

Education

4





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

Main statistical findings

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

Participation of 4-year-olds in education

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

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

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

in Switzerland, Croatia and the former Yugoslav Republic of Macedonia, as well as all regions in Turkey.

Students aged 17 in education

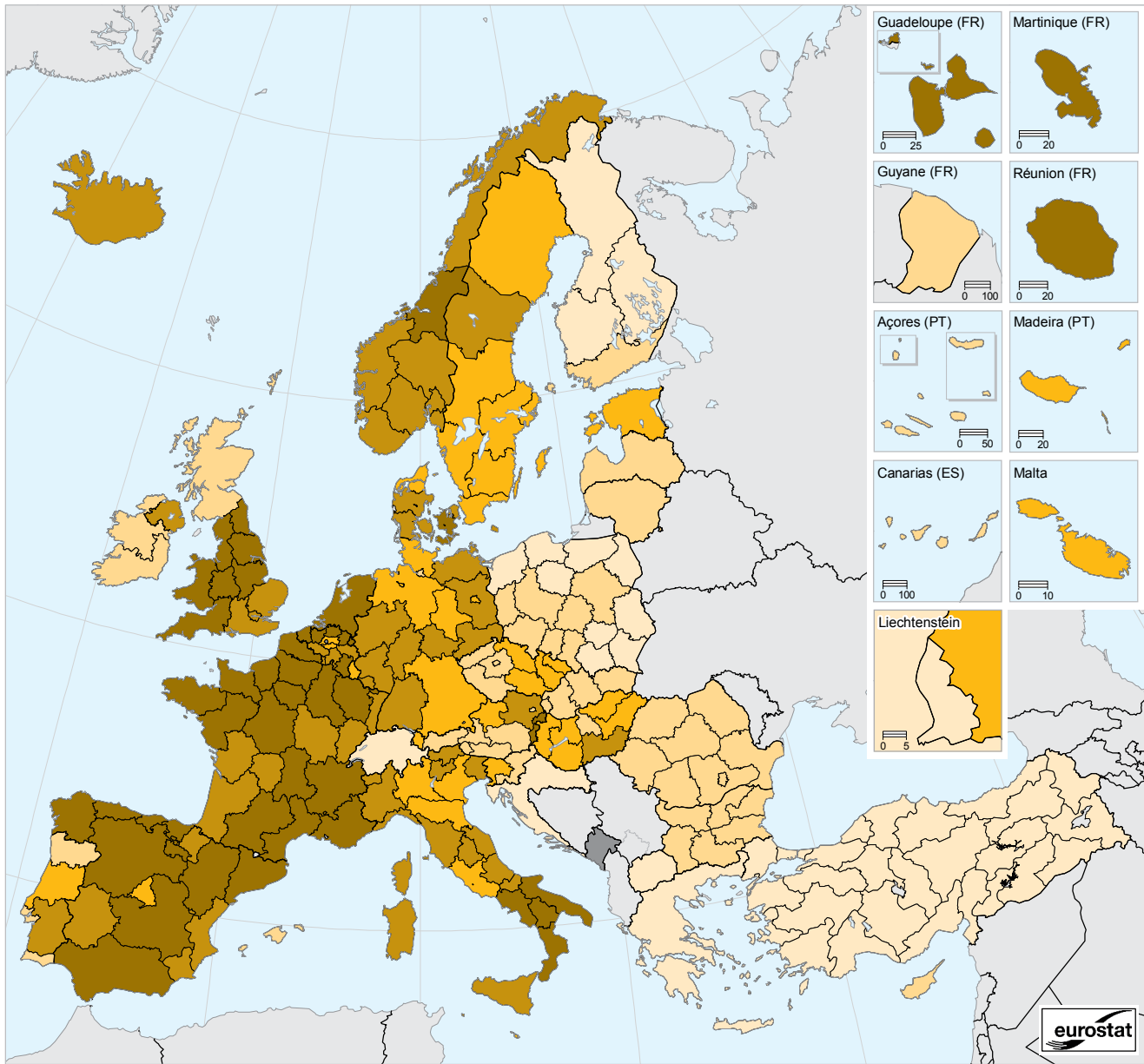
The number of students aged 17 in education (at all levels) in the EU-27 in 2009 was 5.2 million, equivalent to 88.3 % of all 17-year-olds. The age of 17 is important as it often marks the age at which young people are faced with a choice between remaining in education, following some form of training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

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

Early leavers from education and training

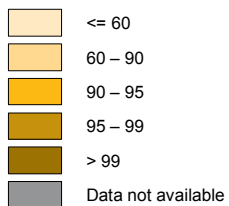
An indicator that presents information about early leavers from education and training tracks the percentage of individuals aged 18 to 24 who have finished no more than a lower secondary education, and who are not involved in further education or training: some 14.1 % of 18- to 24-year-olds

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

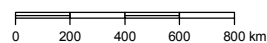


(% of four 4-year-olds)

EU-27 = 90.5



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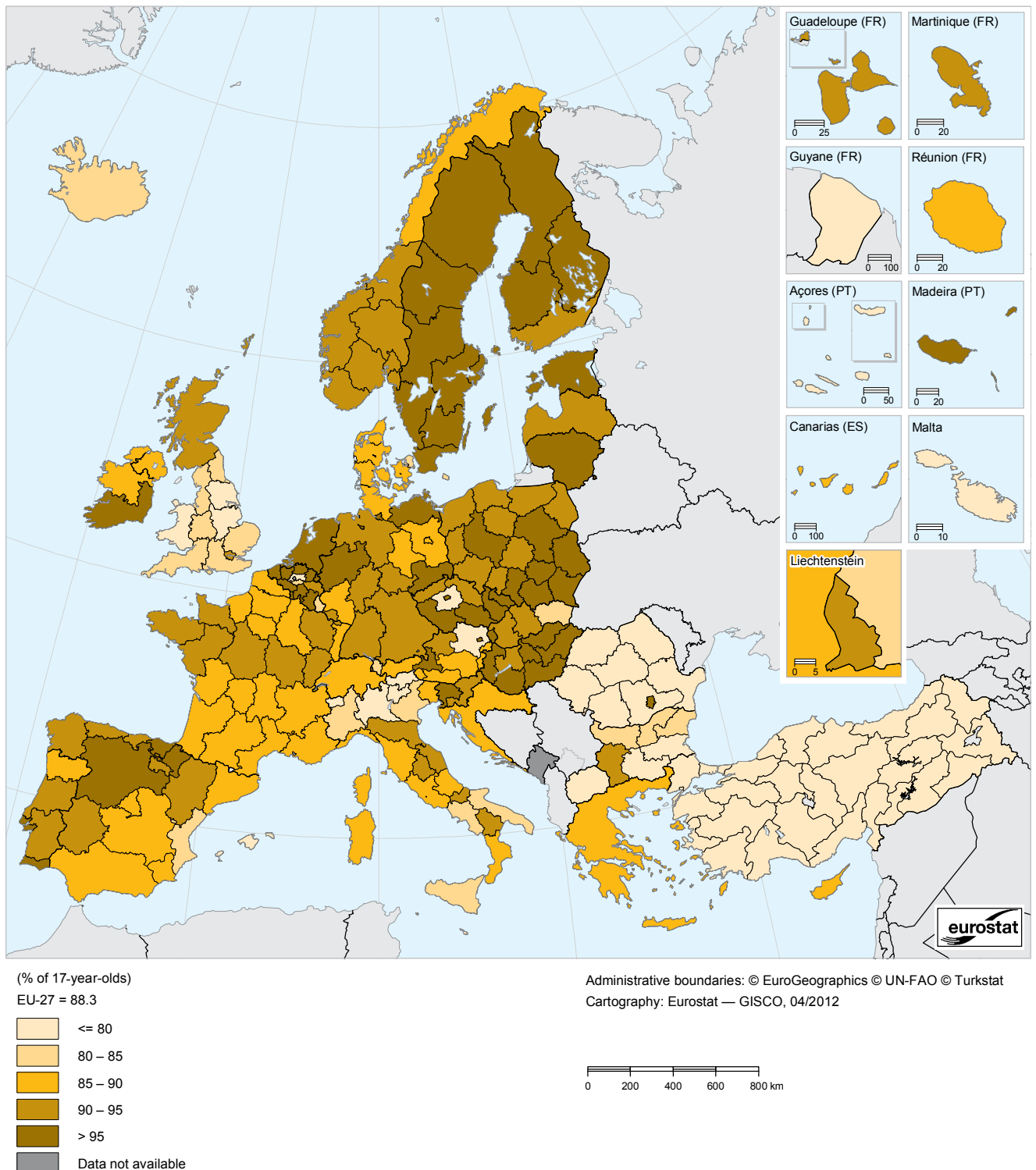


⁽¹⁾ EU-27, Estonia, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Iceland, Liechtenstein, Switzerland, the former Yugoslav Republic of Macedonia and Turkey, 2009; Greece, 2008; Vlaams Gewest (BE2), 2007; Région Wallonne (BE3), 2001; Germany and the United Kingdom, by NUTS 1 regions; Greece, the Netherlands,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

Source: Eurostat (online data code: [educ_regind](#))



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



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

Source: Eurostat (online data code: [educ_regind](#))



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

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

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

Students in tertiary education

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

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

learning for all members of society, tertiary-level students increasingly fall outside of the traditional 20 to 24 age group (used as the denominator for this ratio).

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

Tertiary educational attainment

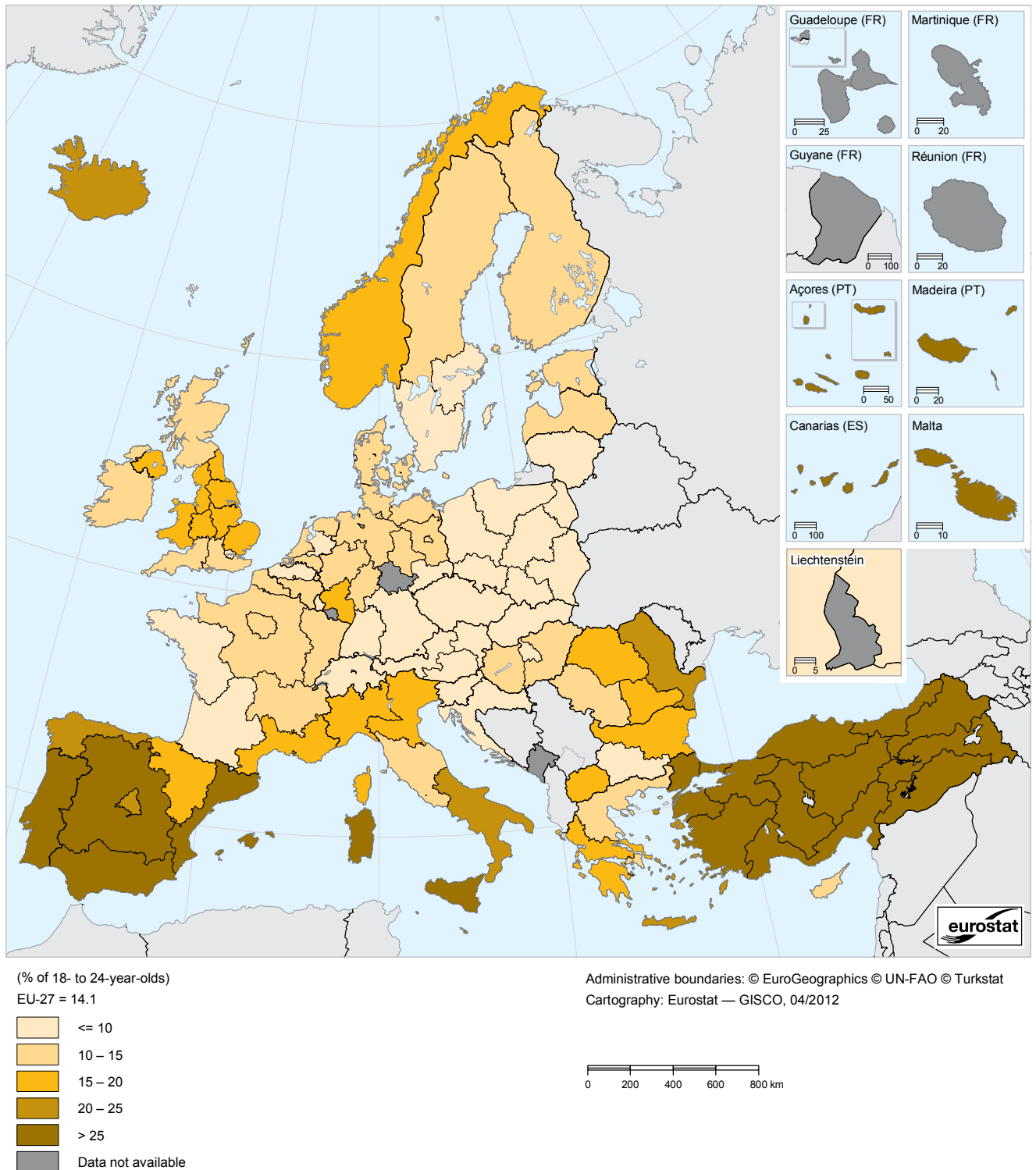
Maps 4.5 and 4.6 present two further indicators relating to tertiary education. The first shows the educational attainment among a relatively young age group, those aged 30 to 34, giving an indication of the recent level of attainment in tertiary education. The second looks at those aged 25 to 64, and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

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

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

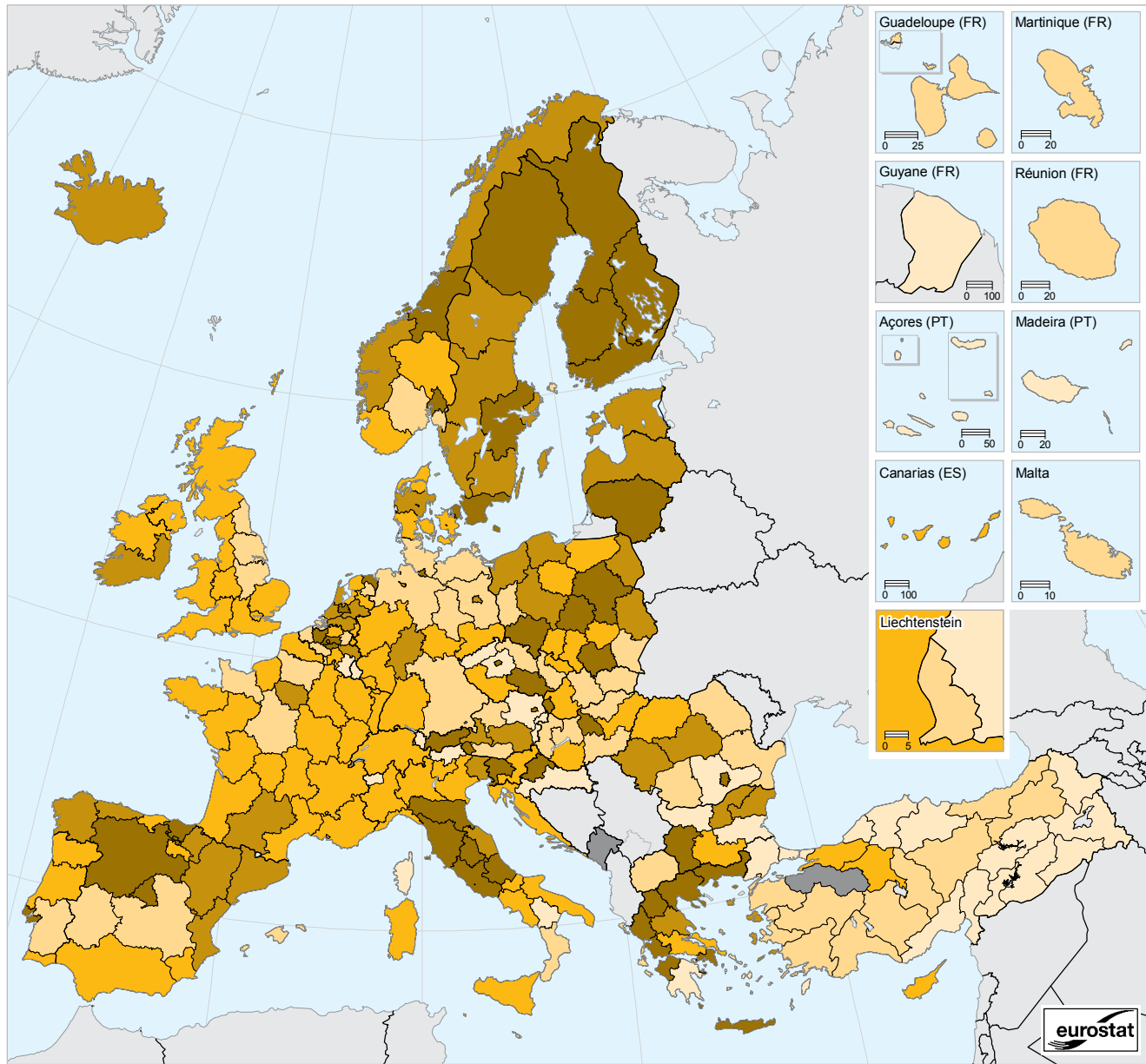


Map 4.3: Early leavers from education and training, by NUTS 1 regions, 2010 ⁽¹⁾
(% of 18- to 24-year-olds)



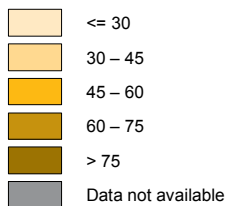
⁽¹⁾ Proportion of those aged 18 to 24 years having attained at most a lower secondary education and not being involved in further education or training; France, Sweden and Switzerland, provisional; Hamburg (DE6), 2008; Brandenburg (DE4), 2007; Mecklenburg-Vorpommern (DE8), 2005; Finland, national level.
Source: Eurostat (online data code: [edat_lfse_16](#))

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

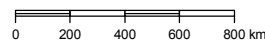


(%)

EU-27 = 61.3



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Cartography: Eurostat — GISCO, 04/2012

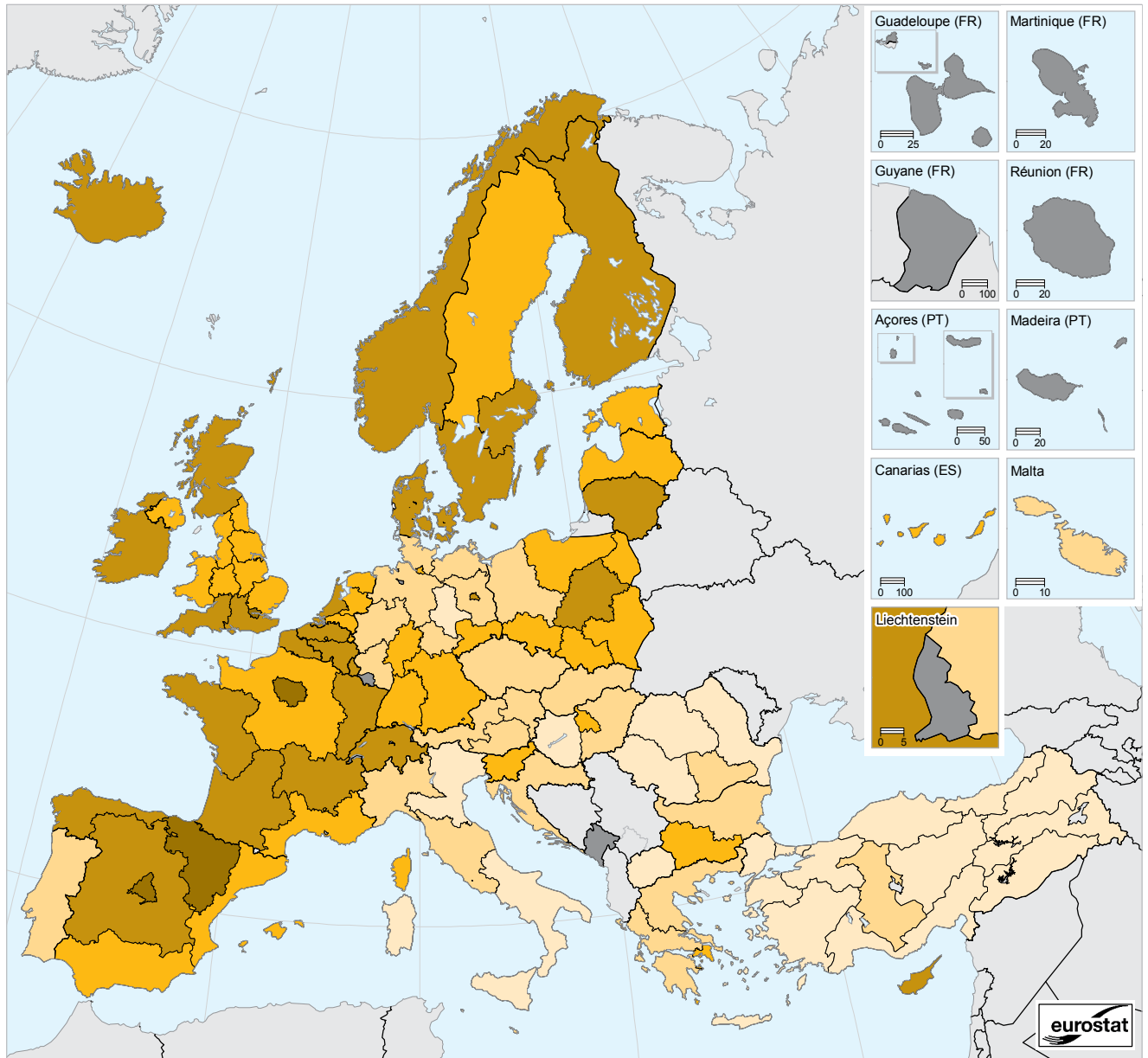


⁽¹⁾ Total number of tertiary students divided by the resident population of 20- to 24-year-olds; data cover enrolments at regional level in school year 2009/10; EU-27, Estonia, Cyprus, Latvia, Lithuania, Malta, Iceland, Liechtenstein, Switzerland, the former Yugoslav Republic of Macedonia and Turkey,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

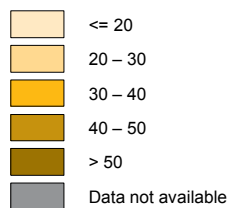
Source: Eurostat (online data code: [educ_regind](#))



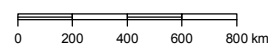
Map 4.5: Persons aged 30 to 34 years with tertiary education (ISCED levels 5 and 6) attainment, by NUTS 1 regions, 2010 ⁽¹⁾
(% of 30- to 34-year-olds)



(% of 30- to 34-year-olds)
EU-27 = 33.6



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Cartography: Eurostat — GISCO, 04/2012



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



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

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

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

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

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

Data sources and availability

As the structure of education systems varies from one country to another, a framework for assembling, compiling and presenting regional, national and international education statistics and indicators is a prerequisite for comparability. The International Standard Classification of Education (ISCED) provides the basis for collecting data on education.

ISCED-97, the current version of the classification introduced in 1997, classifies all educational programmes by field of education and level; it presents standard concepts, definitions and classifications. A full description is available on the Unesco Institute of Statistics website: http://www.uis.unesco.org/ev.php?ID=3813_201&ID2=DO_TOPIC.

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

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

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

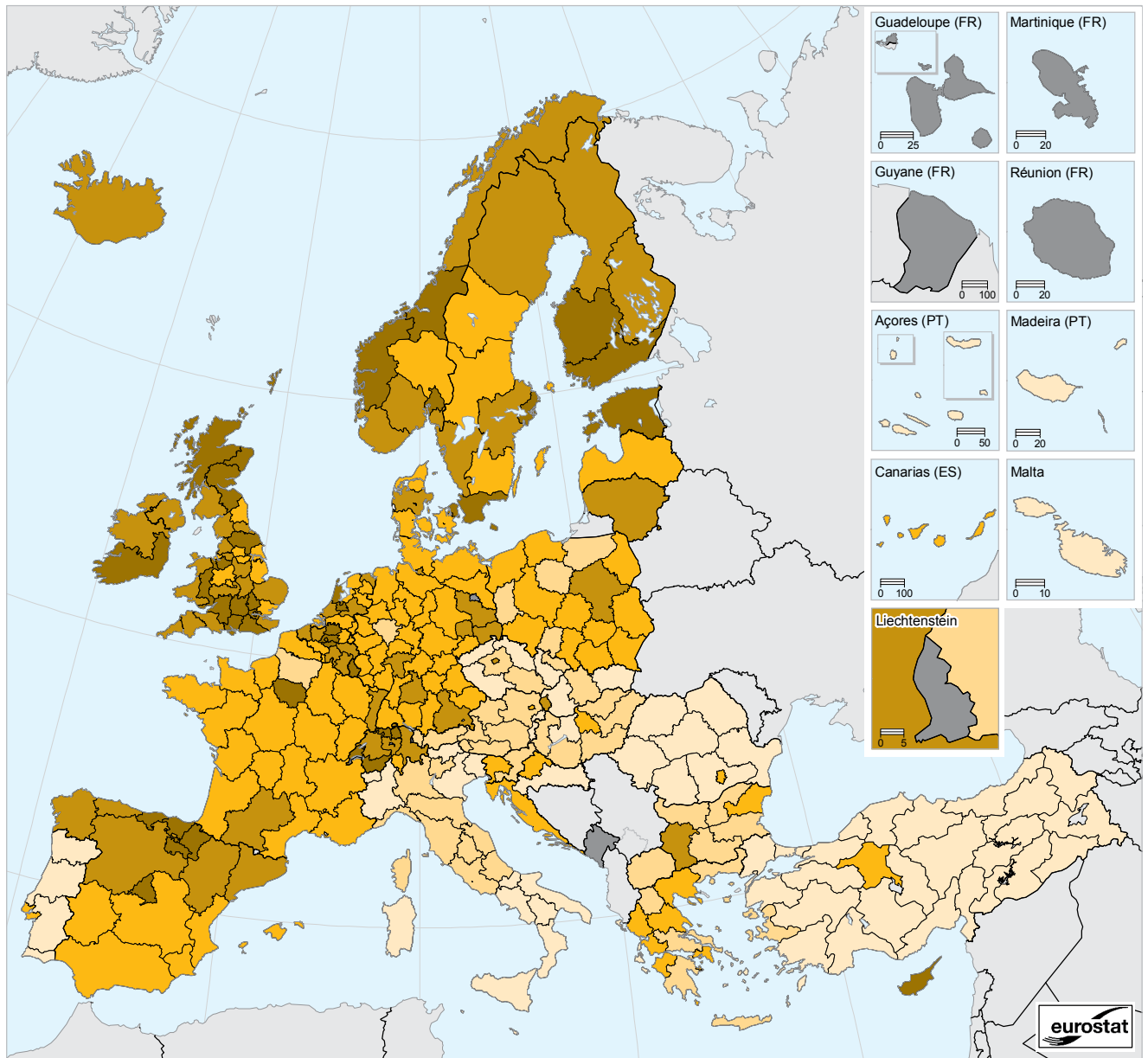
Statistics on enrolment in education include enrolment in all initial education programmes and all adult education programmes with content similar to initial education programmes or leading to qualifications similar to the corresponding initial programmes. Apprenticeship programmes are included, except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

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

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

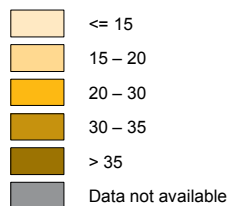


Map 4.6: Persons aged 25 to 64 years with tertiary education (ISCED levels 5 and 6) attainment, by NUTS 2 regions, 2010 ⁽¹⁾
(% of 25- to 64-year-olds)



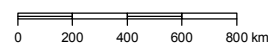
(% of 25- to 64-year-olds)

EU-27 = 25.9



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⁽¹⁾ France and Luxembourg, provisional.

Source: Eurostat (online data code: [edat_lfse_11](#))



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

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

Further information

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

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

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

Context

Diversity of national education systems

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

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

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

Education and training 2020

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

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

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

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