

Education

4





Introduction

Education, vocational training and lifelong learning play a vital role in the economic and social strategies of the European Union.

This chapter takes a look at Eurostat's regional statistics on enrolment in education, educational attainment and participation in lifelong learning, which make it possible to measure progress at regional level and to identify which regions are doing well and which are lagging behind.

Main statistical findings

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. Access to tertiary-level education typically requires successful completion of an upper-secondary and/or post-secondary non-tertiary level programme.

Tertiary-level education can be classified according to the following characteristics:

ISCED level 5A is, for the most part, theoretically based and is intended to provide adequate qualifications for entry into advanced research programmes and professions with high skills requirements. Three-year bachelor and four-to-five-year masters programmes are typical examples in this category.

ISCED level 5B is more practical, technical and employment-oriented.

ISCED level 6 (PhD-like studies) leads to an advanced research qualification.

The tertiary education indicator highlights the mobility of students. In 2009, the number of students in tertiary education in the EU-27 countries stood at nearly 19 million.

Map 4.1 shows the number of students enrolled in tertiary education (ISCED levels 5 and 6) in 2009 (2008/09 academic year) as a percentage of the corresponding regional population aged 20 to 24. This indicator is a function of the number of students in the region and of the number of residents aged 20 to 24 in that region and gives an idea of how attractive the region is to tertiary students. Since it is based on data on the area where students study, and not the area where they come from or live, it is likely that some students are not resident in the region where they are studying. Hence, regions which show high values (e.g. more than 100) for this indicator host big universities or other

tertiary education institutions and, as a consequence, attract large numbers of students from outside the region.

Some of the factors to consider when interpreting this indicator are the age-group structure of the population within regions and the corresponding structure of the tertiary education system between regions. The indicator gives an indication of the concentration or spread of tertiary education institutions across regions.

Students aged 17 in education

Compulsory education and the age when compulsory education ends vary greatly between the EU Member States. In most countries, compulsory education ends at the age of 15 or 16, which is typically at the end of lower-secondary education. By the age of 17, it is possible to have finished secondary education in some countries, whereas in others, pupils may have just started the upper-secondary level (often high school or vocational training leading directly to a labour market qualification). At the age of 17, most young people in the European Union are still in education.

At the age of 17, young people are faced with the choice of whether to remain in education, go into training or look for a job. Even if compulsory education ends before 17, over the last decade young people have become more likely to continue with their education.

Map 4.2 depicts students aged 17 (at all levels of education) as a percentage of the corresponding age group in each region. Almost everywhere in Europe, this indicator gives a result of more than 75%. This means that, for one reason or another, the younger generations are still in the education system even after the compulsory schooling age.

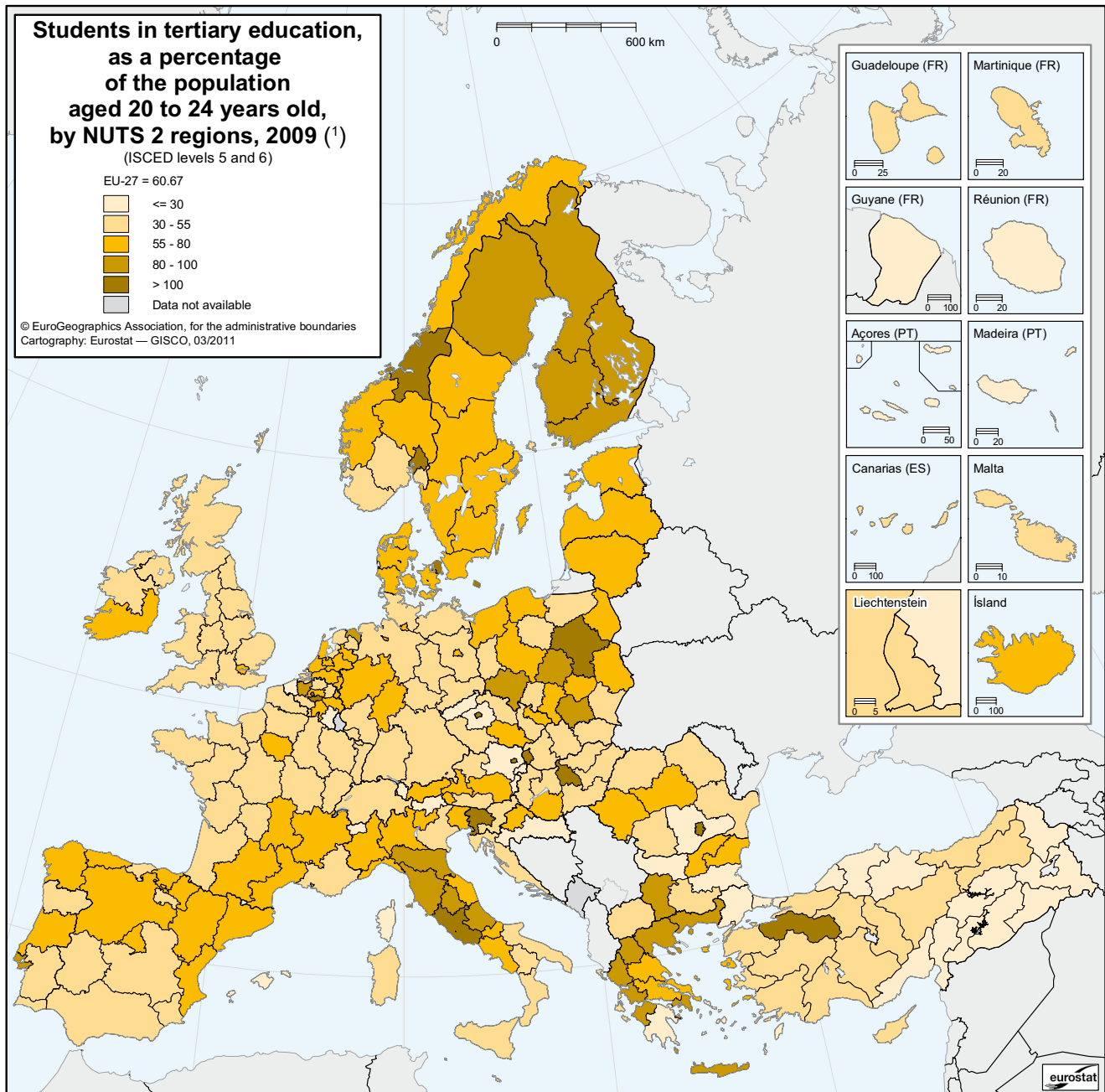
Participation of four-year-olds in education

Learning begins at birth. The period from birth to the start of primary education is a critical formative stage for the growth and development of children. The learning outcomes and the knowledge and skills acquired during primary education are stronger when children learn and develop appropriately in the years preceding regular schooling.

The purpose of pre-primary education is to prepare children physically, emotionally, socially and mentally to enter grade 1 of primary education, giving them the ability and skills to enter the education system.

The indicator reflects participation in early childhood education by NUTS 2 region, by measuring the percentage of four-year-olds who are in either pre-primary or primary education. By far the majority of four-year-olds attend pre-primary school. A four-year-old child can be enrolled either

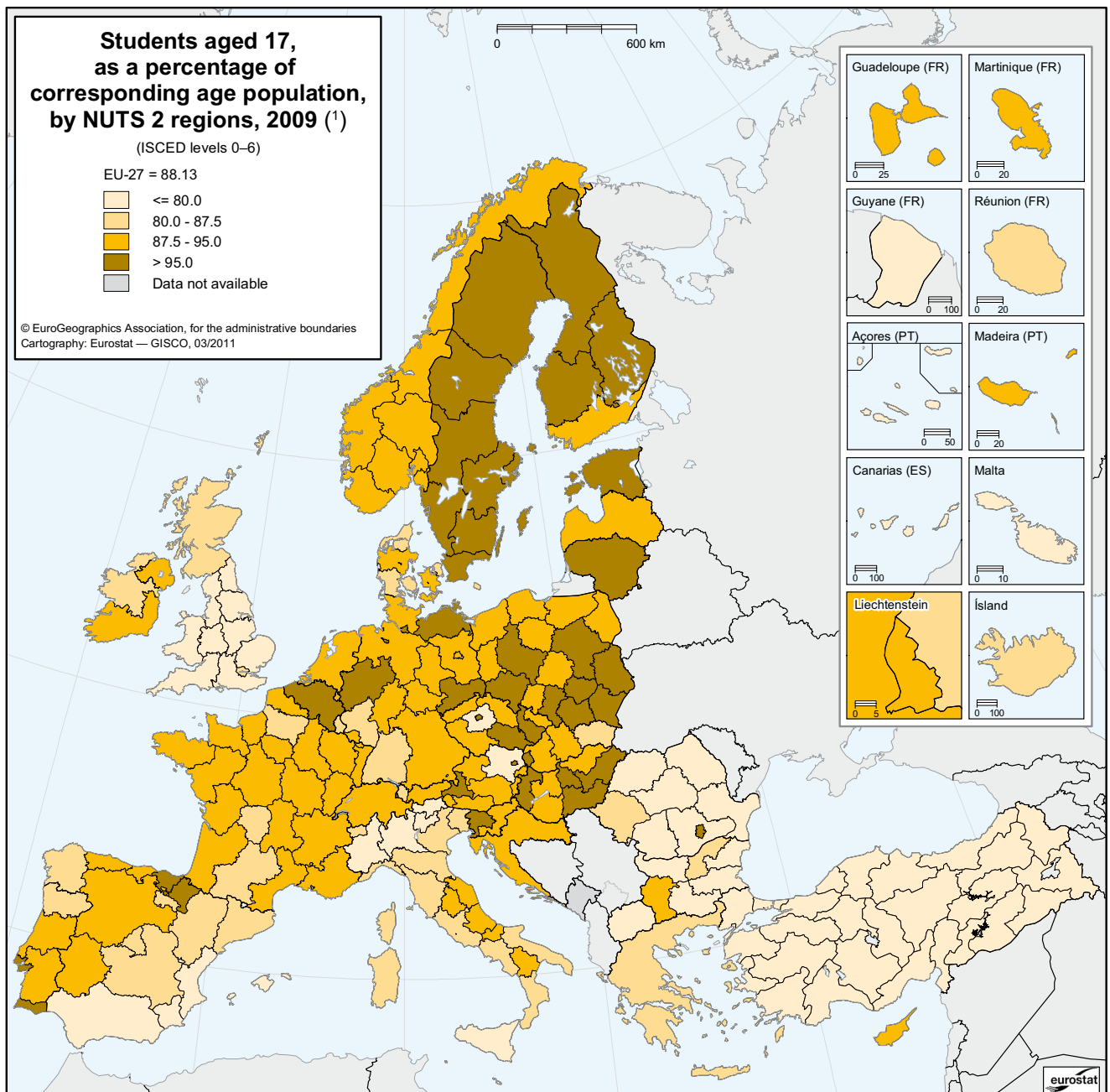
Map 4.1: Students in tertiary education, as a percentage of the population aged 20 to 24 years old, by NUTS 2 regions, 2009 ⁽¹⁾ (ISCED levels 5 and 6)



⁽¹⁾ Data covers enrolments at regional level in school year 2008/09; Belgium, Greece and United Kingdom, 2008; Switzerland, national level; Germany and United Kingdom, by NUTS 1 regions.

Source: Eurostat (online data code: [tgs00094](#)).

Map 4.2: Students aged 17, as a percentage of corresponding age population, by NUTS 2 regions, 2009 ⁽¹⁾
(ISCED levels 0–6)



⁽¹⁾ Belgium, Greece and United Kingdom, 2008; Belgium, Greece, Netherlands, Switzerland and Croatia, national level; Germany and United Kingdom, by NUTS 1 regions.

Source: Eurostat (online data code: [tgs00091](#)).



in pre-primary or in primary school. The data highlight that most four-year-olds attend pre-primary schools. Ireland and the United Kingdom are the only countries where a significant proportion of four-year-olds are in primary education. At the age of four, most children in the European Union are therefore in pre-primary education, which is generally available from at least three to four years of age in Member States. Enrolment in pre-primary education is often voluntary. Nevertheless, many countries have full participation rates.

As Map 4.3 shows, in countries such as Belgium, Denmark, France, Germany, Iceland, Italy, Luxembourg, Malta, the Netherlands, Norway and Spain, almost all four-year-olds are in education. By contrast, in Croatia, Greece, Ireland, Poland, most regions of Finland, the former Yugoslav Republic of Macedonia, Turkey and Switzerland, fewer than 50 % of four-year-olds are enrolled.

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

At age 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 choose to continue their education at this age.

Map 4.4 shows the percentage of students enrolled in upper-secondary education (ISCED level 3) and post-secondary non-tertiary education (ISCED level 4) as a percentage of the population aged between 15 and 24 years old in the region.

General upper-secondary education provides extensive all-round learning based on the basic education received. The objective is to equip students with sufficient skills and knowledge for them to go on studying. Upper-secondary education usually begins at the end of full-time compulsory education and typically requires nine years or more of full-time education (since 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. Post-secondary non-tertiary education (ISCED level 4) covers programmes which are beyond the boundary of upper-secondary education but are not considered to be tertiary education. Often they are more advanced technical and vocational programmes for teacher training, medical professions, commerce and marketing.

Students generally start upper-secondary education at the age of 15 to 17 and finish it two to four years later. The starting/finishing ages and the age range depend on the national educational programmes. 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.

Tertiary educational attainment

Map 4.5 shows the proportion of the population aged 25 to 64 who have successfully completed university or similar (tertiary-level) education. The demographic profile of a region has some influence on educational attainment, as younger generations tend to achieve higher levels than older generations. In 2009, 58 regions in the EU had more than 32% of the population with higher education.

These include large cities such as Brussels, London, Paris, Berlin, Leipzig, Dresden, Helsinki, Stockholm, Madrid and Utrecht in the Netherlands. Oslo (Norway), Genève and Zürich (Switzerland) also fall into this category. In EU Member States such as Ireland, Sweden, Finland, the Netherlands, Belgium, Germany and Estonia, 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 areas of nine EU countries, in marked contrast to their larger cities. This is the case in Portugal and Romania in particular, in Turkey and, to a lesser extent, in Croatia, Bulgaria, the Czech Republic, Italy, Greece, Hungary, Poland and Slovakia. It also applies to some islands, such as Sardegna and Sicilia (Italy), Açores and Madeira (Portugal) and Malta.

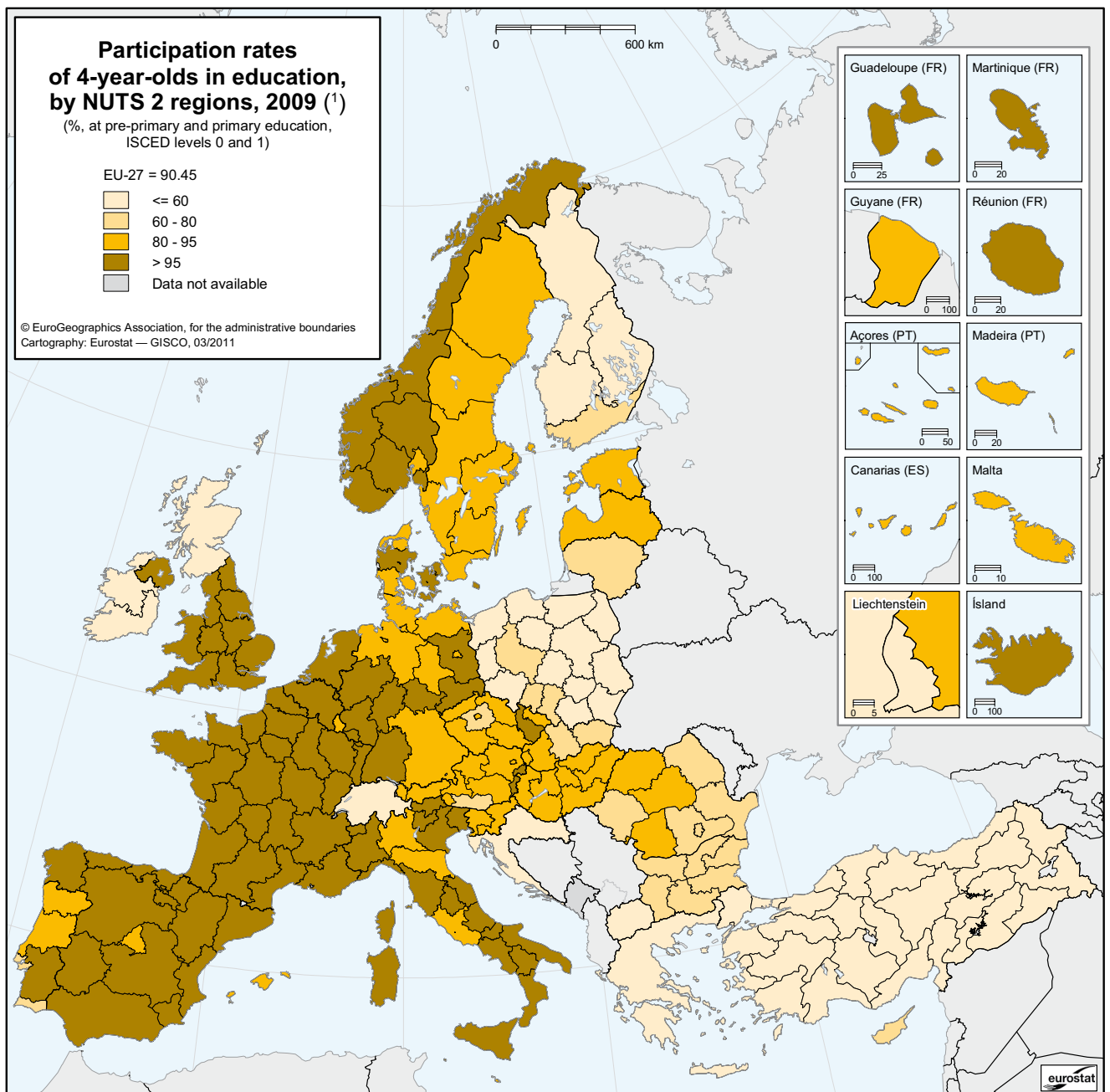
Early leavers from education and training

The indicator '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 and training.

As Map 4.6 shows, the share of early leavers from education and training varies significantly across the EU-27. Several regions display a percentage below 10 %, which means they have reached the objective set in the EU 2020 strategy. They are situated in Croatia, Slovakia, Poland, Slovenia, the Czech Republic, Luxembourg, Lithuania, Austria and Finland. Higher percentages above 20 % are observed in Spain, Portugal, Malta and the southern regions of Italy (Sud, Isole), as well as in Turkey and Iceland.

These high percentages are not necessarily associated with high unemployment within the age group. Over 70 % of early leavers from education and training are in employment in Malta, Portugal and Iceland. On the other hand, more than 70 % of early leavers from education and training are inactive or unemployed in Slovakia, Hungary and Bulgaria.

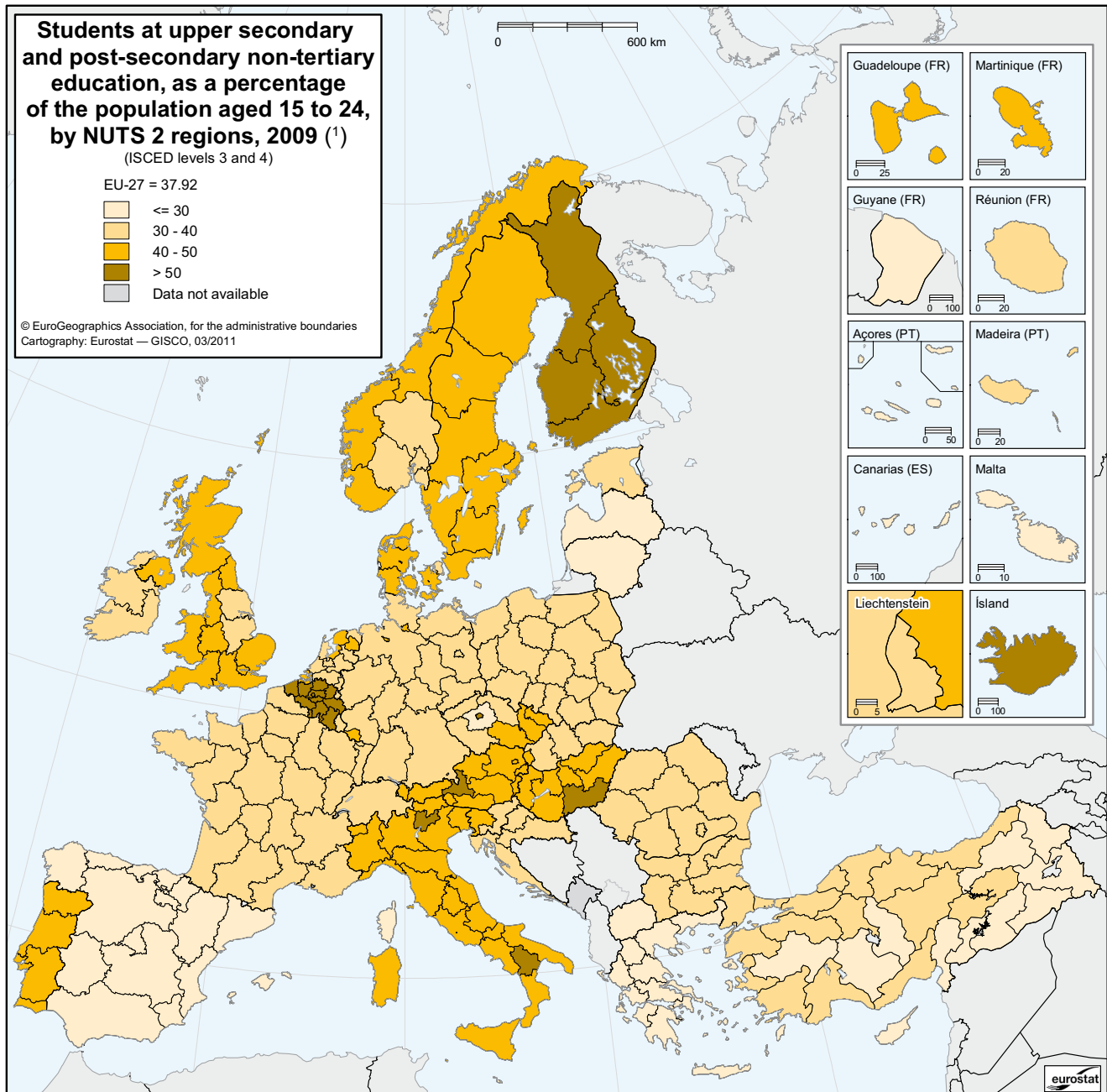
Map 4.3: Participations rates of 4-year-olds in education, by NUTS 2 regions, 2009 ⁽¹⁾
 (% at pre-primary and primary education, ISCED levels 0 and 1)



⁽¹⁾ Belgium, Greece and United Kingdom, 2008; Belgium, Greece, Netherlands, Switzerland and Croatia, national level; Germany and United Kingdom, by NUTS 1 regions.

Source: Eurostat (online data code: tgs00092).

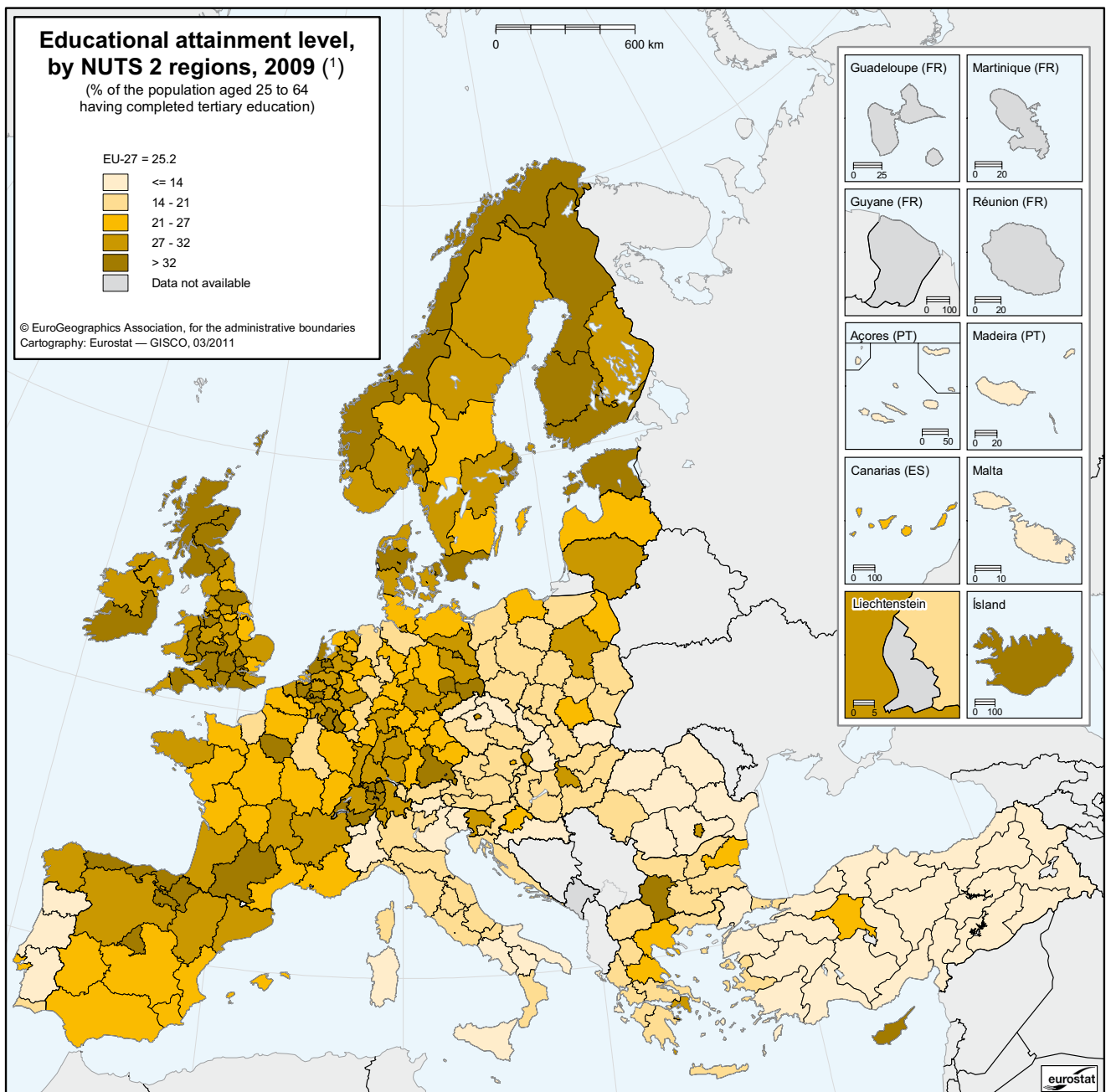
Map 4.4: Students at upper secondary and post-secondary non-tertiary education, as a percentage of the population aged 15 to 24, by NUTS 2 regions, 2009 ⁽¹⁾
(ISCED levels 3 and 4)



⁽¹⁾ Data covers enrolments at regional level in school year 2008/09; Belgium, Greece and United Kingdom, 2008; Switzerland, national level; Germany and United Kingdom, by NUTS 1 regions.

Source: Eurostat (online data code: tgs00093).

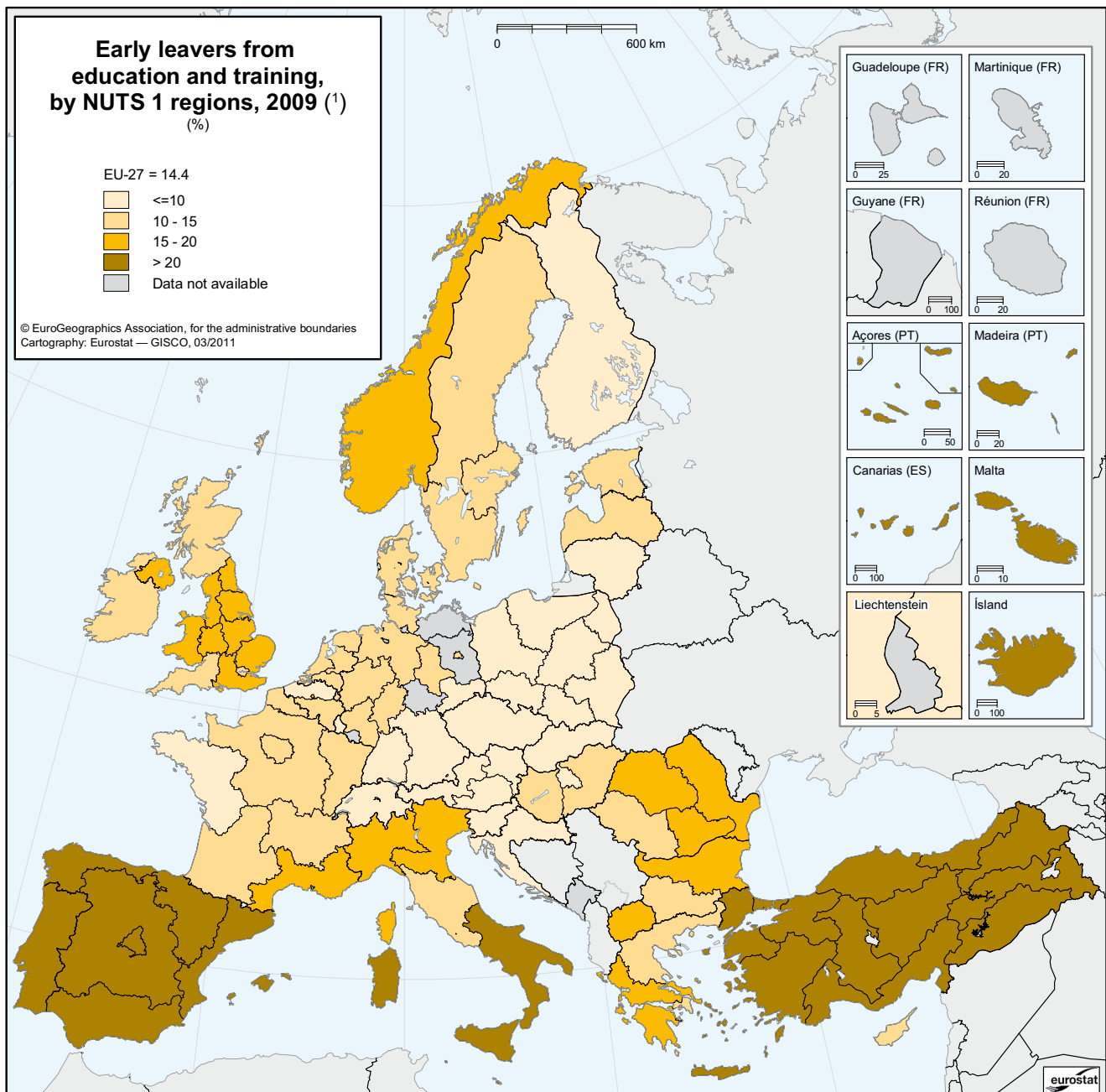
Map 4.5: Educational attainment level, by NUTS 2 regions, 2009 ⁽¹⁾
 (% of the population aged 25 to 64 having completed tertiary education)



⁽¹⁾ Corse (FR83), data not reliable due to small sample size; Luxembourg, Malta and Sweden, provisional data.

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

Map 4.6: Early leavers from education and training, by NUTS 1 regions, 2009 ⁽¹⁾
(%)



⁽¹⁾ Slovenia and Croatia, data lack reliability due to small sample size; Luxembourg, Malta and Sweden, provisional data.

Source: Eurostat (online data code: [edat_lfse_16](#)).



Data sources and availability

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

As the structure of education systems varies from one country to another, a framework for assembling, compiling and presenting national and international education statistics and indicators is a prerequisite for international 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.

ISCED-97 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

Qualitative information on school systems in the EU Member States is organised and disseminated by Eurydice (<http://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.).

Statistics on enrolment in education include enrolment in all initial education programmes and all adult education 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 data source used for Maps 4.1 to 4.4 are two specific Eurostat tables which form part of the UOE data collection on education systems. 'UOE' incorporates UIS-UNESCO, OECD and Eurostat data. See: http://circa.europa.eu/Public/irc/dsis/edtcsl/library?l=/public/unesco_collection&vm=detailed&sb=Title

Education attainment level is defined as the percentage of people of a given age group (excluding those who did not answer the question 'highest level of education or training attained') having attained a given education level.

The indicator 'Early leavers from education and training' (previously named 'Early schoolleavers') tracks the percentage 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.

These two indicators are a collection of annual series based on the quarterly results of the EU Labour Force Survey (EU-LFS). The educational attainment level reported is based on ISCED-97.

Context

The EU is currently aiming to achieve several goals and benchmarks for higher education. The key aims are to increase the number of mathematics, science and technology graduates, to increase the number of Erasmus students, to raise investment in higher education and to foster the mobility of students across Europe.

The preparation given by pre-primary education is considered the foundation for further development. In December 2008, the European Commission proposed a new benchmark, saying that 95 % of four-year olds should participate in pre-primary education by 2020. The aim of this proposal is to underpin progress on the target set at the 2002 Barcelona Summit to increase participation in pre-primary education to 90% of all children between three years of age and the beginning of compulsory education.

Early leavers from education and training and tertiary educational attainment are headline indicators for the Europe 2020 strategy. They were selected with other indicators to monitor progress towards a smarter, knowledge-based, greener economy, delivering high levels of employment, productivity and social cohesion.

'Early leavers from education and training' is also one of the **sustainable development indicators**, under the theme 'social inclusion'.