available in the introductory chapter.

Employment in rural areas

The European Commission adopted a communication titled 'Employment in rural areas: closing the jobs gap' (COM(2006) 857 final) which recognised employment challenges across EU rural areas. It identified the most important drivers for rural growth as natural resources and environmental quality, alongside a diverse sectoral structure in the local economy and a higher quality of life. The major barriers to employment growth in rural areas were: negative demographic trends and the loss of young people from rural areas; a high degree of concentration within relatively few economic activities; poor (or a lack of) infrastructure; low levels of accessibility to services, such as the quality of and access to broadband Internet; low levels of skills, knowledge, entrepreneurship and innovation; and undeveloped social and institutional capital.

Cohesion policy promotes tourism for sustainable regional development and job creation. Indeed, tourism can play a key role in the development of many rural regions, with sustainable tourism ensuring the preservation and enhancement of cultural and natural heritage. Infrastructure created for tourism has the potential to contribute to local economic development, while jobs may be created or maintained. EU support for tourism through cohesion policy from 2007–13 amounted to more than EUR 6 billion, the majority of which was allocated for the improvement of tourist services, while significant amounts were allocated for the protection and development of natural heritage and the promotion of natural assets.

Annex 1 — Classification of territorial units for statistics, 2010 version

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 Северозападен/Severozapaden
BG32 Северен централен/Severen tsentralen
BG33 Североизточен/Severoiztochen
BG34 Югоизточен/Yugoiztochen
BG41 Югозападен/Yugozapaden
BG42 Южен централен/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
DE40 Brandenburg
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
DED2 Dresden
DED4 Chemnitz
DED5 Leipzig
DEE0 Sachsen-Anhalt
DEF0 Schleswig-Holstein
DEG0 Thüringen

Estonia

EE00 Eesti

Ireland

IE01 Border, Midland and Western
IE02 Southern and Eastern

Greece

EL11 Ανατολική Μακεδονία, Θράκη/Anatoliki Makedonia, Thraki
EL12 Κεντρική Μακεδονία/Kentriki Makedonia
EL13 Δυτική Μακεδονία/Dytiki Makedonia
EL14 Θεσσαλία/Thessalia
EL21 Ήπειρος/Ipeiros
EL22 Ιόνια Νησιά/Ionia Nisia
EL23 Δυτική Ελλάδα /Dytiki Ellada

EL24 Στερεά Ελλάδα/Sterea Ellada
EL25 Πελοπόννησος/Peloponnisos
EL30 Αττική/Attiki
EL41 Βόρειο Αιγαίο/Voreio Aigaio
EL42 Νότιο Αιγαίο/Notio Aigaio
EL43 Κρήτη/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
ITF1 Abruzzo
ITF2 Molise
ITF3 Campania
ITF4 Puglia
ITF5 Basilicata
ITF6 Calabria
ITG1 Sicilia
ITG2 Sardegna
ITH1 Provincia Autonoma di Bolzano/Bozen
ITH2 Provincia Autonoma di Trento
ITH3 Veneto
ITH4 Friuli-Venezia Giulia
ITH5 Emilia-Romagna
ITI1 Toscana
ITI2 Umbria
ITI3 Marche
ITI4 Lazio

Cyprus

CY00 Κύπρος/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 București - 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

FI19 Länsi-Suomi
FI1B Helsinki-Uusimaa
FI1C Etelä-Suomi
FI1D Pohjois- ja Itä-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
UKD3 Greater Manchester
UKD4 Lancashire
UKD6 Cheshire
UKD7 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

Acceding and candidate countries: statistical regions at level 2

Montenegro

ME00 Црна Гора/Crna Gora

Croatia

HR03 Jadranska Hrvatska
HR04 Kontinentalna Hrvatska

The former Yugoslav Republic of Macedonia

MK00 Поранешна југословенска Република Македонија/
Poranešna jugoslovenska Republika Makedonija

Serbia

RS00 Република Србија/Republika Srbija

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

BE001C1 **Bruxelles / Brussel**
BE002C1 Antwerpen
BE003C1 Gent
BE004C1 Charleroi
BE005C1 Liège
BE006C1 Brugge
BE007C1 Namur
BE008C1 Leuven
BE009C1 Mons
BE010C1 Kortrijk
BE011C1 Oostende

Bulgaria

BG001C1 **Sofia**
BG002C1 Plovdiv
BG003C1 Varna
BG004C1 Burgas
BG005C1 Pleven
BG006C1 Ruse
BG007C1 Vidin
BG008C1 Stara Zagora
BG009C1 Sliven
BG010C1 Dobrich
BG011C1 Shumen
BG012C1 Pernik
BG013C1 Yambol
BG014C1 Haskovo
BG015C1 Pazardzhik
BG016C1 Blagoevgrad
BG017C1 Veliko Tarnovo
BG018C1 Vratsa

Czech Republic

CZ001C1 **Praha**
CZ002C1 Brno
CZ003C1 Ostrava
CZ004C1 Plzeň
CZ005C1 Ústí nad Labem
CZ006C1 Olomouc
CZ007C1 Liberec
CZ008C1 České Budějovice
CZ009C1 Hradec Králové
CZ010C1 Pardubice
CZ011C1 Zlín
CZ012C1 Kladno
CZ013C1 Karlovy Vary
CZ014C1 Jihlava
CZ015C1 Havířov
CZ016C1 Most
CZ017C1 Karviná
CZ018C2 Chomutov-Jirkov

Denmark

DK001C1 **København**
DK002C1 Århus
DK003C1 Odense
DK004C1 Aalborg

Germany

DE001C1 **Berlin**
DE002C1 Hamburg
DE003C1 München
DE004C1 Köln
DE005C1 Frankfurt am Main
DE006C1 Essen
DE007C1 Stuttgart
DE008C1 Leipzig
DE009C1 Dresden
DE010C1 Dortmund
DE011C1 Düsseldorf
DE012C1 Bremen
DE013C1 Hannover
DE014C1 Nürnberg
DE015C1 Bochum
DE017C1 Bielefeld
DE018C1 Halle an der Saale
DE019C1 Magdeburg
DE020C1 Wiesbaden
DE021C1 Göttingen
DE022C1 Mülheim a.d.Ruhr
DE023C1 Moers
DE025C1 Darmstadt
DE026C1 Trier
DE027C1 Freiburg im Breisgau
DE028C1 Regensburg
DE029C1 Frankfurt (Oder)
DE030C1 Weimar
DE031C1 Schwerin
DE032C1 Erfurt
DE033C1 Augsburg
DE034C1 Bonn
DE035C1 Karlsruhe

DE036C1 Mönchengladbach
DE037C1 Mainz
DE039C1 Kiel
DE040C1 Saarbrücken
DE041C1 Potsdam
DE042C1 Koblenz
DE043C1 Rostock
DE044C1 Kaiserslautern
DE045C1 Iserlohn
DE046C1 Esslingen am Neckar
DE047C1 Hanau
DE048C1 Wilhelmshaven
DE049C1 Ludwigsburg
DE050C1 Tübingen
DE051C1 Villingen-Schwenningen
DE052C1 Flensburg
DE053C1 Marburg
DE054C1 Konstanz
DE055C1 Neumünster
DE056C1 Brandenburg an der Havel
DE057C1 Gießen
DE058C1 Lüneburg
DE059C1 Bayreuth
DE060C1 Celle
DE061C1 Aschaffenburg
DE062C1 Bamberg
DE063C1 Plauen
DE064C1 Neubrandenburg
DE065C1 Fulda
DE066C1 Kempten (Allgäu)
DE067C1 Landshut
DE068C1 Sindelfingen
DE069C1 Rosenheim
DE070C1 Frankenthal (Pfalz)
DE071C1 Stralsund
DE072C1 Friedrichshafen
DE073C1 Offenburg
DE074C1 Görlitz
DE075C1 Sankt Augustin
DE076C1 Neu-Ulm
DE077C1 Schweinfurt
DE078C1 Greifswald
DE079C1 Wetzlar
DE080C1 Speyer
DE081C1 Passau
DE082C1 Dessau-Roßlau
DE501C1 Duisburg
DE502C1 Mannheim
DE503C1 Gelsenkirchen
DE504C1 Münster
DE505C1 Chemnitz
DE506C1 Braunschweig
DE507C1 Aachen
DE508C1 Krefeld
DE509C1 Oberhausen
DE510C1 Lübeck
DE511C1 Hagen
DE513C1 Kassel
DE514C1 Hamm
DE515C1 Herne
DE516C1 Solingen
DE517C1 Osnabrück
DE518C1 Ludwigshafen am Rhein
DE519C1 Leverkusen
DE520C1 Oldenburg (Oldenburg)
DE521C1 Neuss
DE522C1 Heidelberg
DE523C1 Paderborn
DE524C1 Würzburg
DE525C1 Recklinghausen
DE526C1 Wolfsburg
DE527C1 Bremerhaven
DE528C1 Bottrop
DE529C1 Heilbronn
DE530C1 Remscheid
DE531C1 Offenbach am Main
DE532C1 Ulm
DE533C1 Pforzheim
DE534C1 Ingolstadt
DE535C1 Gera
DE536C1 Salzgitter
DE537C1 Reutlingen
DE538C1 Fürth
DE539C1 Cottbus
DE540C1 Siegen
DE541C1 Bergisch Gladbach
DE542C1 Hildesheim
DE543C1 Witten
DE544C1 Zwickau
DE545C1 Erlangen
DE546C1 Wuppertal
DE547C1 Jena

Estonia

EE001C1 **Tallinn**
EE002C1 Tartu
EE003C1 Narva

Ireland

IE001C1 **Dublin**
IE002C1 Cork
IE003C1 Limerick
IE004C1 Galway
IE005C1 Waterford

Greece

EL001C1 **Athina**
EL002C1 Thessaloniki
EL003C1 Pátra
EL004C1 Irakleio
EL005C1 Larisa

EL006C1 Volos
EL007C1 Ioannina
EL008C1 Kavala
EL009C1 Kalamata

Spain

ES001C1 **Madrid**
ES002C1 Barcelona
ES003C1 Valencia
ES004C1 Sevilla
ES005C1 Zaragoza
ES006C1 Málaga
ES007C1 Murcia
ES008C1 Las Palmas
ES009C1 Valladolid
ES010C1 Palma de Mallorca
ES011C1 Santiago de Compostela
ES012C1 Vitoria/Gasteiz
ES013C1 Oviedo
ES014C1 Pamplona/Iruña
ES015C1 Santander
ES016C1 Toledo
ES017C1 Badajoz
ES018C1 Logroño
ES019C1 Bilbao
ES020C1 Córdoba
ES021C1 Alicante/Alacant
ES022C1 Vigo
ES023C1 Gijón
ES024C1 L'Hospitalet de Llobregat
ES025C1 Santa Cruz de Tenerife
ES026C1 A Coruña
ES027C1 Barakaldo
ES028C1 Reus
ES029C1 Telde
ES030C1 Parla
ES031C1 Lugo
ES032C1 San Fernando
ES033C1 Girona
ES034C1 Cáceres
ES035C1 Torrevieja
ES036C1 Pozuelo de Alarcón
ES037C1 Puerto de Santa María, El
ES038C1 Coslada
ES039C1 Avilés
ES040C1 Talavera de la Reina
ES041C1 Palencia
ES042C1 Sant Boi de Llobregat
ES043C1 Ferrol
ES044C1 Pontevedra
ES045C1 Ceuta
ES046C1 Gandia
ES047C1 Rozas de Madrid, Las
ES048C1 Guadalajara
ES049C1 Sant Cugat del Vallès
ES050C1 Manresa
ES051C1 Getxo
ES052C1 Rubí
ES053C1 Ciudad Real
ES054C1 Benidorm
ES055C1 Melilla
ES056C1 Viladecans
ES057C1 Ponferrada
ES058C1 San Sebastián de los Reyes
ES059C1 Zamora
ES060C1 Fuengirola
ES061C1 Cerdanyola del Vallès
ES062C1 Sanlúcar de Barrameda
ES063C1 Vilanova i la Geltrú
ES064C1 Prat de Llobregat, El
ES065C1 Línea de la Concepción, La
ES066C1 Cornellà de Llobregat
ES067C1 Majadahonda
ES068C1 Torremolinos
ES069C1 Castelldefels
ES070C1 Irun
ES071C1 Granollers
ES072C1 Arrecife
ES073C1 Elda
ES074C1 Santa Lucía de Tirajana
ES075C1 Mollet del Vallès
ES501C1 Granada
ES503C1 Badalona
ES504C1 Móstoles
ES505C1 Elche/Elx
ES506C1 Cartagena
ES507C1 Sabadell
ES508C1 Jerez de la Frontera
ES509C1 Fuenlabrada
ES510C1 San Sebastián/Donostia
ES511C1 Alcalá de Henares
ES512C1 Terrassa
ES513C1 Leganés
ES514C1 Almería
ES515C1 Burgos
ES516C1 Salamanca
ES517C1 Alcorcón
ES518C1 Getafe
ES519C1 Albacete
ES520C1 Castellón de la Plana/Castelló de la Plana
ES521C1 Huelva
ES522C1 Cádiz
ES523C1 León
ES524C1 San Cristóbal de la Laguna
ES525C1 Tarragona
ES526C1 Santa Coloma de Gramenet
ES527C1 Jaén
ES528C1 Lleida
ES529C1 Ourense
ES530C1 Mataró
ES531C1 Dos Hermanas
ES532C1 Algeciras

ES533C1 Marbella
ES534C1 Torrejón de Ardoz
ES535C1 Alcobendas

France

FR001C1 **Paris**
FR003C2 Lyon
FR004C2 Toulouse
FR006C2 Strasbourg
FR007C1 Bordeaux
FR008C1 Nantes
FR009C1 Lille
FR010C1 Montpellier
FR011C1 Saint-Etienne
FR012C1 Le Havre
FR013C2 Rennes
FR014C2 Amiens
FR016C1 Nancy
FR017C2 Metz
FR018C1 Reims
FR019C1 Orléans
FR020C2 Dijon
FR021C2 Poitiers
FR022C2 Clermont-Ferrand
FR023C2 Caen
FR024C2 Limoges
FR025C1 Besançon
FR026C2 Grenoble
FR027C1 Ajaccio
FR028C1 Saint Denis
FR030C1 Fort-de-France
FR032C2 Toulon
FR034C2 Valenciennes
FR035C2 Tours
FR036C2 Angers
FR037C1 Brest
FR038C2 Le Mans
FR039C2 Avignon
FR040C2 Mulhouse
FR042C1 Dunkerque
FR043C2 Perpignan
FR044C2 Nîmes
FR045C2 Pau
FR046C2 Bayonne
FR047C2 Annemasse
FR048C1 Annecy
FR049C2 Lorient
FR050C2 Montbéliard
FR051C2 Troyes
FR052C2 Saint-Nazaire
FR053C1 La Rochelle
FR056C1 Angoulême
FR057C2 Boulogne-sur-Mer
FR058C2 Chambéry
FR059C2 Chalon-sur-Saône
FR060C2 Chartres
FR061C2 Niort
FR062C1 Calais
FR063C2 Béziers
FR064C2 Arras
FR065C2 Bourges
FR066C1 Saint-Brieuc
FR067C2 Quimper
FR068C2 Vannes
FR069C1 Cherbourg
FR073C2 Tarbes
FR074C2 Compiègne
FR076C2 Belfort
FR077C1 Roanne
FR079C2 Saint-Quentin
FR082C2 Beauvais
FR084C1 Creil
FR086C2 Evreux
FR090C2 Châteauroux
FR093C2 Brive-la-Gaillarde
FR096C2 Albi
FR099C1 Fréjus
FR104C2 Châlons-en-Champagne
FR201C1 Aubagne
FR202C1 Aix-en-Provence
FR203C1 Marseille
FR205C2 Nice
FR206C1 CA de Sophia-Antipolis
FR207C1 Lens - Liévin
FR208C1 Hénin - Carvin
FR209C2 Douai
FR210C1 Marne la Vallée
FR211C1 Versailles
FR212C1 CC de la Boucle de la Seine
FR213C1 Sénart en Essonne
FR214C1 Valence
FR215C2 Rouen
FR216C1 CA Marne et Chantereine
FR217C1 CA des deux Rives de la Seine
FR218C1 CC des Coteaux de la Seine
FR219C1 CA Europ' Essonne
FR220C1 CA Brie Francilienne
FR221C1 CA les Portes de l'Essonne
FR222C1 CA Val et Forêt
FR223C1 CC de l'Ouest de la Plaine de France
FR224C1 CA le Parisis
FR304C1 Melun
FR305C1 Meaux
FR306C1 Mantes en Yvelines
FR308C1 Evry
FR309C1 CA du Plateau de Saclay
FR310C1 CA de Seine Essonne
FR311C1 CA du Val d'Orge
FR312C1 CA du Val d'Yerres
FR313C1 CA Sénart - Val de Seine
FR322C1 CA Val de France
FR323C1 CA de la Vallée de Montmorency

FR324C1 Martigues
FR501C1 Argenteuil - Bezons
FR504C1 Cergy-Pontoise
FR505C1 Charleville-Mézières
FR506C1 Colmar
FR512C1 CA des Lacs de l'Essonne
FR518C1 Saint-Quentin en Yvelines

Italy

IT001C1 **Roma**
IT002C1 Milano
IT003C1 Napoli
IT004C1 Torino
IT005C1 Palermo
IT006C1 Genova
IT007C1 Firenze
IT008C1 Bari
IT009C1 Bologna
IT010C1 Catania
IT011C1 Venezia
IT012C1 Verona
IT013C1 Cremona
IT014C1 Trento
IT015C1 Trieste
IT016C1 Perugia
IT017C1 Ancona
IT019C1 Pescara
IT020C1 Campobasso
IT021C1 Caserta
IT022C1 Taranto
IT023C1 Potenza
IT024C1 Catanzaro
IT025C1 Reggio di Calabria
IT026C1 Sassari
IT027C1 Cagliari
IT028C1 Padova
IT029C1 Brescia
IT030C1 Modena
IT031C1 Foggia
IT032C1 Salerno
IT033C1 Piacenza
IT034C1 Bolzano
IT035C1 Udine
IT036C1 La Spezia
IT037C1 Lecce
IT038C1 Barletta
IT039C1 Pesaro
IT040C1 Como
IT041C1 Pisa
IT042C1 Treviso
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IT044C1 Busto Arsizio
IT045C1 Asti
IT046C1 Pavia
IT047C1 Massa
IT048C1 Cosenza
IT049C1 Carrara
IT050C1 Benevento
IT051C1 Sanremo
IT052C1 Savona
IT053C1 Vigevano
IT054C1 Matera
IT055C1 Viareggio
IT056C1 Acireale
IT057C1 Avellino
IT058C1 Pordenone
IT059C1 Biella
IT060C1 Lecco
IT501C1 Messina
IT502C1 Prato
IT503C1 Parma
IT504C1 Livorno
IT505C1 Reggio nell'Emilia
IT506C1 Ravenna
IT507C1 Ferrara
IT508C1 Rimini
IT509C1 Siracusa
IT510C1 Monza
IT511C1 Bergamo
IT512C1 Forlì
IT513C1 Latina
IT514C1 Vicenza
IT515C1 Terni
IT516C1 Novara
IT517C1 Giugliano in Campania

Cyprus

CY001C1 **Lefkosia**
CY501C1 Lemesos

Latvia

LV001C1 **Rīga**
LV002C1 Liepāja
LV003C1 Jelgava
LV501C1 Daugavpils

Lithuania

LT001C1 **Vilnius**
LT002C1 Kaunas
LT003C1 Panevėžys
LT004C1 Alytus
LT501C1 Klaipėda
LT502C1 Šiauliai

Luxembourg

LU001C1 **Luxembourg**

Hungary

HU001C1 **Budapest**
HU002C1 Miskolc
HU003C1 Nyíregyháza

HU004C1 Pécs
HU005C1 Debrecen
HU006C1 Szeged
HU007C1 Győr
HU008C1 Kecskemét
HU009C1 Székesfehérvár
HU010C1 Szombathely

Malta

MT001C1 **Valletta**

Netherlands

NL001C1 ‘s-Gravenhage
NL002C1 **Amsterdam**
NL003C1 Rotterdam
NL004C1 Utrecht
NL005C1 Eindhoven
NL006C1 Tilburg
NL007C1 Groningen
NL008C1 Enschede
NL009C1 Arnhem
NL010C1 Heerlen
NL011C1 Almere
NL012C1 Breda
NL013C1 Nijmegen
NL014C1 Apeldoorn
NL015C1 Leeuwarden
NL016C1 Sittard-Geleen
NL017C1 Delft
NL018C1 Hilversum
NL019C1 Amstelveen
NL020C1 Roosendaal
NL021C1 Spijkenisse
NL022C1 Leidschendam-Voorburg
NL023C1 Purmerend
NL024C1 Vlaardingen
NL025C1 Velsen
NL026C1 Alphen aan den Rijn
NL027C1 Capelle aan den IJssel
NL028C1 Bergen op Zoom
NL029C1 Katwijk
NL030C1 Gouda
NL031C1 Hoorn
NL032C1 Middelburg
NL501C1 Haarlem
NL502C1 Zaanstad
NL503C1 ‘s-Hertogenbosch
NL504C1 Amersfoort
NL505C1 Maastricht
NL506C1 Dordrecht
NL507C1 Leiden
NL511C1 Zwolle
NL512C1 Ede
NL513C1 Deventer
NL514C1 Alkmaar
NL515C1 Venlo
NL516C1 Helmond
NL517C1 Hengelo
NL518C1 Schiedam
NL519C1 Almelo
NL520C1 Lelystad

Austria

AT001C1 **Wien**
AT002C1 Graz
AT003C1 Linz
AT004C1 Salzburg
AT005C1 Innsbruck
AT006C1 Klagenfurt

Poland

PL001C1 **Warszawa**
PL002C1 Łódź
PL003C1 Kraków
PL004C1 Wrocław
PL005C1 Poznań
PL006C1 Gdańsk
PL007C1 Szczecin
PL008C1 Bydgoszcz
PL009C1 Lublin
PL010C1 Katowice
PL011C1 Białystok
PL012C1 Kielce
PL013C1 Toruń
PL014C1 Olsztyn
PL015C1 Rzeszów
PL016C1 Opole
PL017C1 Gorzów Wielkopolski
PL018C1 Zielona Góra
PL019C1 Jelenia Góra
PL020C1 Nowy Sącz
PL021C1 Suwałki
PL022C1 Konin
PL023C1 Żory
PL024C1 Częstochowa
PL025C1 Radom
PL026C1 Płock
PL027C1 Kalisz
PL028C1 Koszalin
PL029C1 Słupsk
PL030C1 Jastrzębie-Zdrój
PL031C1 Siedlce
PL032C1 Piotrków Trybunalski
PL033C1 Lubin
PL034C1 Piła
PL035C1 Inowrocław
PL036C1 Ostrowiec Świętokrzyski
PL037C1 Gniezno
PL038C1 Stargard Szczeciński
PL039C1 Ostrów Wielkopolski

PL040C1 Przemyśl
PL041C1 Zamość
PL042C1 Chełm
PL043C1 Pabianice
PL044C1 Głogów
PL045C1 Stalowa Wola
PL046C1 Tomaszów Mazowiecki
PL047C1 Łomża
PL048C1 Leszno
PL049C1 Świdnica
PL050C1 Zgierz
PL051C1 Tczew
PL052C1 Ełk
PL501C1 Gdynia
PL502C1 Sosnowiec
PL503C1 Gliwice
PL504C1 Zabrze
PL505C1 Bytom
PL506C1 Bielsko-Biała
PL507C1 Ruda Śląska
PL508C1 Rybnik
PL509C1 Tychy
PL511C1 Wałbrzych
PL512C1 Elbląg
PL513C1 Włocławek
PL514C1 Tarnów
PL515C1 Chorzów
PL516C1 Legnica
PL517C1 Grudziądz

Portugal

PT001C1 **Lisboa**
PT002C1 Porto
PT003C1 Braga
PT004C1 Funchal
PT005C1 Coimbra
PT006C1 Setúbal
PT007C1 Ponta Delgada
PT008C1 Aveiro
PT009C1 Faro
PT010C1 Seixal
PT011C1 Amadora
PT012C1 Almada
PT013C1 Odivelas
PT014C1 Viseu
PT015C1 Valongo
PT016C1 Viana do Castelo
PT017C1 Paredes
PT018C1 Barreiro
PT019C1 Póvoa de Varzim
PT501C1 Sintra
PT502C1 Vila Nova de Gaia
PT503C1 Matosinhos
PT504C1 Gondomar
PT505C1 Guimarães
PT508C1 Vila Franca de Xira

Romania

RO001C1 **Bucureşti**
RO002C1 Cluj-Napoca
RO003C1 Timişoara
RO004C1 Craiova
RO005C1 Brăila
RO006C1 Oradea
RO007C1 Bacău
RO008C1 Arad
RO009C1 Sibiu
RO010C1 Târgu Mureş
RO011C1 Piatra Neamţ
RO012C1 Călăraşi

RO013C1 Giurgiu
RO014C1 Alba Iulia
RO015C1 Focşani
RO016C1 Târgu Jiu
RO017C1 Tulcea
RO018C1 Târgovişte
RO019C1 Slatina
RO020C1 Bârlad
RO021C1 Roman
RO501C1 Constanţa
RO502C1 Iaşi
RO503C1 Galaţi
RO504C1 Braşov
RO505C1 Ploieşti
RO506C1 Piteşti
RO507C1 Baia Mare
RO508C1 Buzău
RO509C1 Satu Mare
RO510C1 Botoşani
RO511C1 Râmnicu Vâlcea
RO512C1 Suceava
RO513C1 Drobeta-Turnu Severin

Slovenia

SI001C1 **Ljubljana**
SI002C1 Maribor

Slovakia

SK001C1 **Bratislava**
SK002C1 Košice
SK003C1 Banská Bystrica
SK004C1 Nitra
SK005C1 Prešov
SK006C1 Žilina
SK007C1 Trnava
SK008C1 Trenčín

Finland

FI001C2 **Helsinki / Helsingfors**
FI002C1 Tampere / Tammerfors
FI003C1 Turku / Åbo

FI004C2 Oulu / Uleåborg
FI005C1 Espoo / Esbo
FI006C1 Vantaa / Vanda
FI007C1 Lahti / Lahtis
FI008C1 Kuopio
FI009C1 Jyväskylä

Sweden

SE001C1 **Stockholm**
SE002C1 Göteborg
SE003C1 Malmö
SE004C1 Jönköping
SE005C1 Umeå
SE006C1 Uppsala
SE007C1 Linköping
SE008C1 Örebro
SE501C1 Västerås
SE502C1 Norrköping
SE503C1 Helsingborg
SE504C1 Lund
SE505C1 Borås

United Kingdom

UK001K2 **London**
UK002C1 Birmingham
UK003C1 Leeds
UK004C1 Glasgow
UK005C1 Bradford
UK006C1 Liverpool
UK007C1 Edinburgh
UK008C1 Manchester
UK009C1 Cardiff
UK010C1 Sheffield
UK011C1 Bristol
UK012C1 Belfast
UK013C1 Newcastle upon Tyne
UK014C1 Leicester
UK015C1 Derry
UK016C1 Aberdeen
UK017C1 Cambridge
UK018C1 Exeter
UK019C1 Lincoln
UK020C1 Gravesham
UK021C1 Stevenage
UK022C1 Wrexham
UK023C1 Portsmouth
UK024C1 Worcester
UK025C1 Coventry
UK026C1 Kingston-upon-Hull
UK027C1 Stoke-on-trent
UK028C1 Wolverhampton
UK029C1 Nottingham
UK030C1 Wirral
UK031C1 Bath and North East Somerset
UK032C1 Thurrock
UK033C1 Guildford
UK034C1 Thanet
UK035C1 Nuneaton and Bedworth
UK036C1 Fareham
UK038C1 Waveney
UK040C1 Tunbridge Wells
UK041C1 Ashford
UK043C1 East Staffordshire
UK044C1 Darlington
UK045C1 Worthing
UK046C1 Mansfield
UK047C1 Chesterfield
UK050C1 Burnley
UK051C1 Great Yarmouth
UK052C1 Woking
UK053C1 Hartlepool
UK054C1 Cannock Chase
UK055C1 Eastbourne
UK056C1 Hastings
UK057C1 Hyndburn
UK059C1 Redditch
UK060C1 Tamworth
UK061C1 Harlow
UK062C1 Halton
UK101C1 City of London
UK102C1 Barking and Dagenham
UK103C1 Barnet
UK104C1 Bexley
UK105C1 Brent
UK106C1 Bromley
UK107C1 Camden
UK108C1 Croydon
UK109C1 Ealing
UK110C1 Enfield
UK111C1 Greenwich
UK112C1 Hackney
UK113C1 Hammersmith and Fulham
UK114C1 Haringey
UK115C1 Harrow
UK116C1 Havering
UK117C1 Hillingdon
UK118C1 Hounslow
UK119C1 Islington
UK120C1 Kensington and Chelsea
UK121C1 Kingston upon Thames
UK122C1 Lambeth
UK123C1 Lewisham
UK124C1 Merton
UK125C1 Newham
UK126C1 Redbridge
UK127C1 Richmond upon Thames
UK128C1 Southwark
UK129C1 Sutton
UK130C1 Tower Hamlets
UK131C1 Waltham Forest
UK132C1 Wandsworth

UK133C1 Westminster
UK501C1 Kirklees
UK502C1 North Lanarkshire
UK503C1 Wakefield
UK504C1 Dudley
UK505C1 Wigan
UK506C1 Doncaster
UK507C1 Stockport
UK508C1 Sefton
UK509C1 Sandwell
UK510C1 Sunderland
UK511C1 Bolton
UK512C1 Walsall
UK513C1 Medway
UK514C1 Rotherham
UK515C1 Brighton and Hove
UK516C1 Plymouth
UK517C1 Swansea
UK518C1 Derby
UK519C1 Barnsley
UK520C1 Southampton
UK521C1 Oldham
UK522C1 Salford
UK523C1 Tameside
UK524C1 Trafford
UK525C1 Milton Keynes
UK526C1 Rochdale
UK527C1 Solihull
UK528C1 Northampton
UK529C1 North Tyneside
UK530C1 Gateshead
UK531C1 Warrington
UK532C1 Luton
UK533C1 York
UK534C1 Bury
UK535C1 Swindon
UK536C1 Stockton-on-Tees
UK537C1 St. Helens
UK538C1 Basildon
UK539C1 Bournemouth
UK540C1 Wycombe
UK541C1 Southend-on-Sea
UK542C1 Telford and Wrekin
UK543C1 North East Lincolnshire
UK544C1 Chelmsford
UK545C1 Peterborough
UK546C1 Colchester
UK547C1 South Tyneside
UK548C1 Basingstoke and Deane
UK549C1 Bedford
UK550C1 Dundee City
UK551C1 Falkirk
UK552C1 Reading
UK553C1 Blackpool
UK554C1 Maidstone
UK555C1 Poole
UK556C1 Dacorum
UK557C1 Blackburn with Darwen
UK558C1 Newport
UK559C1 Middlesbrough
UK560C1 Oxford
UK561C1 Torbay
UK562C1 Preston
UK563C1 St Albans
UK564C1 Warwick
UK565C1 Newcastle-under-Lyme
UK566C1 Norwich
UK567C1 Slough
UK568C2 Cheshire West and Chester
UK569C1 Ipswich
UK571C1 Cheltenham
UK572C1 Gloucester
UK573C1 Bracknell Forest
UK574C1 Lisburn
UK575C1 Carlisle
UK576C1 Crawley

EFTA countries: Urban Audit cities

Norway

NO001C1 **Oslo**
NO002C1 Bergen
NO003C1 Trondheim
NO004C1 Stavanger
NO005C1 Kristiansand
NO006C1 Tromsø

Switzerland

CH001C1 Zürich
CH002C1 Genève
CH003C1 Basel
CH004C1 **Bern**
CH005C1 Lausanne
CH006C1 Winterthur
CH007C1 St. Gallen
CH008C1 Luzern
CH009C1 Lugano
CH010C1 Biel/Bienne

Acceding and candidate countries: Urban Audit cities

Croatia

HR001C1 **Zagreb**
HR002C1 Rijeka
HR003C1 Slavonski Brod
HR004C1 Osijek
HR005C1 Split

Turkey

TR001C1 **Ankara**
TR002C1 Adana
TR003C1 Antalya
TR004C1 Balıkesir
TR005C1 Bursa
TR006C1 Denizli
TR007C1 Diyarbakır
TR008C1 Edirne
TR009C1 Erzurum
TR010C1 Gaziantep
TR011C1 Hatay
TR012C1 İstanbul
TR013C1 İzmir
TR014C1 Kars
TR015C1 Kastamonu
TR016C1 Kayseri
TR017C1 Kocaeli
TR018C1 Konya
TR019C1 Malatya
TR020C1 Manisa
TR021C1 Nevşehir
TR022C1 Samsun
TR023C1 Siirt
TR024C1 Trabzon
TR025C1 Van
TR026C1 Zonguldak

European Commission

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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 2013* gives a detailed picture relating to a broad range of statistical topics across the regions of the 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, four special focus chapters are included in this edition: these look at European cities, the definition of city and metro regions, income and living conditions according to the degree of urbanisation, and rural development.

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