

Eurostat regional yearbook 2009



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Preface

Dear Readers,

Five years ago, 2004, was a momentous year, with 10 new Member States joining the European Union on 1 May. This *Eurostat regional yearbook 2009* is eloquent testimony to the economic and social progress made by these regions since then and highlights those areas where redoubled efforts will be needed to reach our goal of greater cohesion.

The 11 chapters of this yearbook investigate interesting aspects of regional differences and similarities in the 27 Member States and in the candidate and EFTA countries. The aim is to encourage readers to track down the regional data available on the Eurostat website and make their own analyses of economic and social developments.

In addition to the fascinating standard chapters on regional population developments, the regional labour market, regional GDP, etc., this year's edition features a new contribution on the regional development of information society data. As in recent years, the description of regional developments is rounded off by a contribution on the latest findings of the Urban Audit, a data collection containing a multitude of statistical data on European towns and cities.

We are constantly updating the range of regional indicators available and hope to include them as topics in future editions, provided the availability and quality of these data are sufficient.

I wish you an enjoyable reading experience!



Walter Radermacher
Director-General, Eurostat



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Introduction





Statistics on regions and cities

Statistical information is essential for understanding our complex and rapidly changing world. Eurostat, the Statistical Office of the European Communities, is responsible for collecting and disseminating data at European level, not only from the 27 Member States of the European Union, but also from the three candidate countries (Croatia, the former Yugoslav Republic of Macedonia and Turkey) and the four EFTA countries (Iceland, Liechtenstein, Norway and Switzerland).

The aim of this publication, the *Eurostat regional yearbook 2009*, is to give you a flavour of some of the statistics on regions and cities that we collect from these countries. Statistics on regions enable us to identify more detailed statistical patterns and trends than national data, but since we have 271 NUTS 2 regions in the EU-27, 30 statistical regions on level 2 in the candidate countries and 16 statistical regions on level 2 in the EFTA countries, the volume of data is so great that one clearly needs some sorting principles to make it understandable and meaningful.

Statistical maps are probably the easiest way for the human mind to sort and 'absorb' large amounts of statistical data at one time. Hence this year's *Eurostat regional yearbook*, as in previous editions, contains a lot of statistical maps where the data is sorted by different statistical classes represented by colour shades on the maps. Some chapters also make use of graphs and tables to present the statistical data, selected and sorted in some way (different top lists, graphs with regional extreme values within the countries or only giving representative examples) to make it easier to understand.

We are proud to present a great variety of subjects tackled in the 11 chapters in this year's edition of the *Eurostat regional yearbook*. The first chapter on **Population** gives us detailed knowledge of different demographic patterns, such as population density, population change and fertility rates in the countries examined. This chapter can be considered the key to all other chapters, since all other statistics depend on the composition of the population. The second chapter focuses on **European cities** and explains in detail the definitions of the various spatial levels used in the Urban Audit data collection, with some interesting examples on how people travel to work in nine European capitals.

The chapter on the **Labour market** mainly describes the differences in weekly working hours

throughout Europe and offers a couple of explanations for why they vary so much from region to region. The three economic chapters on **Gross domestic product**, **Household accounts** and **Structural business statistics** all give us detailed insight into the general economic situation in regions, private households and different sectors of the business economy.

We are particularly proud to present a new and very interesting chapter on the **Information society**, which describes the use of information and communication technologies (ICT) among private persons and households in European regions. This chapter tells us, for example, how many households use the Internet regularly and how many have broadband access. The next two chapters are on **Science, technology and innovation** and **Education**, three areas of statistics that are often seen as key to monitoring achievement of the goals set in the Lisbon strategy to make Europe the most competitive and dynamic knowledge-based economy in the world.

In the next chapter we learn more about regional statistics on **Tourism**, and which tourist destinations are the most popular. The last chapter focuses on **Agriculture**, this time mainly crop statistics, revealing which kind of crop is grown where in Europe.

The NUTS classification

The nomenclature of territorial units for statistics (NUTS) provides a single uniform breakdown of territorial units for the production of regional statistics for the European Union. The NUTS classification has been used for regional statistics for many decades, and has always formed the basis for regional funding policy. It was only in 2003, though, that NUTS acquired a legal basis, when the NUTS regulation was adopted by the Parliament and the Council ⁽¹⁾.

Whenever new Member States join the EU, the NUTS regulation is amended to include the regional classification in those countries. This was the case in 2004, when the EU took in 10 new Member States, and in 2007 when Bulgaria and Romania also joined the European Union.

The NUTS regulation states that amendments of the regional classification, to take account of new administrative divisions or boundary changes in the Member States, may not be carried out more frequently than every three years. In 2006, this review took place for the first time, and the re-

⁽¹⁾ More information on the NUTS classification can be found at http://ec.europa.eu/eurostat/ramon/nuts/splash_regions.html



sults of these changes to the NUTS classification have been valid since 1 January 2008.

Since these NUTS changes were introduced quite recently, the statistical data are still missing in some cases or have been replaced with national values on some statistical maps, as indicated in the footnotes to each map concerned. This applies in particular to Sweden, which introduced NUTS level 1 regions, to Denmark and Slovenia, which introduced new NUTS level 2 regions, and to the two northernmost Scottish regions, North Eastern Scotland (UKM5) and Highlands and Islands (UKM6), where the border between the two regions has changed. The regional data availability for these countries will hopefully soon be improved.

Please also note that some Member States have a relatively small population and are therefore not divided into more than one NUTS 2 region. Thus, for these countries the NUTS 2 value is exactly the same as the national value. Following the latest revision of the NUTS classification, this now applies to six Member States (Estonia, Cyprus, Latvia, Lithuania, Luxembourg and Malta), one candidate country (the former Yugoslav Republic of Macedonia) and two EFTA countries (Iceland and Liechtenstein). In all cases the whole country consists of one single NUTS 2 region.

A folding map on the inside of the cover accompanies this publication and it shows all NUTS level 2 regions in the 27 Member States of the European Union (EU-27) and the corresponding level 2 statistical regions in the candidate and EFTA countries. In the annex you will find the full list of codes and names of these regions. This will help you locate a specific region on the map.

Coverage

The *Eurostat regional yearbook 2009* mainly contains statistics on the 27 Member States of the European Union but, when available, data is also

given on the three candidate countries (Croatia, the former Yugoslav Republic of Macedonia and Turkey) and the four EFTA countries (Iceland, Liechtenstein, Norway and Switzerland).

Regions in the candidate countries and the EFTA countries are called statistical regions and they follow the same rules as the NUTS regions in the European Union, except that there is no legal base. Data from the candidate and EFTA countries are not yet available in the Eurostat database for some of the policy areas, but the availability of data is constantly improving, and we hope to have even more complete coverage from these countries in the near future.

More regional information

In the subject area 'Regions and cities' under the heading 'General and regional statistics' on the Eurostat website you will find tables with statistics on both 'Regions' and the 'Urban Audit', with more detailed time series (some of them going back as far as 1970) and with more detailed statistics than this yearbook contains. You will also find a number of indicators at NUTS level 3 (such as area, demography, gross domestic product and labour market data). This is important since some of the countries covered are not divided into NUTS 2 regions, as mentioned above.

For more detailed information on the content of the regional and urban databases, please consult the Eurostat publication *European regional and urban statistics — Reference guide — 2009 edition*, which you can download free of charge from the Eurostat website. You can also download Excel tables containing the specific data used to produce the maps and other illustrations for each chapter in this publication on the Eurostat website. We do hope you will find this publication both interesting and useful and we welcome your feedback at the following e-mail address: estat-regio@ec.europa.eu

Education





Introduction

Education, vocational training and lifelong learning play a vital role in the economic and social strategy of the European Union. The relaunched Lisbon process, implemented by the 'Education and training 2010' programme, cannot be completed without efficient use of resources, quality improvements in education and training systems and implementation of a coherent lifelong learning strategy at national level. Securing education and lifelong learning opportunities in every region and for every inhabitant, wherever they live, is one of the cornerstones of the national strategies to achieve this goal. Eurostat's regional statistics on enrolment in education, educational attainment and participation in lifelong learning make it possible to measure progress at regional level and monitor regions lagging behind.

Comparable regional data on enrolment in education from 1998 onwards are available from Eurostat's website, while data on educational attainment levels and participation in lifelong learning are available for the period since 1999.

The Eurostat website contains regional information on the total number of enrolments by level of education and sex, and by age and sex plus indicators relating enrolments in education to the total population. Data on enrolments in education are generally available for the 15 'old' Member States for the period since 1998 and for the 12 'new' Member States plus Norway since 2000 or 2001. Information on the educational attainment of the population and on participation in lifelong learning is available for all the Member States and also for Norway.

Students' participation in education

In its broad sense, education refers to any act or experience that has a formative effect on the mind, character, or physical ability of an individual. In its technical sense, education is the process by which society, through schools, colleges, universities and other institutions, deliberately transmits its cultural heritage and its accumulated knowledge, values and skills from one generation to another.

This chapter gives evidence of the educational enrolment of the regional populations as well as their educational attainment levels and their participation in lifelong learning, reflecting how education touches persons throughout life in all regions.

Map 9.1 shows the number of students in all levels of education as a percentage of the total population at regional level. This indicator reveals the number

of individuals participating in education irrespective of the level in which they are enrolled. In 2007 roughly 21 % of the total European population (the 27 EU Member States and the candidate and EFTA countries) was enrolled in education. It means that one person in five is involved in formal education. This indicator is influenced by the age distribution of the population: 'old' populations have relatively low enrolment rates and, conversely, if the age distribution of the population under consideration is younger the figures are higher.

Some of the regions with the highest percentages of students in education are around capital cities in eastern Europe such as Praha, București, Bratislava and Lubjiana. These cities represent the focal point of their region in terms of education. Some countries such as Belgium, Sweden, Norway, Iceland and Lithuania display figures that are higher than anywhere else, whereas in Denmark, in the north of Italy and in some regions of Spain, Greece and Germany the rates are relatively low, below 18 %.

Furthermore, the differences within the countries are at times small, as in Poland and France, while in other countries there are noticeable dissimilarities, as in Italy (northern regions compared to southern regions), Spain (north-west regions compared to the others), Germany (eastern area compared to the western regions) and Greece (where the southern area has lower rates than the rest of the country).

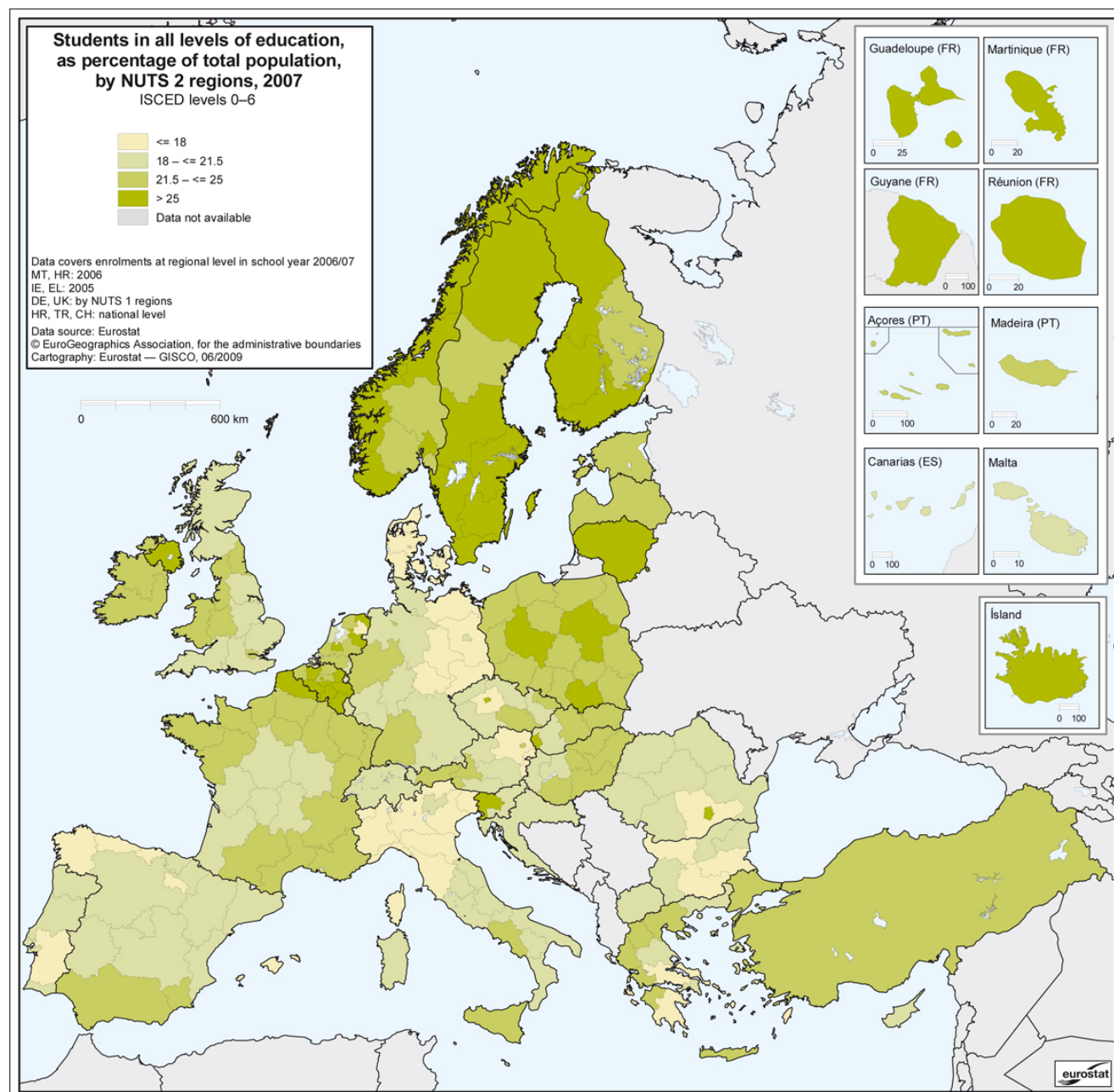
Participation of 4-year-olds in education

Learning begins at birth. The period from birth to entry into primary education is a critical formative stage for the growth and development of children. The learning outcomes, knowledge and skills of primary education are stronger when appropriate learning and development occur in the years preceding regular schooling.

The purpose of pre-primary education is to prepare children physically, emotionally, socially and mentally to enter primary school, giving them the ability and the skills to enter the first level of the educational system. This preparation is considered the foundation for further educational development.

In December 2008, the European Commission proposed a new benchmark, whereby 90 % of 4-year-olds should participate in pre-primary education by 2020. The aim of this proposal is to underpin progress towards the 2002 Barcelona Summit conclusion of increasing participation in pre-primary education to 90 % of all children between 3 years of age and the beginning of compulsory education.

Map 9.1: Students in all levels of education, as a percentage of total population, by NUTS 2 regions, 2007
ISCED levels 0–6





The EU-27 rate of participation is already approaching the target (88.5 % in 2007), but this overall high level of participation masks significant variations between the figures for individual countries.

When the EU-27 Member States and the candidate and EFTA countries are taken into account, approximately 73 % (in 2007) of the European 4-year-olds were enrolled in pre-primary and primary education.

The indicator shown here examines the participation in early childhood education at regional level (NUTS 2) by measuring the percentage of 4-year-olds who are in either pre-primary or primary education. By far the majority of them attend pre-primary schooling (which in many cases is also non-compulsory). A 4-year-old child can be enrolled either in pre-primary or in primary school. Data highlight that most of them attend pre-primary school. Ireland and the United Kingdom are the only countries where the proportion of 4-year-olds in primary education is relevant.

At the age of 4 most children in the European Union are therefore in pre-primary education (80 %), which is generally available from at least 3 to 4 years of age in the EU Member States. Only 5 % of 4-year-olds are enrolled in primary education, of which 89 % are in the United Kingdom and 11 % in Ireland.

Enrolment in pre-primary education is almost always voluntary. Nevertheless, many countries have participation rates of 100 % or close to this.

Map 9.2 shows that in some countries, such as Denmark, France, Iceland, Italy, Malta, the Netherlands and Spain, and in regions such as Vlaams Gewest (Belgium), the participation of 4-year-olds in education is nearly 100 %. In contrast, in Croatia, Ireland, Macedonia, Switzerland, Turkey and most of Poland and Finland less than 50 % of the 4-year-olds are enrolled in education. No significant regional differences within the countries can be noted except for England, Germany and Portugal, where there are some slight differences in levels of participation between the regions.

Students in upper secondary education and post-secondary non-tertiary education

At the age of 16 young people are faced with the choice of whether to remain in education, go into vocational training or seek employment. Over the last decade young people have become more likely to continue with their education at this age.

Map 9.3 shows the percentage of students enrolled in upper secondary education (ISCED 3 level) and post-secondary non-tertiary education (ISCED level 4) as a percentage of the population aged 15–24 years old in the region.

The task of general upper secondary education is to provide extensive all-round learning and to continue the teaching and educational task of basic education. The objective is often to offer sufficient skills and knowledge with a view to further study. It would normally give access to university-level programmes. In contrast, vocational streams often provide training for specific labour market occupations.

Students generally start upper secondary education at the age of 15 to 17, at the end of full-time compulsory education, and finish it three or four years later. The starting/finishing ages and the age range depend on the national educational programmes. However, students can normally attend upper secondary education programmes relatively close to where they have grown up. For this indicator a broad age group has been defined to cover the relatively wide spread in ages, depending on the country.

Post-secondary non-tertiary education programmes (ISCED level 4) lie between the upper secondary and tertiary levels of education from an international point of view, even though they might clearly be considered upper secondary or tertiary programmes in a national context. Although their content may not be significantly more advanced than upper secondary programmes, they serve to expand the knowledge of participants who have already gained an upper secondary qualification.

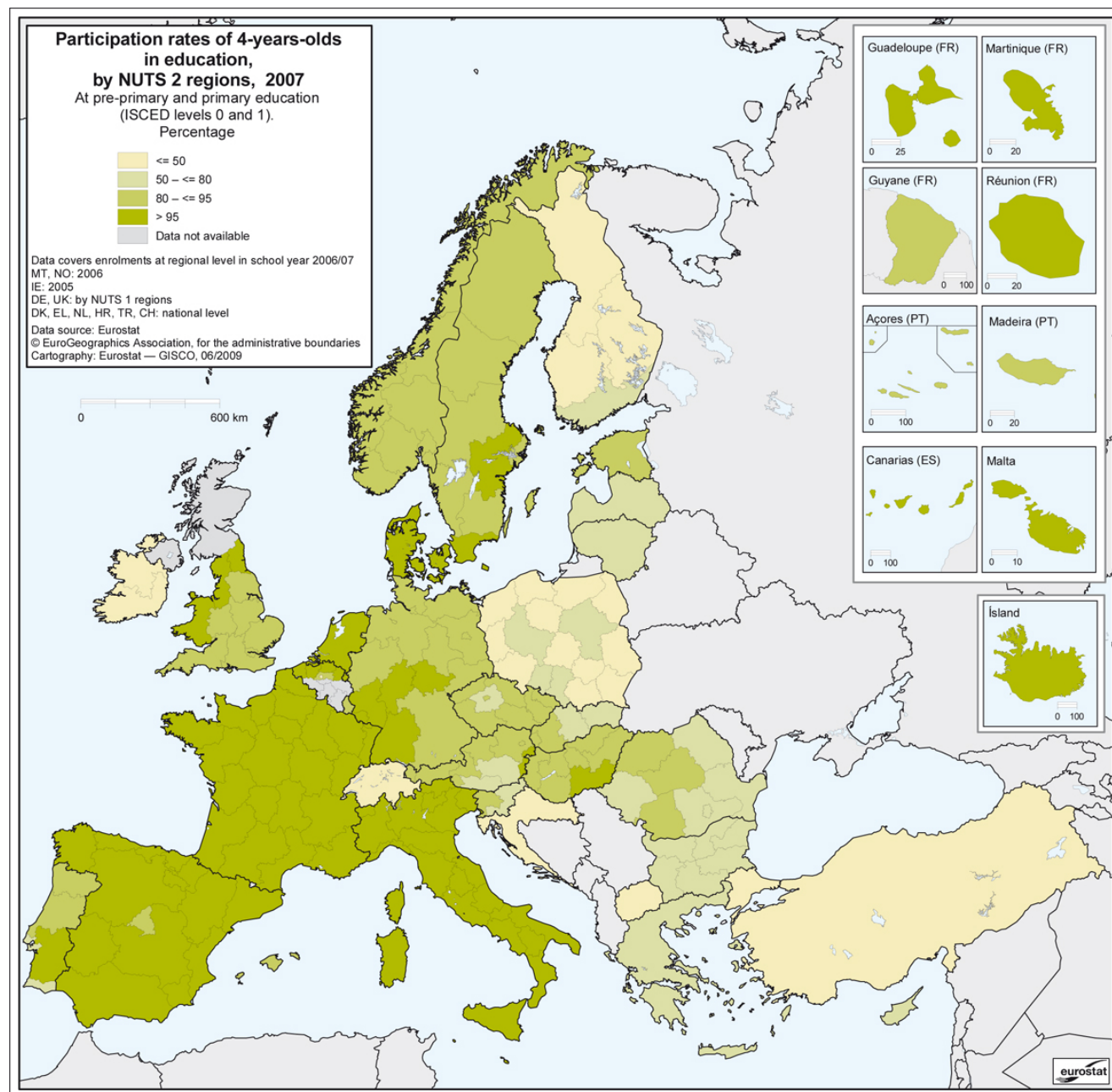
In 2007 more than 38 % of the population aged 15–24 years in the EU-27 was enrolled in upper secondary and post-secondary education.

The highest rates are found in Belgium, Finland, Iceland, the Praha region, some regions of Sweden (Mellersta Norrland and Norra Mellansverige), Valle d'Aosta Basilicata and Friuli-Venezia Giulia (Italy), Közép-Magyarország and Dél-Alföld (Hungary) and the Salzburg region (Austria).

Taking a wider look at the map, the Nordic countries (Norway, Sweden, Denmark, Finland and Iceland) show a common pattern with high percentages. Many parts of Europe (such as France, Germany, Switzerland, the Netherlands, Poland, Slovakia, Slovenia, Croatia, Romania, Bulgaria and Greece) have low rates of participation, whereas Italy, Austria, the Czech Republic and Hungary show high rates. The United Kingdom is split in two parts — England (high rates) and

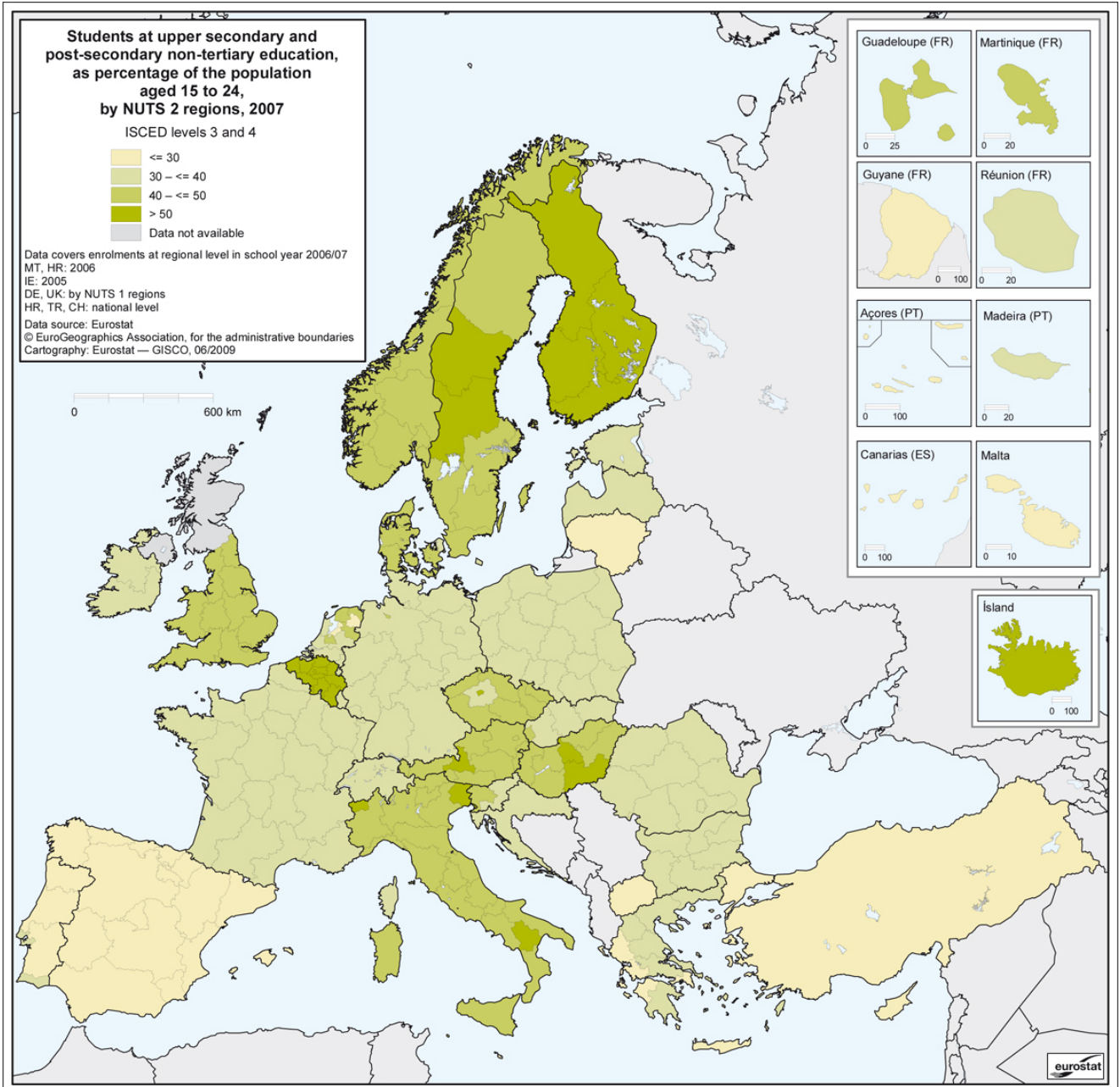


Map 9.2: Participation rates of 4-year-olds in education, by NUTS 2 regions, 2007
 At pre-primary and primary education (ISCED levels 0 and 1).
 Percentage





Map 9.3: Students at upper secondary and post-secondary non-tertiary education, as a percentage of the population aged 15 to 24, by NUTS 2 regions, 2007
ISCED levels 3 and 4





the rest (lower rates). In contrast, the Iberian peninsula (Spain and Portugal), Turkey, Lithuania, Malta, Cyprus, Macedonia and some regions in Greece have very low participation rates.

Students in tertiary education

Tertiary education refers to levels of education that are provided by universities, vocational universities, institutes of technology and other institutions that award academic degrees or professional certifications. Access to tertiary-level educational programmes typically requires successful completion of an upper secondary level and/or a post-secondary non-tertiary level programme.

The levels of education can be largely theoretically based and intended to provide sufficient qualifications for gaining entry into advanced research programmes and professions with high skills requirements (ISCED level 5A) or more practical, technical and employment-oriented (ISCED level 5B), or can lead to an advanced research qualification (ISCED level 6, PhD-like studies).

Map 9.4 shows the number of students in tertiary education (ISCED levels 5 and 6) as a percentage of the population aged 20–24 years old in the region. The student population is related to the population in the relevant age group in order to see the relative size of the student population at regional level.

This indicator is based on data on where the students are studying, not on where they come from or live. Regions with universities and other tertiary education institutions, often big cities, therefore tend to have high percentages of students, as students often travel or move to them for higher education. This is in contrast to younger pupils and students in lower levels of education, who usually attend a school close to where they live. Therefore, the first thing which this indicator shows is an uneven distribution of higher education institutions across regions (and not uneven participation in higher education by region).

In 2007, 58 % of the population aged 20–24 years in the European Union was in tertiary education. Some countries, such as Malta, Cyprus and Luxembourg, have relatively low rates because many students at tertiary level go abroad to study and hence are not included in the statistics of their home countries but in the countries where they study.

In the regions with the highest percentages, students in tertiary education outnumber the population of 20–24-year-olds. In regions such as Praha, Wien, Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest, Brabant Wallon (south of Brussels), Bratislava, Bucureşti, Közép-Magyarország

(Hungary, Budapest region), Dytiki Ellada (Greece) and Mazowieckie, including the capital Warszawa (Poland), the figures are more than 100 %, signifying a large student population among the younger cohorts. Many of these regions are around capital cities where big universities are located.

Relatively few regions have tertiary-level student populations below 30 % of the 20–24-year-old age group and those that do are spread out among many Member States. Many of them have features which easily explain the low percentages, such as being in the rural parts of a country or being islands. Most of these regions have little, if any, tertiary-education infrastructure, and the students have to move away in order to obtain higher education.

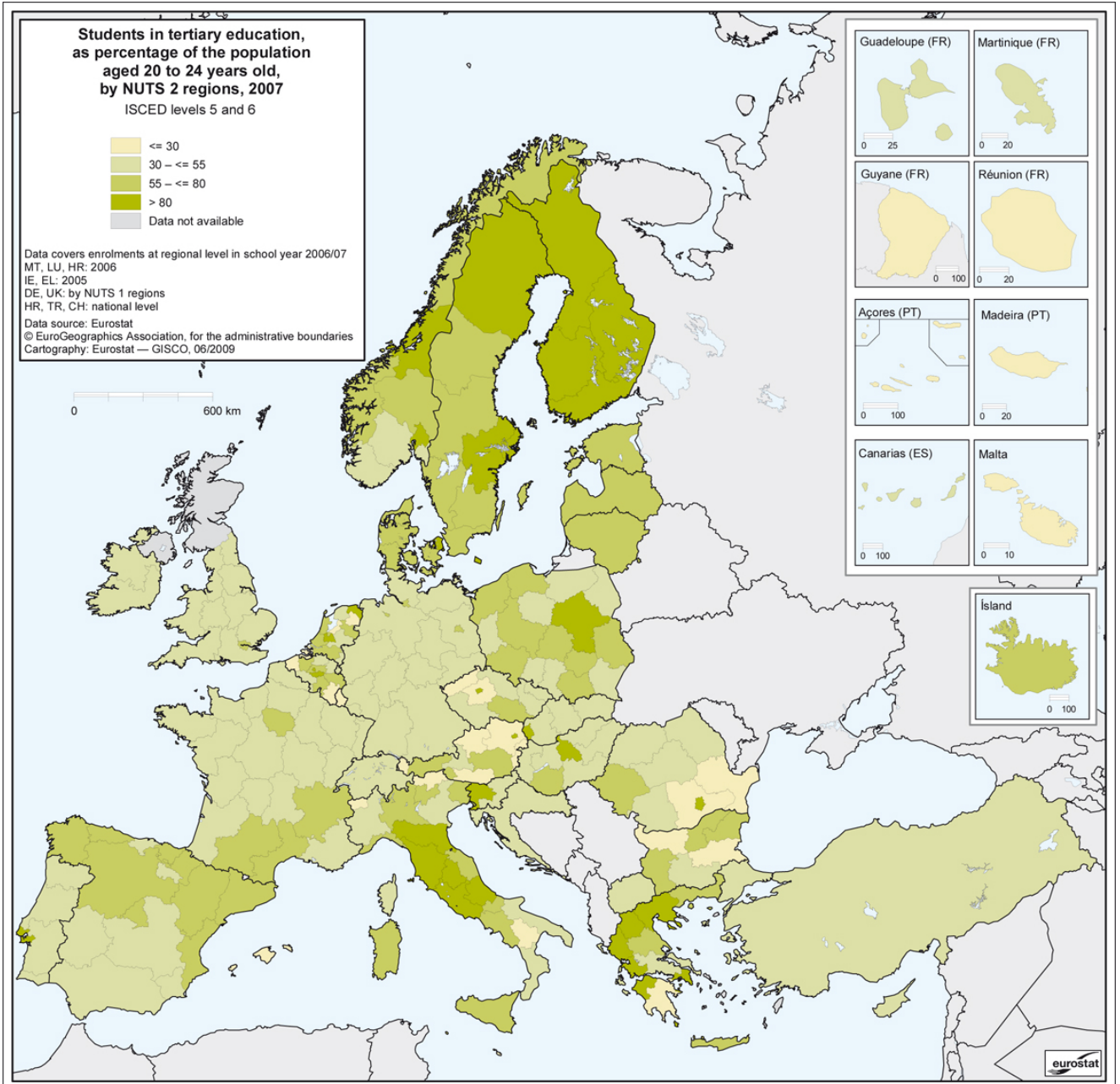
Tertiary educational attainment

The proportion of the population aged 25–64 years who have successfully completed university or university-like (tertiary-level) education is shown in Map 9.5. The pattern in this map is similar to the pattern in Map 9.4. In most countries the highest proportions of tertiary-level attainment are found in the same regions as the students in tertiary education, i.e. where the tertiary education institutions as well as the largest enterprises and institutions and their providers are located. The demographic profile of a region also has some influence on the educational attainment levels, as younger generations tend to have higher educational attainment levels than older generations. In 2007 only 23 regions in the EU had a proportion of persons with higher education above 35 %; these included large cities such as Bruxelles/Brussel, London, Paris, Helsinki, Stockholm, Madrid and Amsterdam; Oslo (Norway), Geneva and Zurich (Switzerland) also fell into this category. In EU Member States such as Ireland, Sweden, Finland, the Netherlands, Belgium and Germany educational attainment levels are generally high across the whole country. The regions with the lowest percentages of people with tertiary education are largely concentrated in the rural parts of 10 EU countries, with a significant contrast with their larger cities: this is the case in Portugal, as well as Romania, Croatia and Turkey, and to a lesser extent Bulgaria, the Czech Republic, Greece, Italy, Hungary, Poland and Slovakia and includes islands such as Sardegna and Sicilia (Italy), Açores and Madeira (Portugal) and Malta.

Lifelong learning

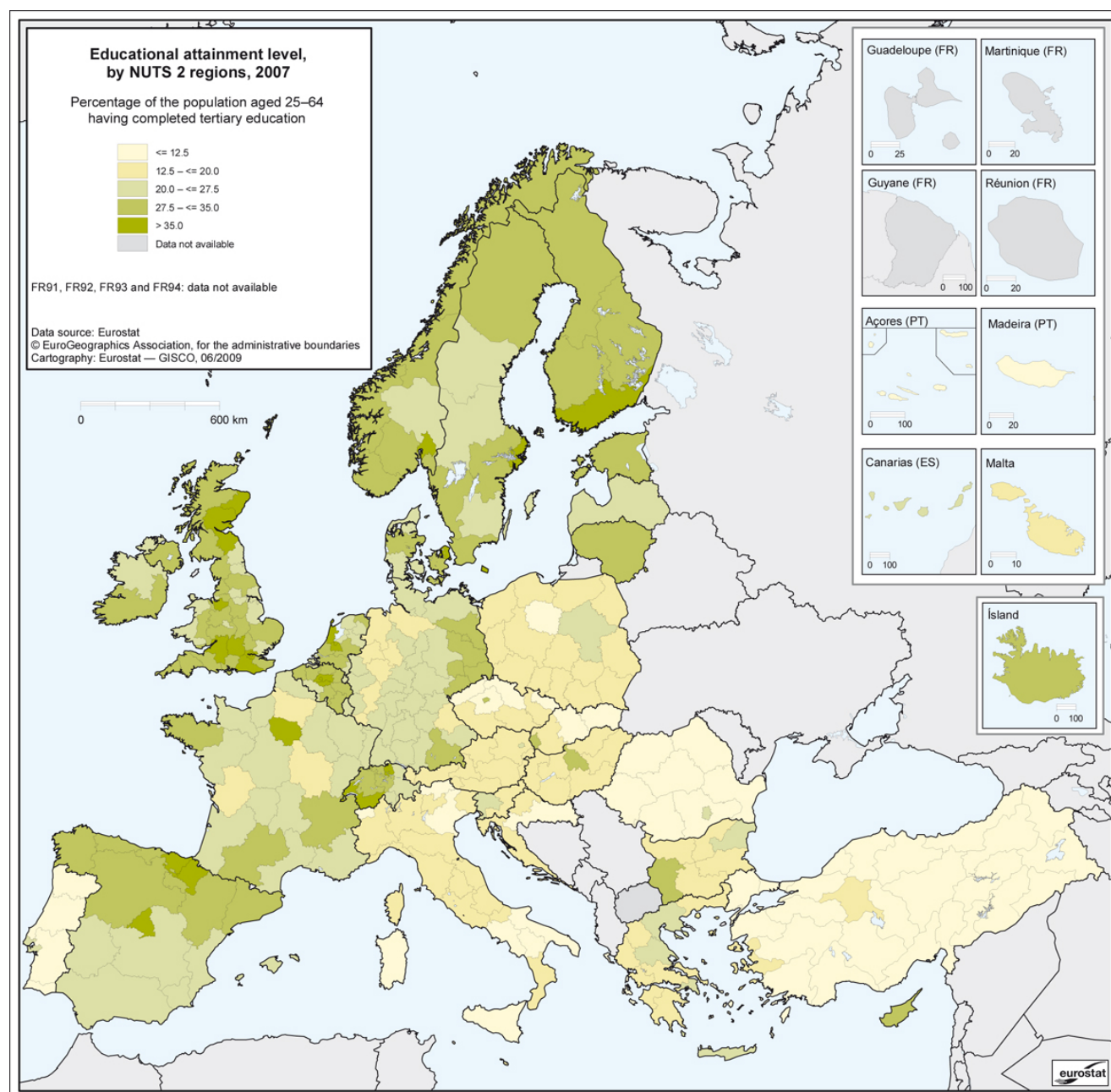
Continuous refreshing of the skills of the labour force via lifelong learning has repeatedly been underlined in EU policies following up the Lisbon objectives. This is reflected in the 'Education

Map 9.4: Students in tertiary education, as a percentage of the population aged 20 to 24 years old, by NUTS 2 regions, 2007
ISCED levels 5 and 6





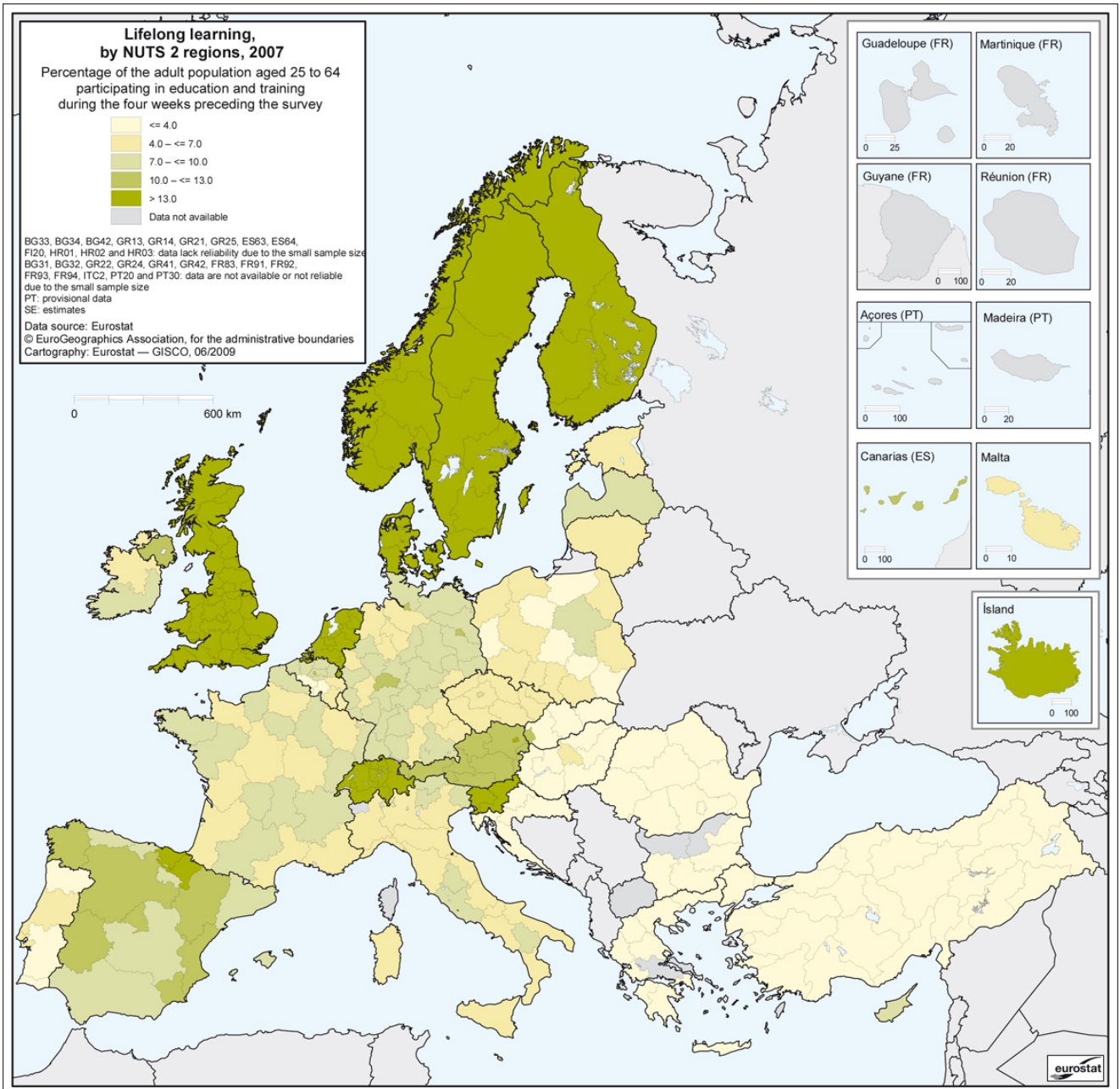
Map 9.5: Educational attainment level, by NUTS 2 regions, 2007
 Percentage of the population aged 25–64 having completed tertiary education





Map 9.6: Lifelong learning, by NUTS 2 regions, 2007

Percentage of the adult population aged 24 to 64 participating in education and training during the four weeks preceding the survey





and training 2010' programme as well as in the European employment strategy, which emphasises the need for comprehensive lifelong learning strategies to ensure the continual adaptability and employability of workers. Adult learning can be measured via the labour force survey through specific questions on participation in education or training activities during the four weeks preceding the survey. The data concern the age group 25–64 years for all education or vocational training, whether or not relevant to current or future employment. As Map 9.6 shows, participation in education and training is largely nationally profiled. In fact, this is the education indicator showing the smallest regional variation compared with the others discussed earlier in this chapter. The participation is high in every region of Denmark, the Netherlands, Slovenia, Finland, Sweden and the United Kingdom and also in Iceland, Norway and Switzerland. Within countries, the highest rates of participation in education and training are often found around the largest cities, which

are usually also the regions with the highest levels of educational attainment (see previous section) and the regions where the supply of education and training activities is wider and continuing vocational training activities are most frequent (e.g. in large enterprises). On the other hand, EU Member States on the fringes of the continent, such as Greece, Hungary, Malta, Poland, Portugal, Romania and Slovakia, and also Croatia and Turkey generally have low participation rates in education and training for the age group 25–64.

Conclusion

The examples given above are intended merely to highlight a few of the many possible ways of analysing education and lifelong learning in the regions of the EU and do not constitute a detailed analysis. We hope, however, that they will encourage readers to probe deeper into all the data on education freely available on the Eurostat website and to make many further interesting discoveries.

Methodological notes

The maps are presented at NUTS 2 level, except for the educational enrolment indicators for Germany and the United Kingdom, where data are available at NUTS 1 level only. In Croatia, Switzerland and Turkey no data on enrolments by age are available at regional level. Hence only national figures have been shown for these countries.

As the structure of education systems varies widely from one country to another, a framework for assembling, compiling and presenting both national and international education statistics and indicators is a prerequisite for international comparability. The International Standard Classification of Education (ISCED) provides the classification basis for collecting data on education. ISCED-97, the current version of the classification introduced in 1997, is built to classify each educational programme by field of education and by level.

ISCED-97 presents standard concepts, definitions and classifications. A full description of it is available on the Unesco Institute of Statistics website (http://www.uis.unesco.org/ev.php?ID=3813_201&ID2=DO_TOPIC).

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

The statistics on enrolments in education include enrolments in all regular education programmes and all adult education with content similar to regular education programmes or leading to qualifications similar to the corresponding regular programmes. Apprenticeship programmes are included except those which are entirely work-based and which are not supervised by any formal education authority. The data source used for Maps 9.1 to 9.4 are two specific Eurostat tables which form part of the so-called UOE (UIS-Unesco, OECD and Eurostat) data collection on education systems. Information about the UOE data collection can be found at http://circa.europa.eu/Public/irc/dsis/edtcsl/library?l=/public/unesco_collection&vm=detailed&sb=Title.

The statistics on educational attainment and participation in lifelong learning are based on the EU labour force survey (LFS), which is a quarterly sample survey. The indicators refer to the annual average of quarterly 2007 data. The educational attainment level reported is based on ISCED-97. Participation in education and training (lifelong learning) includes participation in all kinds of education and training activities during the four weeks prior to the survey.