ISSN 1830-9674

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Eurostat regional yearbook 2008

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Luxembourg: Office for Official Publications of the European Communities, 2008

ISBN 978-92-79-08212-2
ISSN 1830-9674
DOI 10.2785/11820
Cat. No. KS-HA-08-001-EN-N
(Cat. No. printed publication KS-HA-08-001-EN-C)

Theme: General and regional statistics
Collection: Statistical books

Preface

Dear reader,

I am pleased to present the 2008 edition of the Eurostat regional yearbook, which gives an overview of the most recent developments in the regions of the European Union, with its current 27 Member States, as well as in the candidate countries and EFTA countries.

We have again selected themes that we think will show you the most interesting facets of development in the economic, social and demographic fields in Europe's regions. We are also pleased to include a contribution from our colleagues at the Commission's Directorate-General for Regional Policy for the second year running. This time the chapter is about 'Sectoral productivity' and it examines how productivity in different business sectors differs between the EU's regions.

Regional policy programmes initiated last year under the EU's new cohesion policy are now well under way and we hope that this publication will give some flavour of the progress being made in regional cohesion throughout the EU. We have also included some of the most recent results from the Urban Audit exercise, a data collection that compiles a great deal of statistical information on Europe's cities.

We are progressively developing the range of regional indicators available and will hopefully be able to include these in our choice of topics in future editions, as data availability and quality allow.

I wish you a stimulating read.

Hervé Carré
Director-General, Eurostat

Acknowledgements

The editors of the *Eurostat regional yearbook 2008* would like to thank all those who were involved in its preparation. We thank in particular the following chapter authors for making publication of this year's edition possible.

- **Population**: Gregor Kyi (Unit F.1 at Eurostat: Demographic and migration statistics)
- **Urban statistics**: Teodóra Brandmüller (Unit D.2 at Eurostat: Regional indicators and geographical information)
- **Gross domestic product**: Andreas Krüger (Unit C.2 at Eurostat: National accounts — production)
- **Household accounts**: Andreas Krüger (Unit C.2 at Eurostat: National accounts — production)
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- **Tourism**: Ulrich Spörel (Unit F.6 at Eurostat: Information society and tourism statistics)
- **Science, technology and innovation**: Bernard Felix and Tomas Meri (Unit F4 at Eurostat: Education, science and culture statistics)
- **Health**: Tomasz Urbanski (Unit F.5 at Eurostat: Health and food safety statistics)
- **Agriculture**: Garry Mahon (Unit E.2 at Eurostat: Agricultural and fisheries statistics)

This publication was edited and coordinated by Åsa Önnerfors (Unit D.2 at Eurostat: Regional indicators and geographical information) with the help of Pavel Bořkovec (Unit B.6 at Eurostat: Dissemination). Baudouin Quennery (Unit D.2) produced all the statistical maps.

We are also very grateful to:

— the **Directorate-General for Translation of the European Commission**, and in particular the German, English and French translation units;

— the **Office for Official Publications of the European Communities**, and in particular Peter Johansson in Unit B.1, Cross-media publishing, and the proofreaders in Unit B.2, Editorial services.

Contents

Introduction

Regional statistics give more detailed information

Eurostat, the statistical office of the European Communities, collects data on a range of different statistical topics, mainly 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 from the four EFTA countries (Iceland, Liechtenstein, Norway and Switzerland). The statistical data are often only collected at national level, but very many statistical fields also have statistics at regional level, which gives us a more complete picture.

This aim of this publication, the *Eurostat regional yearbook 2008*, is to give you detailed information on life in the European regions today. Looking at the regions of Europe under the magnifying glass allows the authors of the 13 different chapters to make an in-depth analysis of a large variety of statistical domains. We very much hope you will enjoy reading it!

The first chapter is about population statistics (demography), because population data form the basis for all other statistics. Many other statistical indicators are divided by the population figures, thus resulting in data with the unit expressed in terms of 'per inhabitant'. Therefore, we start the first chapter by presenting some basic facts about how the population is spread over the regions in Europe, providing birth and death rates, migration patterns and age distribution.

The second chapter, on urban statistics, is based on the Urban Audit data collection and it presents data on a range of different topics from all European capitals and from many other large European cities. As a large proportion of EU citizens live in these cities, it should be a topic that is interesting and directly relevant for many people.

The other chapters can be divided into four different themes.

The first concerns economic or financial indicators: gross domestic product (GDP), household accounts and structural business statistics. Economic cohesion is one of the main goals in EU policy and, one might say, the engine for all other policies. In particular the chapter on GDP gives a very good idea of the situation in the European Union today.

Labour market indicators form the second group of themes in this publication, containing a basic chapter on the labour market, and also introducing two totally new subjects for the *Eurostat regional yearbook*; sectoral productivity, written by a subject specialist from the Directorate-General for Regional Policy, and labour costs, where the regional differences in labour costs per hour are analysed.

The theme for the third group of chapters is more general and concerns the everyday life of most European citizens. Transport and tourism both focus on the mobility of people, while science, technology and innovation is often seen as one of the main cornerstones in the new Lisbon strategy for growth and jobs.

Well-being in general is the theme for the last two chapters; statistics on health are a welcome reappearance this year, focusing on the main causes of death and on the density of healthcare staff in the European regions; the chapter on agriculture this year concerns animal-rearing, mainly regarding pigs, sheep and cows.

The NUTS classification

All statistics at regional level within the EU are based on the nomenclature of territorial units for statistics (NUTS). 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 of course 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 it expanded to include Bulgaria and Romania.

The NUTS regulation provides for a review to be conducted every three years whereby the regional classification can be changed and adapted to new administrative boundaries or economic circumstances. In 2006, this exercise took place for the first time, and the results of these changes to the NUTS classification have now been valid since 1 January 2008. Most territorial changes are at NUTS level 3, affecting 11 countries, while four countries had changes made at NUTS level 2 and only one country at NUTS level 1.

The main changes in this latest revision of the NUTS classification are the following: Denmark introduced new NUTS 2 regions and revised the existing NUTS 3 regions following a substantial

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

administrative regional reform. In one German region, Sachsen-Anhalt, three different NUTS 2 regions were merged into just one NUTS 2 region. Slovenia introduced two new NUTS 2 regions where it had only one previously. In the United Kingdom, more specifically in north-eastern Scotland, a boundary shift at both NUTS 2 and 3 levels had the effect of creating new regions. Sweden introduced NUTS 1 regions for the first time due to the size of the country. For more detailed information on the most recent NUTS changes, please consult the Eurostat website.

Since these NUTS changes were introduced only on 1 January 2008 and the statistical data for all the chapters had already been extracted by the beginning of this year, you will find that regional data, especially for Denmark and Slovenia, are missing or have been replaced with national values on many of the statistical maps. The regional data availability for these two countries will have hopefully improved for next year's publication.

As a rule regional data by NUTS 2 regions are displayed and analysed in the *Eurostat regional yearbook 2008*, but there is one exception. Regarding labour costs, Eurostat only collects data at NUTS level 1 and therefore in that chapter the data are based on NUTS 1 regions instead.

Please note that some of the Member States have a relatively small population and they 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 these cases the whole country consists of one single NUTS 2 region.

A folding map accompanies this publication on the inside of the cover and it shows all the regions at NUTS level 2 in the 27 Member States of the European Union (EU-27) and the corresponding statistical regions at level 2 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 to locate a specific region geographically on the map.

Coverage

The *Eurostat regional yearbook 2008* mainly contains statistics from the 27 Member States of the European Union, but when available also from the three candidate countries: Croatia, the former Yugoslav Republic of Macedonia, and Turkey; and from 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 policy areas, but the data availability situation is constantly improving, and we hope to have even better coverage in the near future.

More regional information

Under the theme '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 contained in this yearbook. 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 contents of the regional and urban databases please consult the Eurostat publication *European regional and urban statistics — Reference guide — 2008 edition*, which you can download free of charge from the Eurostat website. The specific data used for producing the maps and other illustrations in this publication can also be found as Excel tables on the Eurostat website.

1

Population

Revealing the regional pattern of demography

Demographic trends have a strong impact on the societies of the European Union. Consistently low fertility levels, combined with an extended longevity and the fact that the baby boomers are reaching retirement age, result in a demographic ageing of the EU population. The share of the older generation is increasing, while the share of those of working age is decreasing.

This chapter presents the regional pattern of demographic phenomena as it is visible today. The analysis is mainly based on demographic trends that have been observed during the period from 1 January 2001 to 1 January 2006. For this purpose, five-year averages have been calculated of the total annual population change and of its components. Given that demographic trends are long-term developments, the five-year averages provide a stable and accurate picture. They help to identify regional clusters that often extend across national borders.

Some demographic developments are likely to become considerably more important in future decades. Eurostat calculates national and regional population projections that reveal the effects current trends might have if they continued into the future. Eurostat's population projections should be considered not as forecasts, but as 'what if?' scenarios: they show possible demographic developments that are based upon assumptions about fertility, mortality and migration which, in turn, have been derived from observed trends and expert opinion (see Methodological notes at the end of this chapter).

This regional yearbook presents some results of the regional population projections that became available at the beginning of 2008. More data can be found on the Eurostat website (under Data/ Population/Population projections).

The drivers behind population change

During the last four and a half decades, the population of the 27 countries of today's European Union has grown from around 400 million persons (1960) to almost 500 million persons (2007). However, the strength and composition of the population growth have varied significantly over the years.

The total population change has two components: the so-called 'natural increase', which is defined as the difference between the numbers of live births and deaths, and net migration, which ideally represents the difference between inward and outward migration flows (see Methodological notes).

Until the end of the 1980s, the natural increase was by far the major component of population growth. However, since the early 1960s there has been a sustained decline in the natural increase. International migration, on the other hand, has gained in importance, becoming the major force of population growth from the beginning of the 1990s onwards.

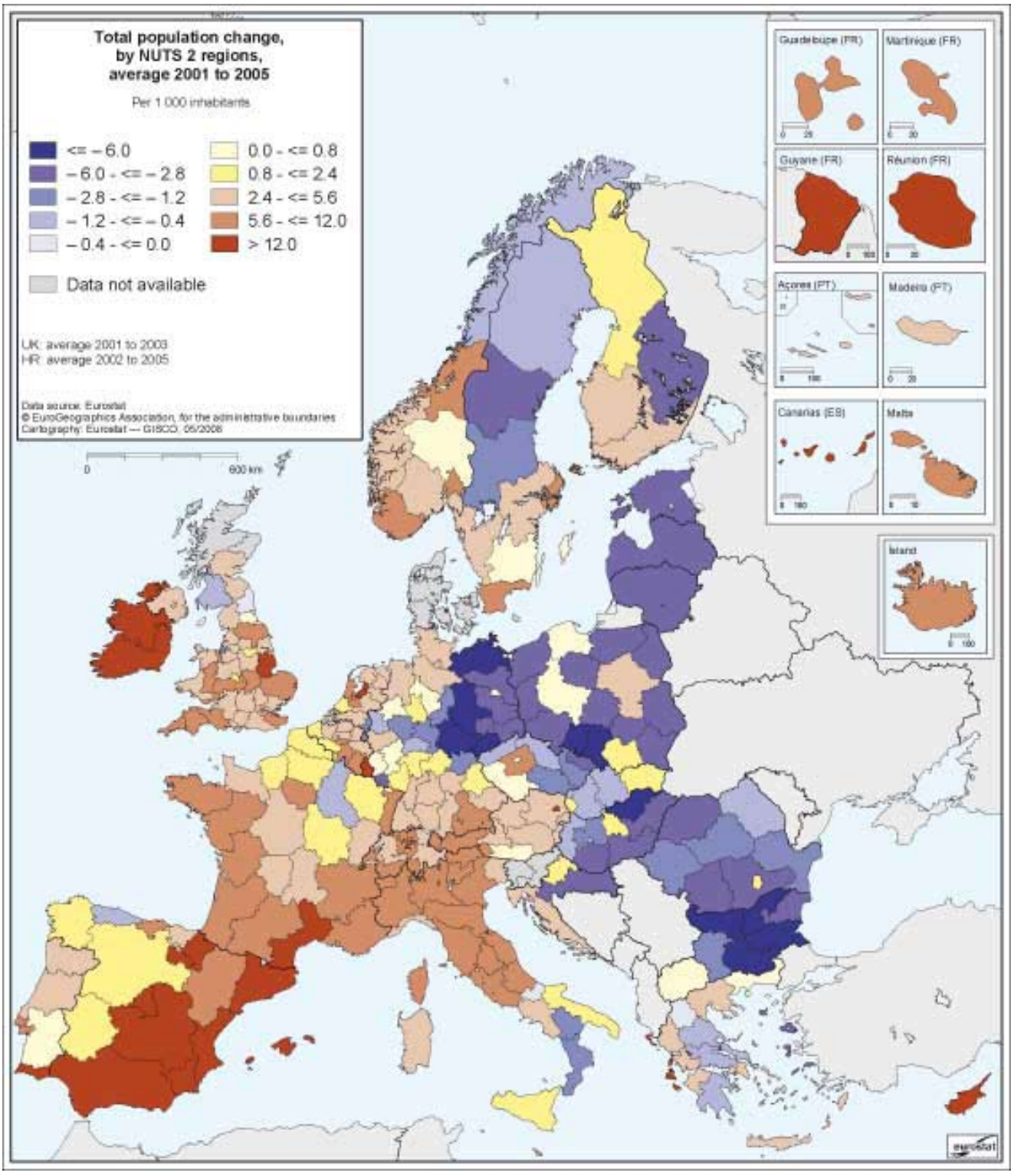
Maps 1.1, 1.2 and 1.3 show the total population change and its components since the start of the new century. For the purposes of comparability, the population change is presented in relative terms, i.e. it is related to the size of the total population. The maps show the five-year average for the resulting 'crude rates of population change' (average for the years 2001 to 2005).

In the north-east and east of the European Union the population is decreasing. Map 1.1 is marked by a clear divide between the regions there and in the rest of the EU. Most affected by a decreasing population are Germany, Poland, the Czech Republic, Slovakia, Hungary, Romania and Bulgaria, and to the north the three Baltic States, and parts of Sweden and Finland.

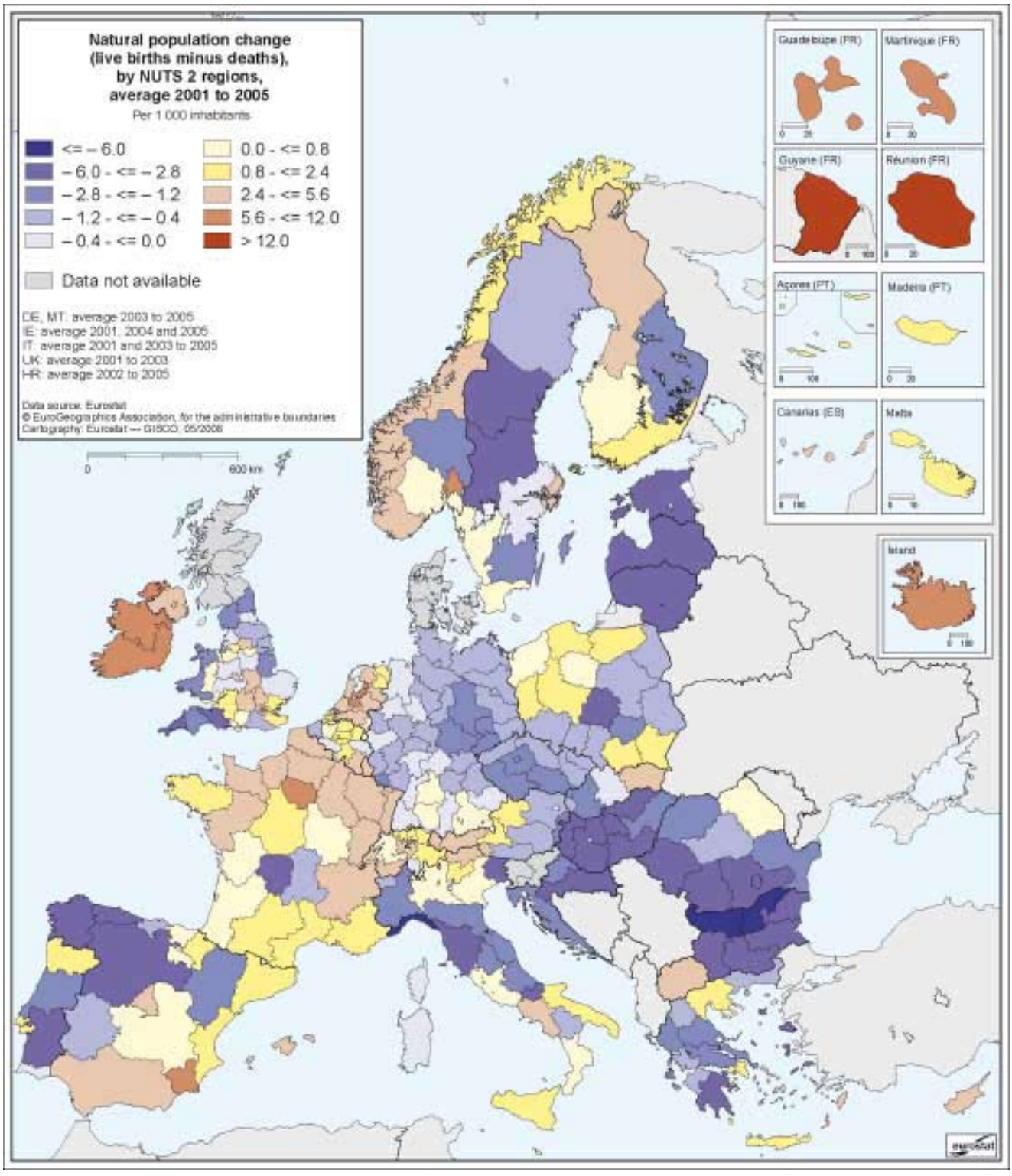
Map 1.2 shows that in many regions of the EU more persons have died than have been born since the start of the new century. The resulting negative 'natural population change' is widespread, although the pattern is less pronounced than for the total population change. Ireland, France and the three Benelux countries have been the main countries experiencing a natural increase in the population. The natural population change is predominantly negative in Germany, the Czech Republic, Slovakia, Hungary, Slovenia, Romania, Bulgaria and adjacent regions, as well as the Baltic States, Sweden in the north and Greece in the south. The other Member States have a situation that is, overall, more balanced.

A major reason for the slowdown of the natural increase in the population is the fact that, on average and over time, the inhabitants of the EU have fewer children. In the 27 countries that today form the European Union, the total fertility rate declined from a level of around 2½ in the early 1960s to a level of about 1½ in 1993, where it has remained (see Graph 1.1 for the definition of 'Total fertility rate' in the Methodological notes). The slight increase in recent years might be attributable

Map 1.1: Total population change, by NUTS 2 regions, average 2001 to 2005
Per 1 000 inhabitants



Map 1.2: Natural population change (live births minus deaths), by NUTS 2 regions, average 2001 to 2005
Per 1 000 inhabitants



in part to the fact that today more women are having their first child later in their lives.

By comparison: In the more developed parts of the world, a total fertility rate of around 2.1 children per woman is currently considered to be the replacement level, i.e. the level at which a population would remain stable in the long run if there were no inward or outward migration.

As for net migration, four cross-border regions where more persons have left than arrived can be identified on Map 1.3. These are:

- the northernmost regions of Sweden and Finland;
- an eastern group, comprising most of eastern Germany, Poland, Lithuania and Latvia, as well as parts of the Czech Republic, Slovakia, Hungary, Romania and Bulgaria;
- regions in the north of France;
- regions in the south of Italy.

In some regions a negative 'natural change' has been compensated for by a positive net migration. This is most conspicuous in western Germany, eastern Austria and the north of Italy, as well as the south of Sweden and regions in Spain, Greece and the United Kingdom. The opposite is much rarer: in only a few regions (namely in the north of Poland) has a positive natural change been offset by negative net migration.

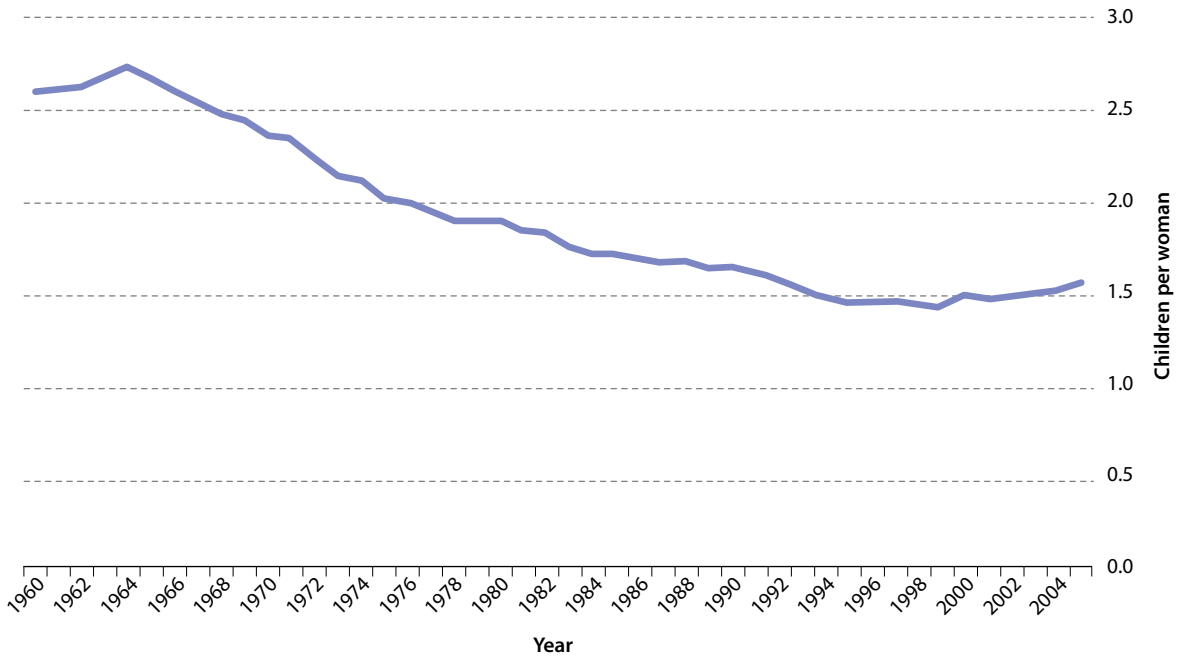
Regions without compensation are often exposed to a profound development, upwards or — in some regions — downwards. In Ireland, the Benelux countries, many regions of France and some regions of Spain, a natural increase has been accompanied by positive net migration. However, in eastern Germany, Lithuania and Latvia, as well as some regions of Poland, the Czech Republic, Slovakia, Hungary, Romania and Bulgaria, both components of population change were negative. In some regions this has led to a sustained population loss.

Demographic ageing: the situation today …

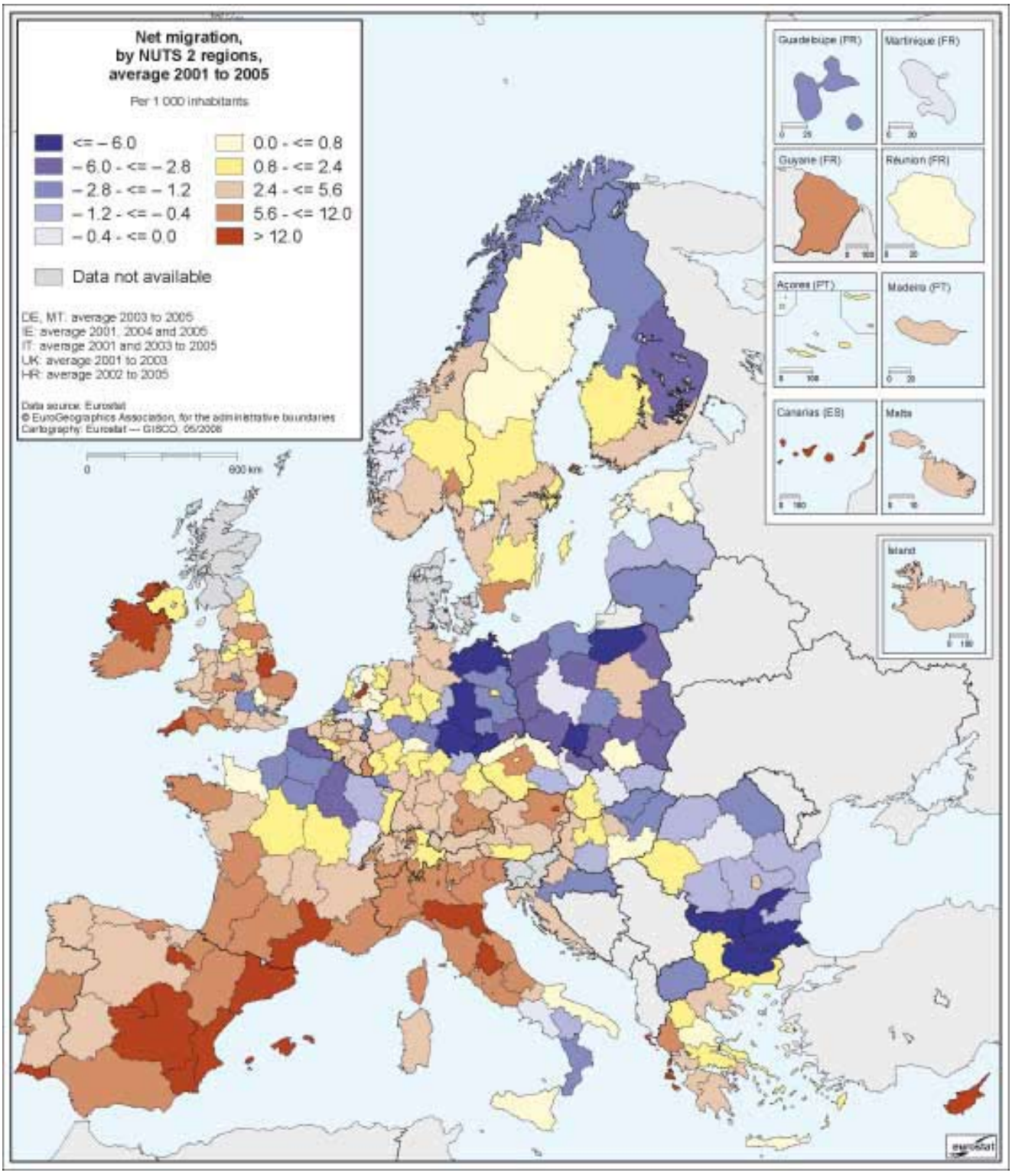
Age dependency ratios are important demographic indicators and relate the young and old-age populations to the population of working age. The 'old age' roughly approximates to the age of retirement. Today, different demographic reports present dependency ratios based on different definitions for the age groups. In this publication the following age groups are used.

- Young age dependency ratio: the population aged up to 14 years related to the population aged between 15 and 64 years.
- Old age dependency ratio: the population aged 65 years or older related to the population aged between 15 and 64 years.

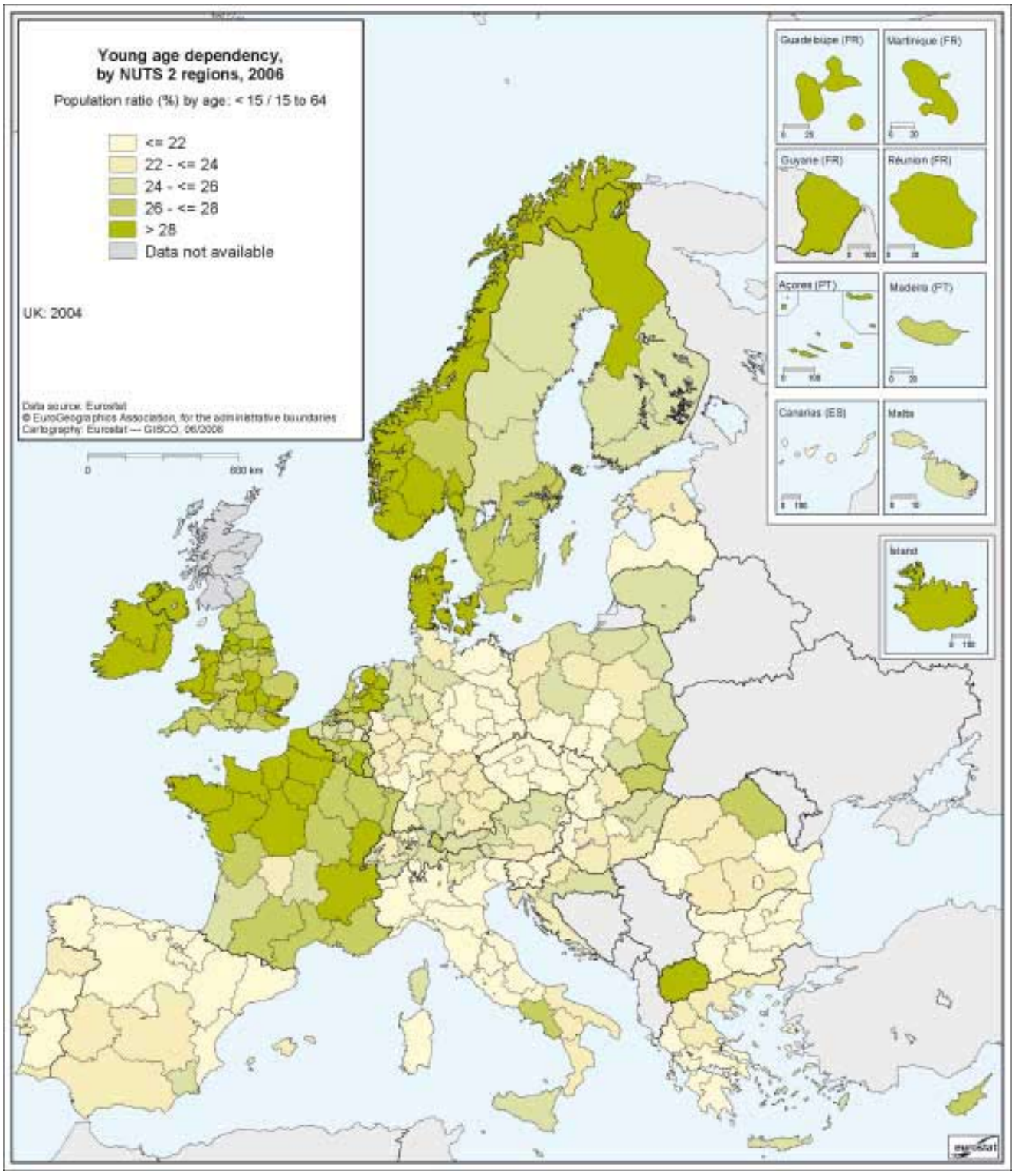
Figure 1.1: Total fertility rate in the EU-25, 1960–2005



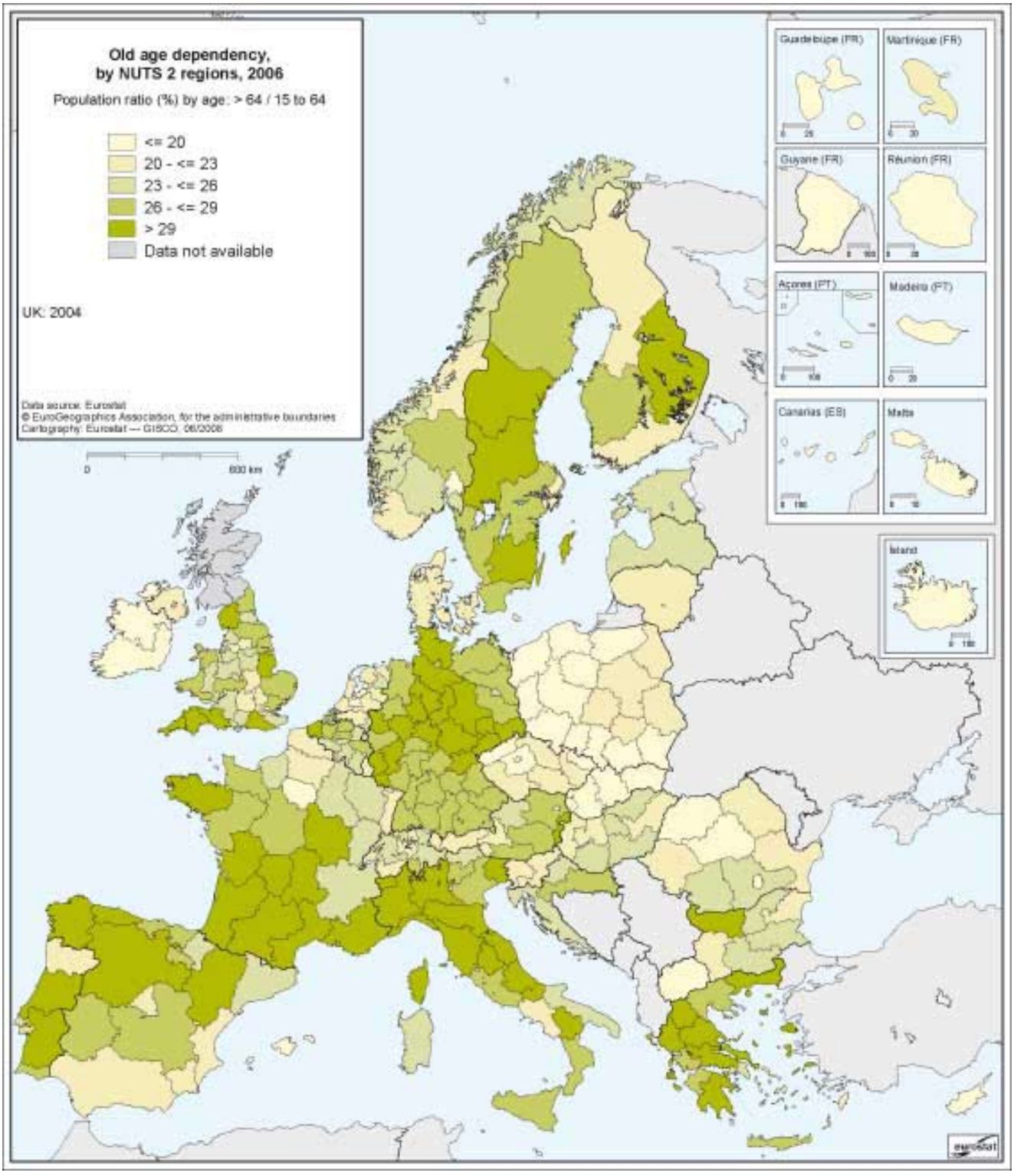
Map 1.3: Net migration, by NUTS 2 regions, average 2001 to 2005
Per 1 000 inhabitants



Map 1.4: Young age dependency, by NUTS 2 regions, 2006
Population ratio (%) by age: < 15/15 to 64



Map 1.5: Old age dependency, by NUTS 2 regions, 2006
Population ratio (%) by age: > 64/15 to 64



Maps 1.4 and 1.5 show the population structure at the beginning of 2006. The young age dependency ratio is influenced by recent fertility levels. Countries with higher fertility tend to have a higher young age dependency (i.e. more young people per 100 of working age) when compared with countries displaying low fertility levels. This is conspicuously the case for Ireland, France, the United Kingdom, the Benelux countries, Sweden and Finland. The young age dependency is below average in regions in Italy, Greece, Spain, Germany, the Czech Republic, Latvia, Romania and Bulgaria. The regional pattern for old age dependency is less clear cut.

… and its impact in the future

Eurostat's population projections allow a fairly accurate anticipation of how the demographic situation will develop if current trends continue.

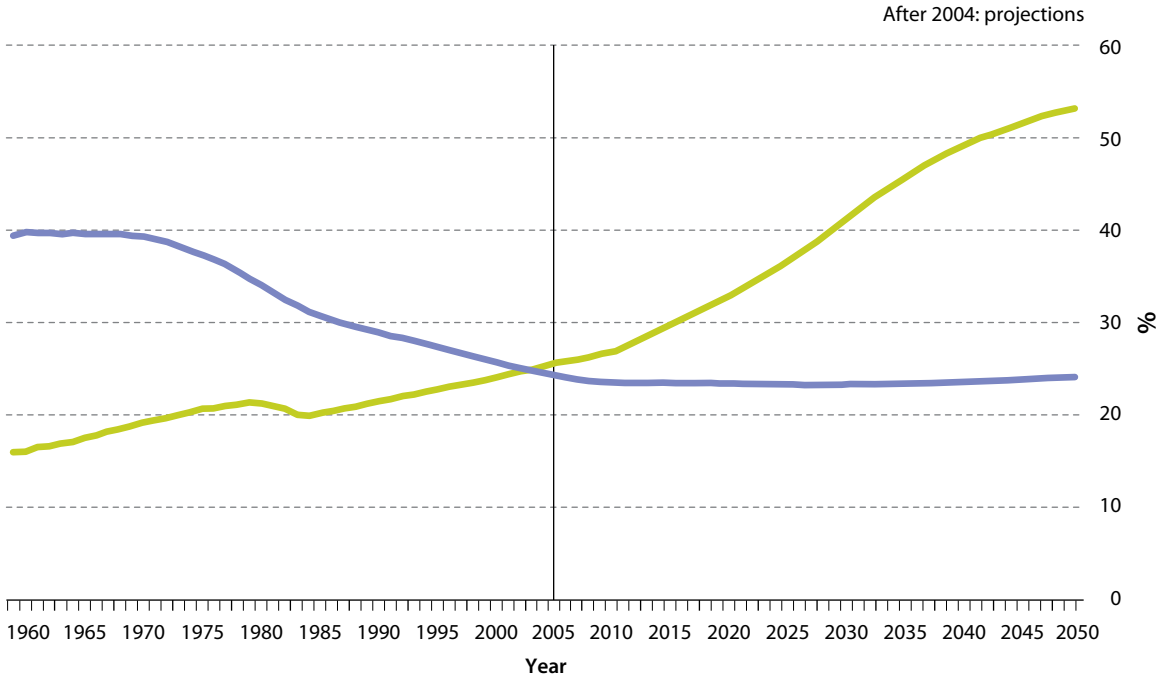
The old age dependency ratio will be a particularly dynamic indicator. It is a reasonable projection that, on average for the EU-27 and if current trends prevail, the old age dependency ratio will approximately double during the next 50 years (Figure 1.2). This means that in 2050 a person of working age might have to provide for up to twice as many retired people as is usual today.

Demographic ageing is a general phenomenon. There are regions where, for a person aged 65 years or older, there are fewer than three persons of working age (old age dependency ratio of over 33 %). In 2006, this was still the exception; less than 6 % of the EU's population lived in such regions. By 2026, however, this will be the rule (over three quarters of the EU population).

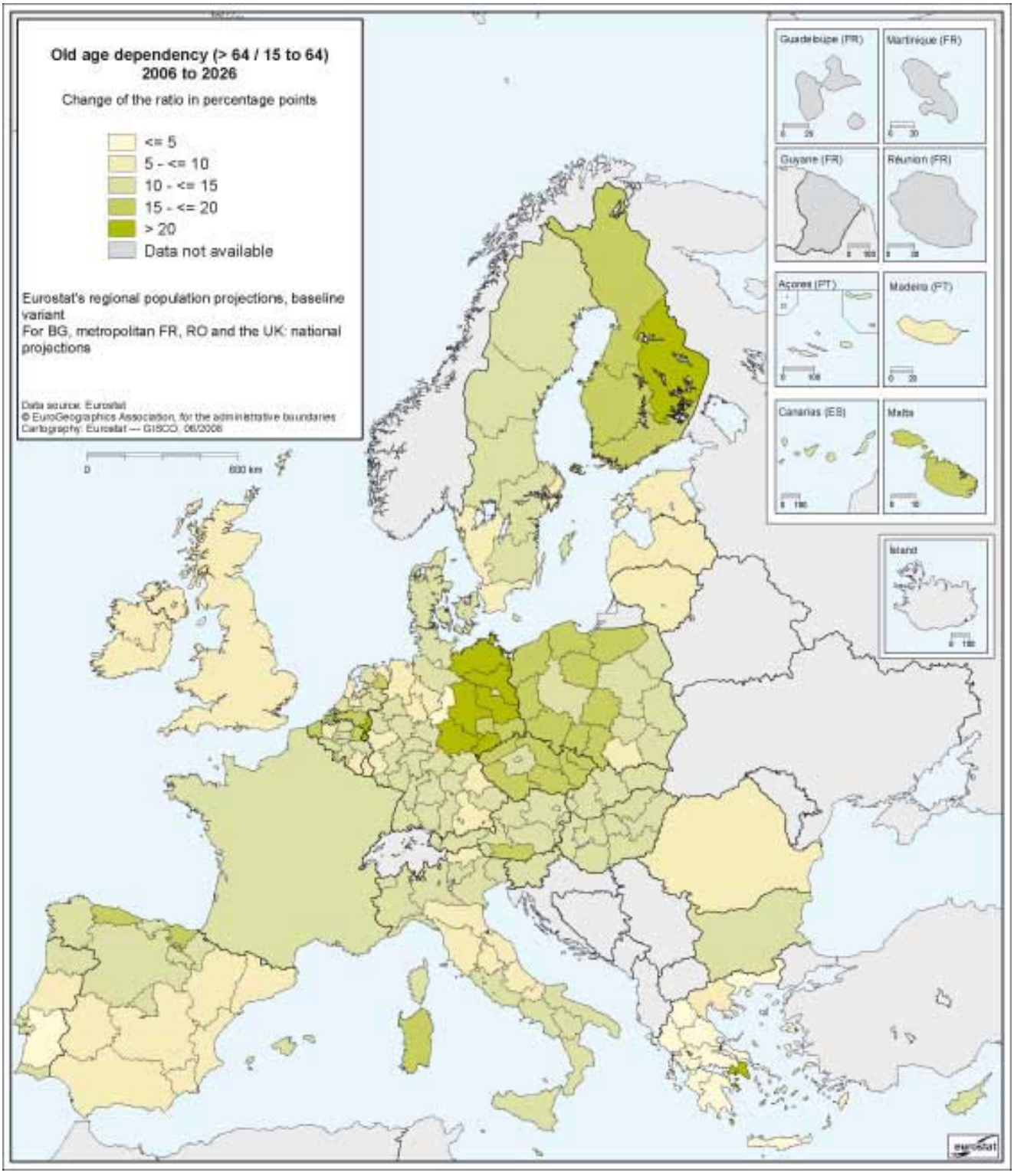
However, the regional differences that are already visible today might lead to a more dramatic development in some regions than in others.

Map 1.6 highlights the size of the regional differences in the development. Whereas in some regions the increase in the old age dependency ratio between 2006 and 2026 will be well below 10 percentage points, the increase in other regions will be over 20 percentage points. In 13 regions, the old age dependency will rise to a level of around 50 % or more in 2026, which means that there will then be only two persons of working age for every person aged 65 years or over. Nine of these regions are in eastern Germany.

Figure 1.2: Old and young age dependency



Map 1.6: Old age dependency (> 64/15 to 64) 2006 to 2026
Change of the ratio in percentage points



Methodological notes

Sources: Eurostat — Demographic statistics. For more information, please consult the Eurostat website (http://www.europa.eu.int/comm/eurostat/).

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 spend her childbearing years conforming to the age-specific fertility rates that have been measured in a given year.

The **Eurostat population projections** presented here correspond to the baseline variant of the trend scenario. The Eurostat set of population projections is just one of a number of scenarios of population evolution based on assumptions of fertility, mortality and migration. The current trend scenario does not take into account any future measures that could influence demographic trends. It comprises different variants: the 'baseline' variant, plus 'high population', 'low population', 'zero-migration', 'high fertility', 'younger age profile' and 'older age profile' variants, which are all available on the Eurostat website. It should be noted that the assumptions adopted by Eurostat may differ from those adopted by national statistical institutes. Therefore, the results may differ from those published by Member States.

The regional breakdown of the population projections at NUTS level 2 is computed by making the assumptions already formulated for the national-level exercise into region-specific assumptions. The regional variation in demographic behaviour is expressed using the method of indirect standardisation: the national fertility and mortality age- and sex-specific rates are applied first to the regional population, yielding a hypothetical number of events; subsequently, the observed number of regional events is divided by this hypothetical number to obtain a regional scaling factor. The latter is therefore an estimate of the extent to which regional rates are above or below the national value. For international migration, scaling factors were calculated as the ratio of the regional crude migration rate to the national crude migration rate.

In addition to the traditional components (fertility, mortality and international migration), one issue that is peculiar to the regional dimension has to be considered: interregional migration. The age- and sex-specific rates of interregional migration are estimated by means of a model that uses as input the inter-NUTS 2 departures and arrivals by age, sex and region, and the total amount of inter-NUTS 2 migration by region of origin and region of destination (origin–destination migration matrix).

Owing to appropriate data not being available for France and the United Kingdom, regional population projections could not be made for these two countries.

Source: Europop2004 regional level, baseline variant.

Migration can be extremely difficult to measure. A variety of different data sources and definitions are used in the Member States, with the result that direct comparisons between national statistics can be difficult or misleading. The net migration figures here are not directly calculated from immigration and emigration flow figures. As many EU Member States do not have complete and comparable figures for immigration and emigration flows, net migration is estimated here as the difference between the total population change and the 'natural increase' over the year. In effect, net migration equals all changes in total population that cannot be attributed to births and deaths.

The **population density** is the ratio of the mid-year population of a territory to the size of the territory on a given date.