Eurostat regional yearbook

2025 edition

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FLAGSHIP PUBLICATIONS

Eurostat regional yearbook

2025 edition

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This document should not be considered as representative of the European Commission's official position.

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Kosovo - this designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

The boundaries and names shown and the designations used on the maps do not imply official endorsement or acceptance by the European Union.

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Foreword

I am delighted to welcome you to the 2025 edition of the *Eurostat regional yearbook*, a journey through the diverse and dynamic regions of Europe. This yearbook provides a rich tapestry of economic, social and environmental insights, drawing on data from the 27 EU countries, 9 candidate countries and 4 EFTA countries. Through detailed figures, vivid maps and striking infographics, this yearbook brings regional stories to life – highlighting both the unique differences among and shared experiences between Europe's regions.

The 2025 *Eurostat regional yearbook* transforms statistical data into clear, engaging narratives. By providing reliable and accessible information, it empowers decision makers to craft thoughtful strategies that bridge regional divides, drive inclusive growth and enhance the quality of life across Europe. The yearbook is also a valuable resource for researchers and students in their enquiries and investigations – and generally for all those who are curious to learn more about Europe's regions.

At the heart of Europe's future lies a bold vision for sustainable prosperity and competitiveness, a priority championed by the European Commission.

For the first time, the *Eurostat regional yearbook* highlights a selection of key indicators that track progress for this priority. Look for this special icon accompanying relevant maps, figures and infographics to discover how the regions are evolving with regard to sustainable prosperity and competitiveness.

Continuing from last year, the yearbook also features several indicators linked to the Sustainable Development Goals (SDGs), marked with their own distinctive icon.

For those eager to dive deeper, the yearbook is accessible online through *Statistics Explained* and in PDF format on Eurostat's website. The most recent and detailed datasets can also be explored via Eurostat's comprehensive database.

I warmly invite you to explore and engage with the diverse regions of Europe, where each data point paints a vibrant portrait of the evolving landscape of our continent.

Mariana Kotzeva

Director-General, Eurostat

Abstract

Statistical information is an important tool for understanding and quantifying the impact of political decisions in a specific territory or region. The *Eurostat regional yearbook 2025* provides a detailed picture relating to a broad range of statistical topics across the regions of the EU, EFTA and candidate countries.

Regional data are presented using the classification of territorial units for statistics (NUTS), which was recently updated – NUTS 2024. It delineates 92 regions at NUTS level 1, 244 regions at NUTS level 2, and 1 165 regions at NUTS level 3.

Each chapter presents statistical information in the form of maps, figures and infographics, accompanied by a descriptive analysis highlighting the main findings. Regional indicators are presented for the following 13 subjects: population, health, education, the labour market, living conditions, the digital society, the economy, business, research and development, tourism, transport, the environment and agriculture.

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An online data code available under each map/figure can be used to access directly the most recent data on Eurostat's website.

All statements on policies within this publication are given for information purposes only. They do not constitute an official policy position of the European Commission and are not legally binding. To know more about such policies, please consult the European Commission's website.

For more information

Eurostat's website: http://ec.europa.eu/eurostat/
Statistics Explained: https://ec.europa.eu/eurostat/statistics-explained

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Contents

Introduction

Eurostat, the statistical office of the European Union (EU), collects, compiles and publishes statistics for the EU, including statistics for the regions of EU, EFTA and candidate countries.

Today's world is defined by rapid change and uncertainty. Data can play a crucial role in shaping and evaluating effective policies and responses to the challenges that arise. This edition of the Eurostat regional yearbook provides statistical insights into a range of pressing challenges at subnational level, from climate change to competitiveness. By leveraging accurate and timely data, policymakers can make informed decisions that drive resilience and sustainable growth.

This edition of the *Eurostat regional yearbook* focuses on 2 key policy areas.

The European Commission's new plan for Europe's sustainable prosperity and competitiveness aims to strengthen economic growth while ensuring environmental and social sustainability. Through balancing economic resilience with climate goals, the plan aspires to create high-quality jobs, reinforce global competitiveness and uphold the EU's commitment to a fair, green and prosperous future for all its citizens. This edition of the *Eurostat regional yearbook* places a logo next to the title of relevant figures, maps, infographics and tables, identifying regional indicators that can be used to measure sustainable prosperity and competitiveness. These indicators have been aligned with those that form part of *The future of European competitiveness*, a report produced by Mario Draghi for the European Commission.

The United Nations' (UN) 2030 Agenda for Sustainable Development is a long-term strategy that aims to achieve a range of economic, social and environmental goals. The UN traces developments by using 17 sustainable development goals (SDGs) and 169 targets. Eurostat monitors progress towards the SDGs in an EU context. It coordinates the review of the EU SDG indicator set and publishes annual monitoring reports. This edition of the *Eurostat regional yearbook* places a logo next to the title of relevant figures, maps, infographics or tables, identifying regional indicators that can be used to measure progress towards the SDGs.

European statistics

SUBNATIONAL STATISTICS

EU countries are often compared with each other in statistical presentations. However, in practice it is sometimes difficult to compare smaller and larger countries. For example, Malta had 563 000 inhabitants on 1 January 2024 and Luxembourg had 672 000 inhabitants, while Germany – the most populous EU country – had 83.5 million inhabitants.

There are considerable differences between and within countries as regards their territorial composition. For example, Ireland, Finland and Sweden are generally rural and sparsely-populated, while Malta and the Benelux countries have much higher levels of population density.

Similarly, there can be considerable diversity within individual EU countries: for example, contrast the densely-populated, urbanised areas of Nordrhein-Westfalen in the west of Germany (which had an average of 532 inhabitants per square kilometre in 2023) with the sparsely-populated, largely rural, north-eastern region of Mecklenburg-Vorpommern (with an average of 70 inhabitants per square kilometre). In a similar manner, there are considerable differences between regions of France: for example, contrast the bustling pace of life in the economic hub and capital region of Paris (which had an average of 20 200 inhabitants per square kilometre in 2023) with the more sedate pace of rural life in the central/southern region of Lozère (with an average of 15 inhabitants per square kilometre).

Examining subnational or regional data within EU countries often provides clearer insights by highlighting internal disparities – such as Italy's north-south divide or Germany's east-west divide – by revealing significant differences in socioeconomic development. For example, Germany and Poland have a polycentric economic structure, with several relatively large cities spread across their territories. In contrast, France and Romania follow a more monocentric pattern of development, with economic activity concentrated in and around their respective capitals.

Over the past few years, Eurostat has expanded the range of statistics that it provides beyond national and regional information to cover other territorial typologies. These alternative typologies address the needs of policymakers, particularly within the context of cohesion and territorial developments, using 2 broad headings:

- regional typologies
- local typologies that are based on data for local administrative units (LAUs or municipalities).

With this in mind, *Regulation (EU) 2017/2391 of the European Parliament and of the Council of 12 December 2017 as regards the territorial typologies (Tercet)* established a common statistical classification of territorial units. This legislative consolidation facilitates the collection, compilation and dissemination of European statistics at different territorial levels.

STATISTICS ON REGIONS – THE NUTS CLASSIFICATION

The classification of territorial units for statistics – known as NUTS – is at the heart of the EU's regional statistics. It is a classification based on a hierarchy, subdividing each EU country into regions, classified from larger to smaller regions as NUTS levels 1, 2 and 3.

Table 1: Number of NUTS 2024 regions and statistical regions

	NUTS level 1	NUTS level 2	NUTS level 3
EU	92	244	1 165
Belgium	3	11	44
Bulgaria	2	6	28
Czechia	1	8	14
Denmark	1	5	11
Germany	16	38	400
Estonia	1	1	5
Ireland	1	3	8
Greece	4	13	52
Spain	7	19	59
France	14	27	101
Croatia	1	4	21
Italy	5	21	107
Cyprus	1	1	1
Latvia	1	1	5
Lithuania	1	2	10
Luxembourg	1	1	1
Hungary	3	8	20
Malta	1	1	2
Netherlands	4	12	40
Austria	3	9	35
Poland	7	17	73
Portugal	3	9	26
Romania	4	8	42
Slovenia	1	2	12
Slovakia	1	4	8
Finland	2	5	19
Sweden	3	8	21
	Level 1	**Level 2**	**Level 3**
Iceland	1	1	2
Liechtenstein	1	1	1
Norway	1	7	17
Switzerland	1	7	26
Bosnia and Herzegovina	–	–	–
Montenegro	1	1	1
Moldova	–	–	–
Georgia	–	–	–
North Macedonia	1	1	8
Albania	1	3	12
Serbia	2	4	25
Türkiye	12	26	81
Ukraine	8	27	138

Note: as of 01 December 2024.

Source: Eurostat

The 2024 edition of the NUTS classification provides the basis for classifying regional information in this year's Eurostat regional yearbook. For example, in Germany there are 400 NUTS level 3 regions, which make up 38 regions at NUTS level 2, or 16 regions at NUTS level 1. Some EU countries have a relatively small population and/or area and are not therefore subdivided at some (or even all) of the different levels of the NUTS classification. Estonia, Cyprus, Latvia, Luxembourg and Malta are each composed of a single NUTS level 2 region that covers the whole of their respective territory, while Cyprus and Luxembourg are also each composed of a single NUTS level 3 region.

For non-EU countries – EFTA and candidate countries – the concept of 'statistical regions' replaces NUTS. Bilateral agreements between the countries concerned and Eurostat apply the same principles as those used for the NUTS classification.

Table 1 provides an overview of the number of NUTS regions that exist in each of the EU and non-EU countries covered in the *Eurostat regional yearbook*.

Most of the regional statistics shown in the *Eurostat regional yearbook* are for NUTS level 2 regions. However, subject to data availability, some maps and figures are shown for either NUTS level 1 regions (more aggregated geographical information) or NUTS level 3 regions (the most detailed level of regional information). The latter are only available for a limited selection of indicators that cover topics such as demography, economic accounts, business statistics, tourism statistics and environmental statistics. No regional data are available for Bosnia and Herzegovina, Georgia and the Republic of Moldova; national data are included when available.

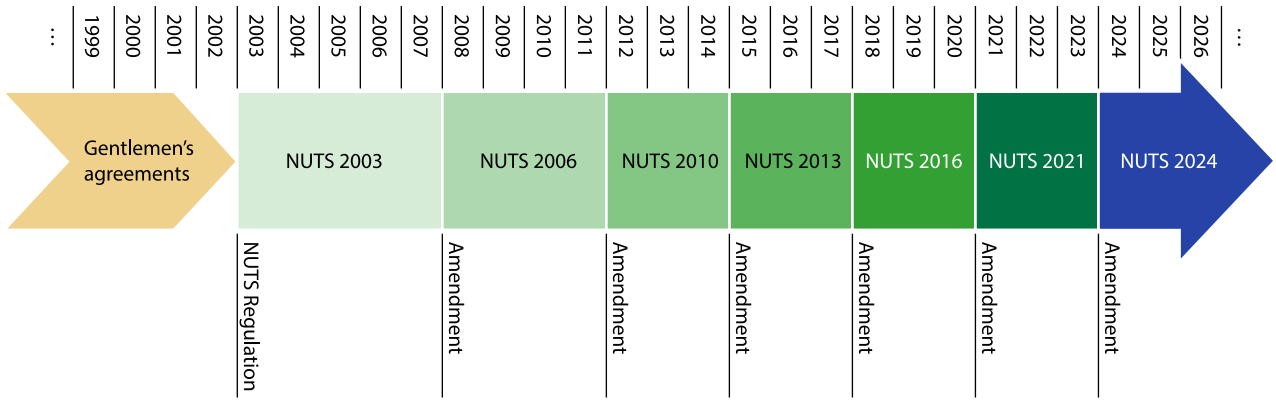
The NUTS regulation

The NUTS classification is defined in *Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS)*. The classification is periodically reviewed by the European Commission amending the regulation to reflect administrative changes within EU countries. The NUTS regulation specifies that there should be a minimum period of 3 years stability during which time the classification should not be changed. Exceptions are made when the accession (or departure) of an EU country occurs.

Since 2003, the NUTS classification has been amended several times (see Figure 1), due to:

- regular amendments
- changes in the membership of the EU
- changes to the territorial boundaries of existing EU countries (for example, the inclusion of data for the French region of Mayotte).

Figure 1: History of NUTS



Source: Eurostat

The European Commission adopted the 7th amendment of the NUTS classification (*Commission Delegated Regulation (EU) No 2023/674*) in December 2022. It applies to any data that is transmitted to Eurostat for reference periods starting from 1 January 2024. This version of NUTS – commonly referred to as NUTS 2024 – is the basis for classifying regional statistics in the 2025 edition of the *Eurostat regional yearbook*. NUTS 2024 provides a standardised framework for regional statistics in the EU, delineating:

- 92 regions at NUTS level 1
- 244 regions at NUTS level 2
- 1 165 regions at NUTS level 3.

With this switch to NUTS 2024, Eurostat tried to recode historical statistics (data for earlier reference periods) to the new classification, although this was not always possible. As a result, data are not always available for a complete set of regions, especially when simple recoding or aggregation was not feasible. The lack of historical data under NUTS 2024 makes time-series analyses challenging. However, EU countries plan to back-calculate key regional statistics in an attempt to improve data availability.

More about the data: the main principles of the NUTS classification

Principle 1: NUTS favours administrative divisions. If available, administrative structures are used for the different NUTS levels. In EU countries where there is no administrative layer corresponding to a particular level of NUTS, so-called non-administrative regions are created by aggregating smaller administrative regions.

Principle 2: the NUTS regulation defines minimum and maximum population thresholds for the size of NUTS regions (see Table 2) to ensure a basic degree of comparability. Different rules apply to administrative and non-administrative layers. Deviations from these thresholds are only possible when particular geographical, socioeconomic, historical, cultural or environmental circumstances exist.

Table 2: Population size constraints for NUTS 2024 regions
(number of inhabitants)

	Minimum population	Maximum population
NUTS level 1 regions	3 000 000	7 000 000
NUTS level 2 regions	800 000	3 000 000
NUTS level 3 regions	150 000	800 000

Source: Eurostat

OTHER TERRITORIAL TYPOLOGIES

Grid-based statistics provide an alternative to administrative boundaries-based regional statistics. They divide territories into uniform grid cells, offering detailed spatial data with a high degree of geographical resolution; for example, the population and housing census that is conducted once a decade provides statistics for a grid that is composed of cells measuring 1 square kilometre. Eurostat uses grid-based statistics to analyse, among other subjects, population, transport, the environment, agriculture and accessibility. For this edition of the *Eurostat regional yearbook*, grid-based statistics are included for 2 chapters: population and health.

Previous editions of the *Eurostat regional yearbook* have shown a number of other territorial typologies. These allow analyses to be extended to cover topics such as cities and commuting zones, or the degree of urbanisation. While these statistics remain highly relevant for policy debate in the EU, an editorial decision was taken when compiling the 2025 edition of the publication to concentrate on regional statistics. Readers interested in subnational statistics based on other territorial typologies can refer to the following publications:

- Rural Europe (online publication)
- Urban Europe (online publication).

A short reading guide

COVERAGE

Each chapter in the *Eurostat regional yearbook* presents statistical information in the form of maps, figures and infographics, accompanied by descriptive analyses highlighting the main findings. Information is shown for 13 different subjects: population, health, education and training, the labour market, living conditions, the digital society, the economy, business, research and innovation, tourism, transport, the environment and agriculture.

The *Eurostat regional yearbook* contains regional statistics for the EU countries, alongside data for several non-EU countries: EFTA countries (Iceland, Liechtenstein, Norway and Switzerland) and candidate countries (Bosnia and Herzegovina, Montenegro, Moldova, Georgia, North Macedonia, Albania, Serbia, Türkiye and Ukraine).

The geographical descriptions used within this publication to group EU countries – for example, as 'northern', 'eastern', 'southern' or 'western' – are not intended as political categorisations. Rather, these references relate to the geographical location of 1 or more EU countries, based on the geography domain of the European Commission's multilingual thesaurus (Eurovoc).

The designations employed and the presentation of material in maps and figures does not imply the expression of any opinion whatsoever on the part of the EU concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

TIMELINESS

Eurostat compiles the information used in this publication from a wide range of surveys and data collection exercises. As a result, there may be differences in the latest available reference year between chapters and indicators, as each aims to show the latest information available.

In general, 2024 data are available for demography (as used in the chapter on population), the labour force survey (as used in the chapters on education and training and on the labour market), EU statistics on income and living conditions (as used in the chapter on living conditions) and the information society survey (as used in the chapter on the digital society). Otherwise, the most recent reference period is generally 2023.

Eurostat's website may have fresher data due to the continuous nature of data collection and processing (resulting in updates and new reference periods being added throughout the year). Online data codes are provided below each of the maps and figures as part of the source; these codes can be used to access the freshest data.

HOW TO INTERPRET THE MAPS

A majority of the maps in the *Eurostat regional yearbook* are choropleth maps that use different colour shades to highlight regional differences. These maps are generally composed of 6 sequential colours, from a light yellow (for low values) through to dark blue (for high values). The information presented has been normalised. In other words, rather than show data for absolute values (which could introduce bias linked to the size of each region), these maps are generally based on proportions/shares, rates or ratios. In some cases, the maps use a larger or smaller number of classes or colours, while in others, a different colour scheme may apply, such as when specific colour conventions are inherent to a particular indicator.

The class boundaries used in the legend for each map are computed exclusively in relation to the distribution of regional values across the EU (in other words, values for regions outside the EU are not taken into account when computing the classes). The boundaries for the lower classes are usually based on the 10th and the 25th percentiles, the middle boundary on the 50th percentile, and the boundaries for the upper classes on the 75th and the 90th percentiles. As such, the

lightest shade of yellow and the darkest shade of blue portrays those EU regions with approximately the lowest/highest 10% of values. For a limited number of cases, several choropleth maps may be shown together (for example, small multiple maps presenting employment rates by educational attainment for people with a lower, medium or higher level of education). These maps share a common classification scheme for their class boundaries to assist readers who want to make comparisons across the different maps.

Some choropleth maps have been produced using a diverging colour scheme. These maps usually highlight the distribution of regions around a specific EU policy target. They usually show shades of teal/turquoise (progressively darker for values that are increasingly higher than an EU target) and shades of gold (progressively darker for values that are increasingly lower than an EU target). For a limited number of maps, the order of the colours in diverging choropleth maps has been reversed. This has been done when there are policy targets that seek to lower (rather than increase) the value of a particular indicator; for example, the EU seeks to reduce the number of early leavers from education and training. Diverging scales are also used when trying to highlight the differences between regions that have positive and negative values, or values that are above/below an index value (for example, the EU/national average = 100).

This publication also contains bivariate choropleth maps. They provide information for 2 distinct indicators at the same time. An example is a map showing the number of hospital beds per 100 000 inhabitants and the number of medical doctors per 100 000 inhabitants. These maps use 9 different colours/shades organised in a 3*3 grid, from a light shade (for those regions that have low values for both indicators) to a dark shade (for those regions that have high values for both indicators).

Finally, there are several maps that are based on proportional circles. These are used to map regional statistics presented as absolute values, for example, the number of people employed as human resources in science and technology. The size/area of each circle represents the underlying number of people employed, whereas the colour of each circle may be used to highlight complementary information, for example, their share in the total labour force.

METADATA

Eurostat's data are consistently published with accompanying metadata. These metadata provide background information on each of the principal sources, as well as more specific information about particular indicators and individual data cells.

Metadata about individual data cells are usually referred to as flags. They provide information about the status of the data, for example, detailing whether it is estimated, provisional or forecasted. To restrict the amount of metadata presented under each map or figure, this publication generally excludes information about flags. No distinction is made between data values that are not available, those of poor quality, or those that are confidential; these data points are all simply shown/labelled as being 'not available'.

Data identified as having a break in series, a differing definition, or low reliability are documented in the metadata notes provided beneath each figure, map, infographic or table. Readers who would like more detailed metadata are encouraged to use the online data codes that are provided as part of the source.

MISSING DATA

Missing data for any region of the EU, EFTA or candidate countries are denoted by a dark shade of grey in maps, while countries outside the spatial coverage adopted for this edition of the *Eurostat regional yearbook* are denoted by a lighter shade of grey.

In figures, missing data for any of the regions are footnoted. Many of the figures presented in the *Eurostat regional yearbook* are based exclusively on data for EU regions – for example, charts showing the 10 regions in the EU with the highest/lowest rates or shares for a particular indicator.

When processing the data for this edition of the *Eurostat regional yearbook* missing data were identified. An effort was made to fill missing cells with data for the previous year (at the same NUTS level); if this was not possible use was made of more aggregated NUTS levels or national data. Any exceptions for different geographical levels or for different reference periods are documented in the notes/footnotes under each figure, map, infographic or table.

Where few or no regional values exist for a particular country, national data have been used to fill the gaps; these exceptions are also documented in notes/footnotes. Furthermore, the source data (online data codes) are adapted so as to reflect any additional national data tables that may have been used.

When statistical information in a particular figure or map covers more than 1 territorial level (for example, only national data are available for some countries), any mention in the accompanying commentaries of the number of regions meeting a criterion are based on the available data, reflecting the actual NUTS levels or national data used.

Policy context

European policymaking must navigate a dual challenge: setting broad objectives for the EU while addressing the specific needs of national and regional territories. The territorial dimension of EU policy is increasingly recognised as essential for issues such as job creation or the transition to a green and digital economy.

Recent challenges within the EU – such as the global financial and economic crisis, security concerns, the refugee crisis, the departure of the United Kingdom from the EU (Brexit), the COVID-19 crisis, the impact of Russia's war of aggression against Ukraine, or the cost-of-living crisis – underscore the complexity of delivering coherent policies locally, regionally, nationally and internationally.

COHESION POLICY

What is cohesion policy?

The EU's cohesion policy is designed to strengthen economic, social and territorial cohesion within the EU. It aims to promote job creation, business competitiveness, economic growth, social inclusion and sustainable development, thereby impacting the overall quality of life.

The bulk of cohesion policy funding is concentrated on less developed EU regions with the goal of helping them to catch up and to reduce the economic, social and territorial disparities that exist across the EU. Although cohesion policy covers every region of the EU, most of the funds are targeted at regions where gross domestic product (GDP) per inhabitant is less than 75% of the EU average.

During the period 2021 to 2027, the framework for regional development and cohesion policy focuses on 5 key policy objectives:

- **a more competitive and smarter Europe**, promoting innovation, digitalisation, economic transformation and support to SMEs
- **a greener Europe**, transitioning towards a 'net zero' economy, while implementing the Paris Agreement
- **a more connected Europe**, enhancing mobility
- **a more social and inclusive Europe**, supporting social inclusion, equal access to healthcare, quality employment, education and skills
- **a Europe closer to citizens**, fostering the sustainable and integrated development of locally led strategies.

Cohesion policy: how is it delivered?

Cohesion policy is delivered through a number of specific funds. They are the main financial instruments used to promote economic, social and territorial cohesion across the EU.

The **European Regional Development Fund (ERDF)** aims to strengthen economic, territorial and social cohesion in the EU by correcting development imbalances between the regions. It focuses on providing funding for key policy areas such as innovation and research, the digital agenda, support for SMEs and the low-carbon economy. The ERDF also supports cross-border and transnational cooperation, under the European Territorial Cooperation objective (Interreg).

The **Cohesion Fund (CF)** aims to reduce economic and social disparities and to promote sustainable development in EU countries with a gross national income per inhabitant below 90% of the EU average. It primarily focuses on investments in environmental and trans-European transport network projects.

The **European Social Fund Plus (ESF+)** provides support for people, with a focus on improving employment and education opportunities across the EU, as well as the situation of the most vulnerable people (those at risk of poverty).

The **Just Transition Fund (JTF)** aims to support territories facing serious socioeconomic challenges arising from the transition towards climate neutrality. It address the social, employment, economic and environmental impacts of the transition and is designed to facilitate the implementation of the European Green Deal, with the goal of achieving climate-neutrality by 2050.

Cohesion policy: how is the budget decided?

Political agreement on the legislative package for cohesion policy for 2021 to 2027 was adopted in the middle of 2021, with the multiannual financial framework including a total of €392 billion for regional development and cohesion. For more information, see the budget allocations for EU cohesion policy 2021 to 2027.

More about the data: the NUTS classification – an objective basis for the allocation of cohesion policy funding

Statistics from regional accounts are used in the allocation of cohesion policy funds, with the NUTS classification providing the basis for regional boundaries and geographic eligibility.

During the period 2021 to 2027, eligibility for cohesion policy funds is based on NUTS level 2 regions being ranked and split into 3 groups:

- less developed regions, where GDP per inhabitant (in purchasing power standards (PPS)) was less than 75% of the EU average
- transition regions, where GDP per inhabitant was 75% to 100% of the EU average
- more developed regions, where GDP per inhabitant was greater than 100% of the EU average.

Additional criteria, such as youth unemployment, education levels, climate change, demographic developments and migrant integration, have been introduced to address regional challenges better.

The EU assigns the bulk of the cohesion policy budget to regions whose development lags behind the EU average, aiming to reduce economic, social and territorial disparities. Less developed and transition regions – predominantly located in the south or the east of the EU, the Baltic countries and several outermost regions – benefit from 90% of the ERDF and ESF+ resources.

OTHER POLICY AREAS THAT IMPACT ON SUBNATIONAL AREAS

Urban development policy in the EU

The EU's urban development policy integrates economic, social, cultural and environmental aspects through coordinated measures such as urban renewal, education opportunities, social inclusion, crime prevention and environmental protection. Intergovernmental cooperation on urban matters began in May 2016 with the Urban Agenda for the EU, established by the Pact of Amsterdam. It aims to enhance regulation, funding and knowledge for cities in Europe through partnerships in 14 priority areas including (among others) migration, urban poverty, housing and climate adaptation.

In 2021, the agenda underwent renewal, guided by the New Leipzig Charter – the transformative power of cities for the common good, leading to the Ljubljana agreement. This second phase introduced new partnerships on greening cities, sustainable tourism, food and cities of equality, to be followed by water-sensitive cities and building decarbonisation.

The EU has strengthened the urban dimension of cohesion policy for 2021 to 2027, requiring that at least 8% of the ERDF is allocated to sustainable urban development and launching the European Urban Initiative (EUI) to support cities in innovation, knowledge-sharing and policy development.

Rural development policy in the EU

Rural areas are central to the European way of life: they are valued for their role in food production, natural resource management, landscape preservation and tourism. However, globalisation and urbanisation have transformed many of the EU's rural regions, such that some are characterised by population decline, fewer job opportunities, ageing communities, an erosion of rural infrastructure and service provision, and limited transport and digital connectivity.

The European Commission's Long-term vision for the EU's rural areas aims to create stronger, connected, resilient and prosperous rural areas by 2040. It includes a cross-sectoral rural action plan to address economic, social and environmental challenges and a rural pact to enhance cooperation between public authorities, private and civil society organisations and academia willing to act for rural areas and communities. The European Commission's recent Vision for Agriculture and Food commits to update the EU rural action plan in 2025, strengthen the rural pact and rural proofing.

The EU's common agricultural policy (CAP) is composed of the European Agricultural Guarantee Fund (EAGF) that provides income support and support to agricultural markets and the European Agricultural Fund for Rural Development (EAFRD) which supports farmers and rural sustainability.

The common agricultural policy for 2023 to 2027 aims to secure the future of agriculture and forestry, while making the CAP more environmentally friendly by focusing on 10 specific objectives that are linked to social, economic and environmental sustainability in agriculture and in rural areas, for example, fair income for farmers, climate action, the preservation of landscapes and biodiversity, and support for generational renewal and vibrant rural areas.

European Committee of the Regions

The European Committee of the Regions (CoR) – which is the EU's assembly for regional and local representatives – provides a voice for regions and cities across the EU. During the period 2025 to 2030, the CoR has 3 main priorities: cohesion, resilience and proximity.

Economic, social and territorial cohesion is essential for reducing regional disparities and promoting balanced development in the EU. The CoR stresses the need for stronger partnerships and the involvement of local and regional authorities in shaping the post-2027 financial framework, ensuring tailored solutions for community-specific challenges.

To address these priorities, the CoR advocates for robust financial instruments, greater fiscal autonomy for regions, and diversified EU revenue sources. This key priority includes matters on competitiveness, EU budget, just transition and sustainable and affordable housing.

Resilience involves addressing natural and human-made crises, security threats and instability. The CoR emphasises empowering local and regional authorities with better coordination, funding and tools to manage climate action, energy security and water resilience effectively. This key priority includes matters on cross-border cooperation, climate change, water resilience, clean, secure and affordable energy, health, agriculture and security.

Proximity focuses on connecting the EU to its citizens by empowering local and regional governments to address community needs. The CoR highlights the role of local governance in fostering trust, addressing demographic change, enhancing inclusion and promoting democratic renewal, youth engagement and gender equality. This key priority includes matters on demographic change, local democracy, gender equality and youth.

The European Week of Regions and Cities is an annual multi-day event which allows regions and cities to showcase their capacity to encourage growth and job creation, implement EU cohesion policy and support good governance. The 23rd European Week of Regions and Cities will be held 13 to 15 October 2025 under the headline of 'Empowering communities'.

Strategic agenda 2024 to 2029

In June 2024, following the European Parliament elections, the European Council adopted a Strategic agenda 2024 to 2029. It addresses global instability, economic challenges and threats to the rules-based order, focusing on 3 main pillars:

- a free and democratic Europe – upholding fundamental rights and democratic values
- a strong and secure Europe – enhancing defence and security measures
- a prosperous and competitive Europe – promoting economic growth and sustainability.

Sustainable prosperity and competitiveness

Subsequently, the European Commission re-aligned its work programme, detailing 7 key priority areas. This publication focuses on 1 of these, namely, A new plan for Europe's sustainable prosperity and competitiveness, which is considered central to improving citizens' economic and social well-being, increasing their purchasing power, creating good jobs, assuring high-quality goods and services, and reinforcing Europe's sovereignty in strategic sectors. The plan seeks to bolster the EU's long-term competitiveness by:

- simplifying business operations
- implementing a clean industrial strategy
- promoting a circular and resilient economy
- accelerating digital technology adoption, by enhancing productivity and positioning the EU as a leader in areas such as artificial intelligence, net-zero technologies, or semiconductors
- prioritising research and innovation
- boosting investment
- addressing skills and labour shortages.

Sustainable development goals

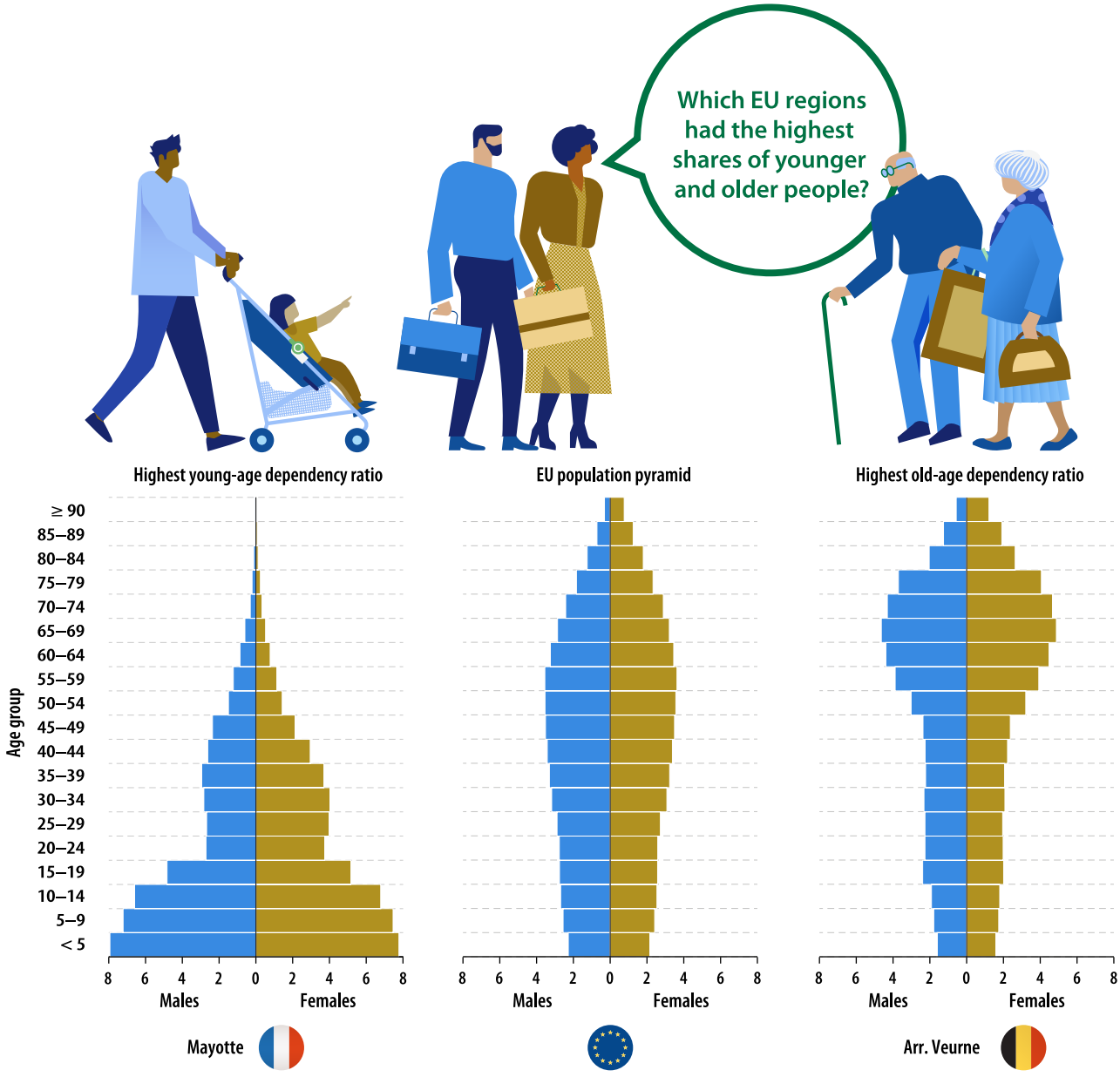
The 17 sustainable development goals (SDGs) provide a global policy framework until 2030 for stimulating action in areas of critical importance related to people, the planet, prosperity, peace and partnership.

On 22 November 2016, the European Commission adopted the Communication, Next steps for a sustainable European future – European action for sustainability (COM(2016) 739 final). It detailed the importance of the SDGs, identified EU policies that contribute to the implementation of SDGs, and announced plans for regular monitoring within an EU context. The EU has made a firm commitment towards delivering on the SDGs and on the Paris Agreement on climate change. Against this background, Eurostat has been called upon to monitor regularly the progress towards the SDGs in an EU context.

People and society

1. Population

On 1 January 2024, there were 449.3 million people living in the EU. During the course of 2023, the population of the EU increased by 1.6 million. The rising number of inhabitants resulted exclusively from migratory flows, as natural population change was negative, with 1.2 million more deaths than births. The EU's net migration – the difference between the number of immigrants and the number of emigrants, with statistical adjustments – was 2.8 million people in 2023. This figure reflects, among other factors, an influx of displaced people linked to Russia's war of aggression against Ukraine, as well as migrant arrivals for employment, international protection, or family reasons. Population events such as births, deaths and migratory flows shape demographic changes over



(% of total population, by NUTS 3 regions, 1 January 2024)

Note: includes estimates made for the purpose of this publication. The infographic shows the NUTS level 3 region with the highest young-age dependency ratio, data for the EU average, and the NUTS level 3 region with the highest old-age dependency ratio.

Source: Eurostat (online data code: demo_r_pjangrp3)

time to impact the structure of the EU's population. Demographic developments are also impacted by irregular shocks, such as the COVID-19 crisis or Russia's war of aggression against Ukraine. The population pyramids shown in the infographic above highlight the considerable difference in age structures across NUTS level 3 regions. On 1 January 2024, the French outermost region of Mayotte had the highest young-age dependency ratio in the EU, while the Belgian coastal region of Arr. Veurne had the highest old-age dependency ratio.

Statistics based on the population grid

More about the data: statistics on the population grid

Unlike the majority of data presented in the *Eurostat regional yearbook*, the information presented in the 1st section of this chapter is based on a fixed set of uniform, grid cells that measure 1 km^2. In the remainder of this publication, data are presented using the more aggregated NUTS 2024 classification. Some of the differences observed when viewing regional data presented by NUTS may reflect the underlying criteria used to determine the administrative boundaries that delineate each region, thereby potentially overlooking important intra-regional disparities and limiting analyses.

The gridded data presented in this section cover the whole of the EU's territory at a resolution of 1 km^2. Gridded statistics offer greater spatial precision than regional data, enabling more detailed, localised analyses, while capturing variations within regions that might otherwise be averaged out over larger administrative units. This is particularly valuable when examining high-resolution phenomena, such as population density, land use or environmental factors.

The analyses that follow present gridded statistics based on a dataset from the 2021 population and housing census. The data references a system of uniform, equal-sized grid cells, offering several advantages:

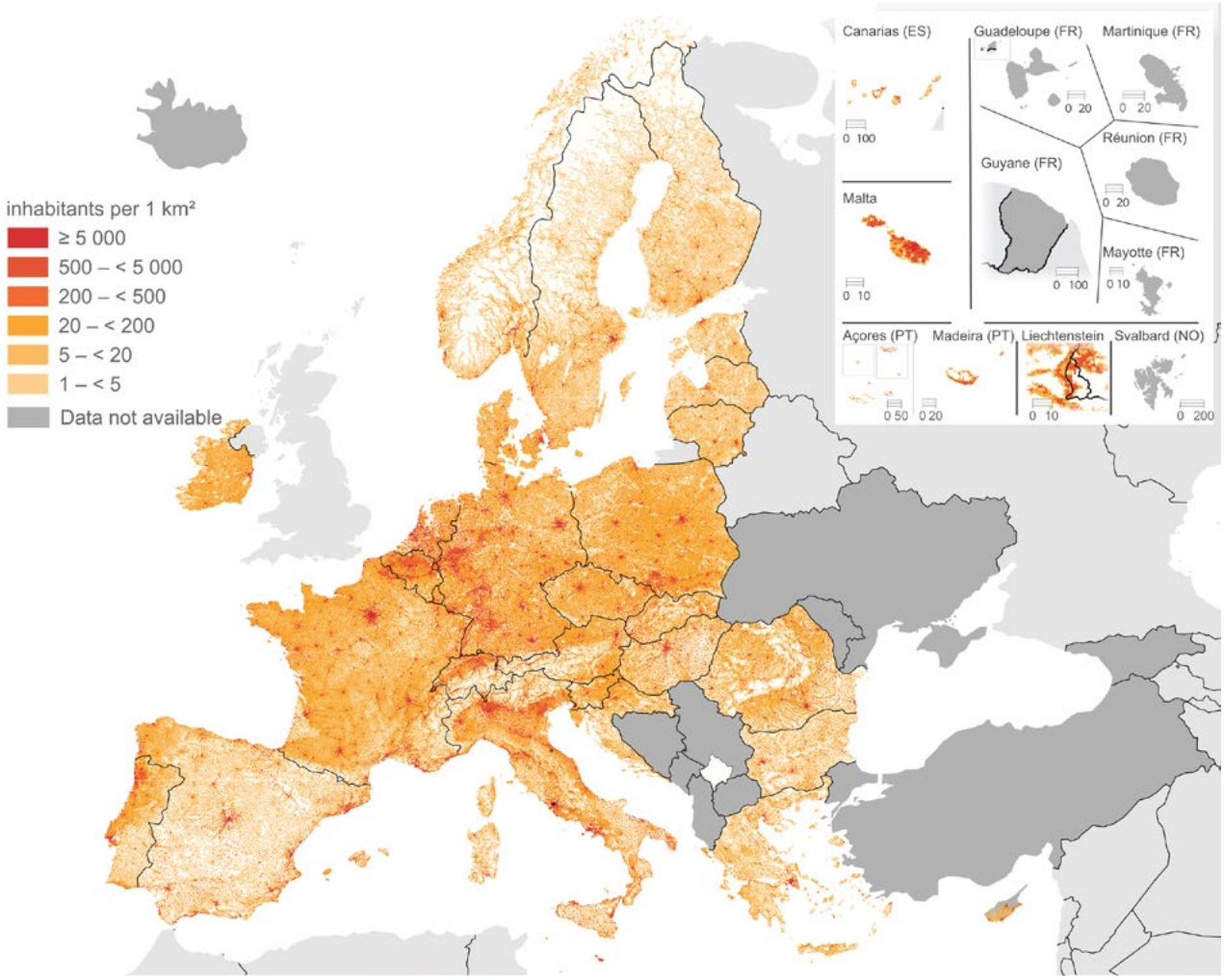
- analysts can aggregate the data for different areas that cross regional and national boundaries
- the data can be assembled to form areas for specific purposes or studies, such as coastal regions, mountain regions or water catchment areas
- the grid system integrates easily with other datasets
- unlike administrative classifications, grids remain stable over time.

There were 4.45 million grid cells of 1 km^2 used for the 2021 population and housing census in the EU, with the EU's population during this census year equal to 443.2 million inhabitants/residents. Across the EU, there were 1.82 million populated grid cells in the reference grid, with an additional 75 673 populated cells in 3 EFTA countries (Liechtenstein, Norway and Switzerland).

Europeans tend to live in quite densely populated cities or in towns and suburbs, while the vast majority of the territory is more sparsely populated (see Map 1.1). Almost 60% of the 1 km^2 grid cells in the EU and EFTA countries – 2.69 million cells – had nobody living in them; among EU countries, Spain and Sweden had the largest areas of uninhabited land (374 735 and 346 556 cells, respectively).

Data from the 2021 housing and population census indicate that 48.9 million people lived in the EU's capital cities; this represented close to 10% of the overall population. More than 1 in 5 of these capital city residents lived in Paris (France) – the EU's largest city – where the population was roughly twice the size of the next largest capital, Madrid (Spain).

Map 1.1: Population density
(number of inhabitants per 1 km², 2021)



Source: Eurostat (GISCO) census population grid 2021

Looking in detail at individual 1 km² grid cells, some of the most densely populated areas of the EU were located in and around Barcelona (Spain), with a peak to the south-west of the city centre in L'Hospitalet de Llobregat, where 1 grid cell had a population of 56 158 inhabitants. There were also very high population density figures – upwards of 40 000 inhabitants per km² – in some grid cells within Paris and in the Spanish cities of Madrid, Valencia/ València and Málaga.

Demographic developments across the EU are far from uniform, with considerable variations both between and within individual countries. The EU's population structure is evolving, with a key factor being the increased mobility of young people. The EU's population distribution spans various settlement types, each characterised by distinct demographic and economic features, including:

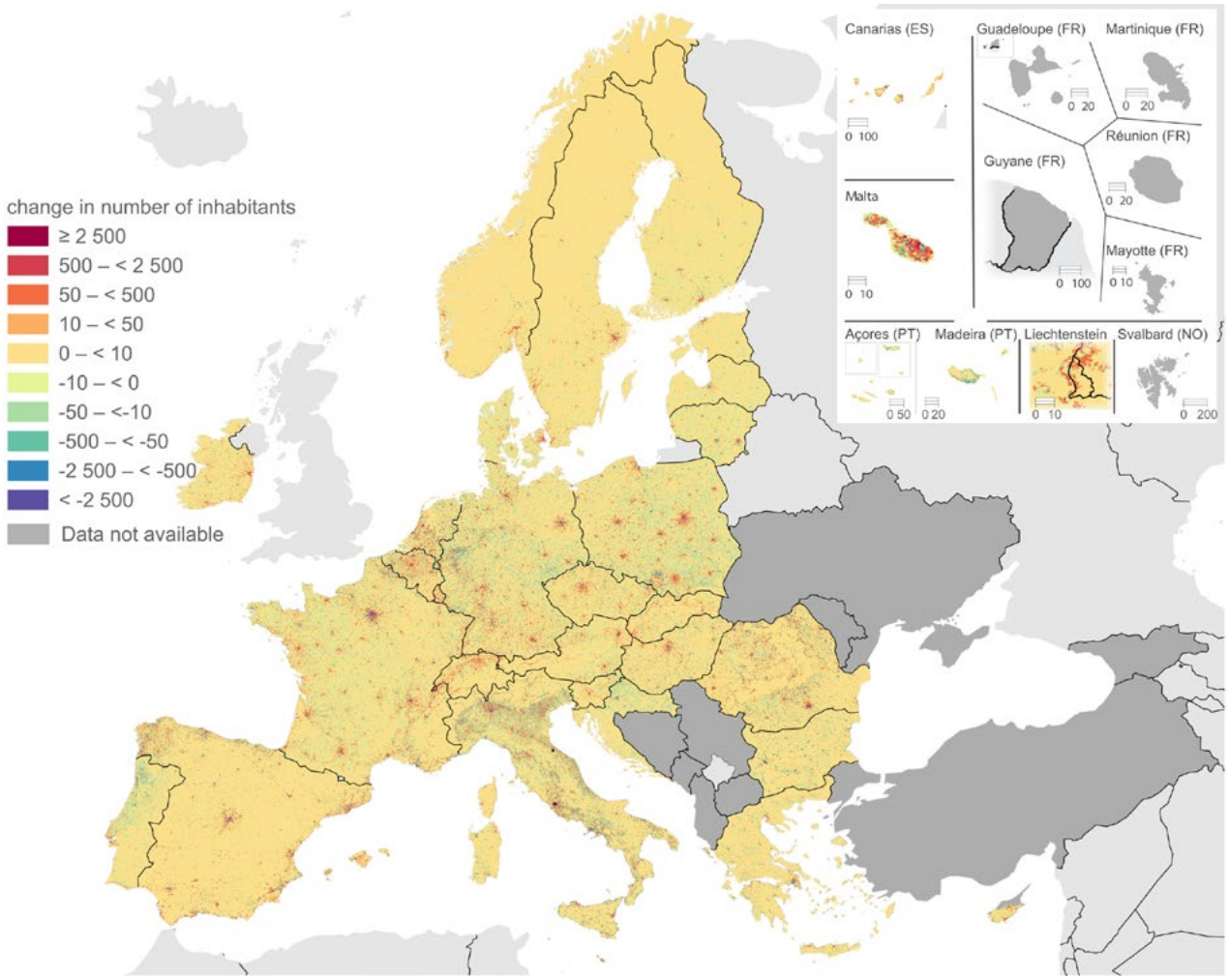
- major urban areas that tend to attract younger populations, with a high share of people living alone, relatively high living costs, diverse educational opportunities and dynamic labour markets
- commuter belts/suburban areas, which are often populated by families
- former industrial heartlands, characterised by economic decline, lower living costs, relatively high levels of unemployment, poverty and social exclusion
- coastal and countryside locations, some of which are viewed as retirement locations for relatively affluent pensioners
- other rural and remote regions which frequently exhibit declining population numbers, ageing populations, limited job opportunities and lower access to essential services.

Population developments can be analysed using data from the 2011 and 2021 population and housing censuses. According to this source, Germany had the largest absolute increase in population, with more than 1.7 million additional inhabitants. In relative terms, Malta experienced the fastest population growth, up 24.5%. By contrast, Romania recorded the largest population decline, losing more than a million inhabitants during the period under consideration, while Bulgaria recorded the steepest fall in relative terms, down 11.5%.

Between 2011 and 2021, several grid cells saw a significant increase in their population counts, with more than 10 000 additional inhabitants per 1 km^2. They were located in:

- several different urban areas within Byen København (the Danish capital)
- Malmö, in the southern Swedish region of Skåne län (which is at the opposite end of the Öresund Bridge that links it to København)
- Aalborg, in the northern Danish region of Nordjylland
- 3 other capital cities: Miasto Warszawa (Poland), Bucureşti/Ilfov (Romania) and Stockholms län (Sweden)
- 3 French cities: Boulogne-sur-Mer (Pas-de-Calais), Marseille (Bouches-du-Rhône) and Toulon (Var).

Map 1.2: Population change
(overall change in number of inhabitants per 1 km^2, 2011–21)



Source: Eurostat (GISCO) census population grid 2021

Population structure

Historically, life expectancy at birth in the EU has increased at a relatively consistent pace. In 2019, prior to the COVID-19 pandemic, life expectancy at birth had reached 81.3 years. However, it fell by 0.9 years in 2020 and by an additional 0.3 years in 2021. In 2022, life expectancy at birth began to rise again, and this upward pattern continued in 2023, reaching 81.4 years, which was 0.1 years higher than its pre-pandemic level.

There are a number of drivers that impact inter-regional differences in life expectancy, including:

- proximity to healthcare services – for example, capital regions tend to have a greater number and variety of healthcare facilities compared with rural regions
- the prosperity of a region – for example, life expectancy is generally above average in regions characterised by a higher standard of living and below average in regions characterised by poverty and social deprivation
- lifestyle and cultural differences – for example, the type of work that predominates in a region, the typical diet of a region, or the incidence of smoking and alcohol consumption
- climatic conditions – for example, people living in warm and relatively dry climates tend to live longer lives than those living in regions that experience more extreme weather conditions.

Map 1.3 is composed of 2 parts: it presents life expectancy at birth for females and for males. Both maps use the same class boundaries in their legends to facilitate comparison. In 2023, female life expectancy at birth in the EU was 84.0 years. This equated to a gap of 5.3 years between the sexes, as male life expectancy at birth was 78.7 years.

Female life expectancy was higher than male life expectancy across every region of the EU

In 2023, all 242 NUTS level 2 regions for which data are available had higher female (than male) life expectancy at birth. The Baltic countries, along with several regions in Poland and Romania, reported some of the largest gender gaps. In Latvia, female life expectancy at birth (80.6 years) exceeded that for males (70.5 years) by 10.1 years.

At the other end of the range, all of the regions in the Netherlands (subject to data availability) and all but 1 of the regions in Sweden – the northernmost region of Övre Norrland being the only exception – reported much smaller differences between the sexes. Flevoland in the Netherlands had the narrowest regional gender gap in 2023, with female life expectancy at birth (83.3 years) exceeding that for males (80.8 years) by 2.5 years. Several regions outside of the Netherlands and Sweden also reported gender gaps that were no more than 3.5 years:

- Prov. Antwerpen in Belgium
- Nordjylland in Denmark
- Eastern and Midland, and Southern in Ireland
- Ciudad de Melilla in Spain
- Mayotte in France
- Luxembourg.

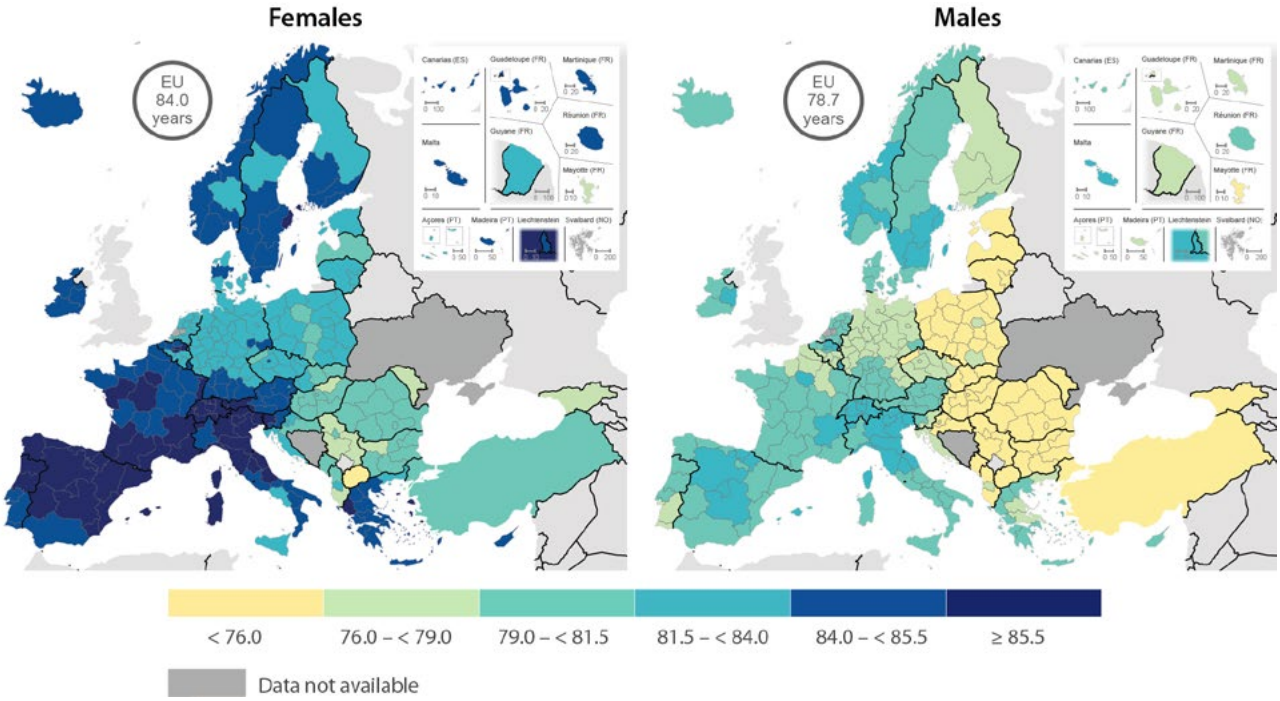
In 2023, the highest levels of female life expectancy at birth (as shown by the darkest shade of blue in Map 1.3) were located across much of Spain and Italy. There were also relatively high values – at least 85.5 years – recorded in several regions from Belgium, Greece, France, Austria and Portugal, as well as single regions from Slovenia, Finland and Sweden. The Finnish archipelago of Åland had the highest female life expectancy at birth, peaking at 88.5 years. The next highest regional values were concentrated in central and northern Spain: Comunidad de Madrid (88.3 years), Castilla y León (87.7 years), Comunidad Foral de Navarra (87.6 years) and País Vasco (87.4 years).

Several of the highest levels of male life expectancy at birth were concentrated in northern and central regions of Italy. Several regions in Belgium, Spain, France and Sweden, as well as Åland (Finland), Eastern and Midland (the Irish capital region), Luxembourg and Malta also recorded relatively high values – at least 81.5 years. Comunidad de Madrid had the highest male life expectancy at birth (83.4 years in 2023). After the Spanish capital region, the next highest values were in Provincia Autonoma di Bolzano/Bozen, Provincia Autonoma di Trento (both northern Italy) and Stockholm (the Swedish capital region), each with male life expectancy at birth of 82.8 years.

Across the 242 EU regions for which data are available, the French outermost region of Mayotte recorded the lowest female life expectancy at birth (76.2 years in 2023). There were 2 other regions – Severozapaden in north-western Bulgaria and Észak-Magyarország in northern Hungary – which also recorded female life expectancy at birth below 79.0 years, as shown by the lightest 2 shades in Map 1.3.

There were 49 NUTS level 2 regions across the EU where male life expectancy at birth was below 76.0 years in 2023 (as indicated by the lightest shade in Map 1.3). These regions were concentrated in eastern EU countries – Bulgaria, Czechia, Croatia, Hungary, Poland, Romania and Slovakia – but also included all of the regions in the Baltic countries, as well as Mayotte. Severozapaden (70.0 years) and Latvia (70.5 years) recorded the lowest regional values for male life expectancy at birth.

Map 1.3: Life expectancy at birth
(years, by NUTS 2 regions, 2023)



Note: Türkiye, national data. Liechtenstein: 2022. North Macedonia: 2021. Albania: 2020.

Source: Eurostat (online data codes: demo_r_mlifexp and demo_mlexpec)

The median age is an indicator that helps summarise the pace at which population structures have changed. During the last 2 decades, the median age of the EU population increased 5.4 years, up from 39.3 years on 1 January 2004 to 44.7 years by 1 January 2024.

The regional distribution of median ages exhibits some skewness. On 1 January 2024, 744 NUTS level 3 regions recorded a median age that was above the level for the EU, 13 had a median age that was the same as the EU (44.7 years), while 408 regions had median ages below the level for the EU.

- At the upper end of the distribution, 178 regions in the EU had a median age of at least 50.0 years. Germany accounted for 79 regions within this group (nearly half of the 178 regions), while there were 40 regions located in Italy (almost 1 in 4 of the 178 regions). Most of the remaining regions with relatively high median ages were located in Bulgaria, Greece, France and Portugal (each with 10 regions).
- At the lower end of the distribution, 50 regions across the EU had a median age below 40.0 years. France (14 regions) and Germany (11 regions) together accounted for half of this group. Many of the regions with low median ages were predominantly urban regions (including capital regions and regions that border/surround their capital).

At the start of 2024, rural regions recorded some of the highest median ages …

Figure 1.1 highlights those regions with the highest and lowest median ages, as of 1 January 2024. There were 3 regions in the EU that reported a median age above 55.0 years:

- Evrytania (57.0 years), a mountainous region in central Greece
- Arr. Veurne (56.6 years), a rural/coastal region in western Flanders (Belgium)
- Alto Tâmega e Barroso (56.5 years), a mountainous region in northern Portugal.

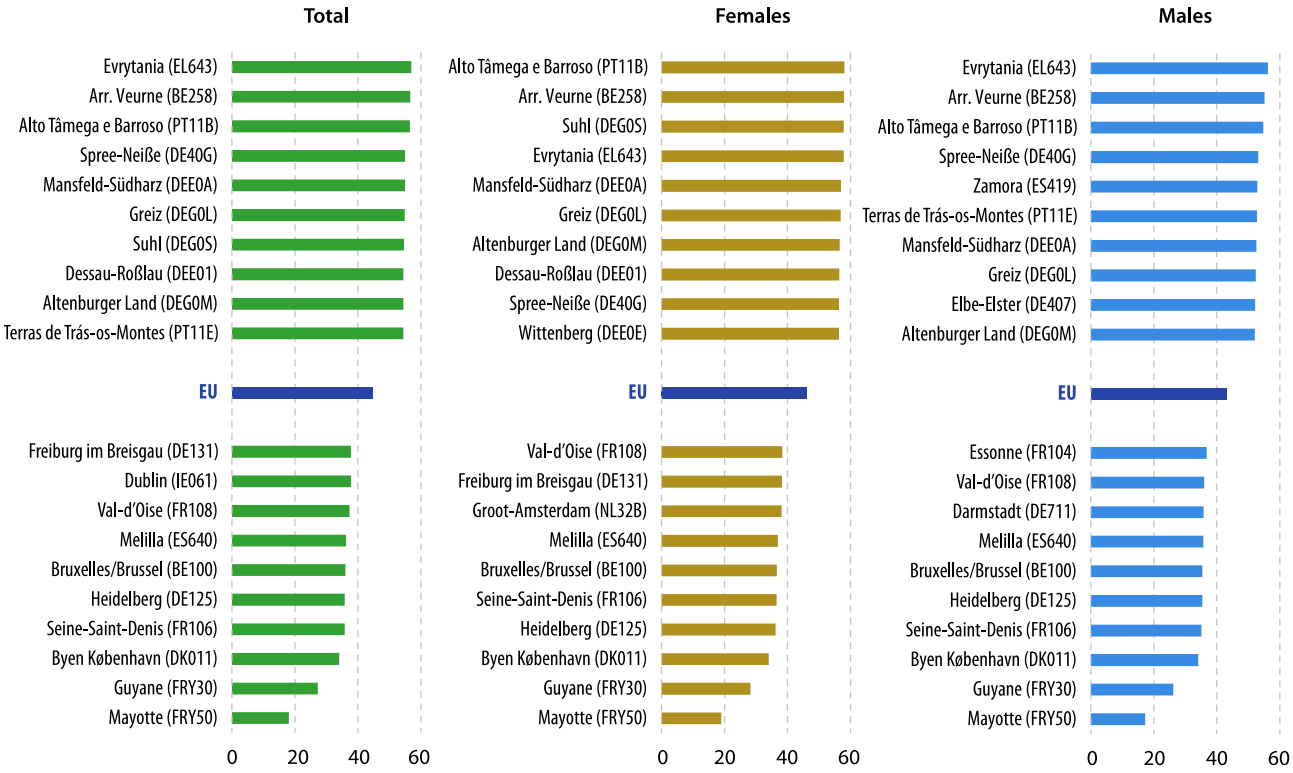
… while some of the lowest median ages were in and around capital cities

Capital regions often exert a considerable pull on inter-regional and international migrants, as they tend to provide a diverse range of educational and employment opportunities. This process can lead to a shift in population structures, with younger people accounting for a growing share of the population in predominantly urban regions; over time, this pattern may self-reinforce, insofar as populations with younger age structures are more likely to have relatively high birth rates.

As of 1 January 2024, the outermost regions of Mayotte and Guyane (both France) had the lowest median ages in the EU (18.1 years and 27.3 years, respectively), reflecting high fertility rates and lower life expectancy; this was also the case in the autonomous region of Melilla (Spain). Beyond these 3 atypical regions, the lowest median ages were recorded in:

- capital regions, including the Danish capital of Byen København (34.1 years), the Belgian capital of Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad (36.0 years) and the Irish capital of Dublin (37.8 years)
- regions bordering or surrounding capitals, such as Seine-Saint-Denis and Val-d'Oise in France
- other predominantly urban regions that are home to renowned academic institutions, diverse populations and dynamic labour markets, like Heidelburg and Freiburg im Breisgau (both Germany).

Figure 1.1: Median age
(years, by NUTS 3 regions, 1 January 2024)



Note: the figure shows the EU regions with the highest and lowest median ages.

Source: Eurostat (online data codes: demo_r_pjanind3 and demo_r_pjanind)

As of 1 January 2024, the Belgian coastal region of Arr. Veurne had the highest old-age dependency ratio in the EU

Europe has an ageing population: dependency ratios serve as a key measure for analysing the economic and social pressures associated with low birth rates, a shrinking workforce and a growing number of retirees, driven in part by increased longevity. For the purpose of this publication, the old-age dependency ratio is defined as the proportion of elderly individuals (aged 65 years or over) relative to the working-age population (people aged 20 to 64 years); it is expressed in percentage terms.

With a growing share of elderly people in the population, the EU faces a number of challenges in relation to pension systems, healthcare and labour markets, emphasising the need for sustainable policies that support the ageing population while at the same time ensuring economic and social stability.

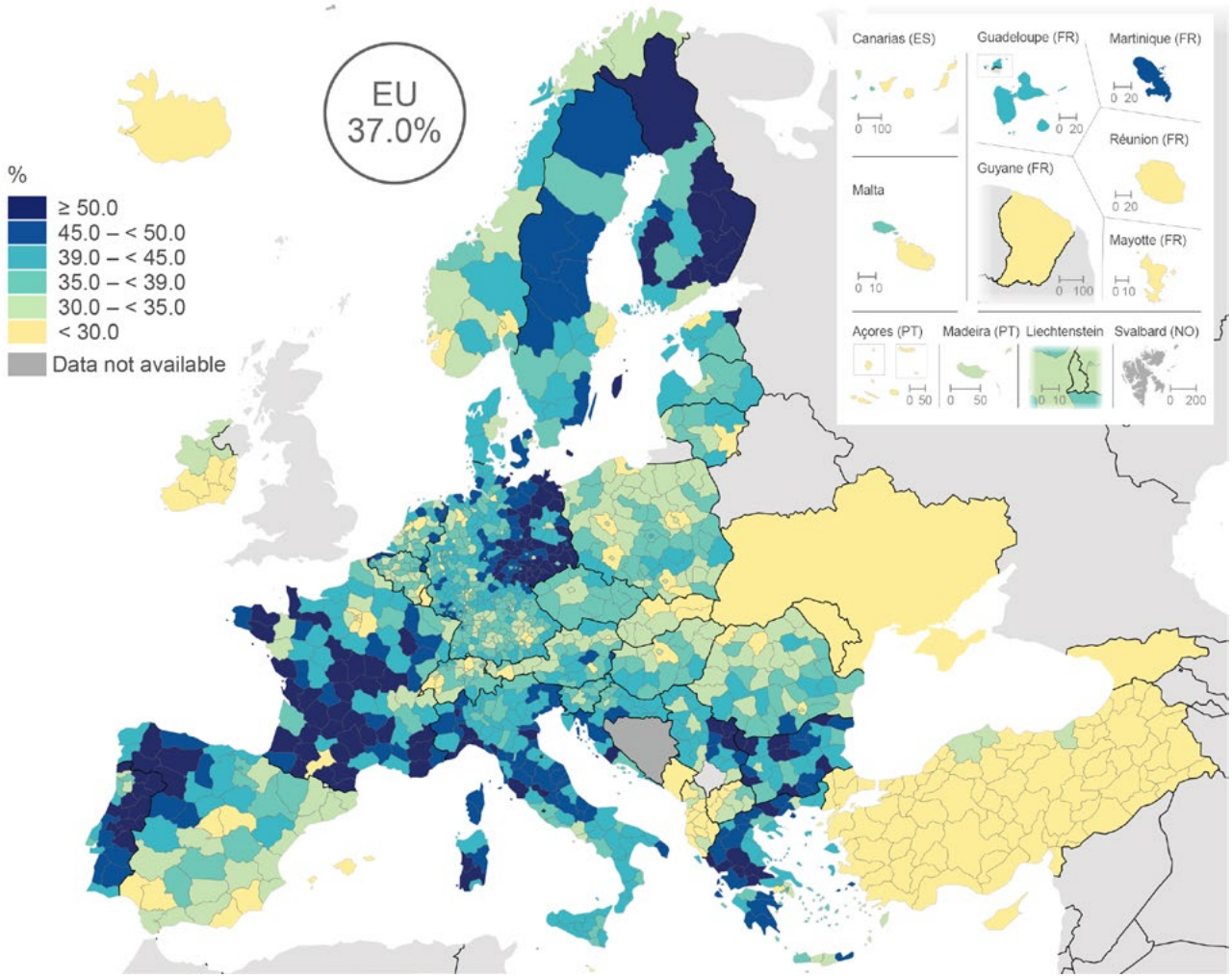
During the past 2 decades, the EU's old-age dependency ratio has increased at a rapid pace. On 1 January 2004, it stood at 26.8%, indicating that there were slightly fewer than 4 working-age adults for every elderly person aged 65 years or over. Fast-forward to 1 January 2024 and the ratio had risen to 37.0%, meaning there were fewer than 3 working-age adults per elderly person.

As of 1 January 2024, there were 139 NUTS level 3 regions where the old-age dependency ratio was at least 50.0%, indicating that there were no more than 2 working-age adults for every elderly person. This group of 139 regions,

shown by the darkest shade of blue in Map 1.4, were mainly concentrated in (eastern) Germany and France. In addition, Italy, Finland, Portugal, Bulgaria, Greece and Spain also had several regions where the old-age dependency ratio was at least 50.0%. Most of these regions with high old-age dependency ratios were characterised as predominantly rural, mountainous and/or relatively remote regions. In other words, regions where it is likely that younger people have left the region to continue their studies or look for jobs.

- Arr. Veurne, a coastal region in the west of Belgium had the highest old-age dependency ratio in the EU, at 72.8% on 1 January 2024.
- Alto Tâmega e Barroso in northern Portugal and Evrytania in central Greece were the only other regions in the EU where this ratio exceeded 70.0%.

Map 1.4: Old-age dependency ratio
(%, by NUTS 3 regions, 1 January 2024)



Note: share of people aged ≥ 65 years relative to people aged 20–64 years. Ukraine: national data. North Macedonia and Albania: 2023. Ukraine: 2022.

Source: Eurostat (online data codes: demo_r_pjanind3 and demo_pjanind)

Predominantly urban regions generally provide more opportunities for higher education and employment across a diverse range of occupations. As a result, they often attract young people, leading to lower old-age dependency ratios. Equally, some elderly people may choose to leave these urban regions once they reach retirement, to avoid some of their perceived disadvantages, such as congestion, noise, crime and/or higher living costs.

Leaving aside the atypical outermost regions of Mayotte (6.1%) and Guyane (13.8%), on 1 January 2024, the lowest old-age dependency ratios were generally recorded in some of the EU's most dynamic and diverse regions, including:

- capital regions – Byen København in Denmark (17.8%), Arr. de Bruxelles-Capitale / Arr. Brussel-Hoofdstad in Belgium (20.5%), Dublin in Ireland (22.0%), Luxembourg (23.5%) and Groot-Amsterdam in the Netherlands (24.4%)
- regions bordering or surrounding capital regions – Ilfov in Romania (21.0%), Seine-Saint-Denis in France (22.6%), Mid-East in Ireland (23.8%)
- other predominantly urban regions – the German regions of Frankfurt am Main (24.3%), its neighbouring region of Offenbach am Main (25.0%) and Heidelberg (25.0%), as well as Gdański in Poland (24.7%).

Figure 1.2 presents a detailed analysis of population structures across NUTS level 3 regions. It highlights those regions with the highest and lowest shares of their populations across 3 different age groups, as of 1 January 2024.

Young people (less than 20 years) made up 20.0% of the EU's total population.

- Notably, there were 2 regions that had shares of young people that were more than twice as high as across the whole of the EU: the French outermost regions of Mayotte (53.8%) and Guyane (40.2%).
- Several predominantly rural regions in southern EU countries recorded particularly low shares of young people: the lowest shares were in the north-western Spanish region of Zamora (12.7%), the northern Portuguese region of Alto Tâmega e Barroso (12.8%) and the central Greek region of Evrytania (12.9%).

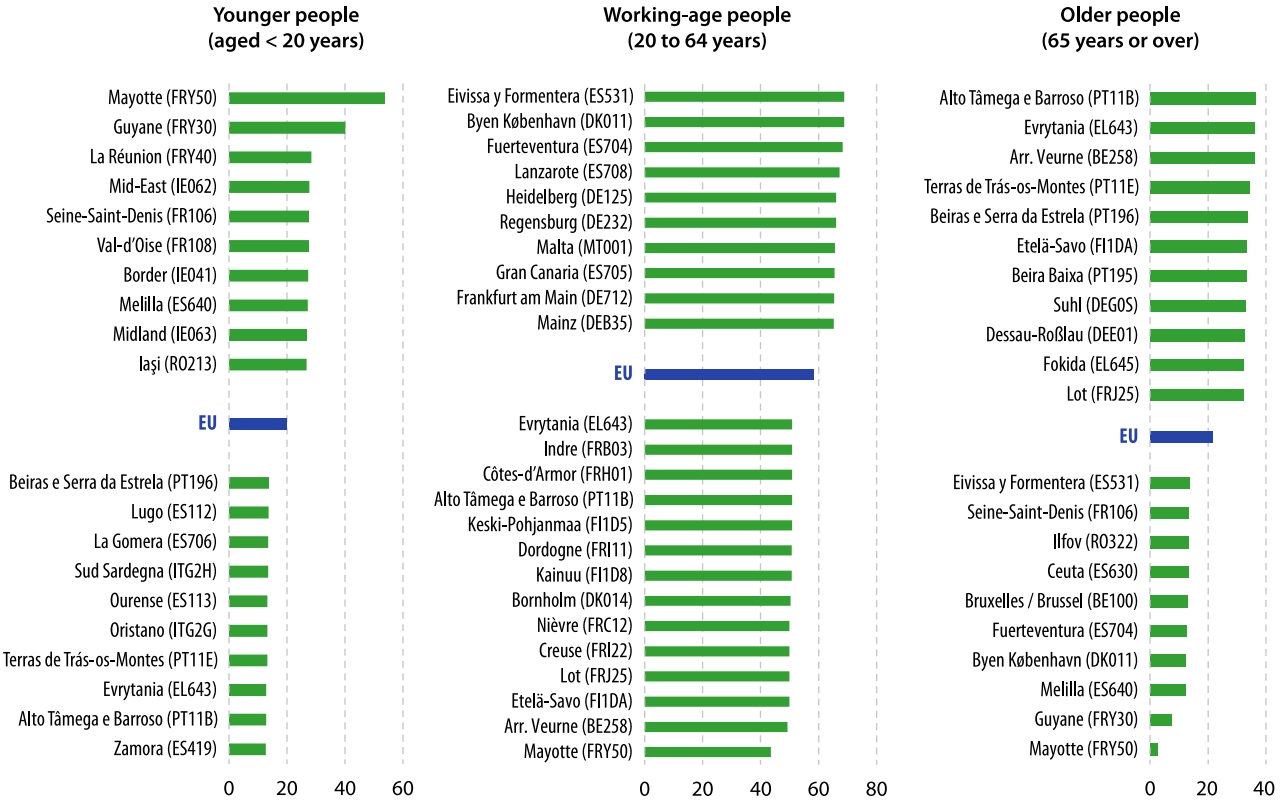
Working-age people made up 58.4% of the EU's total population.

- The highest regional share was recorded in the Spanish island region of Eivissa y Formentera, where 68.9% of the total population was of working age. Other regions with relatively high shares included:
  - tourism-driven economies – Fuerteventura, Lanzarote and Gran Canaria (all in Spain), and Malta
  - urban/metropolitan hubs – Byen København (Denmark) and Frankfurt am Main (Germany)
  - university/research centres – Heidelberg and Regensburg (both in Germany).
- There were 4 regions in the EU where less than half of the population was of working age:
  - Mayotte (France) – where a relatively high share of the population is composed of young people and some individuals seek to migrate for education and/or employment opportunities
  - Etelä-Savo (Finland), Arr. Veurne (Belgium) and Lot (France) – all of which attract retirees seeking a calmer lifestyle centred on their natural surroundings.

Older people accounted for 21.6% of the EU's total population.

- There were 7 regions in the EU where at least 1 in 3 of the total population was composed of older people, several of them facing issues linked to depopulation. The highest shares were in:
  - the mountainous, inland Portuguese regions of Alto Tâmega e Barroso (which recorded the highest share, at 36.3%), Terras de Trás-os-Montes, Beiras e Serra da Estrela and Beira Baixa
  - the mountainous Greek region of Evrytania
  - the coastal Belgian region of Arr. Veurne
  - the lakeland Finnish region of Etelä-Savo.
- By contrast, older people accounted for less than a tenth of the population in the French outermost regions of Mayotte (2.7%) and Guyane (7.3%). There were also relatively low shares in:
  - Melilla and Ceuta (both in Spain)
  - urban/metropolitan hubs – Byen København (Denmark), Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad (Belgium), Ilfov (Romania) and Seine-Saint-Denis (France)
  - tourism-driven economies – Fuerteventura and Eivissa y Formentera (both in Spain).

Figure 1.2: Younger, working-age and older people
(% share of total population, by NUTS 3 regions, 1 January 2024)



Note: the figure shows the EU regions with the highest and lowest shares of younger people, working-age people and older people. The rankings include more than 10 regions if several regions have identical values.

Source: Eurostat (online data codes: demo_r_pjanind3 and demo_r_pjangroup)

Fertility and infant mortality

More about the data: measuring fertility

The total fertility rate is the average (mean) number of children who would be born to a woman during her lifetime, if she were to spend her childbearing years conforming to the age-specific fertility rates of a given year.

The natural replacement rate – the average number of live births per woman required to keep the population size constant in the absence of migration – is estimated to be around 2.10 children per woman for developed countries.

Since 2016, the number of live births across the EU declined slowly from 4.4 million in 2016, falling over 4 consecutive years. After a modest rebound in 2021, the pace of decline accelerated in 2022 and 2023, with the number of births falling 5.1% and 5.4%, respectively. By 2023, the number of live births stood at 3.7 million; this was equivalent to an overall decrease of 16.3% compared with 2016.

In 2023, the EU's total fertility rate was 1.38 live births per woman; this was the lowest rate recorded since the start of the time series in 2001. During the last 2 decades, the EU's fertility rate has remained consistently below the natural replacement rate, within the range of 1.38 to 1.57 live births per woman.

French outermost regions have some of the highest fertility rates in the EU

Map 1.5 shows the distribution of total fertility rates across NUTS level 3 regions. In 2023, the regional distribution was somewhat skewed insofar as there were 423 regions (38.7% of all regions) where the total fertility rate was below the EU level, while there were 671 regions (61.3%) where the rate was equal to or above the EU level.

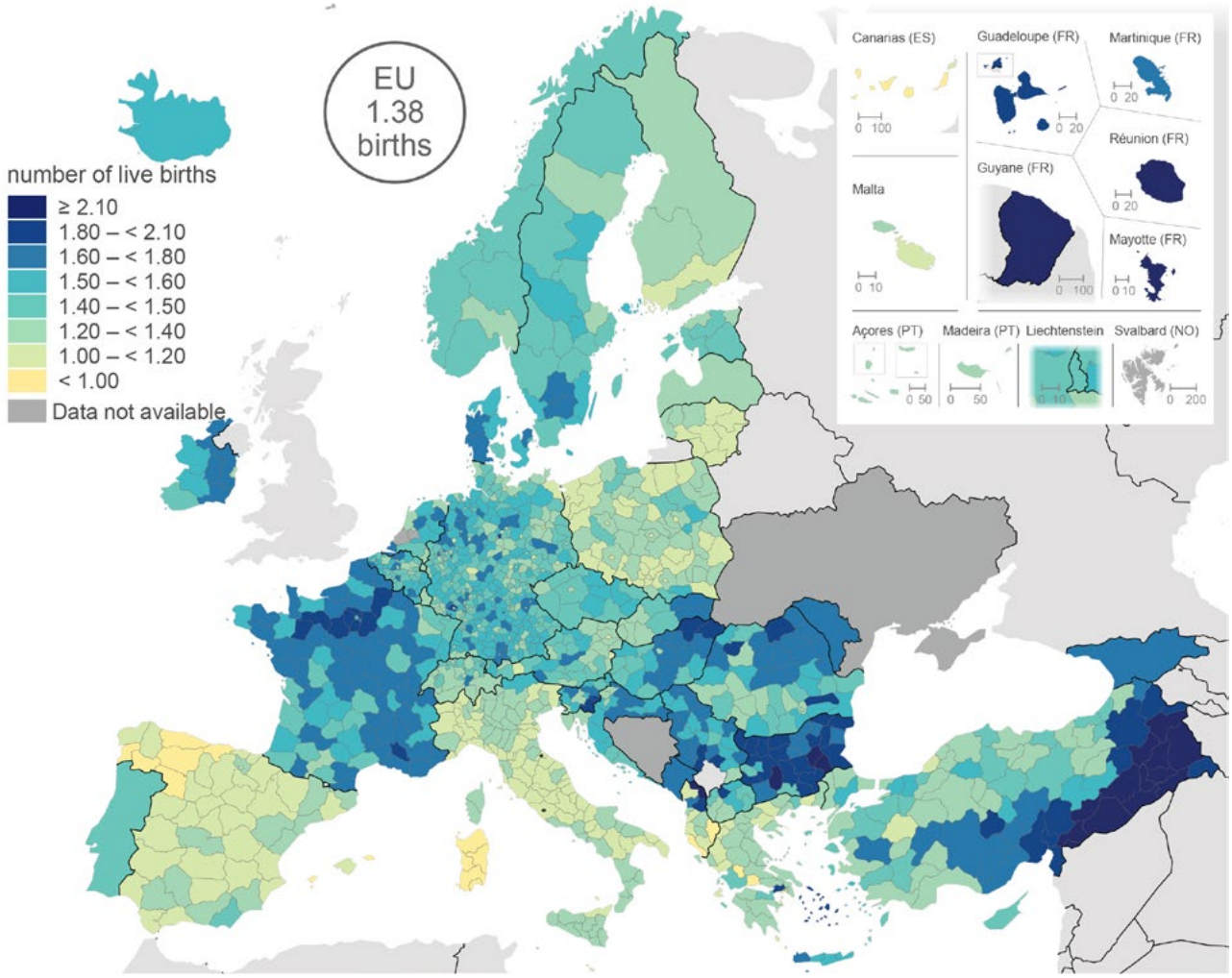
A more detailed analysis of the latest regional data for 2023 reveals that:

- some of the highest total fertility rates were recorded across Bulgaria and France
- there were 6 regions across the EU where the total fertility rate was higher than the natural replacement rate of 2.10 live births per woman (as shown by the darkest shade of blue in Map 1.5)

  - the French outermost regions of Mayotte (4.17 live births per woman), Guyane (3.55) and La Réunion (2.31)
  - the Bulgarian regions of Sliven (2.58), Yambol (2.40) and Pazardzhik (2.20)

- some of the lowest total fertility rates, below 1.00 live birth per woman, were concentrated in the southern EU countries of Greece, Spain and Italy (as shown by the lightest shade of yellow in Map 1.5)
  - the bottom end of the distribution had 5 island regions from Canarias (Spain) – El Hierro recorded the lowest rate (at 0.75 live births per woman), while rates were only marginally higher in Tenerife, La Gomera, Gran Canaria and La Palma
  - leaving aside these Spanish island regions, the next lowest rates occurred on the Italian island region of Sardegna – in Cagliari and Sud Sardegna – and in the central Greek region of Fokida
- it was relatively common for the lowest total fertility rate within a country to be recorded in the capital region; this was the case for Hlavní město Praha (Czechia), Byen København (Denmark), Põhja-Eesti (Estonia), Dublin (Ireland), Budapest (Hungary), Malta (Malta) and Wien (Austria).

Map 1.5: Total fertility rate
(average number of live births per woman, by NUTS 3 regions, 2023)



Note: the Netherlands, Finland and Norway, NUTS level 2. Portugal: NUTS level 1. Latvia: national data. North Macedonia, Albania and Türkiye: 2022.

Source: Eurostat (online data codes: demo_r_find3 and demo_find)

Women in the EU are giving birth later in life

A growing proportion of women in the EU give birth later in life, explaining, at least in part, the relatively low levels of fertility. This may be linked, among other factors, to:

- higher female participation rates in further education and/or more women choosing to establish a career before starting a family
- lower levels of job security (for example, in precarious employment)
- the increasing cost of raising children and of housing.

More about the data: the mean and the median age of women at childbirth

The mean age of women at childbirth is the average age of mothers when giving birth; it is calculated by summing up all of the mothers' ages at childbirth and dividing by the total number of births. The mean value can be skewed by extreme values, such as when a few women give birth much earlier or much later in life.

The median age at childbirth is the middle value when all the mothers' ages at childbirth are arranged in order. It usually provides a more reliable measure of the 'typical age' at which mothers give birth, insofar as it is less affected by outliers.

Both measures provide insights into fertility patterns across the EU. If the mean age is lower than the median age, the distribution is negatively skewed, with some younger mothers – teenagers and women in their early 20s – pulling the mean down. If the mean age is higher than the median age, the distribution is positively skewed, with most births concentrated at younger or middle reproductive ages, but some older mothers raising the mean.

Across the EU, the median age of women at childbirth rose from 30.8 to 31.8 years between 2013 and 2023. During this decade, the rise in the median age had a fairly regular pattern of development, with modest annual increases interspersed with occasional years of stability.

In 2023, the predominantly urban region of Voreios Tomeas Athinon, located to the north of the Greek capital, recorded the highest median age for mothers at childbirth …

Figure 1.3 (right-hand side) shows that in 2023, among NUTS level 3 regions:

- some of the highest median ages of mothers at childbirth occurred in and around the Greek capital: Voreios Tomeas Athinon (to the north; 35.6 years, the highest value across the EU), Notios Tomeas Athinon (to the south; 34.7 years) and Kentrikos Tomeas Athinon (the capital region; 34.3 years)
- several regions in the north and north-west of Spain had high median ages, including: A Coruña (34.8 years), Pontevedra (34.5 years), Bizkaia (34.4 years), Lugo, Ourense, Asturias, Araba/Álava and Valladolid (all 34.3 years)
- 3 regions on the Italian island of Sardegna had relatively high median ages: Oristano (34.7 years), Cagliari (34.4 years) and Sud Sardegna (34.3 years)
- 2 predominantly rural regions in Ireland, West and South-West, had relatively high median ages (34.9 years and 34.6 years, respectively), as did the capital region of Dublin (34.3 years).

At the bottom end of the distribution, the 10 EU regions with the lowest median ages of mothers at childbirth in 2023 were equally split between Bulgaria and Romania (5 regions each). The lowest values occurred in:

- the south-eastern Bulgarian regions of Sliven (23.5 years) and Yambol (25.1 years), both of which had total fertility rates higher than the natural replacement rate
- the southern Romanian regions of Călăraşi (26.0 years) and Ialomița (26.2 years).

Between 2001 and 2023, the mean age of women at childbirth in the EU steadily increased from 29.0 to 31.2 years. Over the last 2 decades, this indicator followed a regular upward pattern of development, with modest annual increments or occasional years of stability. By 2023, the mean age of mothers at childbirth stood at 31.2 years.

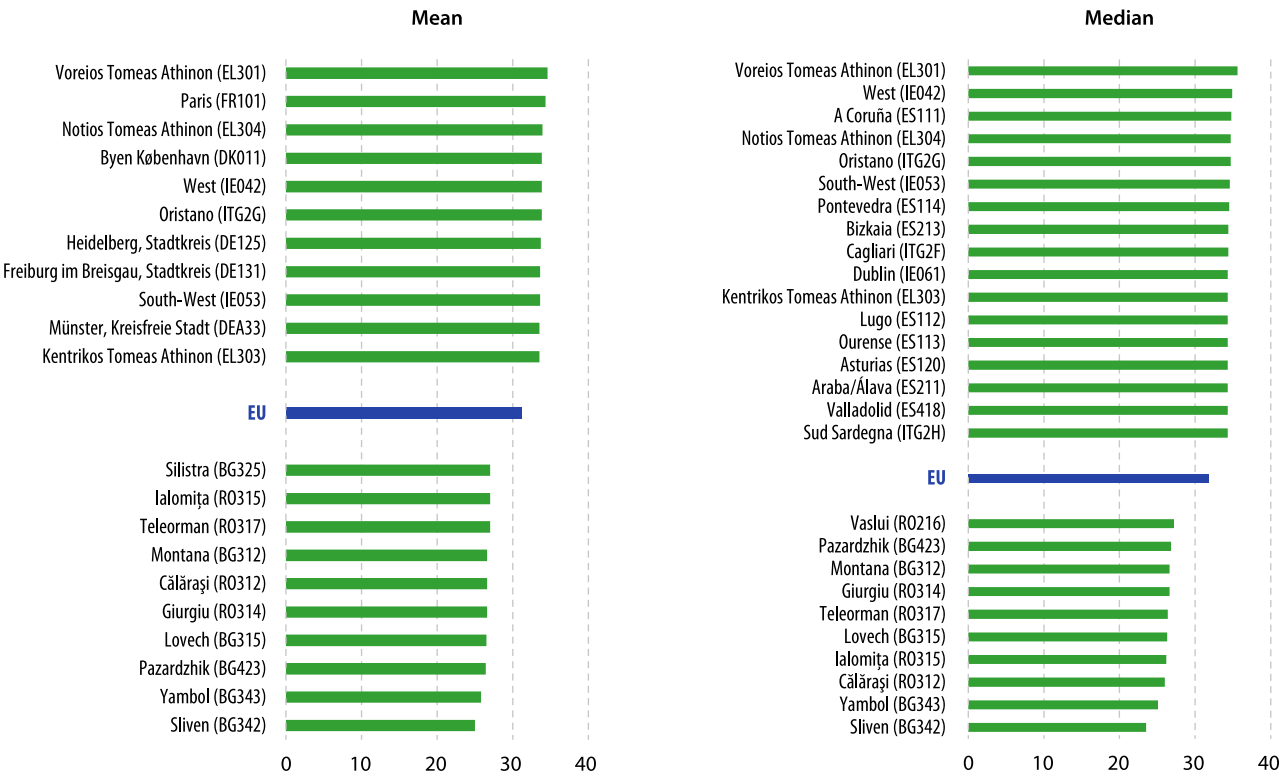
Capital regions and predominantly urban regions accounted for some of the highest mean ages of mothers at childbirth. This may reflect a variety of cultural, socioeconomic and personal factors, including:

- better access to healthcare in these regions, increasing the likelihood of a successful pregnancy for older women
- more progressive social norms, giving women more freedom to decide when they have children.

… while Voreios Tomeas Athinon also had the highest mean age for mothers at childbirth

Figure 1.3 (left-hand side) highlights the NUTS level 3 regions with the highest and lowest mean ages of mothers at childbirth. In 2023, the Greek region of Voreios Tomeas Athinon recorded the highest mean age (it also had the highest median age). Several other predominantly urban regions in and around the Greek capital appeared near the top of the ranking, along with Paris in France (34.3 years) and Byen København in Denmark (33.8 years).

Figure 1.3: Mean and median age of mothers at childbirth
(years, by NUTS 3 regions, 2023)



Note: the figure shows the EU regions with the highest and lowest mean and median ages. The rankings include more than 10 regions if several regions have identical values. The median age is preferred for a more balanced / less skewed representation of fertility trends, while the mean age is more sensitive to outliers. Mean age: the Netherlands and Finland, NUTS level 2; Portugal, NUTS level 1; Latvia, national data; Utrecht (NL35) and Zuid-Holland (NL36), not available.

Source: Eurostat (online data codes: demo_r_find3 and demo_find)

At the opposite end of the distribution, there were 7 EU regions where the mean age of women at childbirth was below 27.0 years; they were all located in Bulgaria (5 regions) or Romania (2 regions). The lowest mean ages were recorded in 3 Bulgarian regions – Sliven (25.0 years), Yambol (25.8 years) and Pazardzhik (26.4 years) – all of which had total fertility rates higher than the natural replacement rate.

Within the EU, a marked reduction in infant mortality rates has been a key driver of increased life expectancy. The EU has a relatively low infant mortality rate by international standards, reflecting well-established healthcare systems, access to quality prenatal and neonatal care, and comprehensive social support.

In 1961, the EU recorded an infant mortality rate of 38.2 deaths per 1 000 live births. This rate fell almost uninterrupted and at a relatively fast pace through to 2000, when it stood at 6.0 deaths per 1 000 live births. The downward trend continued, albeit at a slower pace, over the next 2 decades. In 2023, some 12 280 children across the EU died before reaching the age of 1; as such, the infant mortality rate was 3.3 deaths per 1 000 live births.

Capital regions have some of the lowest infant mortality rates

Map 1.6 shows that the distribution of infant mortality rates across NUTS level 2 regions in 2023 was somewhat skewed. Of the 244 regions for which data are available, 140 had rates below that of the EU and 96 had rates above; the remaining 8 regions had rates identical to that of the EU.

In 2023, 19 regions across the EU had infant mortality rates that were below 2.0 deaths per 1 000 live births (as shown by the lightest shade of yellow in Map 1.6). These relatively low rates were mainly concentrated in Italy (4 regions), Finland, Sweden (both 3 regions) and Austria (2 regions).

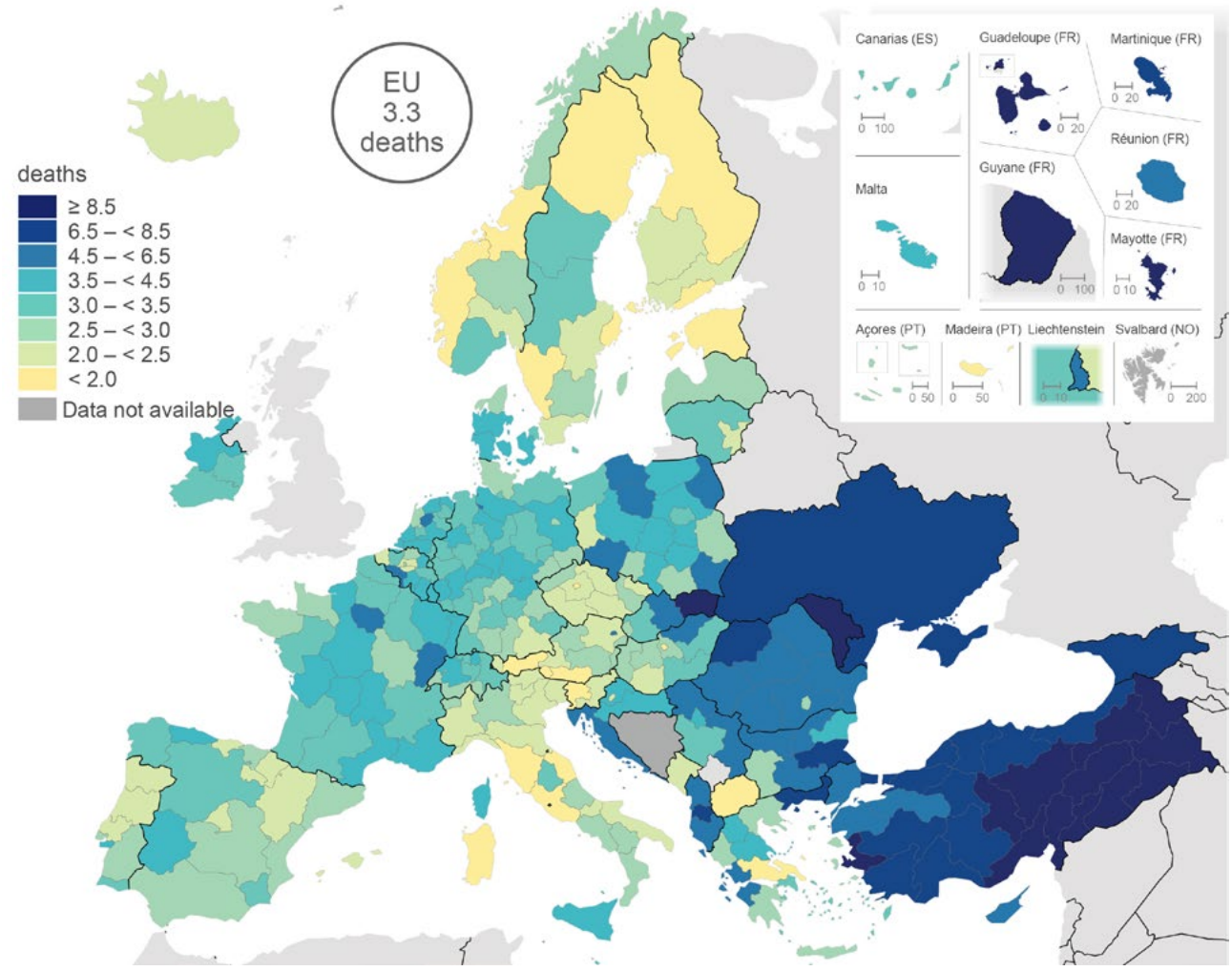
A closer look reveals that several of the regions with low infant mortality rates were capital regions. Budapest (Hungary), Helsinki-Uusimaa (Finland), Stockholm (Sweden), Zahodna Slovenija (Slovenia), Praha (Czechia) and Lazio (Italy) all recorded infant mortality rates that were i) below their respective national averages, and ii) below 2.0 deaths per 1 000 live births. These low rates may reflect, among other factors:

- higher living standards
- better access to healthcare facilities and/or
- a concentration of expertise and resources (for example, specialised neonatal units for infants requiring advanced medical interventions).

At the upper end of the distribution, 35 regions had infant mortality rates of at least 4.5 deaths per 1 000 live births in 2023 (as shown by the 3 darkest shades of blue in Map 1.6). This group included:

- all 5 of the French outermost regions – Mayotte (10.5 deaths per 1 000 live births), Guadeloupe (9.7), Guyane (9.6), Martinique (7.5) and La Réunion (5.6) – with Mayotte recording the highest rate in the EU
- a large number of predominantly rural regions, such as Východné Slovensko in Slovakia (9.3 deaths per 1 000 live births), Yugoiztochen in Bulgaria (7.8), Nord-Vest in Romania (6.9) and Anatoliki Makedonia, Thraki in Greece (6.6)
- some exceptions, as there were a few regions characterised by much higher levels of population density, including Bremen in Germany, Flevoland in the Netherlands, and the capital regions of Wien in Austria and Ile-de-France in France.

Map 1.6: Infant mortality rate
(deaths per 1 000 live births, by NUTS 2 regions, 2023)



Note: the infant mortality rate is based on the number of deaths of children under 1 year of age. Ukraine: national data. Germany: 2022, except Saarland (DEC0) and Leipzig (DED5), 2021. Georgia, Albania, Serbia and Türkiye: 2022. Ukraine: 2021.

Source: Eurostat (online data codes: demo_r_minfind and demo_minfind)

2. Health

Health is an important priority for most Europeans who expect to receive efficient healthcare services – for example, if they contract a disease or are in an accident – alongside timely and reliable public health information. The overall health of the European Union's (EU's) population is also closely linked to that of the environment through – among other influences – the quality of the air we breathe, the water we drink and the food we eat.

A key principle included within the European Pillar of Social Rights is that everyone in the EU should have access to affordable, preventive and curative healthcare of good quality. As part of its work within this area, the European Commission has a range of specific actions, including:

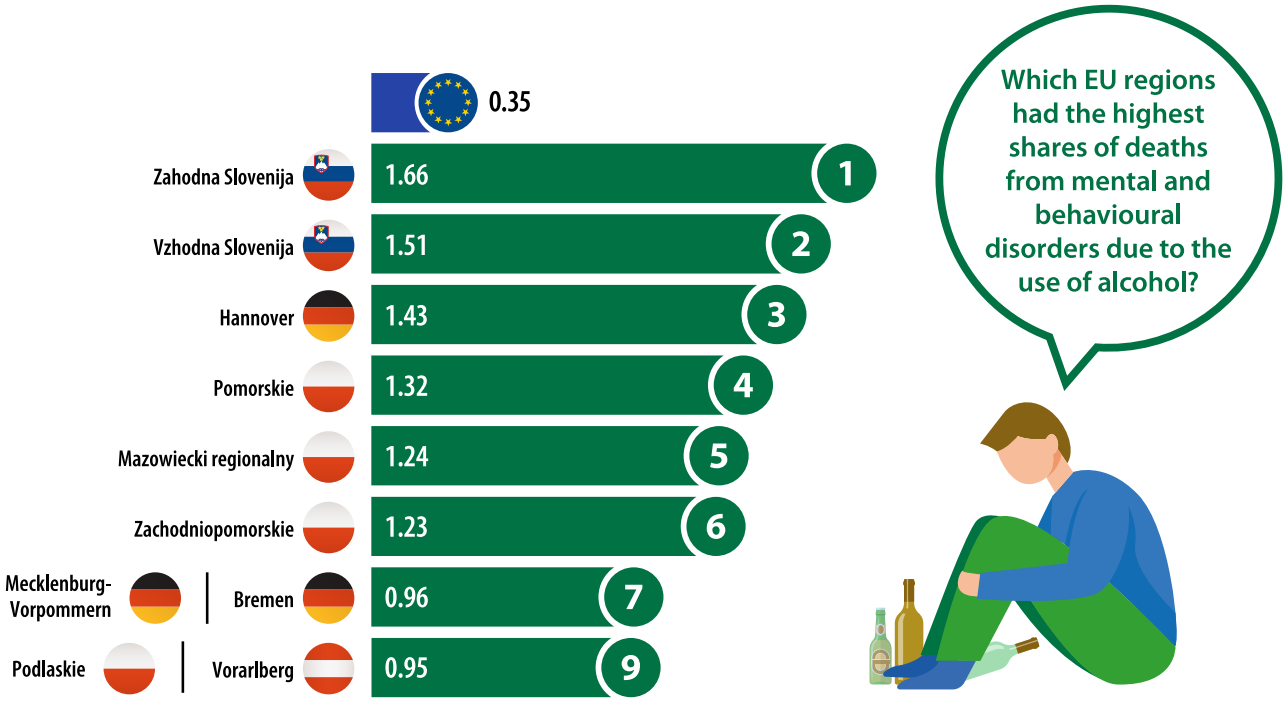
- support for the modernisation and digitalisation of health systems
- a pharmaceuticals strategy for Europe
- Europe's Beating Cancer Plan
- a new comprehensive approach to mental health.

This year's edition of the *Eurostat regional yearbook* highlights mental and behavioural disorders. Initiatives related to these conditions are an integral part of the EU's public health policy, which prioritises prevention, treatment and social inclusion. In 2023, in response to the lasting impact of the COVID-19 pandemic, the European Commission published a *Communication on a comprehensive approach to mental health* (COM(2023) 298 final). This initiative promotes better access to mental healthcare, workplace well-being and research, aiming to give mental health the same importance as physical health. The European Pillar of Social Rights further reinforces mental health as a key aspect of well-being, linking it to employment, education and healthcare policies.

The European Commission addresses alcohol use and mental and behavioural disorders through actions under the EU4Health programmes. It supports the integration of mental health services into primary care and encourages early intervention, while collaborating with EU countries to reduce alcohol-related harm via taxation, labelling and marketing restrictions.

In 2022, mental and behavioural disorders due to the use of alcohol accounted for 0.35% of all deaths within the EU. There were 6 NUTS level 2 regions with shares above 1.00% (see the infographic below):

- the Slovenian regions of Zahodna Slovenija (1.66%) and Vzhodna Slovenija (1.51%)
- Hannover (1.43%) in Germany
- Pomorskie (1.32%), Mazowiecki regionalny (1.24%) and Zachodniopomorskie (1.23%) in Poland.



(% of all deaths, by NUTS 2 regions, 2022)

Note: based on standardised death rates per 100 000 inhabitants. Utrecht (NL35), Zuid-Holland (NL36), Centro (PT19), Grande Lisboa (PT1A), Península de Setúbal (PT1B), Alentejo (PT1C) and Oeste e Vale do Tejo (PT1D): not available.

Source: Eurostat (online data code: hlth_cd_asdr2)

Healthcare resources and unmet needs

ACCESSIBILITY OF HOSPITALS

In 2023, 83.4% of the EU's population lived within 15 minutes driving time of a hospital

Accessibility broadly refers to how quickly and easily people can reach a destination given the available means of transport. Policymakers are increasingly prioritising it in areas such as land-use, transport and regional planning. In rural areas, limited access to key services – such as hospitals, pharmacies, schools, banks or supermarkets – remains a significant challenge.

In 2023, 83.4% of the EU's population lived within a 15 minute drive of a hospital (note: EU countries may apply different definitions for a 'hospital'). In 125 NUTS level 3 regions, the entire population (100.0%) had this level of access, as shown by the darkest shade of blue in Map 2.1. Germany accounted for most of this group – 96 out of the 125 regions – primarily within predominantly urban regions. The other 29 regions included:

- 6 from Belgium
- 6 from the Netherlands (including Groot-Amsterdam)
- 4 from Greece (including Kentrikos Tomeas Athinon and 3 others within close proximity)
- 4 from France (including Paris and 3 others within close proximity)
- 3 from Poland (including Miasto Warszawa)
- both from Malta
- 2 from Spain (Ceuta and Melilla)
- 2 from Italy (Milano and its neighbouring region of Monza e della Brianza).

In 2023, more than 1 in 4 EU regions (318 out of the 1 160 NUTS level 3 regions for which data are available) had at least 95.0% of their population living within a 15-minute drive of a hospital. These regions were typically densely populated and/or predominantly urban. Most of the capital regions in the EU had accessibility rates of at least 90.0%, although slightly lower values were recorded in Estonia, Latvia and Slovakia. By contrast, Osrednjeslovenska (the capital region of Slovenia) and Stockholms län (the capital region of Sweden) reported that less than 80.0% of the population lived within a 15-minute drive of a hospital; this was also the case in Cyprus.

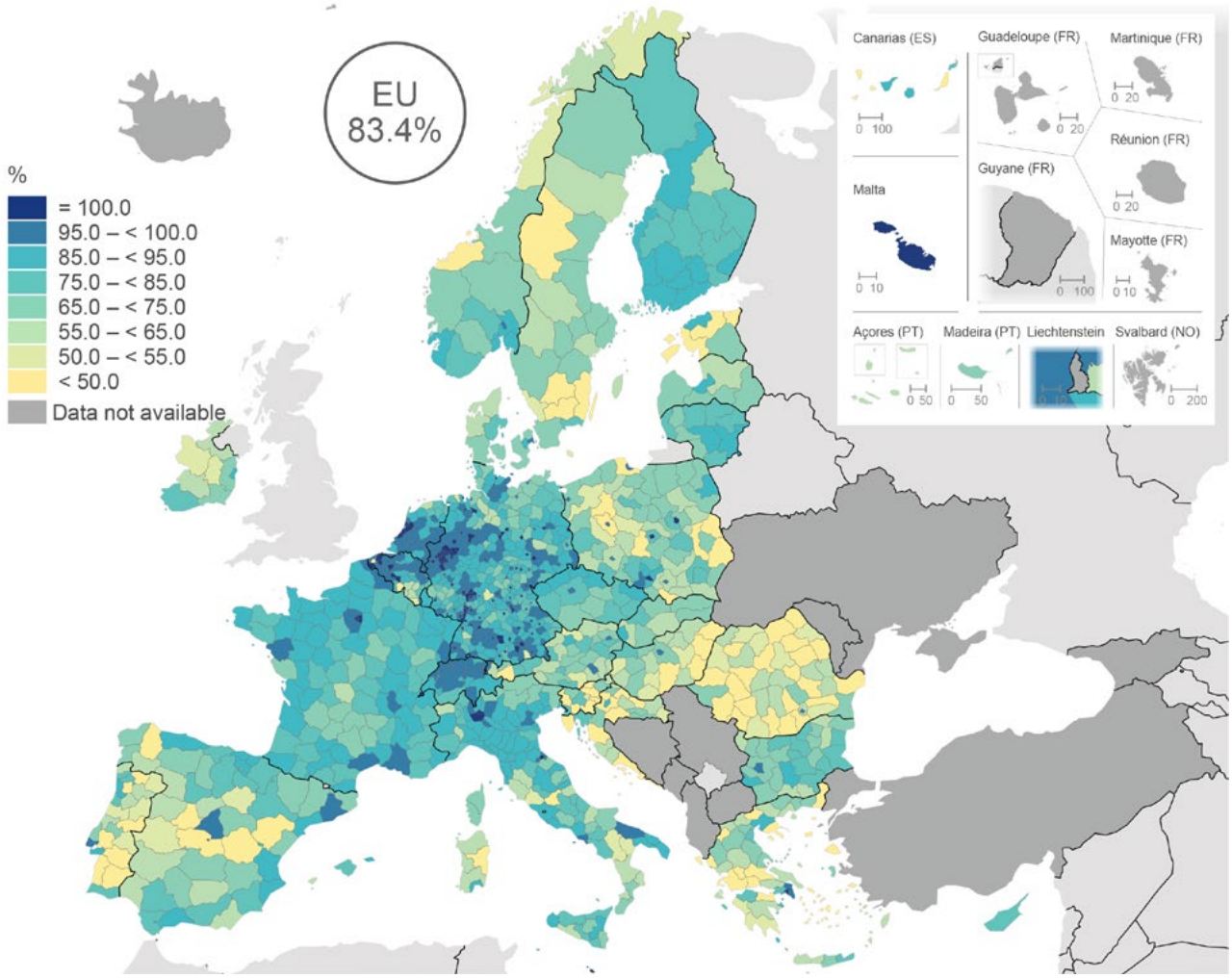
In 2023, 91 NUTS level 3 regions (those shown with a light yellow shade in Map 2.1) had a minority of their population living within a 15-minute drive of a hospital. Most of these regions where less than half of the population lived within 15 minutes driving time of a hospital were located in predominantly rural regions across eastern and southern EU countries:

- Romania (21 regions) and Greece (15 regions) recorded the highest counts
- followed by Croatia and Spain (both 9 regions), Poland (8), Portugal (7) and Slovenia (6).

At the lower end of the distribution, 6 regions in the EU had less than 10.0% of their population living within a 15-minute drive of a hospital:

- Mehedinți, Covasna and Tulcea in Romania
- Chalkidiki, Thesprotia and Lefkada in Greece (with Lefkada having none of its population living within a 15-minute drive of a hospital).

Map 2.1: Accessibility to healthcare services
(% of population living within 15 minutes of a hospital, by NUTS 3 regions, 2023)



Note: 15 minutes driving time.

Source: Eurostat calculations based on TomTom Multinet 2022, Geostat population grid 2021, Eurostat-GISCO hospital locations 2023

HOSPITAL BEDS AND MEDICAL DOCTORS

More about the data: the number of hospital beds and medical doctors

The number of hospital beds and the number of medical doctors serve as indicators to measure the capacity of healthcare systems.

- The number of hospital beds includes beds which are regularly maintained and staffed and immediately available for the care of patients admitted to hospitals; these statistics cover beds in general hospitals and in speciality hospitals.
- The number of medical doctors includes generalists, such as general practitioners (GPs), as well as medical and surgical specialists. These doctors provide services to patients as consumers of health care, including: giving advice, conducting medical examinations and making diagnoses, applying preventive medical methods, prescribing medication and treating diagnosed illnesses, giving specialised medical or surgical treatment.

Eurostat gives preference to the concept of 'practising' healthcare staff. The data for Greece, Portugal and Finland relate to medical doctors 'licensed to practice', while the data for Slovakia, North Macedonia and Türkiye relate to 'professionally active' medical doctors.

Within this section on healthcare resources:

- only national data are available for Germany and the Netherlands for hospital beds
- only national data are available for Germany and Ireland for medical doctors.

Zachodniopomorskie (Poland) and Bucureşti-Ilfov (Romania) were the only EU regions to report more than 1 000 hospital beds per 100 000 inhabitants in 2022

In 2022, there were 2.31 million hospital beds across the EU. This equated to 516 hospital beds per 100 000 inhabitants, or – expressed in a different way – there was, on average, 1 hospital bed for every 194 people.

Figure 2.1 highlights the NUTS level 2 regions with the highest and lowest numbers of hospital beds per 100 000 inhabitants in 2022. Zachodniopomorskie – a region in north-west Poland that includes the city of Szczecin – recorded the highest ratio, with 1 232 beds per 100 000 inhabitants. Bucureşti-Ilfov – Romania's capital region – was the only other region in the EU to report more than 1 000 hospital beds per 100 000 inhabitants, at 1 067 beds.

Major hospitals, specialised medical centres and teaching hospitals are often located in capital regions, potentially increasing their hospital bed capacity (although different healthcare models, funding and population density can also impact the distribution). This pattern of a relatively high number of hospital beds in capital regions was particularly evident in eastern EU countries: in 2022, Bucureşti-Ilfov (Romania), Budapest (Hungary), Yuzhen tsentralen (Bulgaria) and Praha (Czechia) all featured among the 10 regions with the highest numbers of hospital beds per 100 000 inhabitants.

At the other end of the distribution, 7 out of the 10 regions with the lowest ratios of hospital beds per 100 000 inhabitants were located in Sweden, including the capital region of Stockholm (203 hospital beds per 100 000 inhabitants in 2022). This pattern may reflect, at least in part, the Swedish healthcare model that focuses on primary and preventative care, outpatient services and shorter hospital stays, as well as care at home or in nursing facilities. Other regions with very low ratios included:

- the autonomous Spanish cities of Ceuta and Melilla
- the French outermost region of Mayotte, which had the lowest ratio across EU regions, at 155 hospital beds per 100 000 inhabitants.

Attiki (Greece) had a ratio of medical doctors per 100 000 inhabitants that was more than twice as high as the EU average in 2022

In 2022, there were 1.83 million medical doctors in the EU, equivalent to a ratio of 408 doctors for every 100 000 inhabitants, or 1 doctor for every 245 people. This EU average masks significant regional disparities across NUTS level 2: Figure 2.1 provides information about those EU regions that had the highest and lowest ratios of doctor-to-population ratios. At the top end of the distribution:

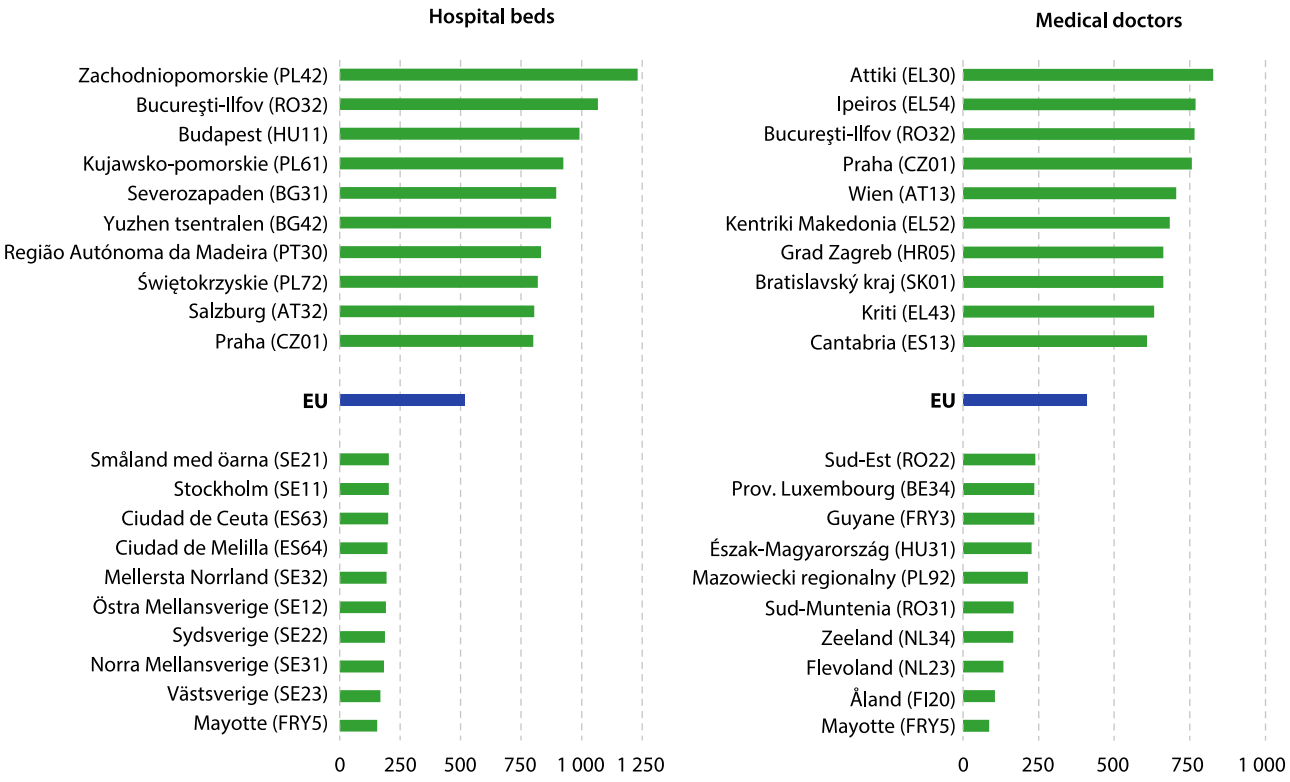
- Attiki, the Greek capital region, had the highest ratio, at 827 medical doctors per 100 000 inhabitants; this may reflect, at least in part
  - data for Greece being based on licensed professionals, rather than practicing doctors; as a result, Greek data is likely to be higher (compared with those of other EU countries) due to the inclusion of some doctors who are engaged in other professional activities, for example, teaching, research or consulting
  - the availability of medical education and training that encourages both domestic and international doctors to settle/remain in the Greek capital
- Ipeiros, another Greek region, had the 2nd highest ratio, with 769 medical doctors per 100 000 inhabitants
- Bucureşti-Ilfov, the Romanian capital region, had the 3rd highest ratio, at 765 per 100 000 inhabitants
- there were several (other) capital regions with high ratios, for example, Praha in Czechia (757 per 100 000 inhabitants), Wien in Austria (706), Grad Zagreb in Croatia (662) and Bratislavský kraj in Slovakia (also 662).

Low doctor-to-population ratios may result from a variety of factors, including the organisation of healthcare resources, limited funding and/or a lack of trained staff (recruitment issues, excessive workload/burnout). Across the EU, it is relatively common to find regions struggling with the recruitment and retention of key healthcare professionals.

EU regions with relatively low doctor-to-population ratios are predominantly rural and often remote. In 2022:

- the French outermost region of Mayotte had the lowest ratio among NUTS level 2 regions, with 86 medical doctors per 100 000 inhabitants
- Åland, an archipelago in Finland, had the 2nd lowest ratio, at 106 per 100 000 inhabitants
- the Dutch regions of Flevoland (133 per 100 000 inhabitants) and Zeeland (166) had, respectively, the 3rd and 4th lowest ratios
- several predominantly rural regions located in eastern EU countries also recorded relatively low ratios, including the southern Romanian regions of Sud-Muntenia and Sud-Est, the northern Hungarian region of Észak-Magyarország, and the central Polish region of Mazowiecki regionalny (which surrounds its capital).

Figure 2.1: Number of hospital beds and medical doctors
(per 100 000 inhabitants, by NUTS 2 regions, 2022)



Note: the figure shows the EU regions with the highest and lowest rates per 100 000 inhabitants. Hospital beds: Germany and the Netherlands, national data. Medical doctors: Germany and Ireland, national data. Medical doctors: Denmark, Finland and Sweden, 2021. Centro (PT19), Grande Lisboa (PT1A), Península de Setúbal (PT1B), Alentejo (PT1C) and Oeste e Vale do Tejo (PT1D): not available. Medical doctors: Ciudad de Melilla (ES64), Luxembourg (LU00), Utrecht (NL35) and Zuid-Holland (NL36), not available.

Source: Eurostat (online data codes: hlth_rs_bdsrg2, hlth_rs_bds1, hlth_rs_physreg, hlth_rs_phys and demo_gind)

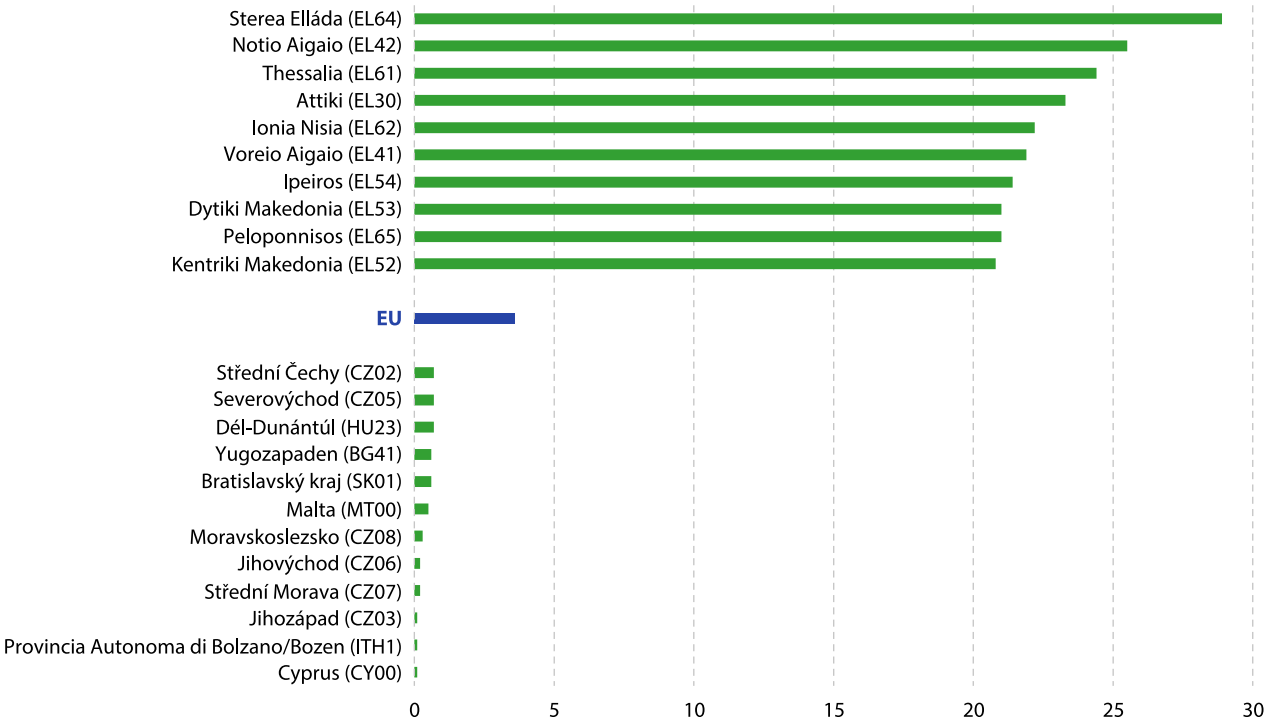
UNMET NEEDS FOR MEDICAL EXAMINATION

Self-reported unmet needs for medical examination refer to a person's own assessment of whether they needed an examination or treatment for a specific type of health care, but did not have it or did not seek it. In 2024, 3.6% of the EU population (aged 16 years or over) that was considered having a need for medical care reported being unable to receive a medical examination due to financial reasons, long waiting lists or distance.

Figure 2.2 provides information on the NUTS level 2 regions with the highest and lowest shares of people reporting unmet needs for medical examination. Note that the denominator for this indicator concerns only those people (aged 16 years or over) who were considered having a need for medical care. In 2024, there were 23 out of 161 regions for which data are available that recorded double-digit shares of people with unmet needs.

- The highest shares were reported in Greek regions, with peaks in Sterea Elláda (28.9%) and Notio Aigaio (25.5%). All 13 Greek regions featured among the 14 regions with the highest shares, with Umbria in Italy the only non-Greek region to record a comparable level.
- The 9 other regions with double-digit shares comprised:
  - 5 regions from Finland – Länsi-Suomi, Åland, Helsinki-Uusimaa, Etelä-Suomi and Pohjois- ja Itä-Suomi
  - Sud-Est (Romania)
  - Estonia
  - Puglia (Italy)
  - Latvia.

Figure 2.2: Self-reported unmet needs for medical examination due to financial reasons, long waiting list or distance
(% of people aged ≥ 16 years in need of medical care, by NUTS 2 regions, 2024)



Note: the figure shows the EU regions with the highest and lowest shares. The rankings include more than 10 regions if several regions have identical values. Länsi-Suomi (FI19) and Åland (FI20) are aggregated (same value for both regions). Belgium, Germany, the Netherlands, Austria and Poland: national data. Mayotte (FRY5): not available.

Source: Eurostat (online data codes: hlth_silc_08b_r and hlth_silc_08b)

Mortality and causes of death

A wide range of factors determine regional mortality patterns, with causes of death linked, among other issues, to age structures, sex distributions, access to and the quality of health care, living/working conditions, types of occupation, lifestyle choices and the surrounding environment. Since a region's (or a country's) population structure can strongly influence crude death rates, statisticians typically compare statistics on the causes of death using standardised death rates.

More about the data: standardised death rates

This section about causes of death presents information that is based on standardised death rates. Statisticians compute these rates by taking a weighted average of age-specific mortality rates, using the age distribution of a standard reference population as the weighting factor.

Since age and sex significantly influence most causes of death, standardised death rates can be used to improve comparability. By eliminating the impact of different age structures between regions – as elderly people are more likely to die than younger people – the resulting measure allows more accurate comparisons across space and/or over time.

In 2022, there were 5.2 million deaths in the EU

The COVID-19 crisis led to an increase in the total number of deaths across the EU: this figure increased by more than 0.5 million in 2020 and by a further 112 000 in 2021 to reach a peak of 5.3 million. In 2022, the total number of deaths in the EU fell 139 000 to 5.2 million. The downward pattern accelerated in 2023, as the number of deaths fell below 5.0 million, although it remained above pre-pandemic levels.

Diseases of the circulatory system accounted for almost 1 in 3 deaths across the EU in 2022

Statistics on causes of death are based on the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10), with the latest data available for 2022. At an aggregated level, based on ICD-10 chapter headings:

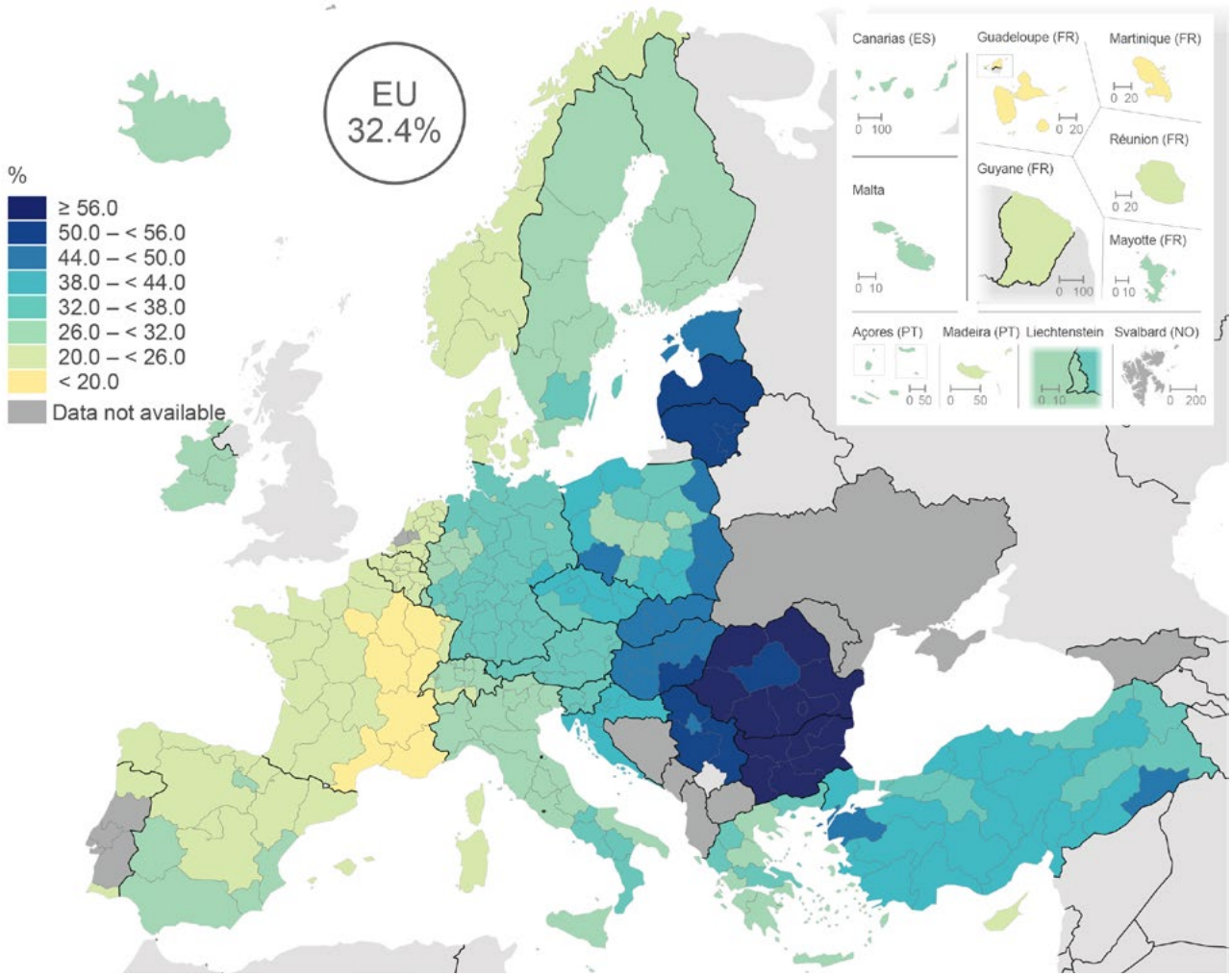
- diseases of the circulatory system – including heart attacks, heart diseases, hypertensive diseases and diseases of pulmonary circulation – accounted for 32.4% of all deaths in the EU
- cancer (malignant neoplasms) was the 2nd most common cause of death – accounting for 22.6% of all deaths
- diseases of the respiratory system – including conditions such as chronic obstructive pulmonary disease, pneumonia or asthma – accounted for 7.0% of all deaths
- mental and behavioural disorders – which are highlighted in this year's edition of the *Eurostat regional yearbook* (see below) – accounted for 4.0% of all deaths
- although not covered in this edition, the share of deaths attributed to COVID-19 fell from 10.8% in 2021 to 6.0% in 2022 reflecting, at least in part, widespread vaccination, natural immunity, improved treatment and understanding of the disease and less overwhelmed health services.

In 2022, diseases of the circulatory system were the main cause of death in 78.5% (186 out of 237) of NUTS level 2 regions. The 2 darkest shades of blue in Map 2.2 highlight the 18 regions across the EU where at least half of all deaths were caused by diseases of the circulatory system.

- The highest regional shares were in Bulgaria and Romania, where diseases of the circulatory system accounted for more than 50.0% of all deaths in every region:
  - Yuzhen tsentralen (southern Bulgaria) had the highest share, at 66.2%, followed by Sud-Vest Oltenia (south-western Romania), with 65.1%
  - 4 other regions in Bulgaria reported that more than 3 in 5 deaths were accounted for by diseases of the circulatory system.
- The only other regions in the EU where diseases of the circulatory system accounted for at least 50.0% of all deaths were both regions in Lithuania and Dél-Alföld (southern Hungary); this was also the case in Latvia.

By contrast, there were 10 NUTS level 2 regions across the EU where diseases of the circulatory system accounted for less than 1 in 5 deaths in 2022 (as shown by the light yellow shade in Map 2.2). All 10 of these regions were located in France, with the lowest shares in the capital region of Ile-de-France (18.9%), the southern region of Provence-Alpes-Côte d'Azur (18.7%) and the outermost region of Martinique (18.3%).

Map 2.2: **Deaths due to diseases of the circulatory system**
(% of all deaths, by NUTS 2 regions, 2022)



Note: based on standardised death rates per 100 000 inhabitants.

Source: Eurostat (online data code: hlth_cd_asdr2)

In 2022, cancer accounted for 22.6% of all deaths in the EU and diseases of the respiratory system for 7.0%

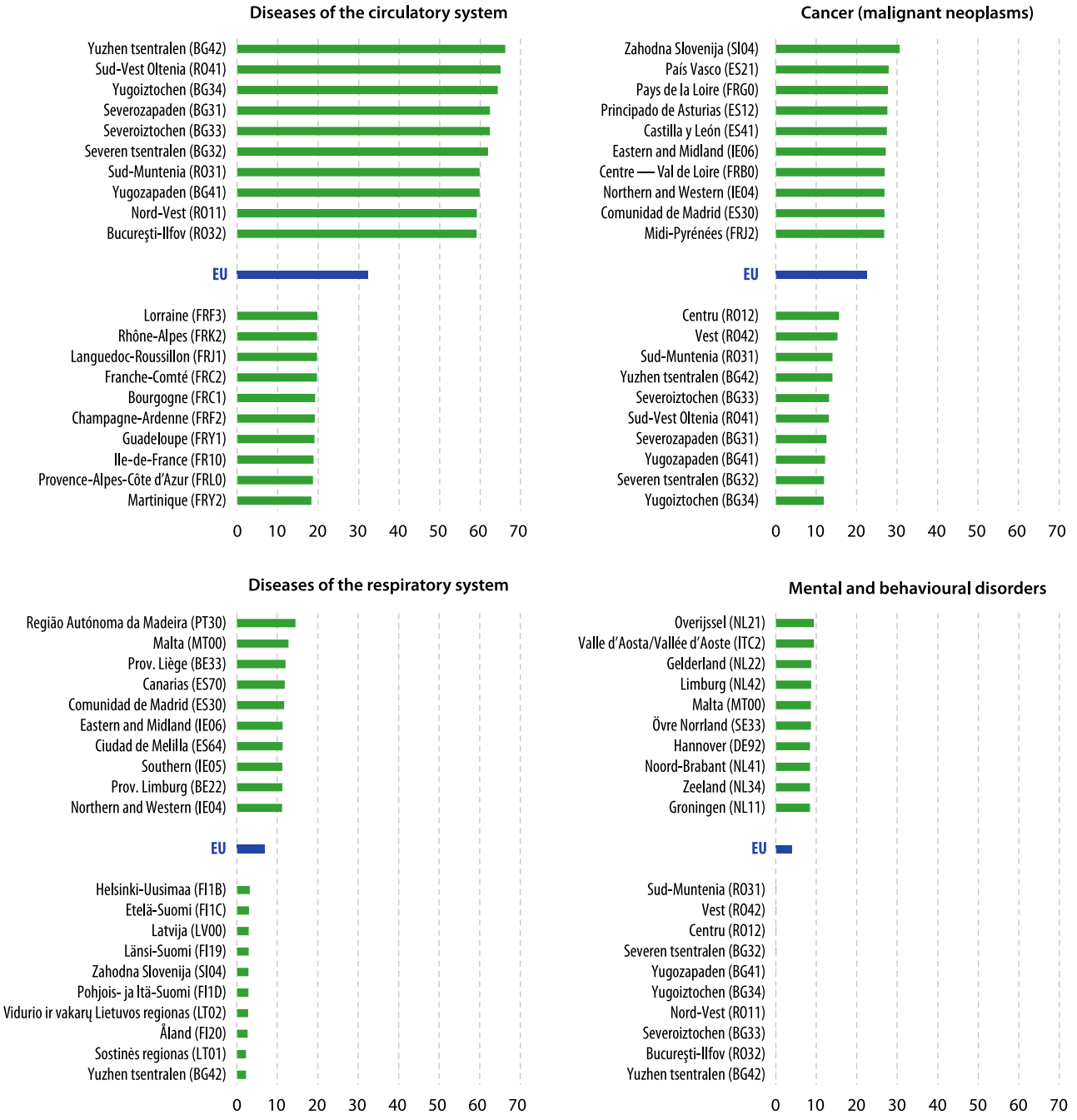
Figure 2.3 presents information for the 3 principal causes of death in the EU – diseases of the circulatory system, cancer (malignant neoplasms) and diseases of the respiratory system – alongside information about deaths from mental and behavioural disorders (which are highlighted in this year's edition of the *Eurostat regional yearbook* – see below).

- The 1st part of the figure confirms that diseases of the circulatory system accounted for more than 50.0% of all deaths in Bulgarian and Romanian regions.
- The Slovenian capital region of Zahodna Slovenija recorded the highest share of deaths from cancer (malignant neoplasms), at 30.6%. Relatively high shares were also reported in several regions of:
  - Spain, where País Vasco had the highest share, at 27.9%
  - France, where Pays de la Loire had the highest share, at 27.7%
  - Ireland, where the capital region of Eastern and Midland had the highest share, at 27.2%.
- Several island regions reported relatively high shares of deaths from respiratory diseases. This may be linked, among other factors, to long-term exposure to volcanic pollutants and ash. Região Autónoma da Madeira (Portugal) had the highest share, at 14.5%, followed by:
  - Malta (12.8%)
  - the eastern Belgian region of Prov. Liège (12.1%), which has a history of heavy industry such as coal mining and steel production
  - Canarias in Spain (11.8%), where Saharan dust may also exacerbate respiratory issues.
- Mental and behavioural disorders accounted for 4.0% of all deaths across the EU. Several Dutch regions recorded shares that were more than twice as high as the EU average, with Overijssel reporting the highest share (9.4%); the northern Italian region of Valle d'Aosta/Vallée d'Aoste had a similar share.

The information presented in Figure 2.3 also highlights those regions with the lowest shares of deaths from specific diseases/disorders in 2022. Low shares may reflect, among other factors: a high share of total deaths for another particular disease, which overshadows the impact of others; under-reporting of certain diseases/disorders, for example, due to misdiagnosis or because some diseases are not officially recognised on death certificates.

- Several regions across France recorded a very low share of deaths from diseases of the circulatory system. This may reflect, among other factors, healthier lifestyles, diet and/or widespread access to preventative screenings/treatments.
- The lowest shares of cancer deaths were recorded across Bulgaria and Romania, often in regions characterised by a high share of deaths from diseases of the circulatory system. There were 8 regions in the EU where cancer accounted for less than 15.0% of all deaths: all 6 regions in Bulgaria, as well as the Romanian regions of Sud-Muntenia and Sud-Vest Oltenia. The lowest share of cancer deaths was recorded in Yugoiztochen in Bulgaria (11.9%).
- Yuzhen tsentralen (Bulgaria) and Sostinės regionas (the capital region of Lithuania) had the lowest shares of deaths from respiratory diseases, both 2.3%. Several of the other regions characterised by low shares of deaths from respiratory diseases were Nordic regions, where low levels of air pollution may be an explanatory factor.
- Bulgarian and Romanian regions had the lowest shares of deaths attributed to mental and behavioural disorders, often with shares close to zero. This was most notable in the southern Bulgarian region of Yuzhen tsentralen and the Romanian capital region of Bucureşti-Ilfov (both 0.0%).

Figure 2.3: Causes of death
(% of all deaths, by NUTS 2 regions, 2022)



Note: based on standardised death rates per 100 000 inhabitants. The figure shows the EU regions with the highest and lowest shares. Utrecht (NL35), Zuid-Holland (NL36), Centro (PT19), Grande Lisboa (PT1A), Península de Setúbal (PT1B), Alentejo (PT1C) and Oeste e Vale do Tejo (PT1D): not available.

Source: Eurostat (online data code: hlth_cd_asdr2)

Focus on mental health

The COVID-19 pandemic intensified mental health challenges, especially for young people and those with pre-existing conditions. Isolation, uncertainty and disruptions to education and employment led to higher levels of stress, anxiety and depression, with lockdowns and restrictions exacerbating feelings of loneliness and emotional distress. Beyond individual struggles, the strain on mental health placed additional pressures on EU healthcare systems, increasing the demand for services, therapy and crisis intervention. Governments faced rising costs from disability claims and financial support for those unable to work, while lower employment rates and reduced productivity negatively impacted the EU economy.

Following the COVID-19 pandemic, the EU has significantly enhanced its focus on mental health, recognising the pandemic's profound impact on some people's well-being. In June 2023, the European Commission introduced a comprehensive approach to mental health, committing €1.23 billion to support EU countries in prioritising mental health alongside physical health. The strategy is anchored in 3 guiding principles:

- implementing effective measures to prevent mental health issues before they arise
- ensuring high-quality and affordable mental healthcare and treatment are accessible to all
- supporting individuals to re-integrate into society after recovery from mental health challenges.

More about the data: mental and behavioural disorders

The statistics presented below on causes of death due to mental and behavioural disorders are primarily based on information pertaining to Chapter V of the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10). This chapter refers to mental and behavioural disorders (ICD-10 F00-F99), which include:

- organic mental disorders (including dementia in Alzheimer disease)
- mental and behavioural disorders due to substance use
- schizophrenia and delusional disorders
- mood disorders
- neurotic and stress-related disorders
- behavioural syndromes
- disorders of adult personality
- mental retardation
- disorders of psychological development
- behavioural and emotional disorders with onset usually occurring in childhood
- note these figures exclude intentional self-harm.

Intentional self-harm (ICD-10 X60-X84 and Y87) covers a range of purposely self-inflicted activities, including (attempted) suicide. The data also include sequelae (or 'late effects') of intentional self-harm, which can result in death 1 year or more after the initial incident. Intentional self-harm is classified by place of occurrence and/or type of activity and includes:

- intentional self-poisoning by and exposure to
  - drugs, medicaments and biological substances
  - alcohol
  - organic solvents, carbon monoxide and other gases
  - pesticides and other chemicals
- intentional self-harm by hanging, strangulation or suffocation
- intentional self-harm by drowning
- intentional self-harm by handgun, rifle and other firearms discharge
- intentional self-harm by explosive material, smoke, fire or flames
- intentional self-harm by sharp or by blunt objects
- intentional self-harm by jumping from a high place, jumping or lying before a moving object, crashing a motor vehicle.

Regional differences in the level and organisation of care for people with mental and behavioural disorders reflect, at least in part, variations in healthcare systems, funding, cultural attitudes and historical developments.

- Northern and western EU countries primarily provide mental healthcare in community settings.
- By contrast, hospital-based models are more common across eastern EU countries, where patients are more likely to be treated in psychiatric hospitals; stigma around mental health issues persists, discouraging some individuals from seeking treatment.
- In southern EU countries there is often limited public support for people with mental and behavioural disorders, leading to a greater reliance on family members to provide informal care.

Mental and behavioural disorders accounted for 4.0% of deaths across the EU in 2022

In 2022, there were 211 000 deaths across the EU attributed to mental and behavioural disorders; this was equivalent to 4.0% of all deaths. The regional distribution was relatively uniform, insofar as 112 out of 237 NUTS level 2 regions for which data are available (47.3% of all regions) reported mental and behavioural disorders accounting for a share of total deaths that was equal to or above the EU average.

Looking in more detail at the top end of the distribution, there were 22 regions where mental and behavioural disorders accounted for at least 7.0% of all deaths in 2022 (as shown by the darkest shade of blue in Map 2.3).

They were mainly concentrated in western EU countries, including:

- 9 out of the 10 Dutch regions for which data are available
- 5 regions from Germany
- the Irish capital region.

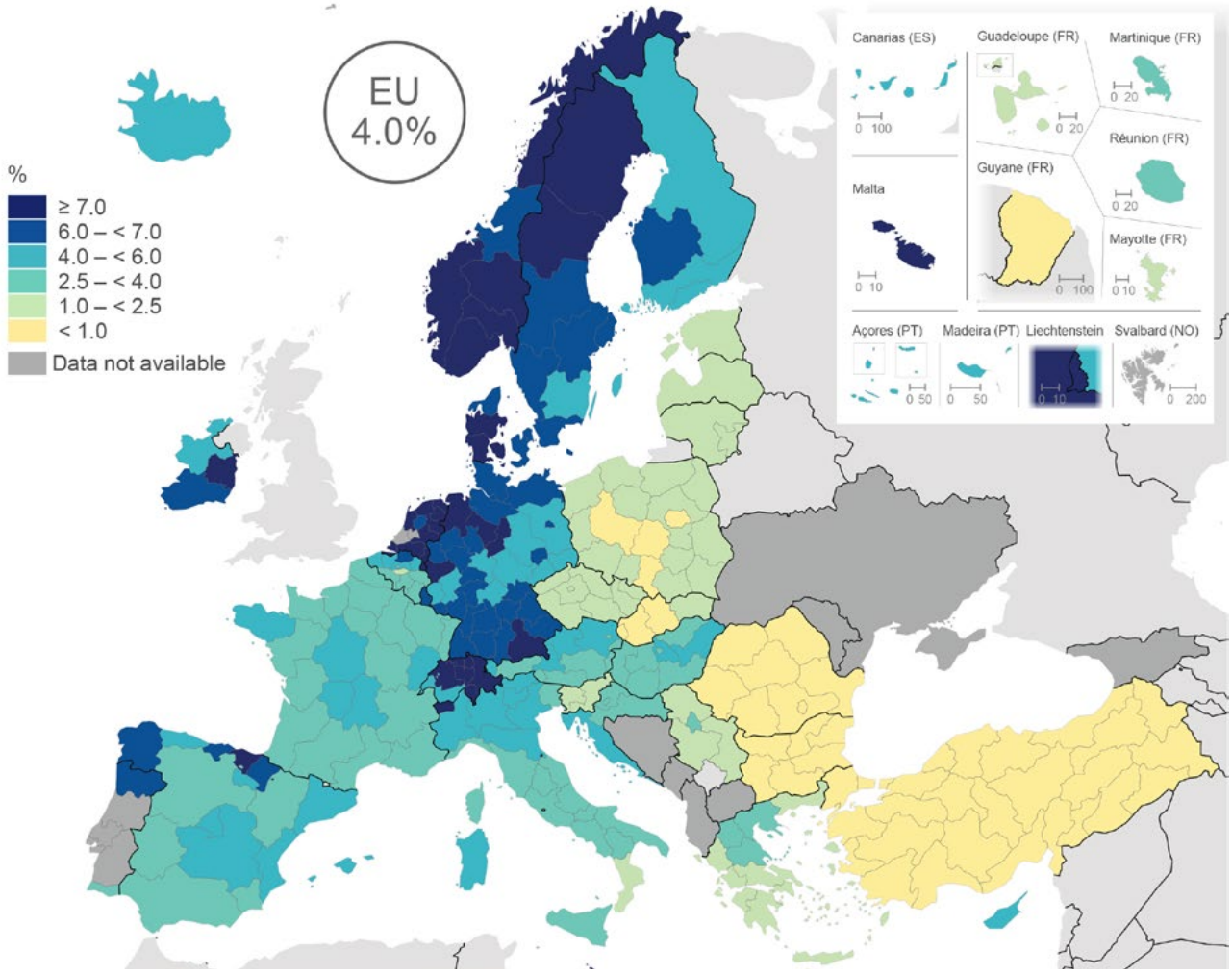
Overijssel (eastern Netherlands) and Valle d'Aosta/Vallée d'Aoste (northern Italy) had the highest shares of deaths from mental and behavioural disorders in 2022, both 9.4%. An analysis of the underlying death rates reveals that Overijssel also had the highest standardised death rate for mental and behavioural disorders among EU regions, at 95.7 deaths per 100 000 inhabitants. The rate in Overijssel was 2.3 times as high as the EU average (41.9 deaths per 100 000 inhabitants). There were 7 regions across the EU where the standardised death rate for mental and behavioural disorders was at least twice as high as the EU average; alongside Overijssel and Valle d'Aosta/Vallée d'Aoste, the others were:

- Groningen, Gelderland and Limburg in the Netherlands
- Hannover in Germany
- Övre Norrland in Sweden.

In 2022, there were 22 NUTS level 2 regions where less than 1.0% of all deaths were attributed to mental and behavioural disorders (as shown by the light yellow shade in Map 2.3). Apart from the French outermost region of Guyane, this group was concentrated in eastern EU countries, including:

- every region of Bulgaria (6 regions) and Romania (8 regions)
- 4 regions from Poland
- 3 regions from Slovakia.

Map 2.3: Deaths due to mental and behavioural disorders
(% of all deaths, by NUTS 2 regions, 2022)



Note: based on standardised death rates per 100 000 inhabitants. Excludes suicides.

Source: Eurostat (online data code: hlth_cd_asdr2)

Within the EU, women recorded a higher share of deaths due to mental and behavioural disorders than men

In 2022, mental and behavioural disorders claimed the lives of 131 000 women across the EU, compared with 80 000 men. This higher number reflects, at least in part, their greater longevity; on average, women live longer than men and are therefore more likely to develop a range of mental and behavioural disorders, some of which – such as dementia – disproportionately affect older adults. Based on standardised death rates, 4.7% of all female deaths across the EU in 2022 were due to mental and behavioural disorders, compared with 3.3% of all male deaths.

Several NUTS level 2 regions recorded shares of deaths from mental and behavioural disorders that were more than twice the EU average.

- The highest shares among women were observed in Overijssel in the Netherlands (11.2%) and Valle d'Aosta/Vallée d'Aoste in Italy (11.1%). There were 5 other regions with double-digit shares: Limburg, Gelderland and Noord-Brabant (all in the Netherlands), Mellersta Norrland (Sweden) and Malta. In addition, Övre Norrland (Sweden), Zeeland (the Netherlands) and País Vasco (Spain) recorded shares that were more than twice as high as the EU average.
- The highest shares among men, 7.3%, were recorded in Hannover (Germany), Overijssel (the Netherlands) and Valle d'Aosta/Vallée d'Aoste (Italy). There were 4 other regions in the Netherlands that reported shares that were more than twice as high as the EU average: Groningen, Gelderland, Limburg and Zeeland, while this was also the case in Övre Norrland, Malta and Midtjylland (Denmark).

Among older people, there were 194 500 deaths due to mental and behavioural disorders across the EU in 2022

In 2022, there were 194 500 deaths in the EU due to mental and behavioural disorders among people aged 65 years or over, compared with 16 300 deaths among those aged under 65. As with most causes of death, older people therefore accounted for the vast majority of deaths from mental and behavioural disorders, some 92.2% of all such deaths. An analysis by sex reveals a higher share among women, with 97.0% of female deaths from mental and behavioural disorders occurring among women aged 65 years or over, compared with 84.3% for men.

Based on standardised death rates, mental and behavioural disorders accounted for 2.2% of all deaths in 2022 across the EU among people who were younger than 65, and 4.4% of all deaths among people aged 65 years or over.

For the younger cohort, there were 7 NUTS level 2 regions where mental and behavioural disorders accounted for at least 5.0% of all deaths:

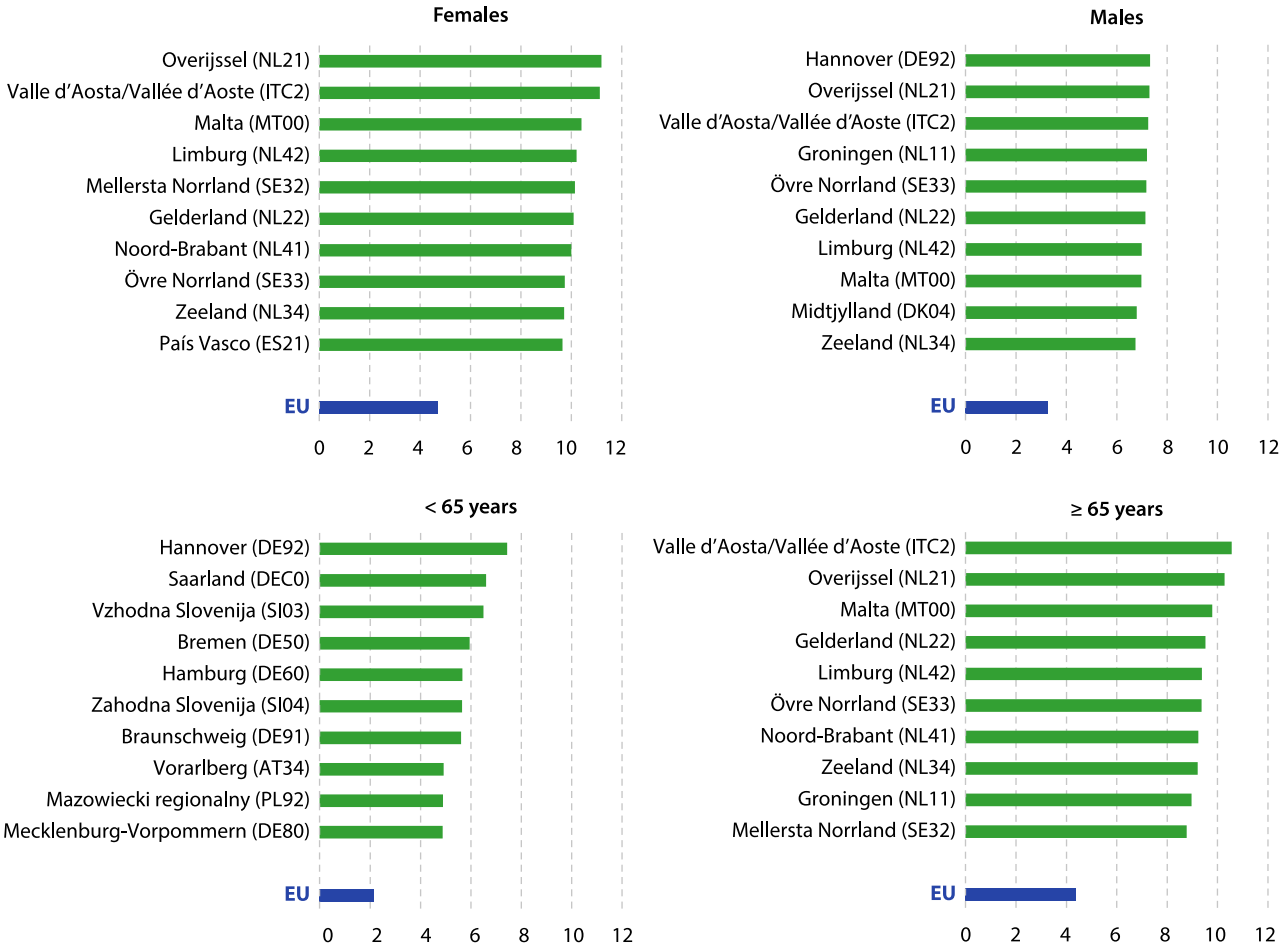
- the German regions of Hannover (7.4%), Saarland (6.6%), Bremen (5.9%), Hamburg (5.7%) and Braunschweig (5.6%)
- both regions from Slovenia – Vzhodna Slovenija (6.5%) and Zahodna Slovenija (5.6%).

In 2022, among people aged 65 years or over, the share of all deaths due to mental and behavioural disorders peaked in the Italian region of Valle d'Aosta/Vallée d'Aoste (10.6%) and the Dutch region of Overijssel (10.3%). There were 8 other regions across the EU where mental and behavioural disorders accounted for more than twice as many deaths as the EU average (4.4%):

- Malta
- the Dutch regions of Gelderland, Limburg, Noord-Brabant, Zeeland and Groningen
- the Swedish regions of Övre Norrland and Mellersta Norrland.

At the other end of the distribution, many regions in eastern EU countries reported very low shares of deaths due to mental and behavioural disorders. This may reflect lower life expectancy – as fewer people reach the ages where these disorders are most common – or different disease patterns, such as higher mortality from circulatory diseases (which, in turn, reduces the relative share of deaths from mental and behavioural causes). However, regardless of the region, the shares may reflect under-diagnosis and/or misreporting – for example, due to cultural stigma, reluctance to record mental illness as a cause of death, or national practices that prioritise physical conditions over mental and behavioural disorders when recording the main cause of death.

Figure 2.4: Deaths due to mental and behavioural disorders
(% of all deaths, by sex, age and NUTS 2 regions, 2022)



Note: based on standardised death rates per 100 000 inhabitants. The figure shows the EU regions with the highest shares. Utrecht (NL35), Zuid-Holland (NL36), Centro (PT19), Grande Lisboa (PT1A), Península de Setúbal (PT1B), Alentejo (PT1C) and Oeste e Vale do Tejo (PT1D): not available. Ciudad de Melilla (ES64): data for males, not available.

Source: Eurostat (online data code: hlth_cd_asdr2)

Almost 50 000 people across the EU died from intentional self-harm in 2022

Deaths from intentional self-harm represent a significant public health issue in the EU. These deaths, often reflecting deeper societal and mental health challenges, vary considerably by sex. Men are considerably more likely to die from intentional self-harm than women, partly due to the more fatal methods they typically use, whereas a higher proportion of women tend to survive attempts to end their own lives. In 2022, the EU recorded 37 000 male deaths from intentional self-harm compared with 12 000 female deaths; as such, there were approximately 3 times as many male (as female) deaths.

In 2022, the EU's standardised death rate for intentional self-harm was 10.6 deaths per 100 000 inhabitants. The male rate (17.2 deaths per 100 000 male inhabitants) was 3.6 times as high as the female rate (4.8 deaths per 100 000 female inhabitants). Among NUTS level 2 regions, the highest standardised death rates:

- for both sexes (males and females together) were in the Hungarian region of Dél-Alföld, along with the French regions of Basse-Normandie and Bretagne
- for males were in the Hungarian regions of Dél-Alföld and Alföld és Észak, and the Lithuanian region of Vidurio ir vakarų Lietuvos regionas
- for females were in the Belgian regions of Prov. Luxembourg, Prov. West-Vlaanderen and Prov. Namur.

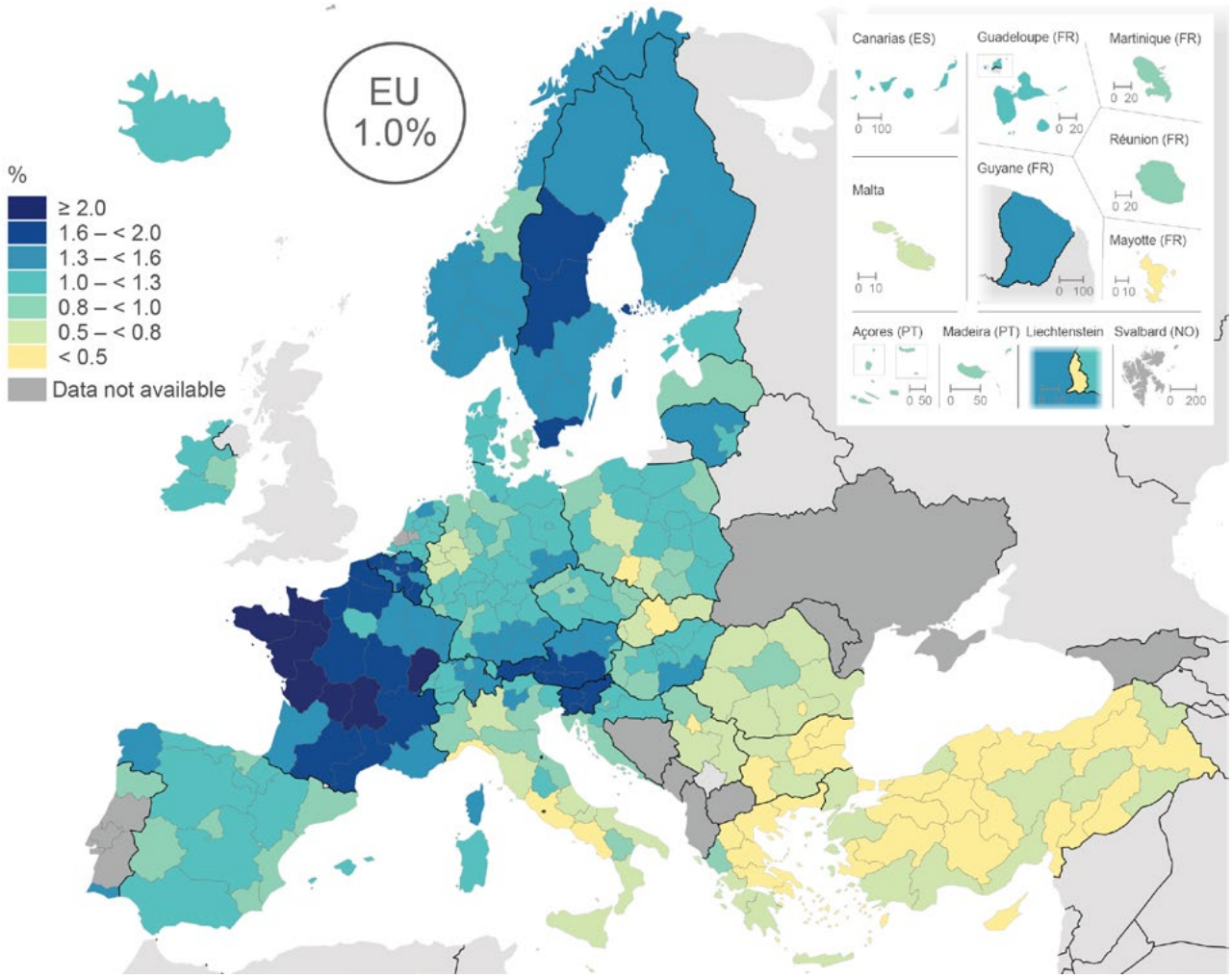
In 2022, intentional self-harm accounted for 1.0% of all deaths in the EU. The highest regional shares, across NUTS level 2 regions, were observed in the French regions of Bretagne and Basse-Normandie, where 2.3% of all deaths were due to intentional self-harm. There were 5 (other) predominantly rural regions in France – Franche-Comté, Poitou-Charentes, Pays de la Loire, Auvergne and Limousin – where intentional self-harm accounted for at least 2.0% of all deaths.

Map 2.4 presents the regional distribution of deaths from intentional self-harm, with the darkest shade of blue identifying 32 regions across the EU where intentional self-harm accounted for at least 1.6% of all deaths in 2022. This group included:

- 15 predominantly rural regions in France (including the 7 already mentioned above with the highest shares)
- 7 out of the 11 regions in Belgium
- 4 regions from Austria, 3 regions from Sweden, both regions in Slovenia and a single region in Finland.

In 2022, 21 regions across the EU reported that less than 0.5% of all deaths were attributed to intentional self-harm (as shown by the light yellow shade in Map 2.4). Nearly all of these regions were in southern or eastern EU countries, with the sole exception being the French outermost region of Mayotte. These regions with the lowest shares were clustered in Greece (7 regions), Bulgaria (4 regions) and Italy (3 regions). Among this group of 21, there were several capital regions, including Lazio in Italy (0.4%), Attiki in Greece (also 0.4%), Bucureşti-Ilfov in Romania (0.3%) and Yugozapaden in Bulgaria (0.1%).

Map 2.4: Deaths due to intentional self-harm
(% of all deaths, by NUTS 2 regions, 2022)



Note: based on standardised death rates per 100 000 inhabitants.

Source: Eurostat (online data code: hlth_cd_asdr2)

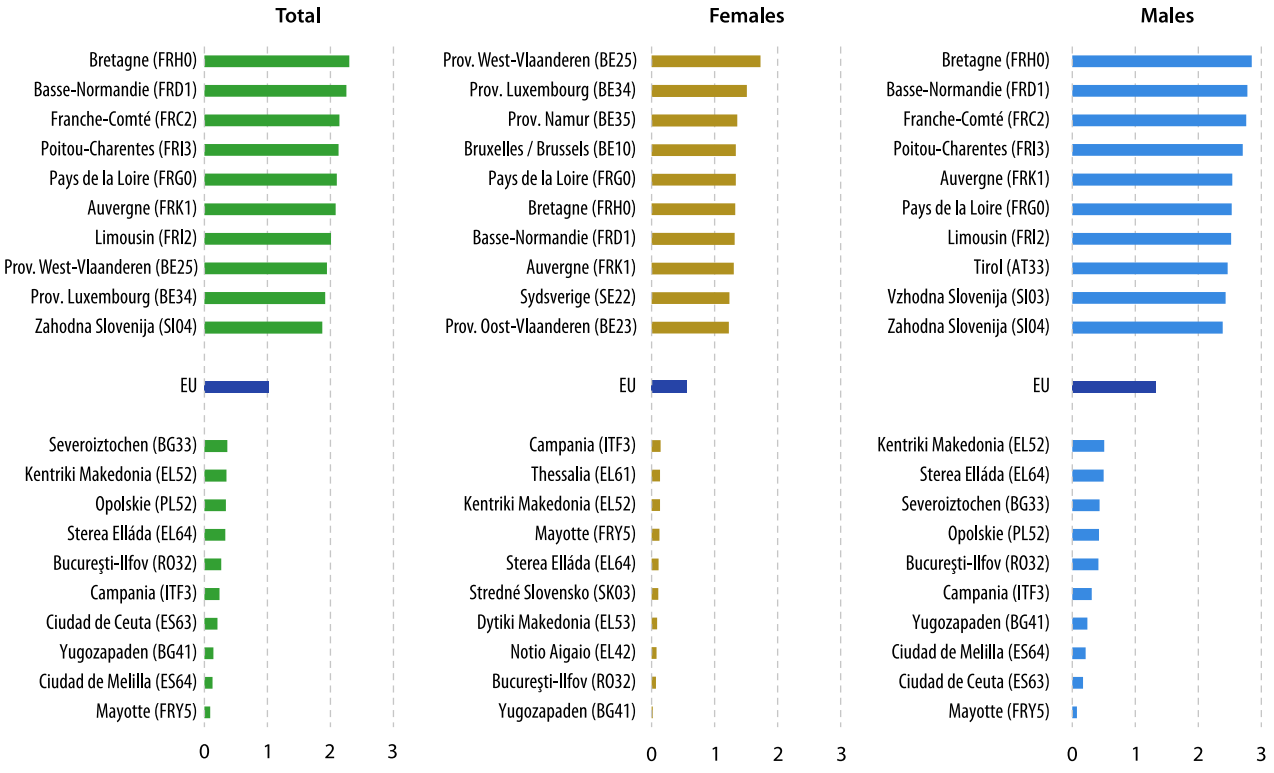
Figure 2.5 highlights those NUTS level 2 regions where intentional self-harm accounted for the highest and lowest shares of all deaths. In 2022, Bretagne in north-western France had the highest share of deaths due to intentional self-harm, at 2.3%.

In 2022, intentional self-harm accounted for 0.6% of all female deaths in the EU. However, there were several regions in Belgium and France that had considerably higher shares. Prov. West-Vlaanderen had the highest share (1.7% of all female deaths were attributed to intentional self-harm), followed by 3 more Belgian regions: Prov. Luxembourg (1.5%), Prov. Namur (1.4%) and the capital region of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (1.3%). The next highest shares were in predominantly rural regions of France: Pays de la Loire, Bretagne, Basse-Normandie and Auvergne (all 1.3%).

Sydsverige in Sweden (1.2%) was the only region from outside of Belgium and France to feature among those with the highest shares of female deaths attributed to intentional self-harm.

In 2022, intentional self-harm accounted for 1.3% of all male deaths in the EU. Much higher shares were recorded in several regions across France, with peaks of 2.8% in Bretagne, Basse-Normandie and Franche-Comté. They were followed by 4 more French regions: Poitou-Charentes (2.7%), Auvergne, Pays de la Loire and Limousin (all 2.5%). Outside of France, the highest shares of male deaths attributed to intentional self-harm were recorded in Tirol in Austria (2.5%) and in both Slovenian regions – Vzhodna Slovenija and Zahodna Slovenija – each with a share of 2.4%.

Figure 2.5: Deaths due to intentional self-harm
(% of all deaths, by sex and NUTS 2 regions, 2022)



Note: based on standardised death rates per 100 000 inhabitants. The figure shows the EU regions with the highest and lowest shares. Utrecht (NL35), Zuid-Holland (NL36), Centro (PT19), Grande Lisboa (PT1A), Península de Setúbal (PT1B), Alentejo (PT1C) and Oeste e Vale do Tejo (PT1D): not available. Voreio Aigaio (EL41) and Ciudad de Melilla (ES64): not available for females.

Source: Eurostat (online data code: hlth_cd_asdr2)

3. Education

Alongside the provision of health care, public expenditure on education is often considered 1 of the most important investments that can be made in people. Education has the potential to drive socioeconomic development forward: this is particularly the case in a globalised world, where a highly skilled workforce can be an advantage in terms of productivity, innovation and competitiveness.

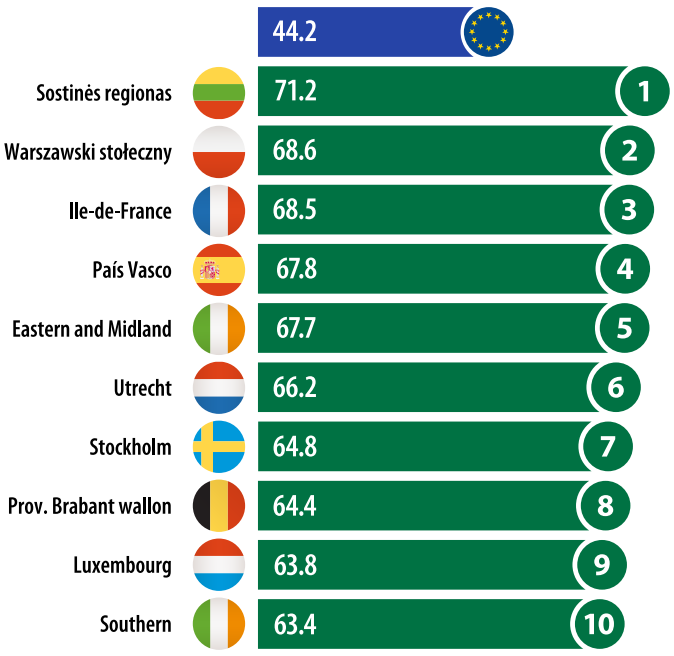
Education and training play a vital role in the economic and social strategies of the EU. In February 2021, a *Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030)* (2021/C 66/01) was adopted. It sets out several policy targets for the European Education Area that are designed to remove barriers to learning and improve access to quality education for all. Several of these targets are referred to within this chapter.

EU policymakers place considerable emphasis on skills development and lifelong learning as essential drivers of competitiveness, innovation and social inclusion. Through a broad set of policies, they seek to equip people with the skills needed to thrive in a rapidly evolving labour market. These efforts focus on increasing participation in education and training, addressing skills mismatches and promoting equal opportunities. They also support progress towards 2 of the EU's key social targets under the European Pillar of Social Rights Action Plan: ensuring that, by 2030, at least 60% of adults participate in training every year, and that the employment rate rises reaches at least 78%.

The infographic below presents data for the 10 NUTS level 2 regions across the EU with the highest shares of people aged 25 to 34 years who have a tertiary level of educational attainment. In 2024, several of the highest shares were recorded in capital regions. For example, 71.2% in Sostinės regionas (Lithuania), 68.6% in Warszawski stołeczny (Poland) and 68.5% in Ile-de-France (France).

This chapter presents data following the common progression of pupils and students through different levels of the education system (according to the International standard classification of education (ISCED); see box for more details), before looking at educational attainment levels, the transition from education into work and adult education and training. Administrative data on the participation of pupils and students in various levels of education generally refer to 2023, while the latest information from other datasets (surveys) generally concerns 2024.

In 2023, there were an estimated 94.5 million pupils and students enrolled across the EU in all levels of education from pre-primary to tertiary (as covered by ISCED levels 02 to 8); this estimate is based on the latest information available.



(% of people aged 25–34 years, by NUTS 2 regions, 2024)

Note: Mayotte (FRY5) and Åland (FI20), not available.

Source: Eurostat (online data code: edat_lfse_04)

More about the data: classifying education levels

As national education systems vary in terms of structure and curricular content, statistics on education and training are compiled according to the international standard classification of education (ISCED). This is the reference classification for organising formal education programmes and related qualifications by education levels and fields into internationally agreed categories.

The most recent version of the ISCED classification – ISCED 2011 – was adopted by the UNESCO General Conference in November 2011 and identifies the following levels of education:

- early childhood education – ISCED level 0
  - early childhood educational development – ISCED level 01
  - pre-primary education – ISCED level 02
- primary education – ISCED level 1
- lower secondary education – ISCED level 2
- upper secondary education – ISCED level 3
- post-secondary non-tertiary education – ISCED level 4
- short-cycle tertiary education – ISCED level 5
- bachelor's or equivalent level – ISCED level 6
- master's or equivalent level – ISCED level 7
- doctoral (PhD) or equivalent level – ISCED level 8.

School attendance is compulsory – at least for primary and lower secondary education – across all of the EU countries.

Young people who have successfully completed lower secondary education may enter upper secondary education (ISCED level 3), when they generally have to choose certain subjects or specialisations to study, alongside their future education and/or career paths. Upper secondary (or intermediate) education typically ends in the EU when students are aged 17 or 18 years. These programmes are designed primarily to prepare students so that they may continue their studies at a tertiary level (general programmes), or to provide them with skills and competencies that are relevant for a specific occupation or trade (vocational programmes).

The term 'tertiary education' is used to refer to ISCED levels 5 to 8. It builds on secondary education, providing learning activities at a higher level of complexity. This level of higher education – provided by universities and other tertiary educational institutions – can play an important role in society, fostering innovation, while increasing economic development and growth.

Enrolments

PARTICIPATION RATES IN EARLY CHILDHOOD EDUCATION

Research has shown that early experiences of children often play a critical role in their long-term development. Early childhood education and care programmes, which are intentionally designed to support children's cognitive, language, physical and socio-emotional development, are considered as educational in the ISCED classification (ISCED level 0, early childhood education) ([1]).

Early childhood education programmes are typically designed to introduce young children to organised instruction outside of the family context. Programmes have an intentional education component and target children below the age of entry into primary education (ISCED level 1). Early childhood education programmes constitute the 1st level of education and training systems and play a key role in redressing 'unequal' life chances, tackling inequalities by preventing the formation of early skills gaps.

([1]) At this age, learning activities are very different to the traditional methods adopted within the context of compulsory schooling, and – most of the time – take place alongside / as part of caring activities (in other words, supervision, nutrition and health). According to ISCED, programmes providing only childcare – without a sufficient set of purposeful learning activities – are not classified as early childhood education.

More about the data: statistics on early childhood education and care

Within the strategic framework for European cooperation in education and training towards the European Education Area and beyond, a key policy target concerns the share of young children – between 3 years of age and the starting age of compulsory primary education – who participate in early childhood education and care. Eurostat data on early childhood education (ISCED level 0) are used to measure progress towards the goal of having at least 96% of children in this age group participating in early childhood education and care by 2030 ([2]).

Within this section, regional statistics presented for Germany relate to NUTS level 1 regions, while national data are presented for the Netherlands.

Based on the latest available data, there were an estimated 15.7 million children (of any age) enrolled in early childhood education across the EU in 2023 (data for Belgium, Greece, Malta and Portugal only cover pre-primary education). Map 3.1 shows a more detailed picture for 193 NUTS level 2 regions, it covers pupils between the age of 3 and the starting age of compulsory education at primary level. While the participation rate in early childhood education averaged 94.0% across the whole of the EU, there were considerable differences in regional rates. The highest rates were generally recorded in the westernmost regions of the EU and lower rates across most eastern regions. Capital regions had higher than average participation rates in some EU countries (for example, Ireland, Hungary and Poland), whereas in others they recorded lower than average rates (for example, Italy, Romania or Sweden).

In 2023, there were 19 regions across the EU where practically every child (100.0%) between the age of 3 years and the age for starting compulsory primary education participated in early childhood education

By 2023, the share of children between the age of 3 years and the age for starting compulsory primary education participating in early childhood education had already reached the EU's strategic target of 96.0% in almost half of all EU regions for which data are available (94 out of 193 regions); these regions are shaded using 3 different tones of teal in Map 3.1. The 94 regions that had already met or surpassed the target were concentrated across regions from Belgium, Germany, Spain, France, Italy, Hungary, Poland and Sweden. Additionally, 2 regions from each of Denmark and Portugal, and single region from Ireland, Lithuania and Austria had also reached the policy target of 96.0%; this was also the case in Luxembourg. At the top end of the distribution, 19 regions in the EU had participation rates of almost 100.0% (as shown by the darkest shade of teal). More than half of these 19 regions were concentrated in France (10 regions), with a further 5 regions in neighbouring Belgium.

In Map 3.1, the regions with participation rates below the strategic target of 96.0% are shaded using different golden tones. In 2023, the share of young children participating in early childhood education was less than 85.0% in 20 out of the 193 regions for which data are available. These regions, with relatively low participation rates (as shown by the darkest shades of gold) were concentrated in eastern EU countries, including all 8 regions of Romania, 3 regions in Czechia, 2 regions from each of Croatia and Slovakia and a single region from Bulgaria. This group also included the French island regions of Mayotte and Corse, the German region of Bremen and the Austrian region of Steiermark.

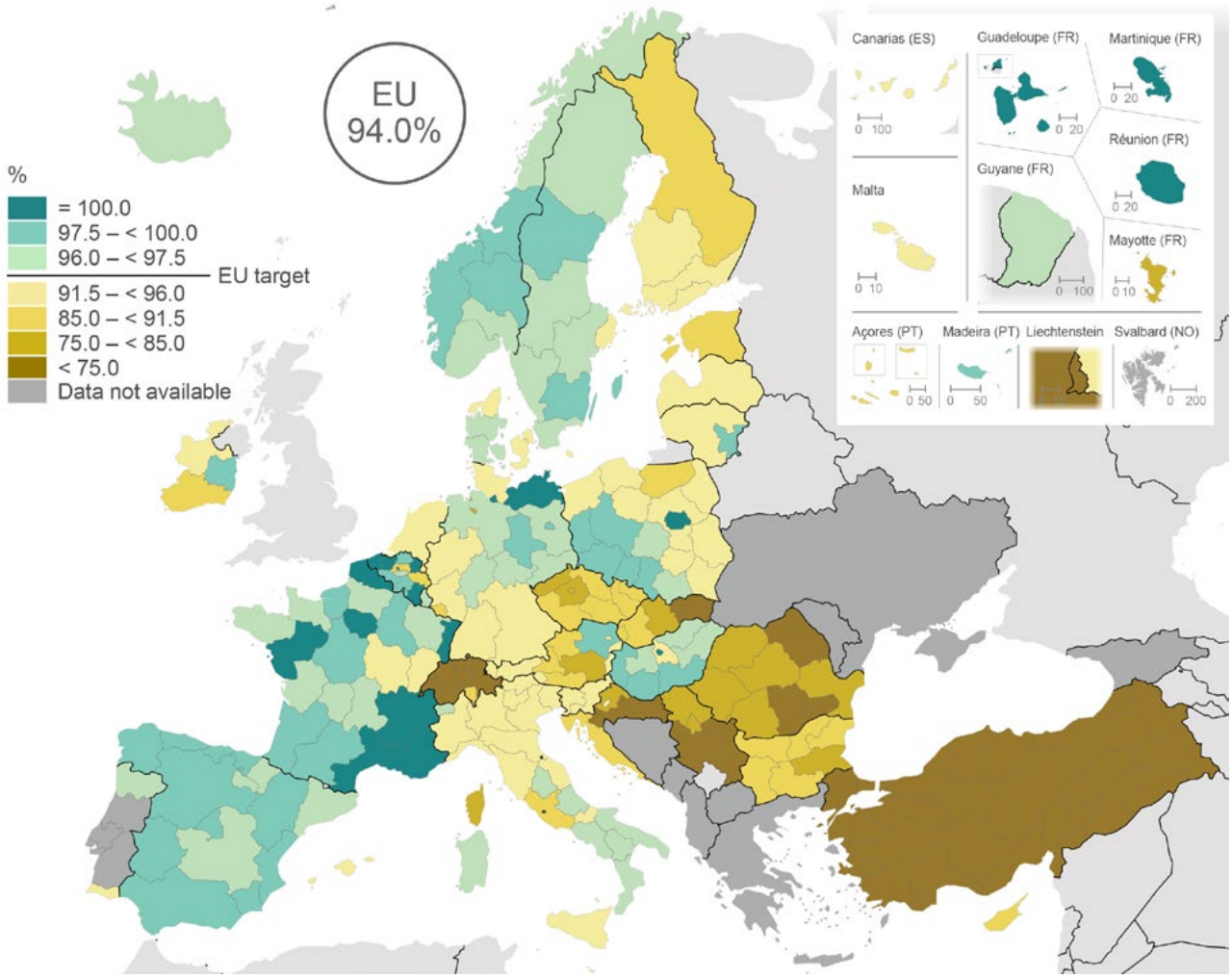
Participation in tertiary education

The number of people enrolling in tertiary education across the EU has risen in recent decades, reflecting several factors, such as:

- demographic patterns
- changes in labour force participation (particularly for women)
- increased demand from employers for tertiary education qualifications (for jobs that previously required a secondary level of education)
- an increased awareness of the benefits of tertiary education
- access to student finance, scholarships and other benefits
- different patterns of learning mobility (within and from outside of the EU)
- an increased demand for longer tertiary education (such as the extension from a bachelor's degree to master's or doctoral (PhD) studies)
- an increasing share of adults participating in lifelong learning.

([2]) It should be noted that the wording of the EU target is for participation in 'early childhood education and care' and not 'early childhood education'. Early childhood education and care refers to any regulated arrangement for children from birth to compulsory primary school age, regardless of the programme content, whereas early childhood education refers specifically to ISCED programmes. The former encompasses not only early childhood education but also programmes which do not meet the minimum requirements to be classified as such (for example, childcare only programmes). Although the EU target is for participation in early childhood education and care, the Regulation stipulates that Eurostat's data on participation rates in early childhood education will be used to measure progress towards this target. This means that, in practice, the EU target for participation in early childhood education and care programmes concerns only those programmes which meet criteria to be classified as early childhood education. For more details on the difference between these 2 terms, please consult an article on early childhood education statistics.

Map 3.1: **Participation rates in early childhood education**
(%, by NUTS 2 regions, 2023)



Note: pupils participating in early childhood education from age 3 years to the starting age of compulsory education at primary level, as a share of the population of the corresponding age. Germany: NUTS level 1. The Netherlands: national data. Liechtenstein and Türkiye: 2022.

Source: Eurostat (online data code: educ_uoe_enra22)

There were 18.8 million tertiary education students enrolled across the EU in 2023

There were approximately 18.8 million students enrolled in the EU's tertiary education institutions in 2023. As such, tertiary students accounted for almost 1 in 5 (19.6%) of the total number of pupils and students enrolled within the EU's education system. A majority of the students enrolled in the tertiary education sector were female (54.8% of the total).

In 2023, 11.2 million EU students were enrolled in bachelor's programmes. This figure was approximately twice as high as the count of students enrolled in master's programmes (5.5 million). The other 2 types of tertiary programmes had fewer students: 1.4 million enrolled in short-cycle programmes (either academic or vocational) and 0.7 million in doctoral programmes. As noted above, females made up the majority of students enrolled in tertiary education. This gender gap was particularly apparent among students studying for a master's degree (where 58.3% were female) and somewhat smaller among students studying for a bachelor's degree (where 54.1% were female). By contrast, males accounted for a small majority of the students pursuing a short-cycle tertiary education qualification (50.5%) and a doctoral degree (also 50.5%).

Unsurprisingly, the highest numbers of tertiary students were recorded in urban regions from some of the most populous EU countries. The German region of Nordrhein-Westfalen (805 000) and the French capital region of Ile-de-France (771 000) were the only regions within the EU to record more than 0.5 million tertiary students enrolled in 2023. After Nordrhein-Westfalen and Ile-de-France,

13 regions had between 250 000 and 500 000 tertiary students enrolled:

- 4 regions from Spain – Comunidad de Madrid, Cataluña, Andalucía and Comunitat Valenciana
- 3 regions from Germany – Bayern, Baden-Württemberg and Hessen (all NUTS level 1)
- 3 regions from Italy – Lombardia, Lazio and Campania
- the capital regions of Attiki in Greece and Warszawski stołeczny in Poland
- the French region of Rhône-Alpes.

Figure 3.1 shows the proportion of all tertiary students enrolled in short-cycle, bachelor's, master's or doctoral degrees. Each national education system has its own specific characteristics, with a particular offer of fields or levels of education. This may explain why some regions have no students enrolled for short-cycle tertiary education qualifications or for a master's or doctoral (PhD) degree, as these educational levels may not be offered. In such cases, the shares of students enrolled in other types of tertiary education may be higher than elsewhere. For example, in the Finnish region of Åland, a bachelor's degree was the only form of tertiary education available and therefore accounted for 100.0% of students enrolled in tertiary education.

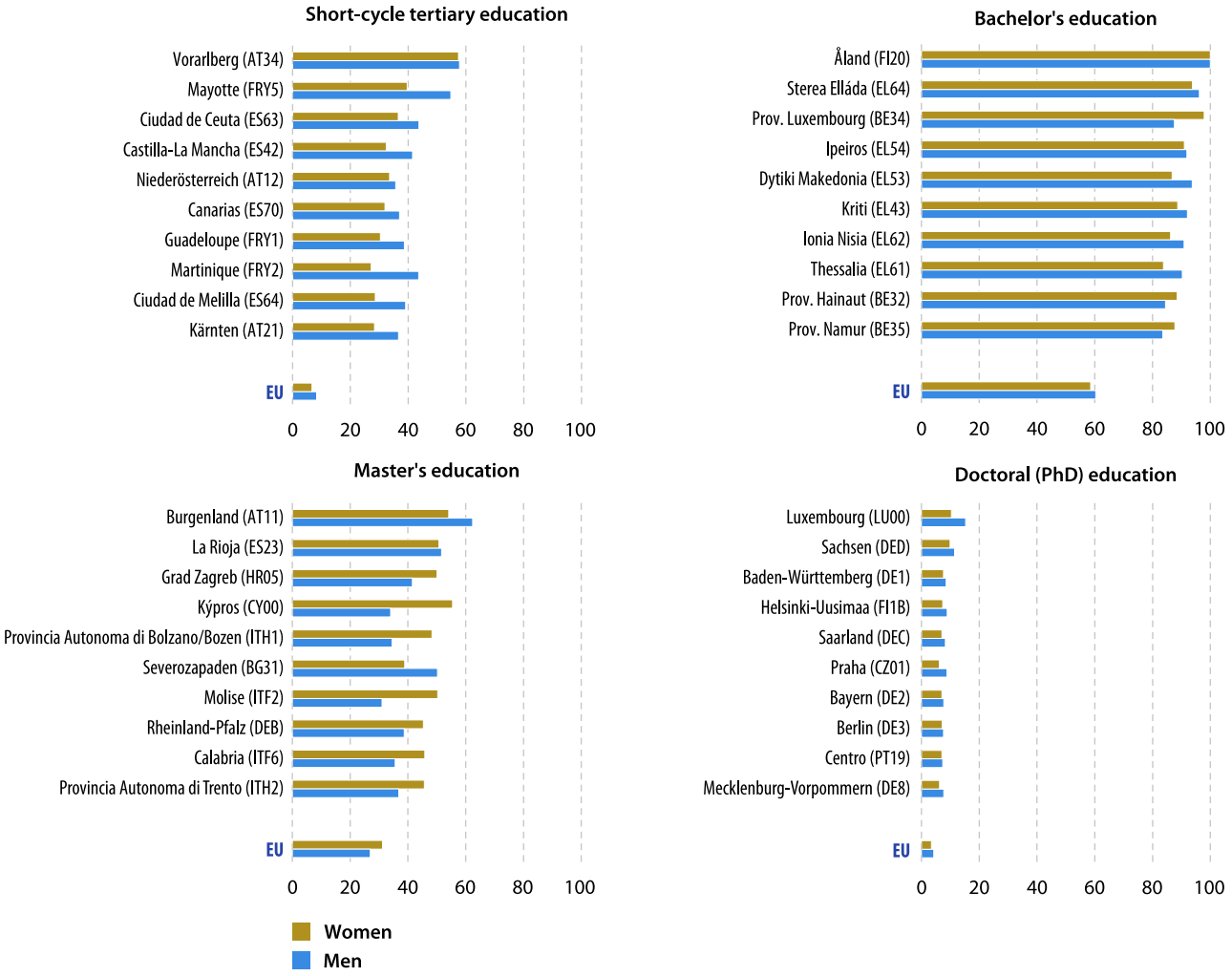
In 2023, 7.5% of all tertiary students in the EU were enrolled to study for a short-cycle tertiary education qualification; the share was somewhat higher among male short-cycle students (8.3% of all male tertiary students) than it was for female short-cycle students (6.7% of all female tertiary students). The westernmost Austrian region of Vorarlberg was the only NUTS level 2 region to report more than half of its tertiary students were enrolled to follow a short-cycle tertiary education course, with a 57.6% share. There were also relatively high shares of tertiary students following short-cycle courses in several (other) regions of Austria and in several regions of France and Spain.

There were 11.2 million students across the EU enrolled to study for a bachelor's education in 2023, a majority of them were female – 6.0 million compared with 5.1 million male students. Together, these students enrolled to study for a bachelor's education made up 59.4% of all tertiary education students, with a higher relative share for male students (60.4% of all male students enrolled in tertiary education) compared with female students (58.6% of all female students enrolled in tertiary education). Among NUTS level 2 regions, there were 6 regions where more than 9 out of every 10 tertiary students followed a bachelor's education in 2023: the Finnish region of Åland, as noted above, the southern Belgian region of Prov. Luxembourg and 4 Greek regions, namely, Sterea Elláda, Ipeiros, Dytiki Makedonia and Kriti. The highest numbers of tertiary students studying for a bachelor's degree were concentrated in Nordrhein-Westfalen (494 000; NUTS level 1), followed by the French, Spanish and Greek capital regions of Ile-de-France (329 000), Comunidad de Madrid (258 000) and Attiki (247 000).

Of the 5.5 million students enrolled to study for a master's education across the EU in 2023, 3.2 million were female and 2.3 million were male. This equated to 29.3% of all tertiary students, with a higher share among females (31.2% of all females enrolled to study for a tertiary education were master's students) than among males (27.0%). The largest numbers of students studying for a master's degree were in Ile-de-France (314 000; just 16 000 fewer than were studying for a bachelor's degree in the French capital region) and 2 German regions (both NUTS level 1) – Nordrhein-Westfalen (271 000) and Bayern (172 000). Burgenland in eastern Austria (58.2%) and La Rioja in northern Spain (51.0%) were the only NUTS level 2 regions to report a majority of their tertiary students were enrolled to study for a master's education.

In 2023, the 717 000 doctoral or equivalent students enrolled across the EU were distributed relatively evenly between the sexes, with 362 000 male and 355 000 female students. Doctoral students made up 3.8% of all tertiary students in the EU, with a higher share of male tertiary education students enrolled to study for a doctoral degree (4.3%), while the corresponding share among females was 3.4%. Across EU regions, Luxembourg (12.7%) and the eastern German region of Sachsen (10.7%; NUTS level 1) were the only regions to report that more than 1 in 10 tertiary students followed a doctoral education. The next highest shares were recorded for the Finnish capital region of Helsinki-Uusimaa (8.1%), 4 more German regions (NUTS level 1) – Baden-Württemberg (8.1%), Saarland (7.7%), Bayern and Berlin (both 7.4%) – and the Czech capital region of Praha (also 7.4%). The highest numbers of students studying for a doctoral degree were recorded in 3 German regions (NUTS level 1): Nordrhein-Westfalen (41 000), Bayern (33 000) and Baden-Württemberg (32 000).

Figure 3.1: Students enrolled in tertiary education
(% of female/male tertiary students in each level of tertiary education, by NUTS 2 regions, 2023)



Note: the figure shows the 10 EU regions with the highest shares (ranked on the average share for both sexes). Germany: NUTS level 1. Subject to data availability.

Source: Eurostat (online data code: educ_uoe_enrt06)

Educational attainment

A basic level of education is desirable for all, as it provides the opportunity to participate in economic and social life. Nevertheless, people with higher levels of educational attainment generally tend to experience a wider range of job opportunities, higher levels of income and tend to be more satisfied with life, while they usually have a lower likelihood of being unemployed.

More about the data: educational attainment

Educational attainment is measured by looking at the highest level of education – based on the ISCED classification – that an individual has successfully completed. These statistics pertain to the highest level of attainment reached prior to the moment of the survey interview. Note that some people in the target age range might:

- still be studying (for a higher level of education)
- have completed their highest level of education in a different region from where they were living at the time of the survey.

PEOPLE WITH AT LEAST AN UPPER SECONDARY EDUCATION QUALIFICATION

The strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021 to 2030) includes a complementary indicator that measures progress in relation to educational attainment: it is defined as the share of people aged 20 to 24 years with at least an intermediate (or upper secondary) level of educational attainment. The target is that by 2030 at least 90% of young people should meet this criterion.

Almost 1 in 3 regions across the EU have already reached the EU's target of 90.0%

In 2024, 84.3% of people in the EU aged 20 to 24 years had attained at least an intermediate level of education (in other words, they had at least an upper secondary level of educational attainment as defined by ISCED levels 3 to 8). This latest figure marks a steady rise over the past 2 decades, up from 76.8% in 2002 when the time series began. The upward development was relatively consistent, with the only pauses occurring in 2009 (no change) and in 2022, when a sharp fall in Germany affected the overall EU average.

Map 3.2 shows information about the share of people aged 20 to 24 years with at least an intermediate level of education. In 2024, some 31% of EU regions – 75 out of 242 NUTS level 2 regions for which data are available – had already reached or exceeded the EU's target of 90.0%; they are coloured in the 3 different shades of teal. These 75 regions were particularly concentrated in (northern) Belgium, Czechia, Ireland, Greece, Croatia, Poland and Slovakia, where a large proportion of regions reported upwards of 90.0% of people aged 20 to 24 years with at least an intermediate level of education.

At the top end of the distribution, there were 25 NUTS level 2 regions where the share of people aged 20 to 24 years with at least an intermediate level of educational attainment was 94.0% or higher in 2024 (as shown by the darkest shade of teal). This group included:

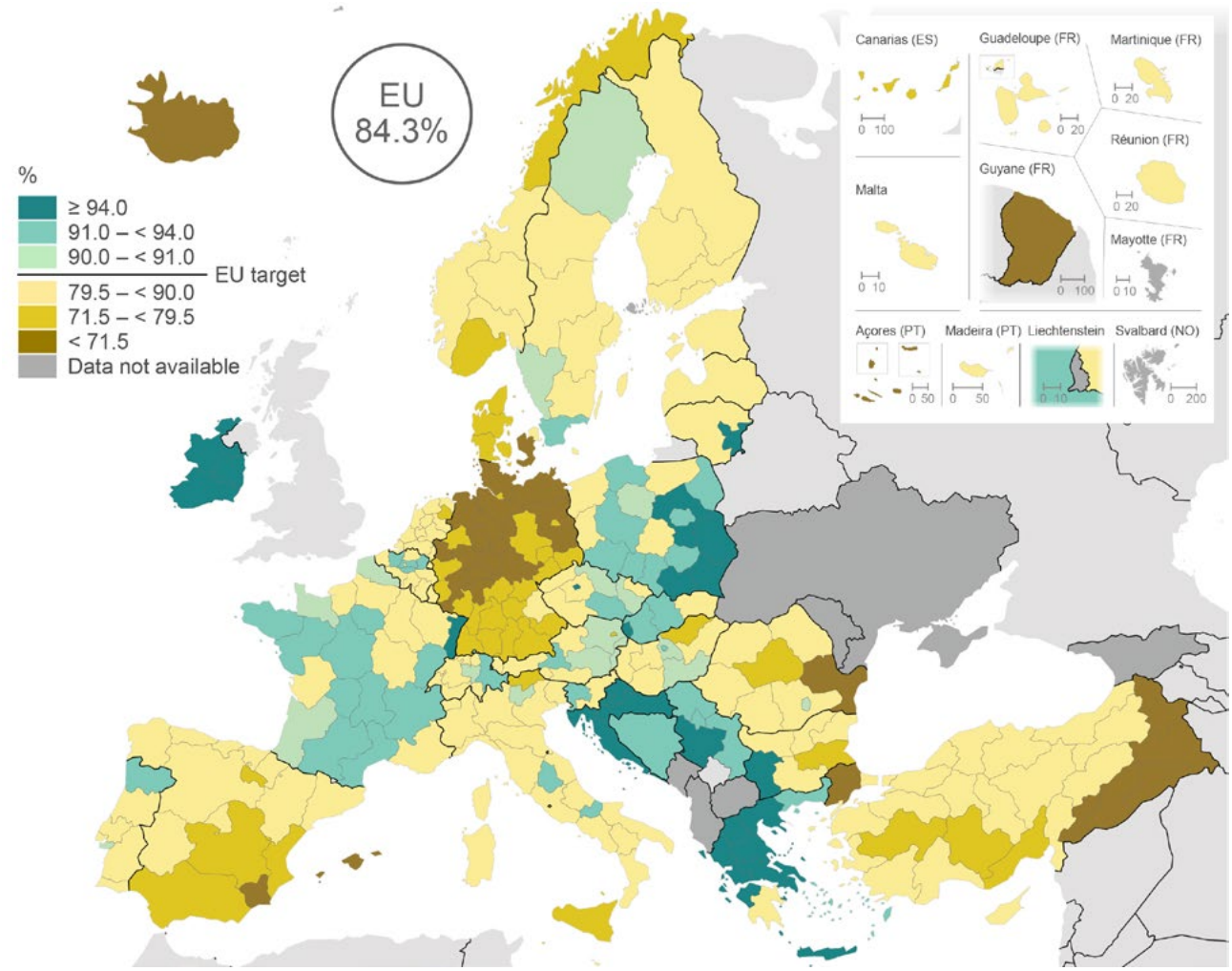
- all 3 regions in Ireland
- all 4 regions of Croatia
- 9 out of 13 regions in Greece, including the capital region of Attiki
- 4 out of 17 regions in Poland
- the capital regions of Yugozapaden (Bulgaria), Praha (Czechia), Sostinės regionas (Lithuania) and Bratislavský kraj (Slovakia)
- Alsace in eastern France.

In 2024, the highest proportions of young people aged 20 to 24 years who had attained at least an intermediate level of education were found in the western Greek region of Dytiki Elláda (99.7%) and the Croatian capital region of Grad Zagreb (99.2%).

At the other end of the range, 25 NUTS level 2 regions reported that, in 2024, fewer than 71.5% of all young people aged 20 to 24 years had attained at least an intermediate level of education (as shown by the darkest shade of gold in Map 3.2). Germany accounted for a majority (17) of these regions, most of which were clustered in the northern half of the country. The remainder of this group was composed of 4 regions from Spain (including the 2 autonomous cities), together with single regions from Denmark, France, Portugal and Romania.

In 2024, the northern German region of Lüneburg (59.2%) recorded the lowest share of young people aged 20 to 24 years who had attained at least an intermediate level of educational attainment. It was the only region across the EU where this share was below 60.0%. The next lowest levels were observed in the French outermost region of Guyane (62.3%) and the central German region of Gießen (63.3%).

Map 3.2: Educational attainment – at least upper secondary
(% of people aged 20–24 years, by NUTS 2 regions, 2024)



Note: ISCED levels 3–8. Bosnia and Herzegovina: 2023. Prov. Vlaams-Brabant (BE24), Trier (DEB2), Ciudad de Ceuta (ES63), Ciudad de Melilla (ES64) and Corse (FRM0): low reliability.

Source: Eurostat (online data code: edat_lfse_04)

PEOPLE WITH A TERTIARY LEVEL OF EDUCATIONAL ATTAINMENT

Map 3.3 shows the regional distribution of tertiary educational attainment in 2024 (in other words, a higher level of educational attainment, as defined by ISCED levels 5 to 8). The data refer to people aged 25 to 34 years, by which age the vast majority of the population have completed their education. The strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021 to 2030) includes an EU-wide target: by 2030, at least 45% of people aged 25 to 34 years should have attained a tertiary level of education.

More than 1 in 3 EU regions have already reached the policy goal for tertiary educational attainment

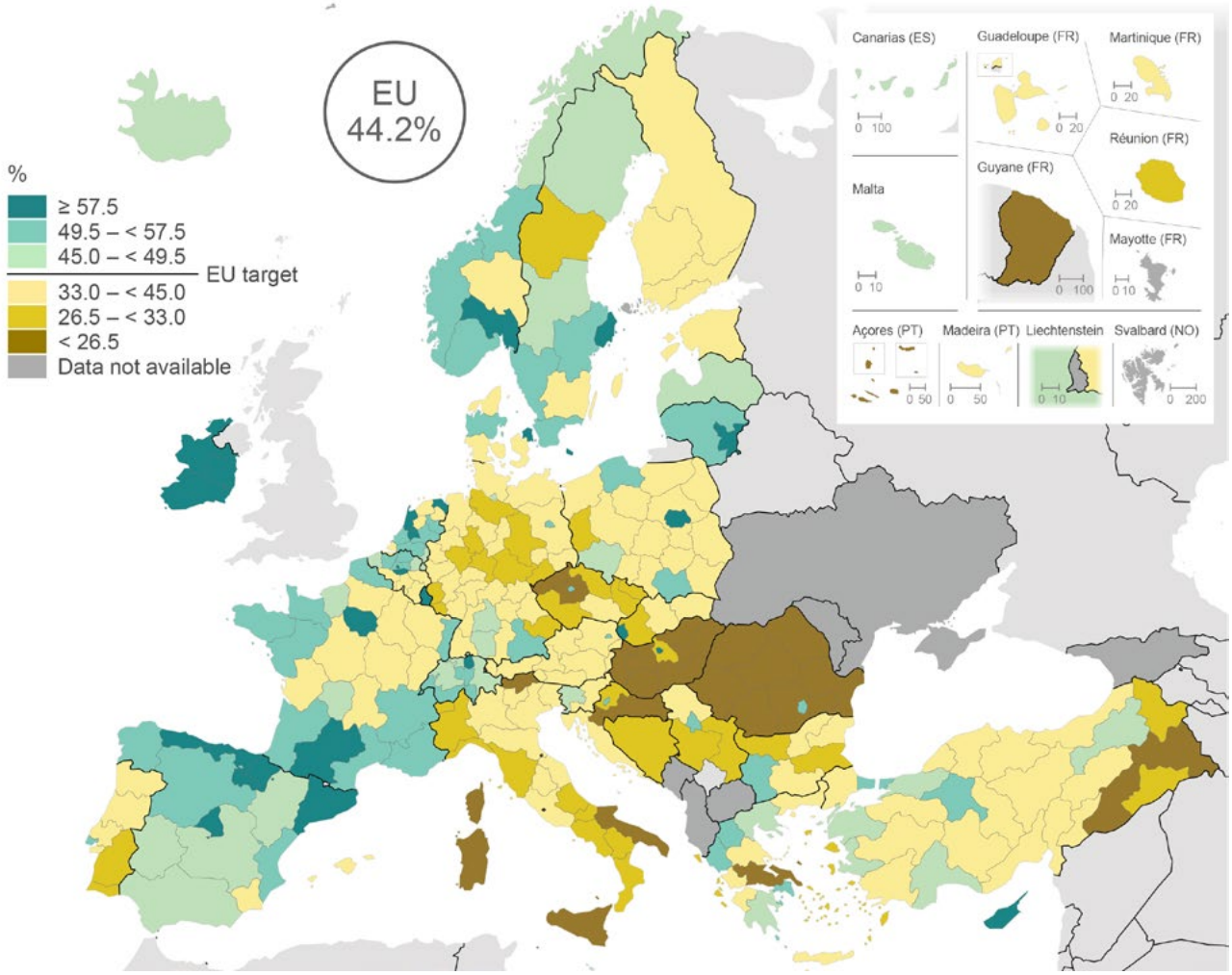
In 2024, 44.2% of the EU population aged 25 to 34 years had a tertiary level of educational attainment; some people within this age group might still be studying. Of the 242 NUTS level 2 regions for which data are available, 84 had already reached or surpassed the EU's policy target of 45.0% (as shown by 3 shades of teal in Map 3.3).

At the top end of the distribution, 25 regions reported that at least 57.5% of young people aged 25 to 34 years had attained a tertiary level of education in 2024. These regions attract highly qualified individuals, creating significant 'pull effects' due to the diverse educational, employment, and social opportunities they offer. This group included several

capital regions and economic hubs, often marked by high-quality universities and a focus on research and innovation. It comprised:

- the capital regions of Belgium, Denmark, Ireland, Spain, France, Lithuania, Hungary, the Netherlands, Poland, Slovakia and Sweden
- 6 additional regions from Spain, clustered in the north (with specialisations in, among other activities, advanced manufacturing and automotive industries)
- both remaining regions of Ireland (pharmaceuticals, life sciences and electronics)
- Utrecht and Groningen in the Netherlands (high-tech industries and green technologies)
- Prov. Brabant Wallon in Belgium (knowledge-intensive industries)
- Midi-Pyrénées in France (aerospace)
- Cyprus and Luxembourg.

Map 3.3: Educational attainment – tertiary
(% of people aged 25–34 years, by NUTS 2 regions, 2024)



Note: ISCED levels 5–8. Bosnia and Herzegovina: 2023. Prov. Vlaams-Brabant (BE24), Trier (DEB2), Ciudad de Ceuta (ES63), Ciudad de Melilla (ES64), Corse (FRM0) and Região Autónoma dos Açores (PT20): low reliability.

Source: Eurostat (online data code: edat_lfse_04)

At the bottom end of the distribution, 24 NUTS level 2 regions reported that fewer than 26.5% of all people aged 25 to 34 years had attained a tertiary level of educational attainment in 2024 (as shown by the darkest shade of gold in Map 3.3). These regions were primarily rural or geographically remote/isolated, often characterised by relatively large agricultural sectors and limited opportunities for highly skilled employment. In several regions, vocational education plays a dominant role, with young people entering the labour market via apprenticeships or training schemes, rather than through a tertiary education qualification. This group of 24 regions was mainly concentrated in eastern and southern EU countries and included:

- 7 out of the 8 regions in Romania, the exception being Bucureşti-Ilfov (the capital region)
- 6 out of the 8 regions in Hungary, the exceptions being Budapest (the capital region) and the surrounding region of Pest
- 4 regions in Italy – including the islands of Sicilia and Sardegna
- 2 regions from Czechia – Severozápad and Střední Čechy
- 2 regions from France – including the island region of Corse and the outermost region of Guyane
- 3 other regions from across the EU – Sterea Elláda in Greece, Panonska Hrvatska in Croatia, the island region of Região Autónoma dos Açores in Portugal.

In 2024, the highest share of people aged 25 to 34 years with a tertiary level of educational attainment was recorded in the Lithuanian capital region of Sostinės regionas, at 71.2%

Figure 3.2 provides more detail for those EU regions with the highest and lowest shares of people having a tertiary level of educational attainment. In 2024, there were 5 NUTS level 2 regions that reported more than 2 out of 3 people aged 25 to 34 years having attained a tertiary level of educational attainment. Most of these were capital regions – the only exception being the northern Spanish region of País Vasco (67.8%) – the others were:

- Sostinės regionas in Lithuania (71.2%)
- Warszawski stołeczny in Poland (68.6%)
- Ile-de-France in France (68.5%)
- Eastern and Midland in Ireland (67.7%).

In 2024, Romania accounted for 6 out of the 7 regions across the EU with the lowest shares of tertiary educational attainment among people aged 25 to 34 years. Sud-Muntenia had the lowest share (15.3%), followed by Sud-Est (15.8%) and Sud-Vest Oltenia (17.1%). The only region from outside this group was Severozápad in Czechia, where 19.1% of people aged 25 to 34 years had attained a tertiary level of educational attainment.

Figure 3.2 extends the analysis of tertiary educational attainment by providing information by sex. As was the case for the total population, the Lithuanian capital region of Sostinės regionas had the highest share of women aged 25 to 34 years having attained a tertiary level of educational attainment, at 79.0% in 2024. However, the pattern for men was different, with the northern Spanish region of País Vasco having the highest share, with 66.6% of men in this age group having attained a tertiary level of education.

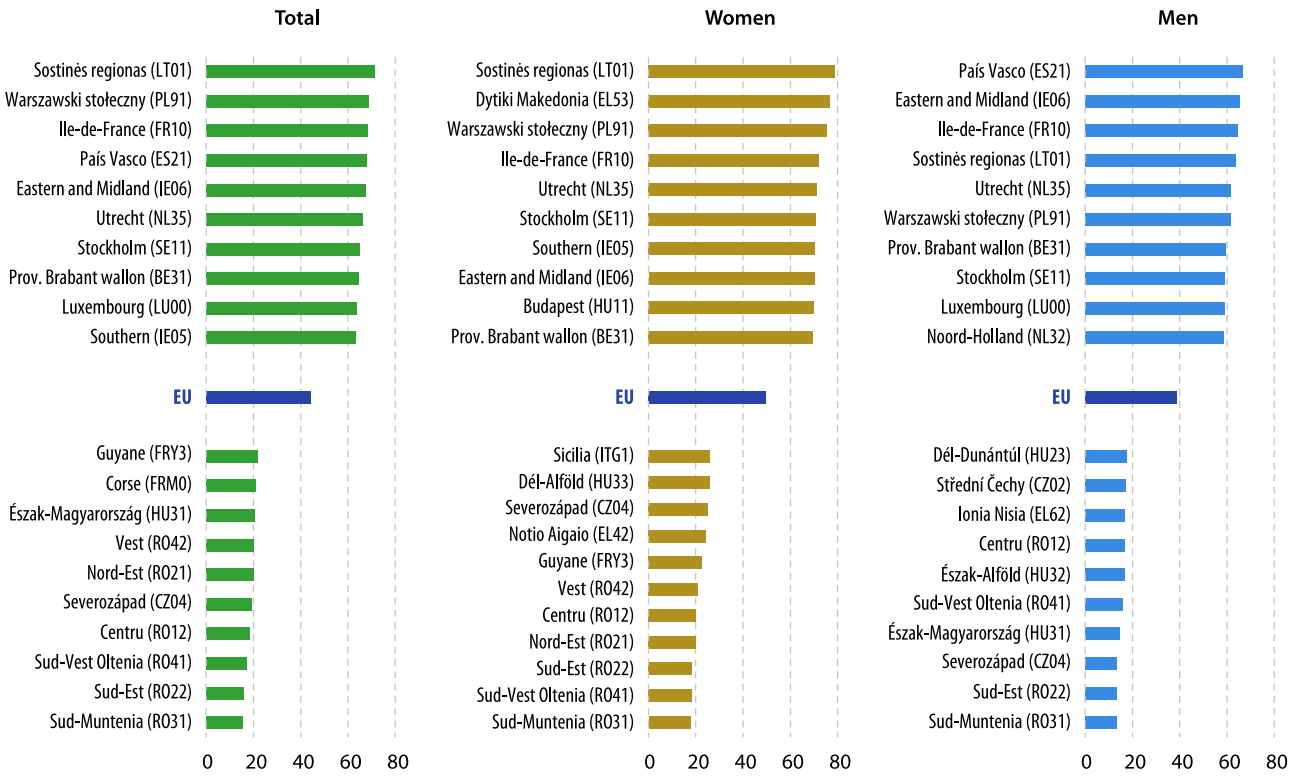
Among the EU regions with the highest shares of people aged 25 to 34 years with a tertiary level of educational attainment in 2024, 7 regions featured in the top 10 both for women and for men. However:

- Dytiki Makedonia (northern-western Greece), Southern (Ireland) and Budapest (the capital region of Hungary) were only present within the top 10 regions for women
- País Vasco (northern Spain), Luxembourg and Noord-Holland (the capital region of the Netherlands) were only present within the top 10 regions for men.

Across the EU, approximately half of all women aged 25 to 34 years had a tertiary level of educational attainment

In 2024, the EU's tertiary education gender attainment gap for people aged 25 to 34 years was 11.2 percentage points. Approximately half (49.9%) of all women in this age group had attained a tertiary level of education, considerably higher than the corresponding share for men (38.7%). The largest gender attainment gaps – with higher shares for women – were observed in the Greek regions of Dytiki Makedonia (51.2 percentage points) and Ipeiros (33.7 points), followed by the central Polish region of Świętokrzyskie (30.2 points). At the opposite end of the distribution, only 4 regions across the EU had a gender attainment gap with a higher share for men. The largest of these was in the Greek region of Notio Aigaio, where the share for men was 4.4 percentage points higher than for women, followed by the German regions of Chemnitz (2.7 points), Tübingen (1.3 points) and Bremen (0.6 points).

Figure 3.2: Educational attainment – tertiary
(% of people aged 25–34 years, by sex and NUTS 2 regions, 2024)



Note: ISCED levels 5–8. The figure shows those EU regions with the highest and lowest shares of tertiary educational attainment among people aged 25–34 years. The rankings include more than 10 regions if several regions have identical values. Corse (FRM0): low reliability for total. Guyane (FRY3): low reliability for women. Ionia Nisia (EL62): low reliability for men. Mayotte (FRY5) and Åland (FI20): not available. Trier (DEB2) and Corse (FRM0): not available for women and men. Valle d'Aosta/Vallée d'Aoste (ITC2) and Região Autónoma dos Açores (PT20): not available for men.

Source: Eurostat (online data code: edat_lfse_04)

Transition from education to work

When students complete their studies, several barriers can restrict their transition into the labour market. These include a lack of relevant work experience, insufficient skills, limited job opportunities in the region where they reside or high unemployment levels during an economic downturn. The penultimate section of this chapter provides an insight into the situation of young people aged 18 to 24 years as they seek to move from education into work.

EARLY LEAVERS FROM EDUCATION AND TRAINING

Within the EU, education policy seeks to ensure that everyone (irrespective of age) has the skills, knowledge and capabilities to develop their careers. The transition from education into work may prove particularly difficult for people with low levels of literacy and numeracy, those who leave education at an early age, and people coming from disadvantaged backgrounds. A particular area of concern is the proportion of early leavers from education and training. They are defined here as individuals aged 18 to 24 years who have at most a lower secondary level of educational attainment (ISCED levels 0 to 2) and who were not engaged in any further education and training (during the 4 weeks preceding the European Union labour force survey (EU-LFS)). This indicator is 1 of 7 key targets outlined in the strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021 to 2030); the EU has set a goal to reduce the proportion of early leavers to less than 9% by 2030.

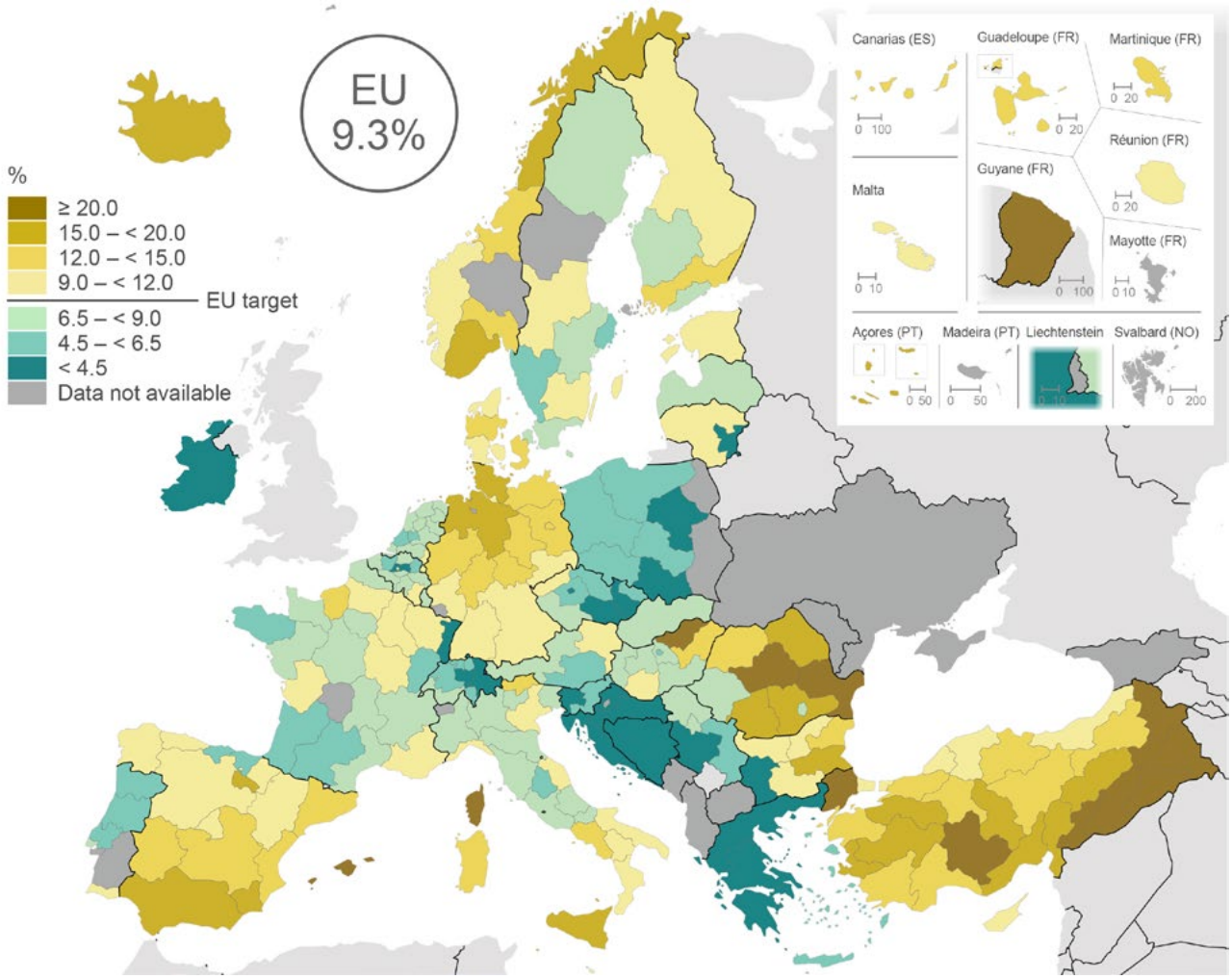
Within the EU, the share of young people who were early leavers from education and training was 9.3% in 2024

Over the past 2 decades, the proportion of early leavers from education and training aged 18 to 24 years has steadily declined across the EU. Starting from 16.9% in 2002 (the 1st year of the time series), the share of early leavers fell each year until 2017, reaching 10.5%. Although the rate remained unchanged in 2018, it resumed its downward path during the subsequent 6 years. By 2024, 9.3% of young people in the EU had at most a lower secondary level of educational attainment and were not engaged in any further education and training; as such, the latest rate was within 0.3 percentage points of the policy target set for 2030.

Within the EU, the number and share of early leavers from education and training is influenced by a range of factors, including geography and sex.

- Spatially, the share of early leavers tends to be higher in sparsely populated regions and former industrial heartlands. This may be linked, among other reasons, to limited educational opportunities and weak local labour markets, which discourage young people from staying (longer) in education and training, while acting as a 'push factor' encouraging those with higher levels of educational attainment to seek opportunities elsewhere.
- Gender differences also play a considerable role, with young men generally more likely to leave education and training earlier than young women. This contrasts with the pattern observed above, whereby young women were far more likely than young men to have a tertiary level of educational attainment. In 2024, 10.9% of young men in the EU were early leavers, 3.2 percentage points higher than the share for young women, at 7.7%.

Map 3.4: Early leavers from education and training
(% of people aged 18–24 years, by NUTS 2 regions, 2024)



Note: Germany, Greece, Austria and Poland, NUTS level 1. Ireland and Slovakia: national data. Corse (FRM0), Guadeloupe (FRY1), Martinique (FRY2) and Bosnia and Herzegovina: 2023. Molise (ITF2) and Övre Norrland (SE33): 2022. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: edat_lfse_16)

More than half of all regions had attained the EU's policy target for early leavers

In 2024, more than half (94 out of 180) of the NUTS level 2 regions for which data are available had a share of early leavers from education and training below the 9.0% policy target (as shown by 3 shades of teal in Map 3.4). These 94 regions were spread across much of the EU. Subject to data availability – with some countries only reporting at NUTS level 1 and others with partial coverage due to relatively low data reliability – they included:

- every region of Greece, Croatia, Poland and Slovenia
- all but 1 region in Czechia, the Netherlands and Austria
- as well as Ireland, Latvia, Luxembourg and Slovakia.

At the other end of the range, 18 NUTS level 2 regions had a share of early leavers from education and training of at least 15.0% in 2024, as shown by the 2 darkest shades of gold in Map 3.4. This group included 5 regions from each of Spain and Romania and was characterised by sparsely populated, island and/or peripheral regions; it is likely that a disproportionately high share of students from island and/or peripheral regions have to leave home if they wish to follow a particular course or programme, leaving behind a higher concentration of early leavers.

In 2024, there were 8 regions across the EU where the share of young people who were early leavers from education and training was below 3.0%

Figure 3.3 highlights the NUTS level 2 regions with the highest and lowest shares of early leavers from education and training in 2024. At the top of the distribution, the French outermost region of Guyane reported the highest share, with 29.4% of young people aged 18 to 24 years classified as early leavers. Other regions with rates above 20.0% included:

- Sud-Est and Centru (Romania)
- Ciudad de Melilla and Illes Balears (Spain)
- Észak-Magyarország (Hungary)
- Corse (France).

By contrast, at the lower end of the distribution, there were 8 NUTS level 2 regions where, in 2024, the share of early leavers from education and training was below 3.0%. The lowest shares were recorded in:

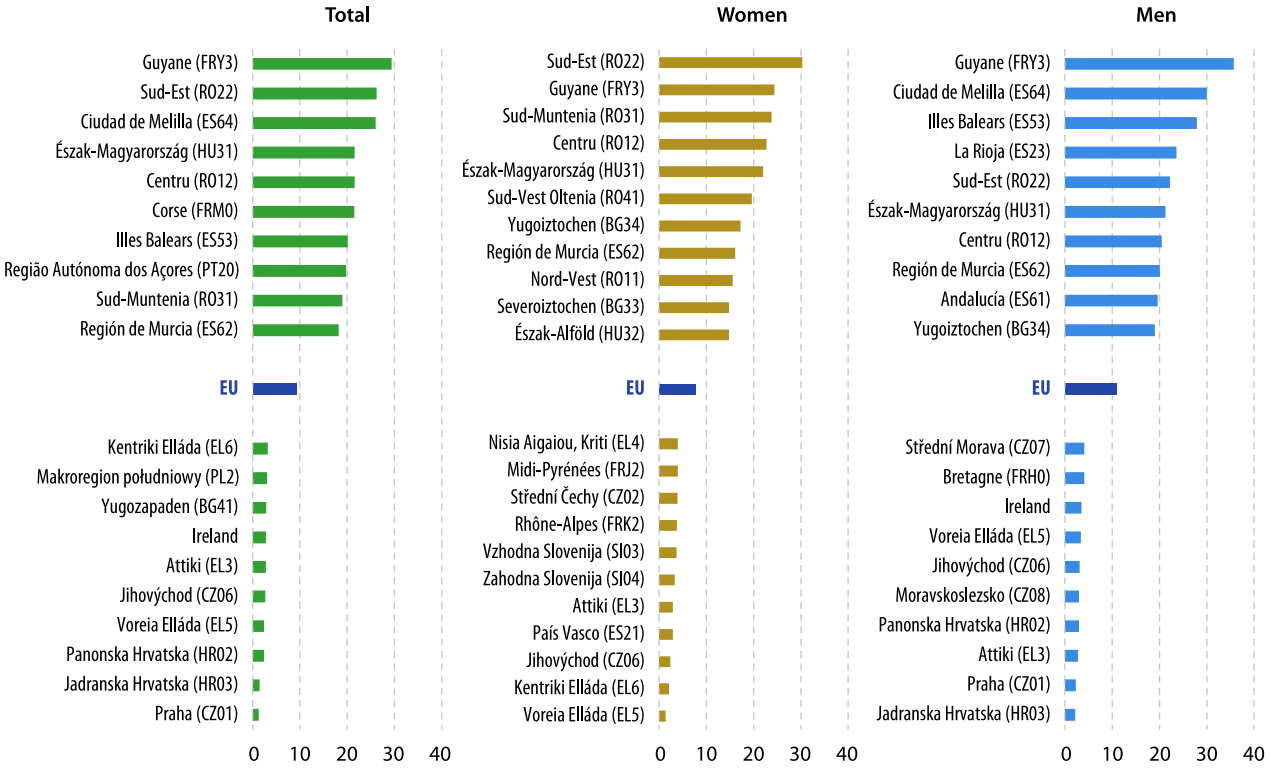
- Praha, the capital region of Czechia (1.3%)
- Jadranska Hrvatska and Panonska Hrvatska in Croatia (1.5% and 2.4%, respectively)
- Voreia Elláda and Attiki in Greece (2.4% and 2.8%, respectively)
- Jihovýchod in Czechia (2.7%)
- Ireland (2.8%)
- Yugozapaden, the capital region of Bulgaria (2.9%).

Figure 3.3 extends the analysis of early leavers from education and training, providing information by sex. As was the case for young people in general, the French outermost region of Guyane had the highest share of early leavers among young men aged 18 to 24 years, at 35.7% in 2024. However, the pattern for young women was different, as the Romanian region of Sud-Est had the highest share, at 30.3%. A closer analysis of the data for the 10 EU regions with the highest shares of early leavers reveals that:

- Sud-Muntenia, Sud-Vest Oltenia, Nord-Vest (all Romania), Severoiztochen (Bulgaria) and Észak-Alföld (Hungary) were only present among the top 10 regions for young women
- Ciudad de Melilla, Illes Balears, La Rioja and Andalucía (all Spain) were only present among the top 10 regions for young men.

In 2024, the lowest shares of early leavers from education and training among young women aged 18 to 24 years were recorded in the Greek regions of Voreia Elláda (1.4%) and Kentriki Elláda (2.1%), followed by the Czech region of Jihovýchod (2.4%). Among young men, the lowest rates were recorded in the Croatian region of Jadranska Hrvatska (2.2%), Praha in Czechia (2.3%) and Attiki in Greece (2.8%).

Figure 3.3: Early leavers from education and training
(% of people aged 18–24 years, by sex and NUTS 2 regions, 2024)



Note: the figure shows, subject to availability, those EU regions with the highest and lowest shares of early school leavers from education and training aged 18–24 years. The rankings include more than 10 regions if several regions have identical values. Germany, Greece, Austria and Poland: NUTS level 1. Ireland and Slovakia: national data. Corse (FRM0): 2023. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: edat_lfse_16)

In more than 4 out of 5 regions across the EU, the share of early leavers from education and training was higher among young men than young women in 2024

More than 1 in 10 young men aged 18 to 24 years across the EU (10.9% in 2024) were early leavers from education and training, compared with 7.7% of young women in the same age group; this resulted in a gender gap of 3.2 percentage points. A similar pattern was observed across most EU regions: among the 115 regions for which data are available, 94 reported a higher share of early leavers among young men (than young women). The largest regional gender gaps for this indicator were recorded in Spain:

- in Illes Balears, the share of young men who were early leavers was 16.0 percentage points higher than for young women
- in La Rioja, the gap was 13.7 points
- the only other region in the EU with a double-digit gender gap was the French outermost region of Guyane, where the rate for young men was 11.3 points higher than that for young women.

Among the 21 EU regions where, in 2024, the share of early leavers from education and training was higher for young women than for young men, the largest gender gaps were recorded in Romania:

- in Sud-Muntenia, the rate for young women was 9.5 percentage points higher than for young men
- in Sud-Est, the gender gap was 8.1 points
- the next largest gap was observed in the Czech region of Severozápad, where the rate for young women was 6.2 points higher than that for young men.

Map 3.5 presents data for NUTS level 2 regions across the EU, highlighting the relationship between the share of early leavers from education and training and the risk of poverty. By combining these 2 indicators, the map affirms that the share of early leavers is a leading factor in increasing the risk of poverty (in other words, these 2 indicators are positively correlated). Education is considered an important determinant of labour market outcomes, as people who leave education and training early typically lack the skills and qualifications needed for stable, well-paid jobs. EU policies and academic research have focused on how to reduce the share of early leavers

as it is considered a root cause of poverty and social exclusion.

In 2024, there were several regions across the EU where at least 12.0% of people were early leavers from education and training, while at least 20.0% of people were at risk of poverty (as shown by the darkest shade in the map). Some of the highest shares/rates for both indicators were recorded in:

- the eastern Bulgarian regions of Severoiztochen and Yugoiztochen
- a number of southern and eastern Spanish mainland regions including Castilla-La Mancha, Extremadura, Comunitat Valenciana, Andalucía and Región de Murcia, as well as the autonomous cities of Ceuta and Melilla, and the island region of Canarias
- the French outermost regions of Guadeloupe, Martinique and Guyane
- the southern Italian region of Campania and the island regions of Sicilia and Sardegna
- the eastern Hungarian regions of Észak-Magyarország and Észak-Alföld
- the Portuguese island region of Região Autónoma dos Açores
- the eastern and southern Romanian regions of Nord-Est, Sud-Est and Sud-Vest Oltenia.

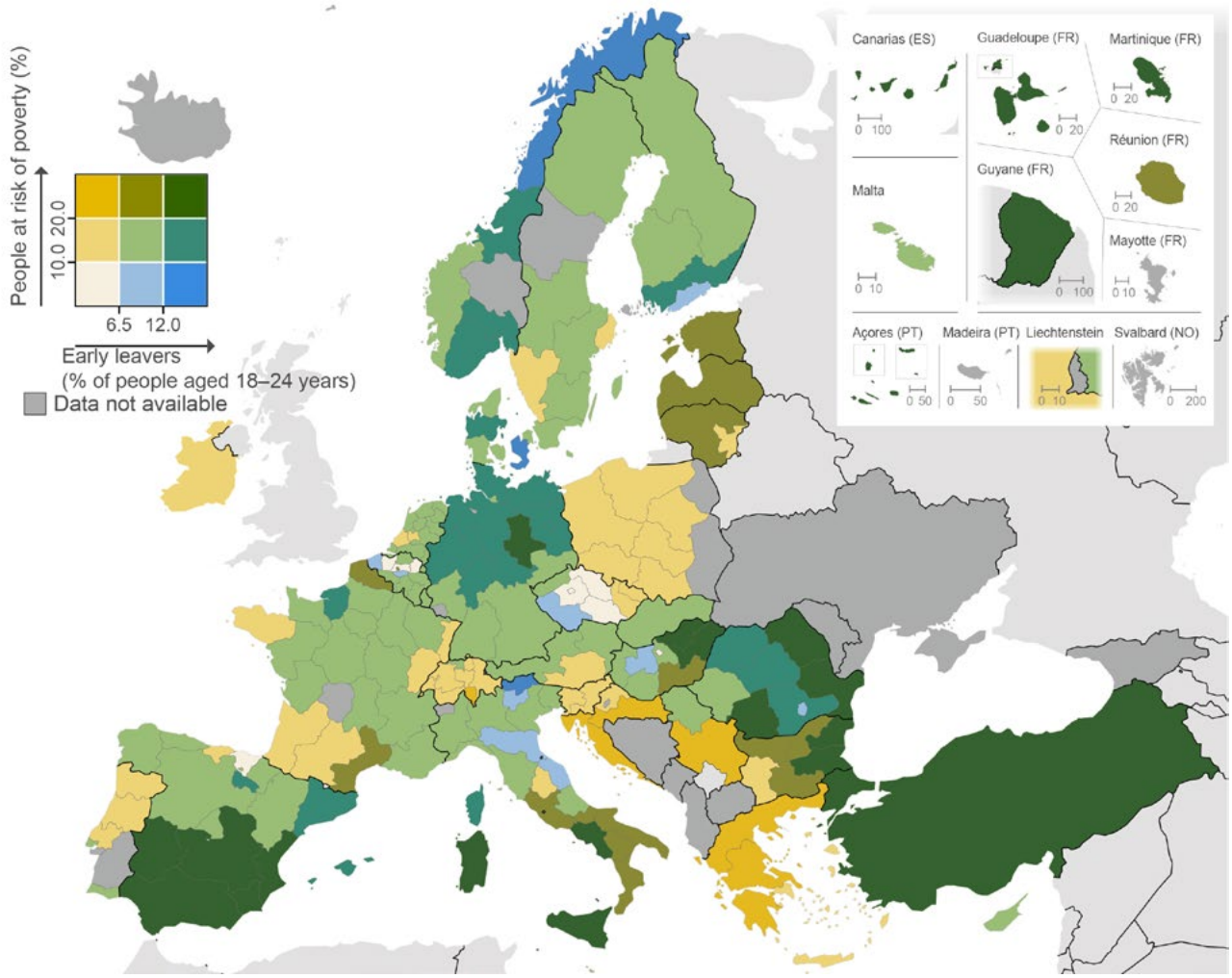
By contrast, at the other end of the spectrum, several regions highlight the importance that sustained investment in education and training may bring, driving stronger labour market integration, higher skills levels and better social outcomes. In 2024, the following regions (shown in the lightest shade) had low proportions of early leavers from education and training (below 10.0%) and low shares of people at risk of poverty (below 6.5%):

- the northern Belgian regions of Prov. Limburg, Prov. Oost-Vlaanderen and Prov. Vlaams-Brabant
- the Czech regions of Praha (the capital), Střední Čechy, Severovýchod and Jihovýchod
- the northern Spanish region of País Vasco
- the Hungarian capital region of Budapest.

Although there is a positive link between the share of early leavers from education and training and the risk of poverty, the strength of this relationship varies across EU regions. While education may serve as a protective factor against the risk of poverty, it does not always guarantee lower poverty rates. Likewise, local labour market conditions, the quality of jobs and/or social policies may have a stronger influence on poverty outcomes than the share of early leavers from education and training.

- For example, several regions in Greece (NUTS level 1), the south of France and Croatia exhibited relatively low shares of early leavers in 2024, yet their at-risk-of-poverty rates remained above the EU average; a similar pattern was observed in Latvia and Luxembourg.
- By contrast, several regions in the EU, including every region of Denmark (except for the capital region of Hovedstaden), a majority of the regions in Germany (NUTS level 1) and several regions predominantly in northern and central Spain, reported higher than average shares of early leavers, alongside a lower than average risk of poverty.

Map 3.5: Early leavers and people at risk of poverty
(by NUTS 2 regions, 2024)



Note: EU, 9.3% for early leavers from education and training. EU, 16.2% for people at risk of poverty. Greece, Austria, Poland and Serbia: NUTS level 1. Ireland, Slovakia and Türkiye: national data. Switzerland and Serbia: 2023.

Source: Eurostat (online data codes: edat_lfse_16, ilc_li41 and ilc_li02)

Adult education and training

Lifelong learning plays a crucial role in expanding a person's knowledge, abilities and qualifications, whether for personal growth, social engagement, or career development. As the demands of the labour market evolve, there is a growing need for workers to refine their existing skills and acquire new ones – either to adapt within their current professions or to explore new career paths. Technological progress, particularly in areas like artificial intelligence, is expected to render some jobs obsolete, making continuous upskilling more essential than ever.

The strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021 to 2030) sets a specific EU policy target in this area. By 2025, the EU aims to have at least 47% of people aged 25 to 64 years participating (during the previous 12 months) in adult learning. This target was revised in June 2021 following its inclusion as 1 of the EU 2030 social targets within the European Pillar of Social Rights Action Plan. The revised goal is for at least 60% of people aged 25 to 64 years to participate in education and training every year by 2030.

More about the data: adult participation in education and training

In order to give an appropriate measure of participation in adult learning, the reference period for the indicator is the last 12 months, in other words, the indicator reflects participation in training activities across a whole year. Until 2021, the adult education survey (AES) was the only source of data for adult participation in learning in the last 12 months. However, as the AES only takes place every 6 years, variables were introduced into the EU labour force survey (EU-LFS) to collect data every 2 years (starting in 2022). The aim of this was to enable more frequent analysis of initiatives related to employment and skills policies, including at the regional level, as the AES does not provide a regional breakdown due to the relatively low sample size. For more information on differences between data available from EU-LFS and AES see Participation in education and training during the last 12 months – differences between data available from two sources.

This edition of the *Eurostat regional yearbook* marks the 1st time that regional statistics using this longer recall period have been published.

The EU's adult participation rate for education and training was 28.1% in 2024

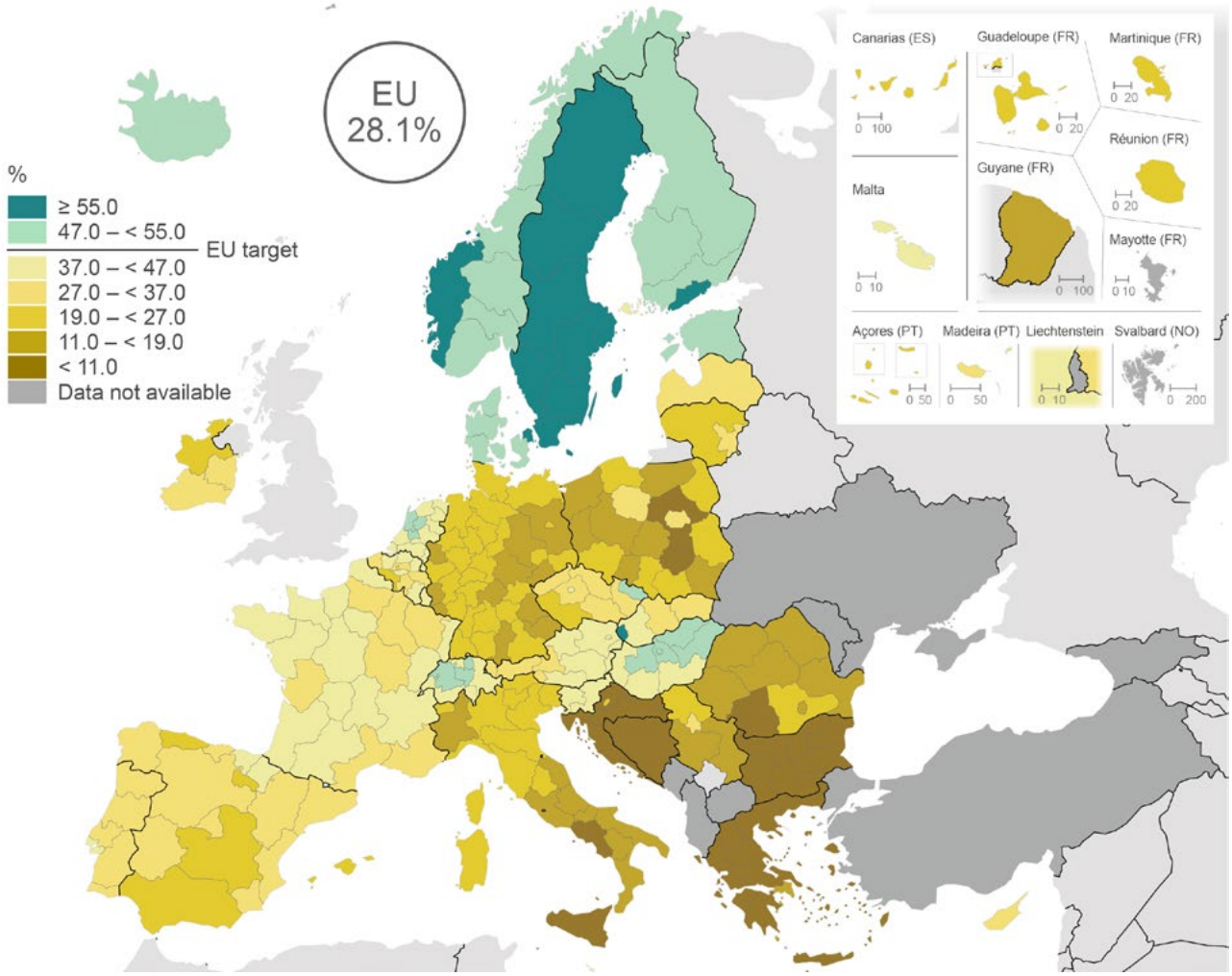
According to the EU-LFS, in 2024, more than 1 in 4 (28.1%) adults aged 25 to 64 years across the EU participated in education and training during the 12 months prior to the survey. This figure was 3.1 percentage points higher than in 2022 (the only other reference year for which comparable data are available, as the data collection exercise is biennial). Among the 234 NUTS level 2 regions for which data are available, more than 3 out of 4 reported an increase between 2022 and 2024 in their adult participation rates for education and training.

Map 3.6 shows adult participation rates in education and training for 2024. These rates were relatively evenly distributed across the EU, as just over half of all NUTS level 2 regions for which data are available (126 out of 243 regions) recorded rates below the EU average of 28.1%. The regional distribution was relatively homogeneous within individual EU countries, partly reflecting national rather than regional education and training initiatives.

- Every region of Bulgaria, Germany, Greece, Croatia, Italy and Romania reported a rate that was below the EU average; this was also the case in Latvia.
- Every region of Denmark, Hungary, the Netherlands, Austria, Slovenia, Slovakia, Finland and Sweden reported a rate that was above the EU average; this was also the case for Estonia, Cyprus, Luxembourg and Malta.

In 2024, Sweden recorded some of the highest adult participation rates in education and training, as every region reported a rate above 55.0% (as shown by the darkest shade of teal in Map 3.6). By contrast, participation rates were below 11.0% in every region of Bulgaria (as shown by the darkest shade of gold; note the latest information for Severen tsentralen refers to 2022). Similarly low rates were recorded across Greece and Croatia, where, apart from the capital regions of Attiki and Grad Zagreb, all other regions had rates below 11.0%.

Map 3.6: Participation rate in education and training
(% of people aged 25–64 years, by NUTS 2 regions, 2024)



Note: participation during the 12 months prior to the survey. Severen tsentralen (BG32), Iceland and Bosnia and Herzegovina: 2022. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: trng_lfse_22)

Swedish regions have particularly high adult participation rates in education and training

Figure 3.4 provides a more detailed analysis of participation rates in education and training in 2024. It confirms that some of the highest rates among adults aged 25 to 64 years were observed in Sweden:

- a peak of 64.0% was recorded in the capital region of Stockholm
- all 8 regions of Sweden ranked among the 10 EU regions with the highest rates
- the top 10 was completed by 2 other capital regions – Bratislavský kraj (Slovakia) and Hovedstaden (Denmark).

In 2024, the 10 regions with the lowest adult participation rates in education and training were concentrated in south-eastern Europe, with 5 regions from each of Bulgaria and Greece. The lowest rates were recorded in the Bulgarian region of Yuzhen tsentralen (2.2%) and the Greek region of Sterea Elláda (2.7%).

A closer inspection of participation rates in education and training for men and women aged 25 to 64 years reveals that in 2024:

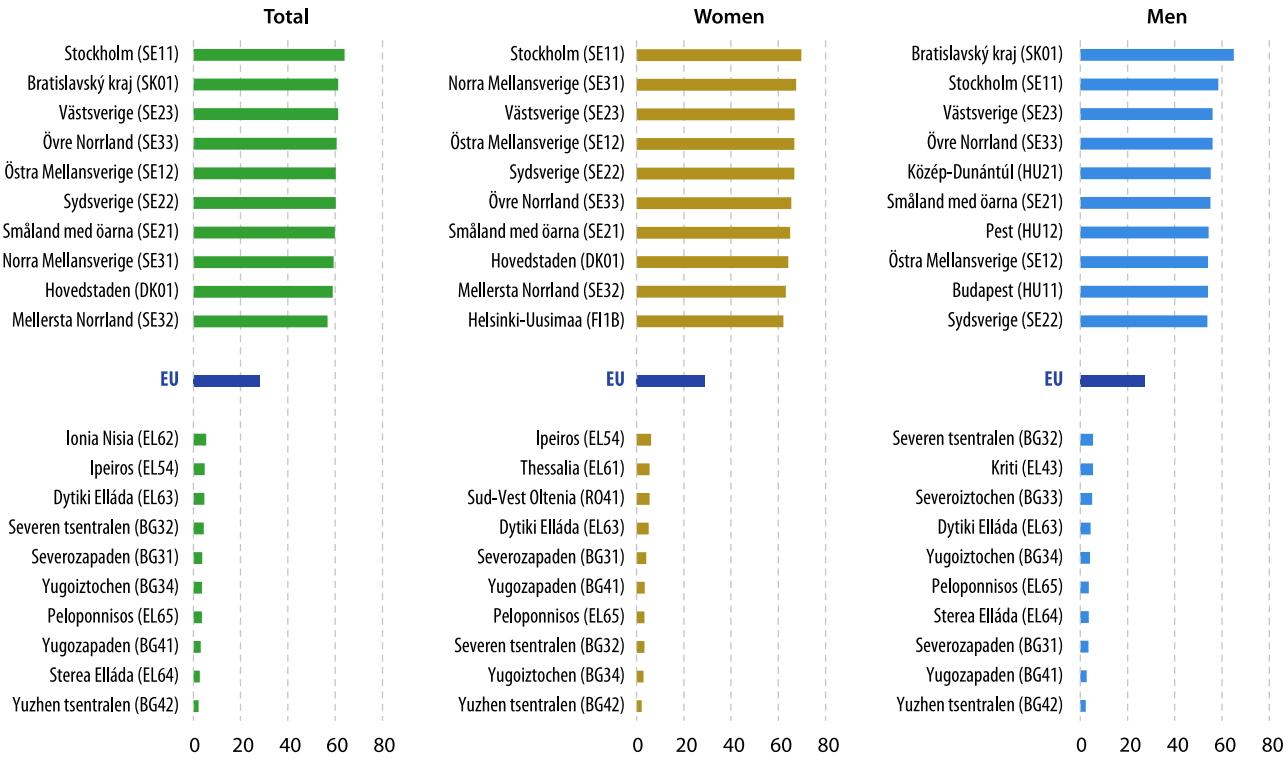
- the Swedish capital region of Stockholm recorded the highest rate among women (69.7%)
- the Slovak capital region of Bratislavský kraj had the highest rate among men (65.0%)
- the 10 highest participation rates for women included every region of Sweden, along with the Danish and Finnish capital regions of Hovedstaden and Helsinki-Uusimaa

- the 10 highest participation rates for men were also relatively uniform – leaving aside Bratislavský kraj, they were regions exclusively located in either Sweden or Hungary
- the lowest participation rates – for both women and men – were recorded in the Bulgarian region of Yuzhen tsentralen, 2.2% and 2.3%, respectively.

In 2024, the EU participation rate in education and training among women aged 25 to 64 years was 29.0%, which was 1.7 percentage points higher than the corresponding rate for men (27.3%). This gender gap – with women having higher participation rates than men – was apparent in approximately 2 out of 3 regions across the EU. Several Nordic and Baltic regions had particularly wide gender gaps (in favour of women); this pattern was also observed in Comunidad Foral de Navarra (Spain).

- The largest gender gap, favouring women, occurred in the Swedish region of Norra Mellansverige (15.7 percentage points difference), followed by Estonia (13.7 points) and another Swedish region, Sydsverige (13.0%).
- The largest gender gap favouring men occurred in the Hungarian region of Közép-Dunántúl (where the participation rate for men was 7.6 points higher than that for women), followed by Bratislavský kraj (7.2 points) and another Hungarian region, Észak-Magyarország (6.0 points).

Figure 3.4: Participation rate in education and training
(% of people aged 25–64 years having participated during the 12 months prior to the survey, by sex and NUTS 2 regions, 2024)



Note: the figure shows those EU regions with the highest and lowest shares of people aged 25–64 years participating in education and training during the 12 months prior to the survey. Severen tsentralen (BG32): 2022. Severozapaden (BG31), Severen tsentralen (BG32), Ipeiros (EL54), Ionia Nisia (EL62) and Sterea Elláda (EL64): low reliability.

Source: Eurostat (online data code: edat_lfse_22)

4. Labour market

On 4 March 2021, the European Commission set out its ambition to build a stronger, more social EU by focusing on jobs and skills, paving the way for a fair, inclusive and resilient socioeconomic recovery from the COVID-19 crisis. *The European Pillar of Social Rights Action Plan* (COM(2021) 102 final) outlines specific actions and headline targets to improve employment, skills and social protection across the EU. One of the principal targets is to have, by 2030, an employment rate of at least 78% among people aged 20 to 64 years.

(people aged 20–64 years, by NUTS 2 regions, 2024)

Note: due to rounding, some totals may not correspond with the sum of the separate figures. Mayotte (FRY5): not available. Kassel (DE73), Trier (DEB2), Lubuskie (PL43) and Opolskie (PL52): unemployment rate, not available. Åland (FI20): outside the labour force and unemployment rate, not available. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: lfst_r_lfsd2pwn)

Employment and social policies offer a broad range of practical benefits for people living in the EU, including employment support, mobility within the labour market, skills development, social protection and inclusion, as well as range of different rights at work. In 2024, there were 260.6 million people aged 20 to 64 years in the EU (those considered to be of core working age); see the infographic above. Of these, the labour force was composed of 197.6 million employed people and 11.9 million unemployed people who were actively seeking and available for work. There were 51.1 million people outside the labour force – in other words, economically inactive – for example, students, retired people (if under the age of 65), people caring for other family members, volunteers and those unable to work due to a long-term illness or disability.

Among NUTS level 2 regions, the Finnish archipelago of Åland recorded the highest share of employed people within the core working-age population, at 86.4% in 2024. By contrast, less than half of this subpopulation was employed in the southern Italian regions of Calabria (48.5%) and Campania (49.4%).

This chapter examines employment and unemployment patterns across EU regions, offering a detailed analysis of regional labour markets, with a focus on qualifications and skills. It highlights key indicators such as employment rates, unemployment rates and the structure of labour markets, offering insights into regional disparities within the EU.

Employment

More about the data: employment rate targets in the European Pillar of Social Rights

The employment rate is the percentage of employed people (of a given age) relative to the total population (of the same age).

The EU prioritises increasing the number and share of people in work as 1 of its key policy objectives. This goal has been central to EU employment policies since the launch of the European employment strategy in 1997; it was subsequently integrated into the Lisbon and Europe 2020 strategies.

The employment rate is a key indicator in the social scoreboard, which monitors the implementation of the European Pillar of Social Rights. By 2030, the EU aims to have an employment rate of at least 78% among people aged 20 to 64 years. This age range reflects the growing share of young people who remain within education into their late teens and beyond, potentially limiting early labour market participation, while most EU residents retire by the age of 65.

Individual EU countries have different employment rate targets. To achieve the overall EU target of a 78% employment rate by 2030, EU countries presented and agreed national targets in June 2022. These are generally higher for countries that already had relatively high rates. For example, the target for Hungary has been set at 85.0%, for Malta at 84.6% and for Germany at 83.0%.

The employment rate is included in the EU's sustainable development goals (SDGs) indicator set. Goal 8 seeks to promote sustained, inclusive and sustainable economic growth, through full and productive employment and decent work for all.

In 2024, the EU's employment rate was 2.2 percentage points below its 2030 target

Prior to the COVID-19 crisis, the EU's employment rate for the core working-age population (20 to 64 years) increased steadily for 6 consecutive years, reaching 73.1% by 2019. This upward development was interrupted in 2020 when the pandemic contributed to a fall of 0.9 percentage points. However, the employment rate rebounded in 2021, nearly returning to its pre-pandemic levels, and continued to rise in subsequent years, with a particularly sharp increase in 2022 (up 1.6 points). By 2024, the EU's employment rate had climbed to a historical high of 75.8%, which was 2.2 points below the target for 2030, as set by the European Pillar of Social Rights Action Plan.

Map 4.1 shows the employment rate in 2024 for NUTS level 2 regions. Almost half (46.5%) of all EU regions – 113 out of the 243 regions for which data are available – had already reached or surpassed the EU's target of 78.0% by 2024 (those regions shown in shades of teal). These 113 regions were found in clusters, with high concentrations in Czechia (all 8 regions), Denmark (all 5 regions), Germany (35 out of 38 regions; the exceptions being Bremen, Düsseldorf and Berlin), Ireland (all 3 regions), the Netherlands (all 12 regions), Slovakia (3 out of 4 regions) and Sweden (all 8 regions); this group included Estonia, Cyprus and Malta too.

At the top end of the distribution, the highest employment rates among NUTS level 2 regions in 2024 – and the only regions to record rates of more than 85.0% – were:

- the archipelago of Åland in Finland (86.4%)
- Warszawski stołeczny, the Polish capital region (86.2%)
- Bratislavský kraj, the Slovak capital region (85.4%)
- Budapest, the Hungarian capital region (85.3%)
- Utrecht in the Netherlands (85.3%)
- Praha, the Czech capital region (85.1%).

Aside from the 6 regions mentioned above, an additional 22 regions recorded employment rates of

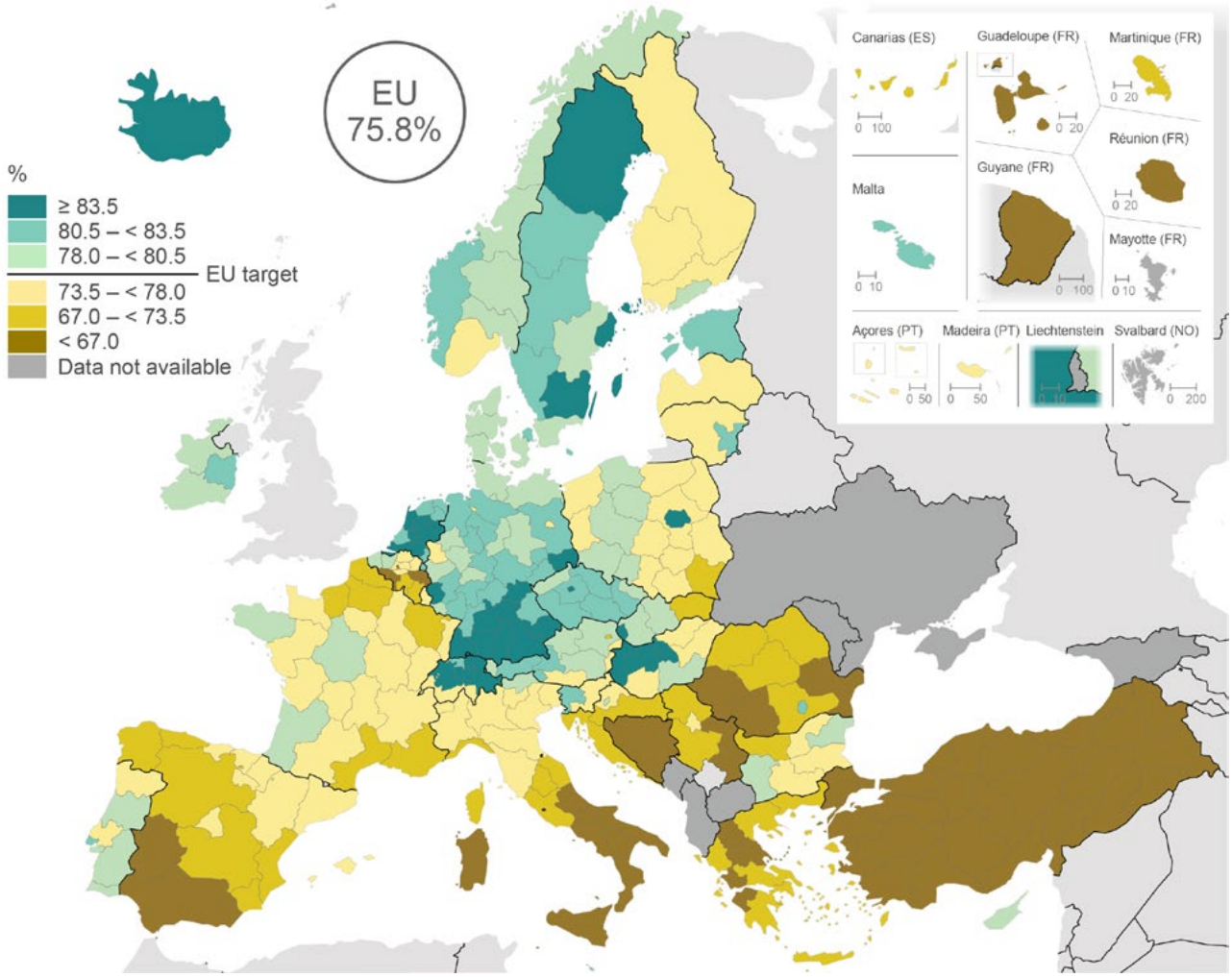
at least 83.5% (as shown by the darkest shade of teal in Map 4.1). Almost half of them were located in Germany, while the others were exclusively from the Netherlands, Hungary or Sweden – including the capital regions of Noord-Holland (the Netherlands; 84.4%) and Stockholm (Sweden; 83.7%).

In 2024, all multi-regional northern, eastern and southern EU countries reported that their capital region had a higher employment rate than their national average. For example, Romania's capital region of Bucureşti-Ilfov had an employment rate of 81.1%, which was 11.6 percentage points above the national average of 69.5%. A similar pattern was observed in the western EU countries of Ireland, France and the Netherlands. By contrast, the pattern was reversed in Belgium, Germany and Austria, where capital regions recorded lower employment rates than their respective national averages. Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest and Wien registered the lowest regional employment rates across the whole of Belgium and Austria, at 64.1% and 70.6%, respectively.

In 2024, the southern Italian regions of Calabria, Campania and Sicilia recorded the lowest employment rates in the EU

Many of the regions with relatively low employment rates were rural, sparsely populated, or regions on the periphery of the EU. This pattern was particularly apparent in southern regions of Spain and Italy, much of Greece, some regions in Romania, and the outermost regions of France. These areas typically experienced limited employment opportunities, especially for individuals with intermediate and high skill levels.

Map 4.1: Employment rate
(% of people aged 20–64 years, by NUTS 2 regions, 2024)



Note: Prov. Vlaams-Brabant (BE24) and Corse (FRM0), low reliability.

Source: Eurostat (online data code: lfst_r_lfe2emprtn)

Another group of regions characterised by relatively low employment rates are former industrial heartlands that have not adapted economically. Some of these have witnessed the negative impact of globalisation on traditional sectors of their economies (such as coal mining, steel or textiles manufacturing). Examples include a band of regions running from north-east France into the Région wallonne (Belgium).

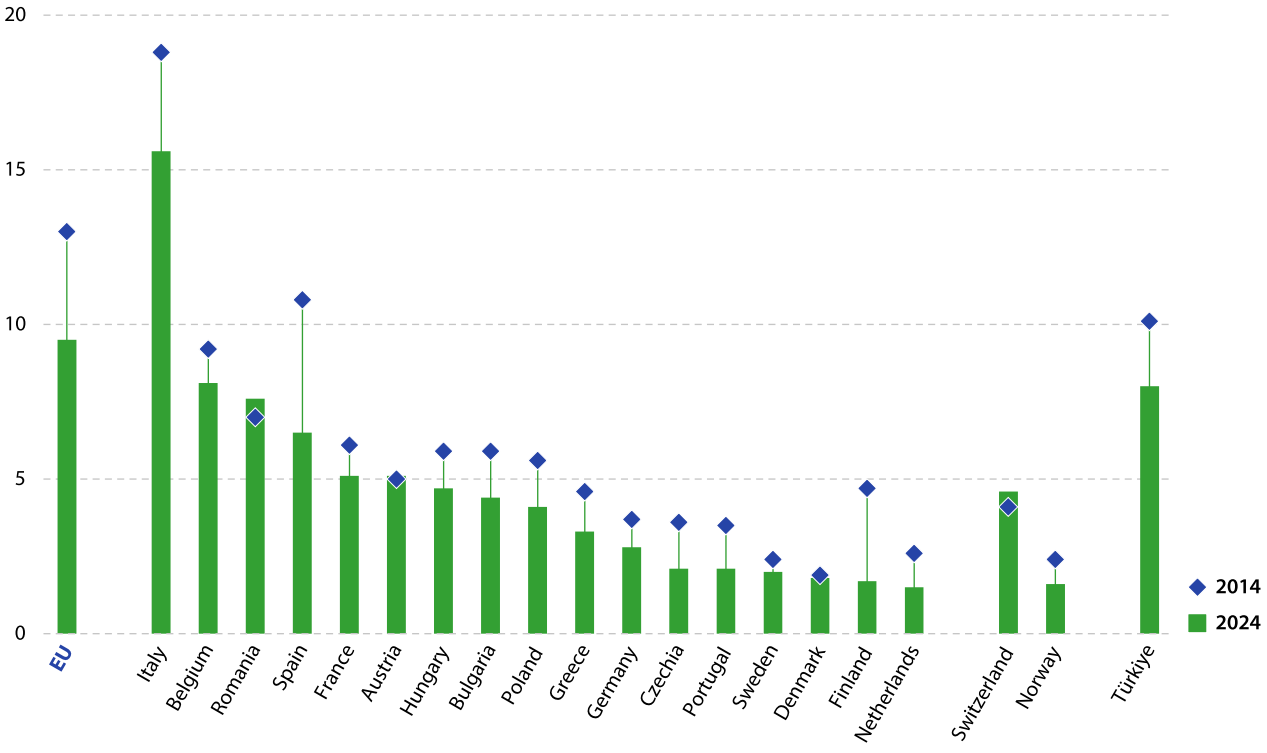
Approximately 1 in 4 (65 out of the 243 regions for which data are available) EU regions had an employment rate that was below 73.5% in 2024 (as shown by the 2 darkest shades of gold in Map 4.1). This group included:

- 2 regions in southern Italy where less than half of the core working-age population was employed – Calabria (48.5%) and Campania (49.4%)
- the island region of Sicilia (also in southern Italy), where employment covered just over half of the working-age population (50.7%), the 3rd lowest rate in the EU
- the capital regions of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest in Belgium (64.1%), Lazio in Italy (69.0%), Wien in Austria (70.6%) and Attiki in Greece (71.0%).

In 2024, Italy had the highest regional disparity for employment rates

Several EU countries face considerable labour market disparities across their regions, with labour shortages in some regions contrasted against persistently high unemployment in others. A population-weighted coefficient of variation provides a means to analyse these inter-regional disparities. Figure 4.1 shows that, in 2024, Italy had the highest regional disparities in employment rates, with a coefficient of variation of 15.6%. Broadly, there was a north-south split: the Alpine region of Provincia Autonoma di Bolzano/Bozen recorded the highest employment rate (79.9%), while the southern regions of Calabria and Campania had the lowest rates (48.5% and 49.4%).

Figure 4.1: Regional disparities in employment rates
(coefficient of variation in %, people aged 20–64 years, by NUTS 2 regions, 2014 and 2024)



Note: as measured by population-weighted coefficient of variation for EU, EFTA and non-EU countries with more than 4 level 2 regions (Estonia, Ireland, Croatia, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Slovenia, Slovakia, Iceland, Liechtenstein, Bosnia and Herzegovina, Montenegro, Moldova, North Macedonia, Georgia and Ukraine: not applicable).

Source: Eurostat (online data code: lfst_r_lmder)

Belgium (8.1%), Romania (7.6%) and Spain (6.5%) had the next highest coefficients of variation for regional employment rates in 2024:

- in Belgium, the highest regional employment rates were generally recorded in Vlaams Gewest, while lower rates were observed in Région wallonne and particularly in the capital region
- in Romania, the highest regional employment rate was in the capital region of Bucureşti-Ilfov (81.1%), with notably lower rates observed in all other regions, in particular, Sud-Est (62.6%) and Sud-Vest Oltenia (63.5%)
- in Spain, the highest regional employment rates were generally recorded in northern and eastern regions, as well as the capital city region; lower rates were observed in peripheral, southern and western regions.

At the other end of the range, the lowest regional disparities in employment rates – with a coefficient of variation of 2.0% or less – were recorded in the Nordic EU countries and the Netherlands.

Figure 4.1 shows that regional employment rates converged to some degree across the EU between 2014 and 2024. The coefficient of variation for the EU as a whole fell from 13.0% to 9.5%. In 15 (out of 17) EU countries for which data are available, inter-regional employment rate disparities narrowed. The largest falls – in relative terms – occurred in Finland, the Netherlands, Czechia, Portugal and Spain, as regional disparities decreased by at least 40%. By contrast, Romania and Austria were the only EU countries to report an increase in regional disparities, rising 8.6% and 2.0%, respectively.

The EU's gender employment gap was 10.0 percentage points in 2024

The gender employment gap is included in the EU's SDGs indicator set. Goal 5 seeks to achieve gender equality by, among other actions, ending all forms of discrimination, violence, and any harmful practices against women and girls, while promoting women's social and economic empowerment.

Long-standing challenges related to female participation in the labour force are reflected in persistent gender gaps in employment and pay. These gaps exist for a variety of reasons, including:

- women often bear a disproportionate share of unpaid care and household chores that may limit their availability for paid employment
- gender bias and discrimination when hiring, promoting and paying women
- fewer women in leadership positions to draw attention to gender-related policies or to mentor more junior female staff
- a lack of affordable childcare and support for working parents
- disincentives in tax and benefit system that can lead to 2nd earners bearing a higher tax burden when they choose to participate in the labour market
- occupational segregation, with women often concentrated in specific activities that are characterised by lower wages and/or fewer opportunities for career development.

In 2024, the EU employment rate for men aged 20 to 64 years was 80.8%, while the corresponding rate for women of the same age was considerably lower, at 70.8%. This resulted in a gender employment gap – defined here as the difference between male and female employment rates – of 10.0 percentage points. As part of its broader target to increase the overall employment rate to 78% by 2030, the European Pillar of Social Rights Action Plan also includes a subgoal to halve the gender employment gap. This implies reducing the gap to 5.6 percentage points by 2030 – equivalent to an average annual decrease of 0.5 points from 2019 onwards.

In 2024, there were 4 regions across the EU where employment rates for women were higher than those for men

In 2024, 59 out of the 243 NUTS level 2 regions for which data are available reported a gender employment gap that was 5.6 percentage points or lower – in other words, meeting the subgoal for the European Pillar of Social Rights Action Plan; they are shown in different shades of teal in Map 4.2. This group of 59 regions was mainly concentrated in Germany (13 regions), France (10 regions), Sweden (7 out of 8 regions), Portugal (6 out of 9 regions) and Finland (all 5 regions); it also included the Baltic regions and Luxembourg. Those regions with relatively small gender employment gaps were often characterised by high overall employment rates.

In 2024, there were only 4 regions within the EU that reported a higher employment rate for women (than for men):

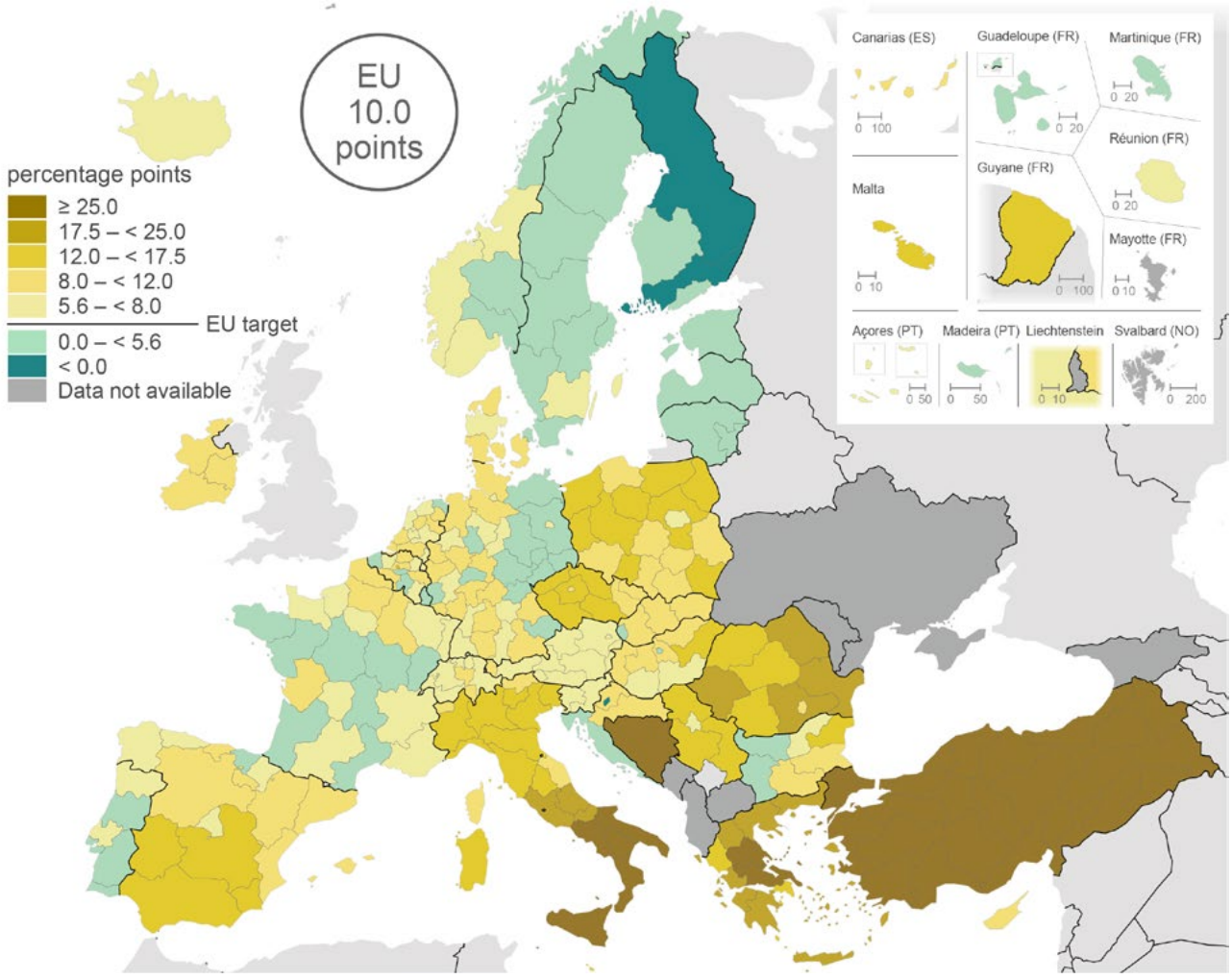
- the Finnish regions of Åland, Etelä-Suomi and Pohjois- ja Itä-Suomi
- the Croatian capital region of Grad Zagreb.

Despite some progress made in reducing the gender employment gap, female employment rates continue to lag behind male rates in the vast majority of EU regions. Many of the regions with relatively large gender employment gaps were characterised by high unemployment rates and a greater share of women outside the labour force. In 2024, there were 24 NUTS level 2 regions that reported gender employment gaps of at least 17.5 percentage points (as shown by the darkest shade of gold in Map 4.2). The regions composing this group were concentrated in southern and eastern EU countries:

- 11 out of 13 regions in Greece, the exceptions being Attiki and Ipeiros
- 8 regions in central/southern Italy, including the capital region of Lazio
- 4 regions in Romania
- Ciudad de Ceuta in Spain.

Sterea Elláda (Greece; 31.2 percentage points in 2024) had the largest gender employment gap in the EU, followed by the Italian regions of Puglia (29.8 points), Campania (29.1 points) and Basilicata (28.1 points).

Map 4.2: Gender employment gap
(percentage points, people aged 20–64 years, by NUTS 2 regions, 2024)



Note: the gender employment gap is the employment rate of men minus the employment rate of women. Prov. Vlaams-Brabant (BE24), Corse (FRM0) and Åland (FI20): low reliability.

Source: Eurostat (online data code: lfst_r_lfe2emprtn)

Employment – focus on qualifications and skills

YOUNG PEOPLE NEITHER IN EMPLOYMENT NOR IN EDUCATION AND TRAINING (NEET)

More about the data: young people neither in employment nor in education and training (NEET)

The share of young people (aged 15 to 29 years) who are neither in employment nor in education and training (NEET) provides a useful measure for studying the vulnerability of young people in terms of their labour market participation and social exclusion.

The NEET rate is expressed relative to the total population of the same age (15 to 29 years); the numerator includes not only young people who are unemployed but also young people who are outside the labour force for reasons other than education or training (for example, because they are caring for family members, volunteering or travelling, or unable to work for health reasons).

The NEET rate is included in the EU's SDG indicator set. Goal 8 seeks to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Economic crises tend to impact young people disproportionately, as they are more likely to work under temporary and other atypical contracts that are easier to terminate. The NEET rate helps assess the share of young people who have not transitioned from education or training to employment. It is generally seen as a more comprehensive measure than the unemployment rate, as it more closely reflects young people's risk of social and labour market exclusion.

Within the European Pillar of Social Rights Action Plan, the EU has set a policy target whereby the NEET rate should decrease to less than 9% by 2030. Having peaked at 16.1% in 2013, the EU's NEET rate subsequently fell during 6 consecutive years. With the onset of the COVID-19 crisis, it climbed to 13.8% in 2020, after which a downward pattern of development returned. In 2024, the EU's NEET rate stood at 11.0%.

In 2024, the 4 EU regions with the lowest NEET rates were all located in the Netherlands

In 2024, 89 NUTS level 2 regions reported a NEET rate of less than 9.0% (the EU's policy target to be reached by 2030); they are shown in teal shades within Map 4.3. This group was concentrated in northern Belgium (all 5 regions of Vlaams Gewest), Czechia (6 out of 8 regions), Ireland (all 3 regions), north-western Hungary (4 regions), the Netherlands (all 12 regions), Austria (7 out of 9 regions), Slovenia (both regions), Slovakia (3 out of 4 regions) and Sweden (all 8 regions); it also included Malta.

Looking more closely at the data, 26 regions across the EU recorded a NEET rate below 6.5% in 2024 (as shown by the darkest shade of teal in Map 4.3). This group included several capital regions, notably those of Bulgaria, Czechia, Denmark, Croatia, Hungary, the Netherlands and Sweden. The lowest NEET rates in the EU were observed in the Netherlands, with Utrecht recording the lowest share, at 4.4%, followed by the capital region of Noord-Holland (4.5%), Noord-Brabant and Overijssel (both 4.7%). Praha, the Czech capital region, had the lowest rate outside the Netherlands, at 4.8% – a share that was also recorded in the Dutch region of Zuid-Holland.

As noted above, some of the lowest NEET rates in the EU were recorded in capital regions. More broadly, capital regions generally reported lower NEET rates than the national average. In 2024, there were only 4 exceptions – among multi-regional EU countries – where the share of young people neither in employment nor in education or training was higher in the capital region than the national average:

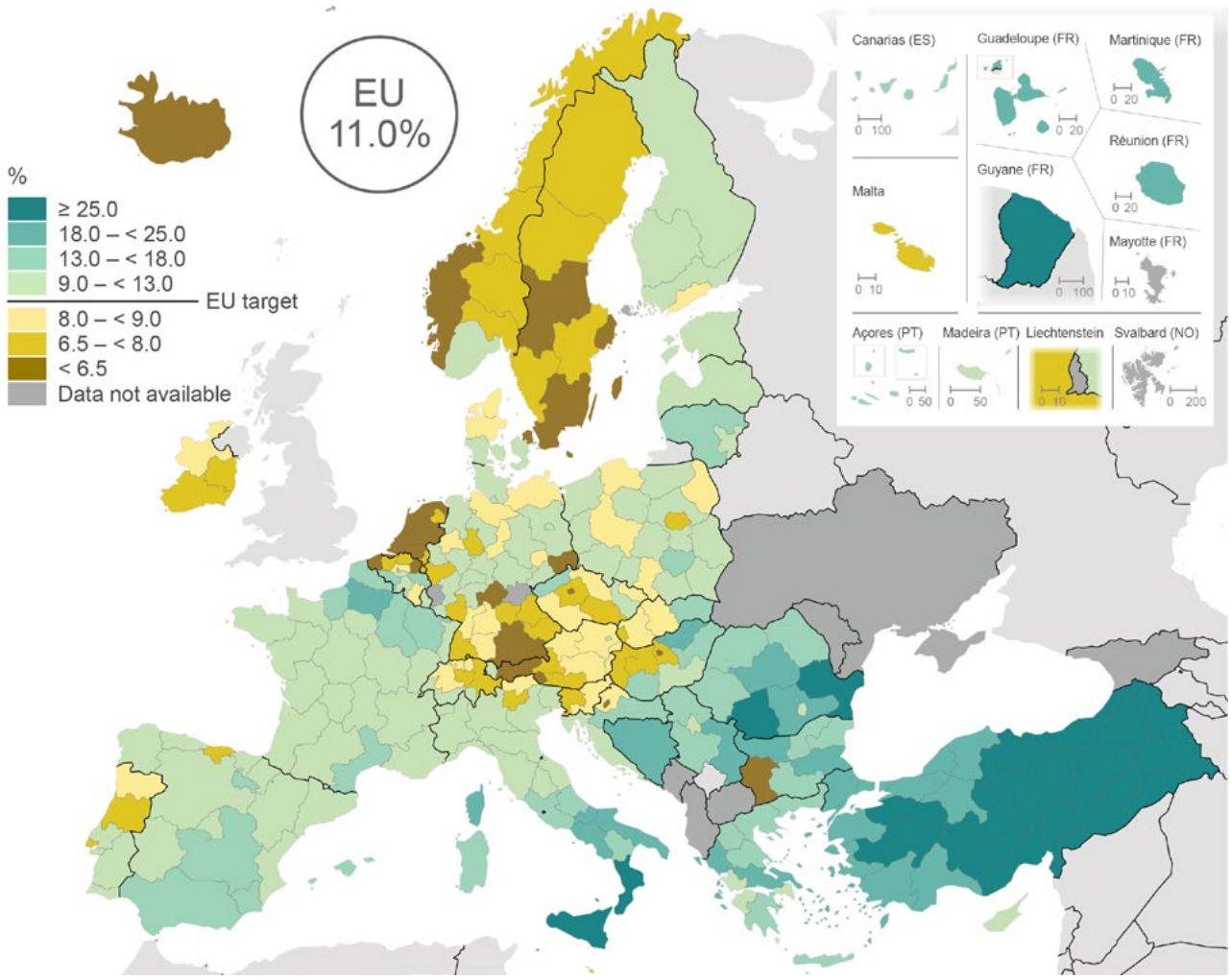
- Wien in Austria (12.7%), where the NEET rate was 3.5 percentage points higher than the national average (9.2%)
- Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest in Belgium (13.1%), where the rate was 3.2 points higher than the national average (9.9%)
- Berlin in Germany (11.1%), where the rate that was 2.6 points higher than the national average (8.5%)
- Eastern and Midland in Ireland (7.7%), where the rate was marginally higher than the national average (7.6%).

By contrast, Bucureşti-Ilfov – the capital region of Romania – had a NEET rate in 2024 that was 9.9 percentage points lower than the national average. This broadly reflected the pattern observed across most eastern EU countries, with the capital regions of Bulgaria (6.5 points), Hungary (5.4 points), Slovakia (also 5.4 points; 2022 data) and Croatia (5.0 points) also recording considerably lower rates than their respective national averages.

In 2024, 24 out of the 240 NUTS level 2 regions for which data are available recorded NEET rates of at least 18.0% among young people aged 15 to 29 years (these regions are shaded in the darkest 2 shades of gold in Map 4.3). The highest NEET rates were generally observed in predominantly rural regions of southern and eastern EU countries, as well as in the French outermost regions. At the upper end of the distribution, 5 regions had NEET rates of at least 25.0%:

- the Italian regions of Sicilia (25.7%) and Calabria (26.2%)
- the Romanian regions of Sud-Vest Oltenia (25.0%) and Sud-Est (29.9%)
- the French outermost region of Guyane had the highest rate, at 34.4%.

Map 4.3: **Young people neither in employment nor in education and training**
(% of people aged 15–29 years, by NUTS 2 regions, 2024)



Note: Burgenland (AT11), Innlandet (NO02) and Bosnia and Herzegovina: 2023. Oberpfalz (DE23) and Bratislavský kraj (SK01), 2022. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: edat_lfse_22)

In 2024, the EU's NEET rate was 2.1 percentage points higher among young females than young males

Across the EU, 12.1% of young females aged 15 to 29 years were neither in employment nor in education and training in 2024. This figure was 2.1 percentage points higher than the corresponding rate for young males (10.0%). Across NUTS level 2 regions, nearly 3 out of 4 regions had a higher NEET rate among young females. The gender gaps were most pronounced in regions located across eastern and southern EU countries, where cultural, economic and societal factors may hinder some young females' from entering the workforce.

Figure 4.2 confirms the highest NEET rates among young females in 2024 were recorded in the Romanian regions of Sud-Est (37.7%), Centru (32.7%) and Sud-Vest Oltenia (30.6%), as well as the French outermost region of Guyane (33.7%). This may reflect, at least in part, persistent structural and societal barriers disproportionately affecting young women in accessing education, training and employment. For young males, the highest NEET rate, by far, was observed in Guyane, at 35.1%; this was followed by Severozapaden in Bulgaria (25.7%).

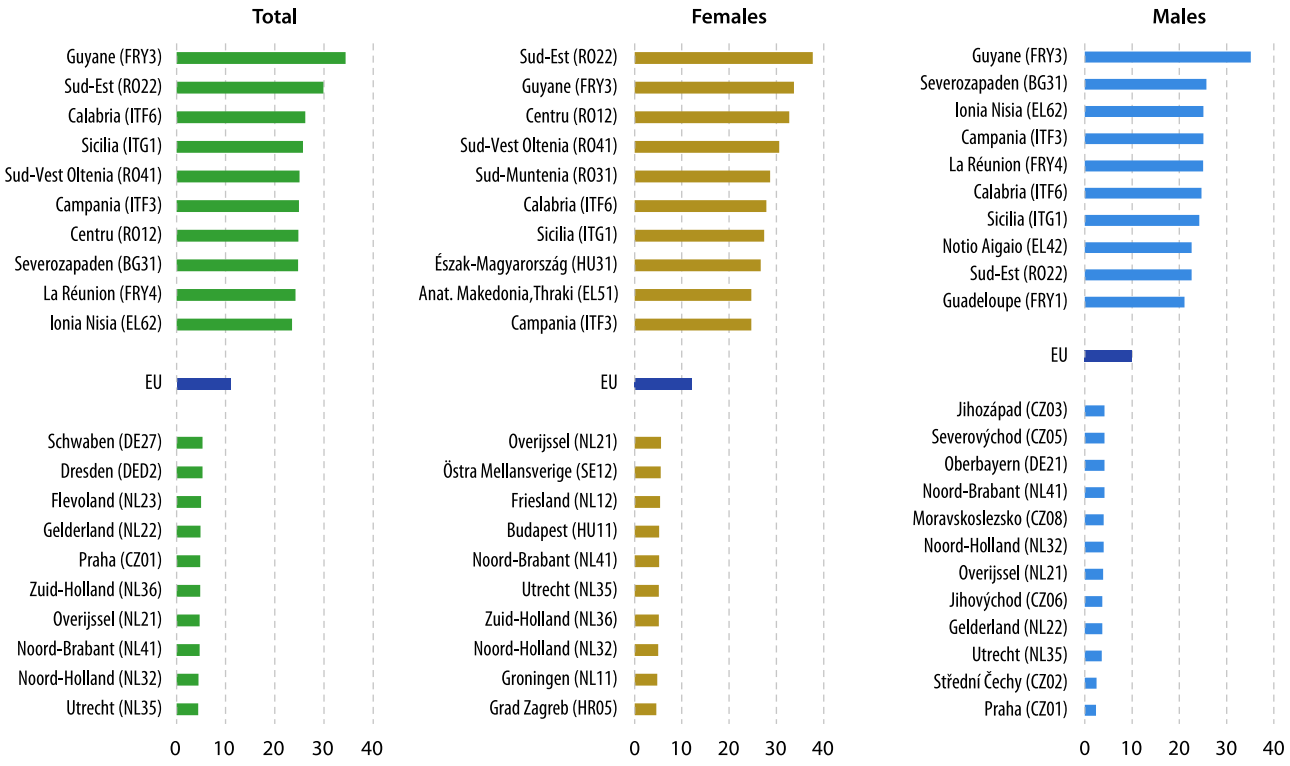
A closer analysis of the data for regions with the highest NEET rates among young females and males in 2024 reveals some notable gender differences. For instance:

- Sud-Muntenia in Romania (28.7%), Észak-Magyarország in Hungary (26.7%) and Anatoliki Makedonia, Thraki in Greece (24.7%) had some of the highest NEET rates for young females, but did not feature among those regions with the highest overall NEET rates
- Notio Aigaio in Greece (22.6%) and Guadeloupe in France (21.1%) had some of the highest NEET rates for young males, but similarly did not feature among those regions with the highest overall NEET rates.

In 2024, the lowest overall NEET rates in the EU were concentrated in the Netherlands, Germany and Czechia, particularly across economically developed and urbanised regions that may make labour market integration for young people easier.

- The lowest female NEET rate was recorded in Grad Zagreb (the Croatian capital region; 4.6%), while Budapest (the capital region of Hungary; 5.2%) and Östra Mellansverige (Sweden; 5.5%) were the only other regions from outside of the Netherlands to feature among those with the lowest rates.
- The lowest male NEET rates were recorded in the neighbouring Czech regions of Praha (2.4%) and Střední Čechy (2.5%). There were 4 other regions from Czechia that featured among those with the 12 lowest rates, alongside 5 regions from the Netherlands (the lowest rate was in Utrecht; 3.6%) and Oberbayern in Germany (4.2%).

Figure 4.2: Young people neither in employment nor in education and training
(% of people aged 15–29 years, by sex and NUTS 2 regions, 2024)



Note: the figure shows those EU regions with the highest and lowest shares of young people aged 15–29 years who were neither in employment nor in education and training (NEET). The rankings include more than 10 regions if several regions have identical values. Subject to data availability. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: edat_lfse_22)

EMPLOYMENT RATES BY EDUCATIONAL ATTAINMENT

More about the data: employment rates by educational attainment

An individual's level of educational attainment can play a key role when seeking employment. People with a tertiary level of educational attainment (as defined by the international standard classification of education (ISCED 2011 levels 5 to 8)) generally enjoy the most success when trying to find work. They also tend to be better shielded from the risks of unemployment than their peers with lower levels of educational attainment.

The data presented in this section concern people aged 25 to 64 years, as this represents a cohort of individuals who have generally completed their education or training and are most likely to be actively participating in the labour market. As such, it excludes younger individuals who may still be studying, as well as older individuals who may be in retirement.

In 2024, 184.7 million people aged 25 to 64 years were employed across the EU. The largest share of this cohort consisted of people with an upper secondary or post-secondary non-tertiary education (ISCED levels 3 to 4; 44.4%), followed by those with a tertiary level of educational attainment (ISCED levels 5 to 8; 40.6%). A relatively small share of the EU workforce had no more than a lower secondary education (ISCED levels 0 to 2; 14.8%). The strong links between educational attainment and employment opportunities are reflected in the latest employment rates:

- 59.2% for people with no more than a lower secondary education (hereafter referred to as a low level of education)
- 78.3% for people with an upper secondary or post-secondary non-tertiary education (a medium level of education)
- 87.8% for people with a tertiary level of education (a high level of education).

Map 4.4 presents employment rates in 2024 for people aged 25 to 64 years according to these 3 different levels of educational attainment.

- There were 46 NUTS level 2 regions where fewer than half of all people with a low level of education were in employment. By contrast, employment rates for people with medium or high levels of education exceeded 50.0% in every region of the EU.
- There were 71 NUTS level 2 regions where at least 90.0% of all people with a high level of education were in employment. By contrast, employment rates for people with a low level of education remained consistently below 90.0% across every region of the EU, while Åland in Finland was the only region to report an employment rate of at least 90.0% for people with a medium level of education.

In 2024, Východné Slovensko in Slovakia had the lowest employment rate among people with a low level of education …

The 1st part of Map 4.4 shows employment rates for people aged 25 to 64 years with a low level of education. In 2024, there were 46 NUTS level 2 regions with employment rates below 50.0% for this cohort. These 46 regions were mainly concentrated in eastern EU countries (excluding Czechia, Hungary and Slovenia), as well as in southern Belgium and southern Italy; among others, this group also included the capital regions of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (Belgium), Attiki (Greece) and Wien (Austria). The lowest employment rate was recorded in Východné Slovensko – the easternmost region of Slovakia – where 27.7% of people with a low level of education were in employment. There were 4 other regions that recorded employment rates below 35.0%: Guyane (France; 31.8%), Centru (Romania; 33.4%), Stredné Slovensko (Slovakia; 34.4%) and Severozapaden (Bulgaria; 34.7%).

… while 3 regions in southern Italy had the lowest employment rates for people with a medium level of education

The 2nd map shows employment rates for people aged 25 to 64 years with a medium level of education. In 2024, there were 8 NUTS level 2 regions that recorded an employment rate of at least 87.0% for this cohort. They included 3 regions in Czechia (among them the capital region of Praha), Bratislavský kraj (the capital region of Slovakia), Malta, Közép-Dunántúl (Hungary), as well as the island regions of Região Autónoma dos Açores (Portugal) and Åland (Finland). Åland recorded the highest employment rate for people with a medium level of education, at 90.1%.

At the lower end of the distribution, there were 3 regions within the EU where fewer than 60.0% of people with a medium level of education were in employment. All 3 were located in southern Italy: Calabria (53.2%), Campania (58.2%) and Sicilia (59.8%). The next lowest employment rate was recorded in the Belgian capital region – Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest – at 60.9%.

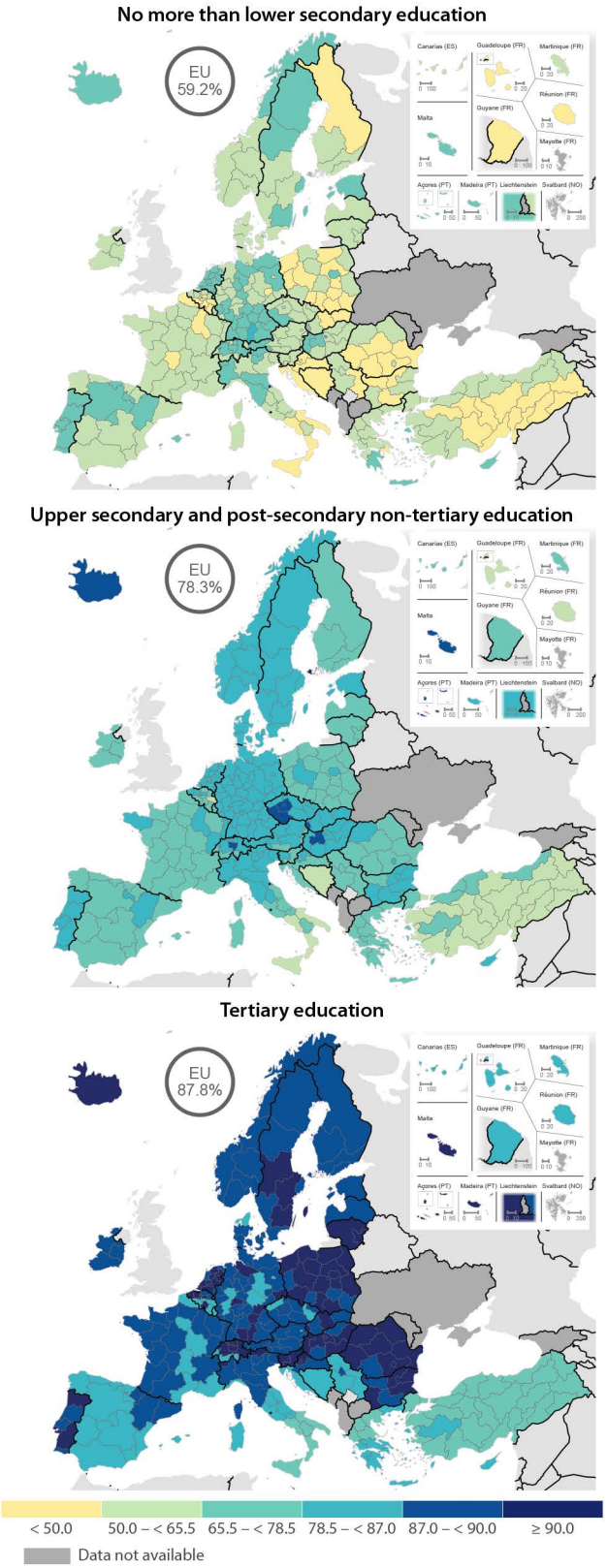
In 2024, Região Autónoma dos Açores in Portugal recorded the highest proportion of tertiary-educated people in employment

The 3rd map shows employment rates for people aged 25 to 64 years with a high level of education. In 2024, there were 71 NUTS level 2 regions across the EU that recorded employment rates of at least 90.0% for this cohort. These regions were clustered across Bulgaria, Lithuania, Hungary, the Netherlands, Poland, Portugal, Romania and Slovenia; Malta had a similarly high level too. The highest proportion of tertiary-educated people in employment was recorded in the Portuguese island region of Região Autónoma dos Açores (93.9%), while employment rates of at least 93.0% were also observed in Småland med öarna (Sweden), Centru (Romania), Pest (Hungary) and Bratislavský kraj (Slovakia).

In 2024, employment rates for people aged 25 to 64 years with a tertiary level of education were generally higher in capital regions than their respective national averages. This may reflect the ability of capital regions to attract highly qualified individuals, exerting considerable 'pull effects' through the diverse educational, employment and social/lifestyle opportunities that they offer. This pattern was particularly evident in Greece, where the employment rate for tertiary-educated people in the capital region of Attiki was 3.1 percentage points above the national average. A similar although less pronounced situation was observed in Slovakia, Spain, Czechia, Bulgaria, Croatia and Poland, where the gap between these 2 rates exceeded 1.0 points. By contrast, in the western EU countries of Belgium, Austria and Germany, the national employment rate for this cohort was at least 3.2 points higher than that for the capital region. This gap was particularly wide in Belgium, as the employment rate for tertiary-educated people in Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest was 6.0 points below the national average.

There were 10 NUTS level 2 regions where, in 2024, the employment rate for people aged 25 to 64 years with a high level of education was below 78.5%. These regions were exclusively located in the southern EU countries of Italy (5 regions), Greece (4 regions) and Spain (1 region, Ciudad de Ceuta). Almost all of these regions were predominantly rural, characterised by relatively large agricultural sectors and limited opportunities for highly skilled workers. The southern Italian region of Calabria had the lowest rate for this cohort, at 71.1%.

Map 4.4: Employment rate by educational attainment
(% of people aged 25–64 years, by NUTS 2 regions, 2024)



Note: Prov. Vlaams-Brabant (BE24), Corse (FRM0) and Åland (FI20), low reliability. Chemnitz (DED4), Grad Zagreb (HR05), Lubuskie (PL43), Opolskie (PL52) and Świętokrzyskie (PL72): low reliability for no more than lower secondary education.

Source: Eurostat (online data codes: lfst_r_lfe2eedu and lfst_r_lfsd2pop)

HIGHLY SKILLED PEOPLE

A recent communication from the European Commission, *Harnessing talent in Europe's regions* (COM(2023) 32 final), highlighted the issue of increasing global competition for talent, as many developed world economies are expected to face shrinking populations in the years ahead. The communication identified demographic transformation as a cause for concern in several EU regions, where shrinking working-age populations and the potential departure of young and skilled workforces to other regions/territories could result in a 'talent development trap'.

More about the data: highly skilled people

The International Classification of Occupations (ISCO) provides statisticians with a framework for internationally comparable data about occupations (a set of tasks and duties performed, or meant to be performed, by 1 person, including for an employer or in self-employment). The current version of the classification was published in 2008 (its 4th iteration) and is known as ISCO-08. It is based on a hierarchical classification made-up of 10 major groups, denoted by 1-digit codes.

For the purpose of this publication, highly skilled employed people are defined as people aged 25 to 64 years in the following occupations:

- managers (ISCO 1)
- professionals (ISCO 2)
- technicians and associate professionals (ISCO 3).

In 2024, there were 84.2 million highly skilled people aged 25 to 64 years employed within the EU; they accounted for 45.8% of the total number of employed people of the same age. Map 4.5 shows that the regional distribution of highly skilled people across NUTS level 2 regions was somewhat skewed: 106 out of 243 regions for which data are available – or 43.6% of all regions – reported a share of highly skilled employed people that was above the EU average.

Capital regions attract highly qualified talent

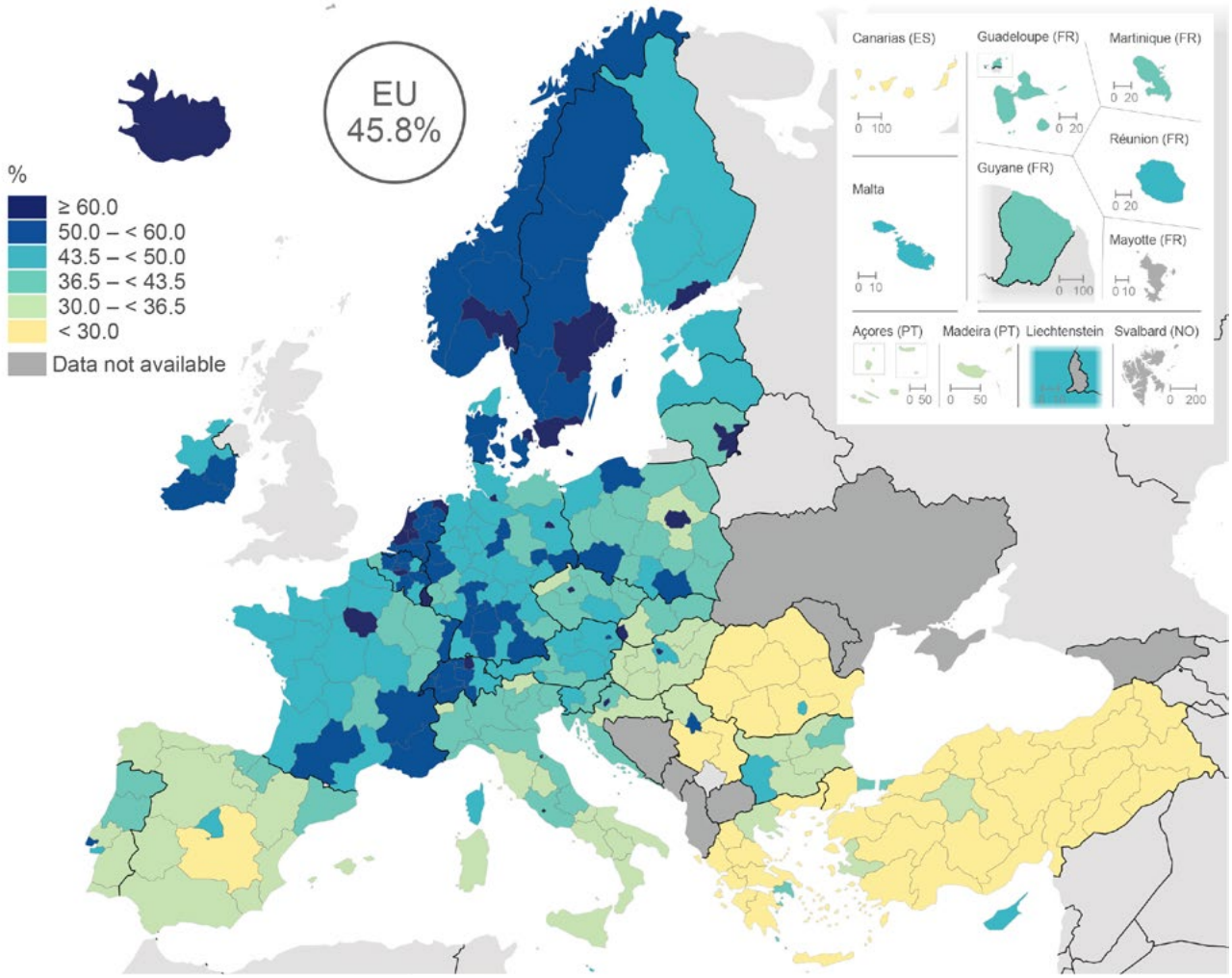
There were 21 NUTS level 2 regions across the EU where, in 2024, at least 60.0% of all employed people aged 25 to 64 years were considered highly skilled. Of these, 13 were capital regions, which tend to attract highly qualified individuals by offering a wide array of job prospects in dynamic sectors of the economy, as well as diverse cultural and social opportunities.

- Stockholm, the Swedish capital region, recorded the highest share, with 72.7% of employed people considered highly skilled.
- In the capital regions of Czechia, Poland, Hungary, the Netherlands and Denmark, more than 2 out of 3 employed people were considered highly skilled; the same was true for Luxembourg.
- The capital regions of France, Croatia, Belgium, Slovakia, Finland, Lithuania and Germany also reported shares of highly skilled employed people that were above 60.0%.
- Luxembourg recorded a share of 71.7%.
- Non-capital regions with shares over 60.0% included:
  - the Dutch regions of Utrecht (72.0%), Zuid-Holland (63.8%) and Groningen (60.6%)
  - the Belgian Prov. Brabant Wallon (68.2%)
  - the Swedish regions of Sydsverige (63.5%) and Östra Mellansverige (60.7%)
  - the German region of Hamburg (61.4%).

In 2024, there were 20 NUTS level 2 regions where highly skilled employed people accounted for less than 30.0% of total employment among those aged 25 to 64 years (these regions are denoted by a yellow shade in Map 4.5). This group was concentrated in the south-east of the EU, comprising 11 regions in Greece and 7 regions in Romania. The other 2 regions were both located in Spain: the central region of Castilla-La Mancha and the island region of Canarias.

Looking in more detail, the lowest share of highly skilled employed people was recorded in the Greek region of Sterea Elláda (18.5% in 2024); it was the only region across the EU where fewer than 1 in 5 employed people were highly skilled. The next lowest shares were observed in Romania – Sud-Muntenia (22.5%) and Nord-Est (22.7%); these were followed by 3 more Greek regions, namely, Anatoliki Makedonia, Thraki (23.3%), Voreio Aigaio (24.4%) and Peloponnisos (24.8%).

Map 4.5: Highly skilled employed people
(% of employed people aged 25–64 years, by NUTS 2 regions, 2024)



Note: the indicator covers people employed as managers, professionals, and technicians and associate professionals (ISCO 1–3). The indicator excludes people who gave no response when asked about their occupation. Prov. West-Vlaanderen (BE25), Corse (FRM0) and Åland (FI20): low reliability.

Source: Eurostat (labour force survey)

PEOPLE FREQUENTLY USING DIGITAL DEVICES AT WORK

Technology has become integral to many job functions, from administrative tasks to complex decision-making processes. In capital regions, where economies are often more service-oriented and knowledge-driven, the adoption of digital tools is particularly high. As technology advances, digital literacy becomes essential for maintaining productivity and competitiveness. In 2022, just over 2 out of 5 (40.3%) employed people in the EU aged 20 to 64 years reported using digital devices for at least half of their time at work. Such devices encompass computers, tablets, phablets and smartphones for work-related tasks; phone calls are excluded.

In 2022, approximately 3 out of 4 employed people in Stockholm used digital devices for at least half of their working time

Map 4.6 shows the regional distribution of employed people aged 20 to 64 years who, in 2022, spent at least half of their working time using digital devices. Among the 234 NUTS level 2 regions for which data are available, 127 reported shares above the EU average of 40.3%. Within this group, 50 regions reported that at least half of all employed people spent at least 50% of their working time using digital devices (as shown by the 2 darkest shades of blue).

Looking in more detail, the map highlights the top decile of the distribution – regions where at least 54.5% of employed people used digital devices for at least half of their working time (shown by the darkest shade of blue

in Map 4.6). In 2022, 25 NUTS level 2 regions were in this category, almost all of them located in western and Nordic EU countries. This group included all 8 Swedish regions and 7 out of the 10 Dutch regions for which data are available. The remainder comprised:

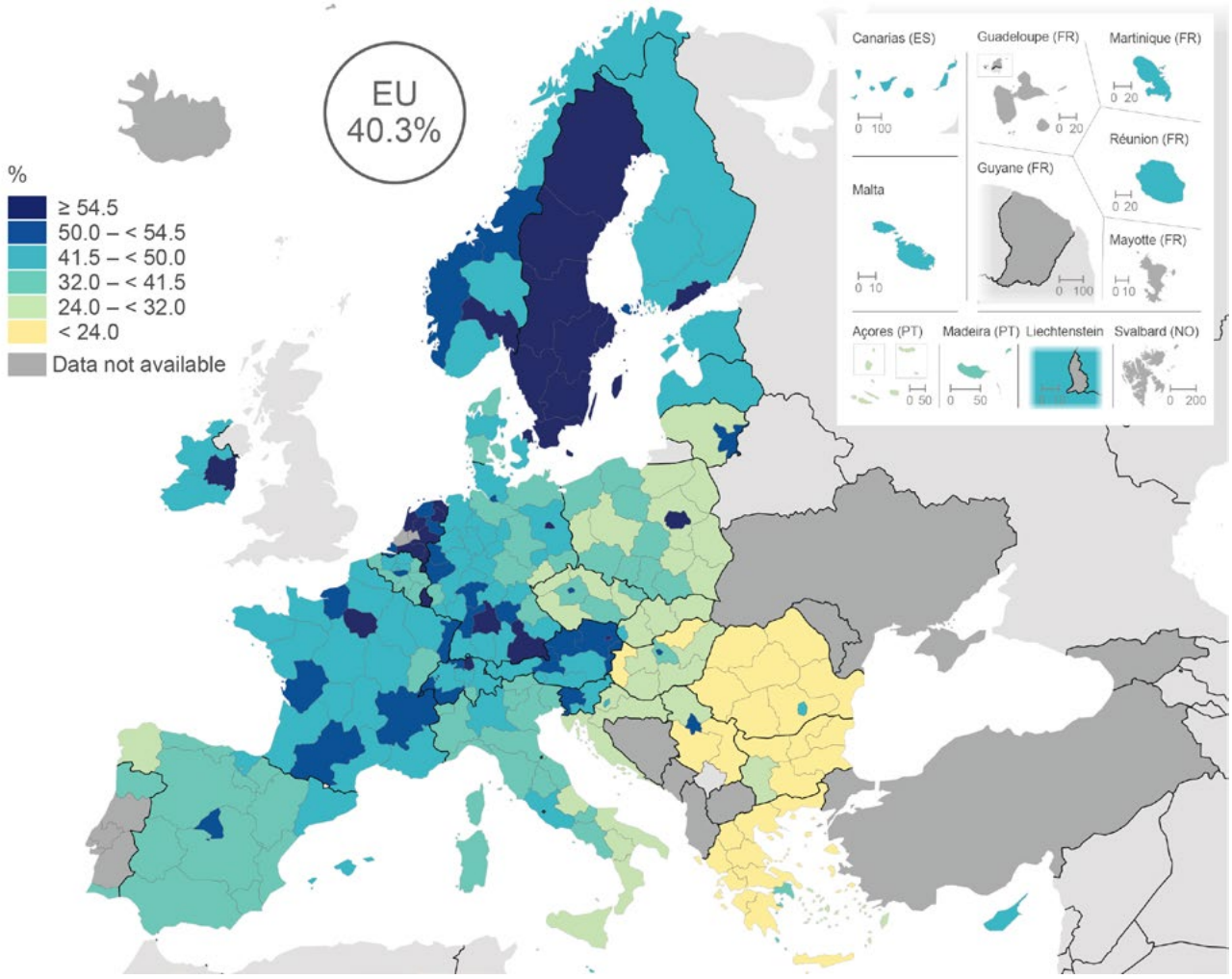
- the capital regions of France, Finland, Austria, Germany, Denmark and Ireland
- 2 other predominantly urban German regions – Oberbayern and Stuttgart
- Luxembourg
- the Polish capital region of Warszawski stołeczny, the only region outside western and Nordic EU countries.

The Swedish capital region of Stockholm recorded, by far, the highest share of employed people using digital devices for at least half of their working time in 2022 (75.9%). The next highest share was reported in Sydsverige (also Sweden; 65.2%), followed by 3 capital regions: Noord-Holland (the Netherlands; 64.9%), Ile-de-France (France; 63.5%), and Helsinki-Uusimaa (Finland; 62.0%).

At the lower end of the distribution, there were 25 NUTS level 2 regions where less than 24.0% of employed people used digital devices for at least half of their working time (as shown by the lightest shade of yellow in Map 4.6). These regions were concentrated across southern and eastern EU countries:

- 5 out of 6 regions in Bulgaria, with the exception of the capital region, Yugozapaden
- 11 out of 13 regions in Greece, with the exceptions of the capital region of Attiki and the island region of Notio Aigaio
- 7 out of 8 regions in Romania, with the exception of the capital region, Bucureşti-Ilfov
- the remaining 2 regions in this group were both located in Hungary – Nyugat-Dunántúl and Észak-Magyarország.

Map 4.6: Frequent use of digital devices at work
(% of employed people aged 20–64 years, by NUTS 2 regions, 2022)



Note: share of employed people using digital devices at least half of their working time. The indicator excludes people who gave no response when asked about their use of digital devices. Prov. Vlaams-Brabant (BE24), Corse (FRM0) and Martinique (FRY2): low reliability.

Source: Eurostat (labour force survey) and (online data code: lfso_22dmsc01)

The central Greek mainland region of Sterea Elláda recorded the lowest share of employed people using digital devices for at least half of their working time, at 11.6% in 2022. The next lowest shares were reported in Peloponnisos and Dytiki Elláda (also Greece; both 13.0%), followed by Severozapaden (Bulgaria; 14.3%) and Ipeiros (Greece; 14.8%).

Unemployment

Unemployment can impact not only the macroeconomic performance of a country or a region, for example lowering productive capacity, but also the well-being of individuals and their families. Rising unemployment results in a loss of income for individuals, increased pressure on government spending for social benefits and a reduction in tax revenues. Additionally, the personal and social costs of unemployment are varied and include a higher risk of poverty, social exclusion, debt or homelessness, while the stigma of being unemployed may have a potentially detrimental impact on (mental) health.

More about the data: the unemployment rate

Within this section, data are presented for people aged 15 to 74 years; this is the standard age range employed by Eurostat and the International Labour Organization (ILO) for studying unemployment rates within the labour force.

Contrary to what may be thought, the unemployment rate is not the direct opposite of the employment rate, since the 2 measures do not have the same denominator; the unemployment rate uses the labour force as a denominator, while the employment rate uses the population.

In 2024, there were 13.1 million unemployed people aged 15 to 74 years across the EU. When expressed as a share of the labour force (of the same age), the EU's unemployment rate was 5.9%. These figures – the overall number of unemployed people and the unemployment rate –represent the lowest levels recorded since the start of the time series in 2002.

Looking more closely at recent developments, the EU's unemployment rate fell from a peak of 11.4% in 2013, declining over 6 consecutive years to 6.7% by 2019. With the onset of the COVID-19 crisis, the rate increased 0.4 percentage points in 2020 and remained unchanged the following year as the pandemic continued to affect much of the EU economy. After a marked decrease in unemployment during 2022 – when labour shortages became apparent in certain sectors – unemployment continued to fall in 2023 and 2024, albeit at a relatively modest pace.

The Czech region of Střední Čechy had the lowest regional unemployment rate in 2024

Map 4.7 presents unemployment rates (for people aged 15 to 74 years) across NUTS level 2 regions. In 2024, the distribution of regional unemployment rates was relatively balanced: of the 204 NUTS level 2 regions for which data are available, 100 had rates above the EU average of 5.9%, while 102 reported rates below the average; Nordjylland (Denmark) and Sostinės regionas (the capital region of Lithuania) had the same unemployment rate as the EU average. The highest regional unemployment rates were generally concentrated in southern EU countries and in several of France's outermost regions, while the lowest rates were primarily found across eastern EU countries.

In 2024, there were 21 regions across the EU that reported unemployment rates of at least 10.5%, as shown by the darkest 2 shades of blue in Map 4.7. The Spanish autonomous cities of Ceuta and Melilla were the only regions with rates exceeding 20.0%. Leaving these 2 regions and the French outermost regions aside, the highest rates in the EU were reported by Andalucía (16.5%) and Extremadura (15.5%) in south-western Spain, Ionia Nisia (16.2%) in western Greece, and Campania (15.6%) in southern Italy.

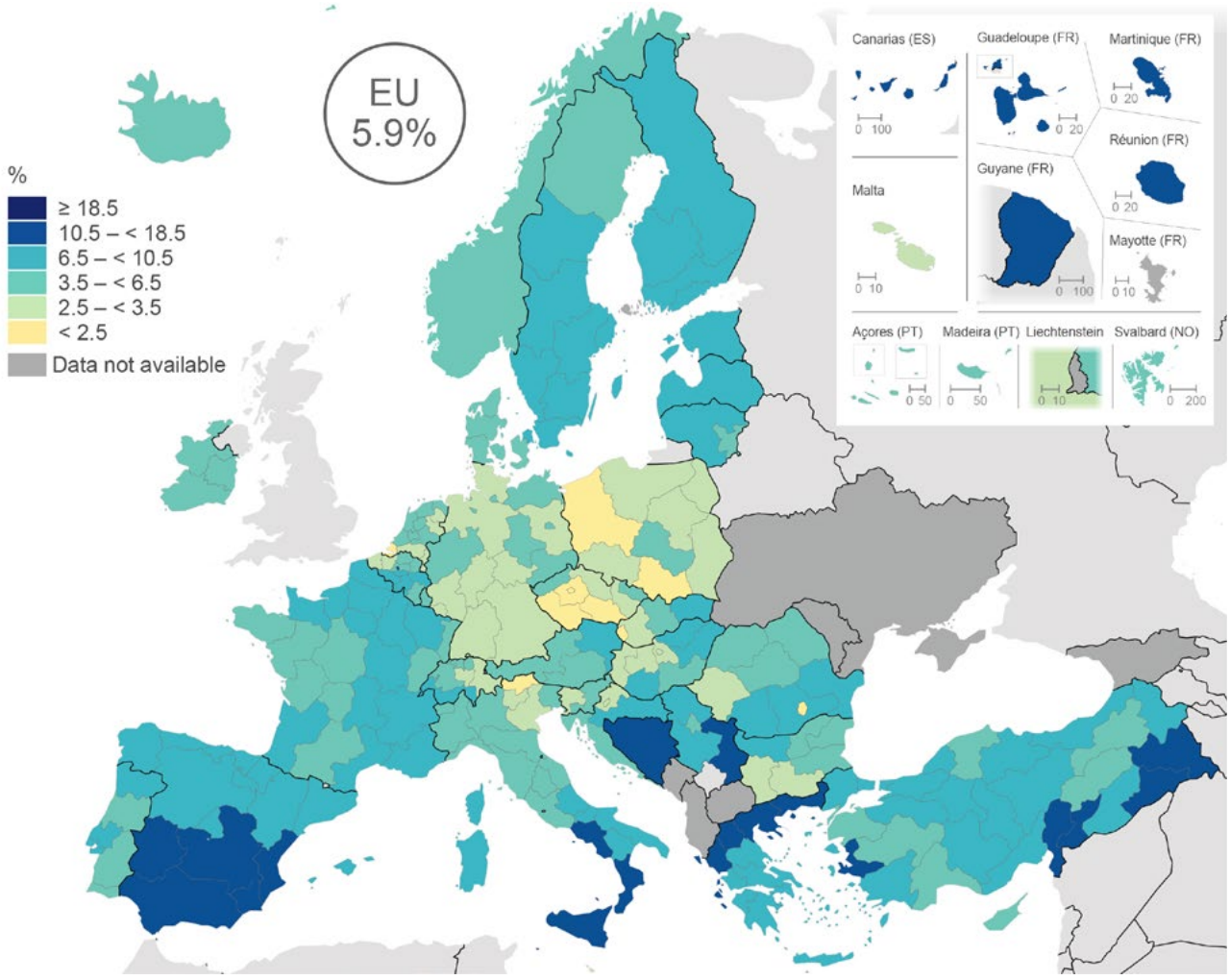
At the lower end of the distribution, there were 10 regions with unemployment rates below 2.5% in 2024; they are shown with a yellow shade in Map 4.7. A majority of these 10 regions were located in Czechia and Poland, while Provincia Autonoma di Bolzano/Bozen (northern Italy), Zeeland (the Netherlands), Bucureşti-Ilfov (the capital region of Romania) and Bratislavský kraj (the capital region of Slovakia) also recorded such low rates. The neighbouring Czech regions of Střední Čechy and Praha (the former surrounds the latter), recorded the lowest unemployment rates in the EU, at 1.3% and 1.8%, respectively.

Unemployment rates in the capital regions of multi-regional eastern and Baltic EU countries were consistently lower than their national averages. In 2024, this pattern was particularly notable in Romania and Slovakia, as their national unemployment rates were at least twice as high as those recorded in the capital regions of Bucureşti-Ilfov and Bratislavský kraj. By contrast, the capital regions of Belgium, Denmark, Germany, Ireland, France, the Netherlands, Austria and Finland reported higher unemployment rates than their respective national averages. Indeed, in 6 of these 8 countries – with France and the Netherlands as exceptions – the capital region recorded the highest unemployment rate of any region (in Finland, Etelä-Suomi had a rate identical to that recorded in Helsinki-Uusimaa). This pattern was especially striking in Belgium, as Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest had an unemployment rate that was more than double the national average.

Unemployment rates vary considerably as a function of age. In 2024, EU-wide unemployment rates were highest among young people aged 15 to 24 years (14.9%) and lowest among people aged 45 to 54 and 55 to 64 years (both 4.4%). Subject to data availability, young people systematically faced the highest unemployment rates in every NUTS level 2 region of the EU. In 6 regions, the unemployment rate of young people was at least 5 times as high as the regional average (for people aged 15 to 74 years):

- Corse in France (6.4 times as high)
- Nord-Vest in Romania (5.7)
- Praha, the capital region of Czechia (5.4)
- Prov. Oost-Vlaanderen and Prov. West-Vlaanderen in Belgium (5.3 and 5.2, respectively)
- Molise in Italy (5.0).

Map 4.7: Unemployment rate
(% of labour force among people aged 15–74 years, by NUTS 2 regions, 2024)



Note: Germany, Austria and Poland, NUTS level 1. Norway: national data. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: lfst_r_lfu3rt)

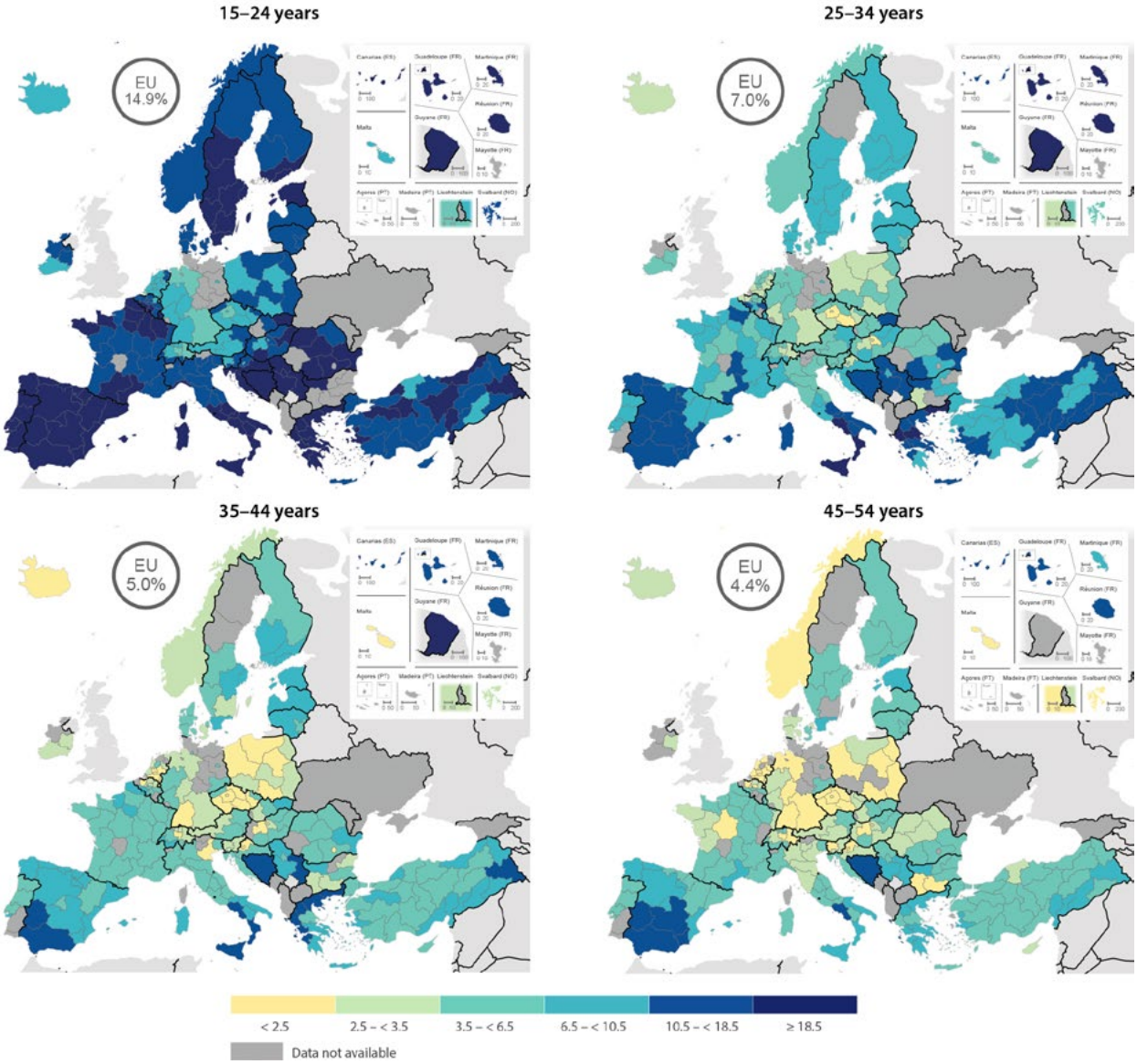
An analysis by age – covering people aged 15 to 24, 25 to 34, 35 to 44 and 45 to 54 years – reveals the highest regional unemployment rates across all EU regions were mainly found in Spanish and French regions (see Map 4.8):

- the autonomous Spanish regions of Ciudad de Ceuta and Ciudad de Melilla featured across all 4 age groups
- the French island region of Corse and the French outermost regions of Guadeloupe and Guyane also featured multiple times
- Ionia Nisia (Greece) had a particularly high rate for people aged 25 to 34 years.

Conversely, the lowest regional unemployment rates by age group were primarily recorded in Czechia and Hungary:

- Střední Čechy (Czechia) featured across all 4 age groups
- Praha, Jihovýchod and Jihozápad (all in Czechia) also recorded several particularly low rates
- Pest and Budapest (both Hungary) had particularly low rates for people aged 25 to 34 years and people aged 35 to 44 years, respectively
- Bayern (Germany) and Zeeland (the Netherlands) had particularly low rates for people aged 15 to 24 years
- Prov. Oost-Vlaanderen in Belgium and Gelderland in the Netherlands had particularly low rates for people aged 45 to 54 years.

Map 4.8: Unemployment rate
(% of labour force among people aged 15–24 years, by NUTS 2 regions, 2024)



Note: Germany, Austria and Poland, NUTS level 1. Norway: national data. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: lfst_r_lfu3rt)

The EU's long-term unemployment rate was 1.9% in 2024

Long-term unemployment is a major challenge in the EU, affecting both individual well-being and social cohesion. High rates often signal structural issues in the labour market, skill mismatches, or economic stagnation, leading to income loss, social exclusion and increased pressure on public welfare systems and community well-being. In March 2024, the European Commission presented an action plan to tackle labour and skills shortages driven by demographic changes, emerging skill demands and poor working conditions. Building on existing initiatives – including the European Pillar of Social Rights Action Plan – it supports training, mobility and attracting talent – 1 of its key measures is the financing of new projects aimed at achieving zero long-term unemployment.

In 2024, 4.2 million people across the EU had been unemployed for more than a year. The long-term unemployment rate – which is defined as the share of the labour force (aged 15 to 74 years) that has been unemployed for 12 months or more – stood at 1.9%. As such, around 1 in 3 unemployed people in the EU had been jobless for more than a year.

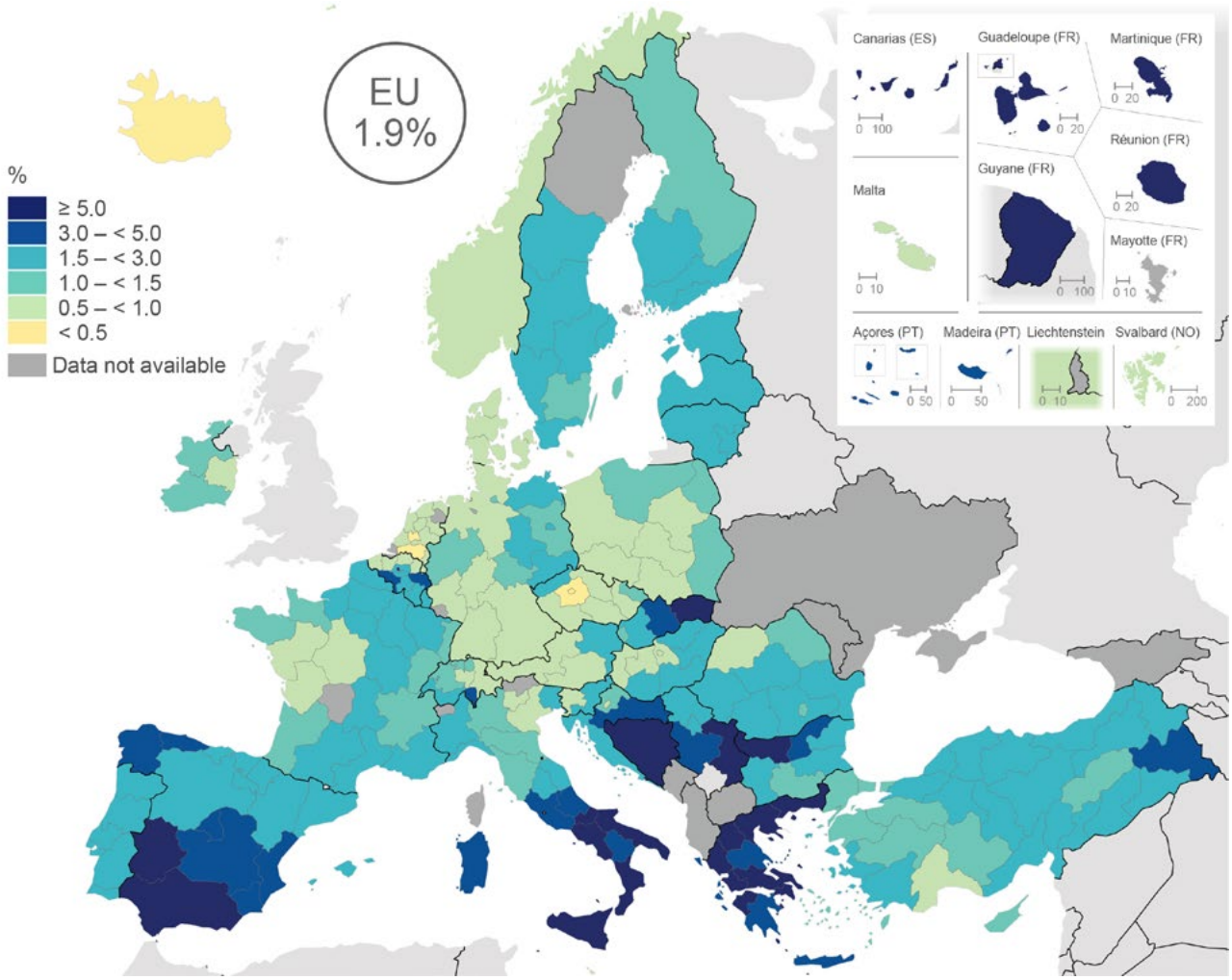
Map 4.9 shows long-term unemployment rates (for people aged 15 to 74 years) across NUTS level 2 regions. Of the 195 regions for which data are available, 82 recorded rates above the EU average, while 106 had rates below, and 7 had the same rate. As with the overall unemployment rate, some of the highest long-term unemployment rates were observed in southern EU countries and several of France's outermost regions.

- The autonomous Spanish regions of Ciudad de Melilla (16.3%) and Ciudad de Ceuta (15.8%) had, by far, the highest rates.
- The French outermost region of Guadeloupe (11.4%) was the only other region in the EU with a double-digit rate, while another French outermost region – La Réunion (8.2%) – also had a relatively high rate.
- There were 3 other regions across the EU that had long-term unemployment rates of at least 8.0%, each of them located in southern Italy – Campania (9.9%), Calabria (8.3%) and Sicilia (8.0%).

In 2024, there were 52 regions across the EU where the long-term unemployment rate was below 1.0% (as shown by the lightest 2 shades in Map 4.9). These regions were mainly concentrated in northern Belgium, Czechia, Denmark (all 5 regions), north-western Hungary, the Netherlands (all 10 regions for which data are available), Austria and Poland; Malta also recorded a rate below 1.0%. The lowest rate across the EU – 0.4% – was observed in 4 regions:

- the neighbouring Czech regions of Praha and Střední Čechy
- Utrecht and Noord-Brabant in the Netherlands.

Map 4.9: Long-term unemployment rate
(% of labour force among people aged 15–74 years, by NUTS 2 regions, 2024)



Note: Germany, Austria and Poland, NUTS level 1. Norway: national data. Several regions only have data for 2023 (too many to document). Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: lfst_r_lfu2ltu)

5. Living conditions

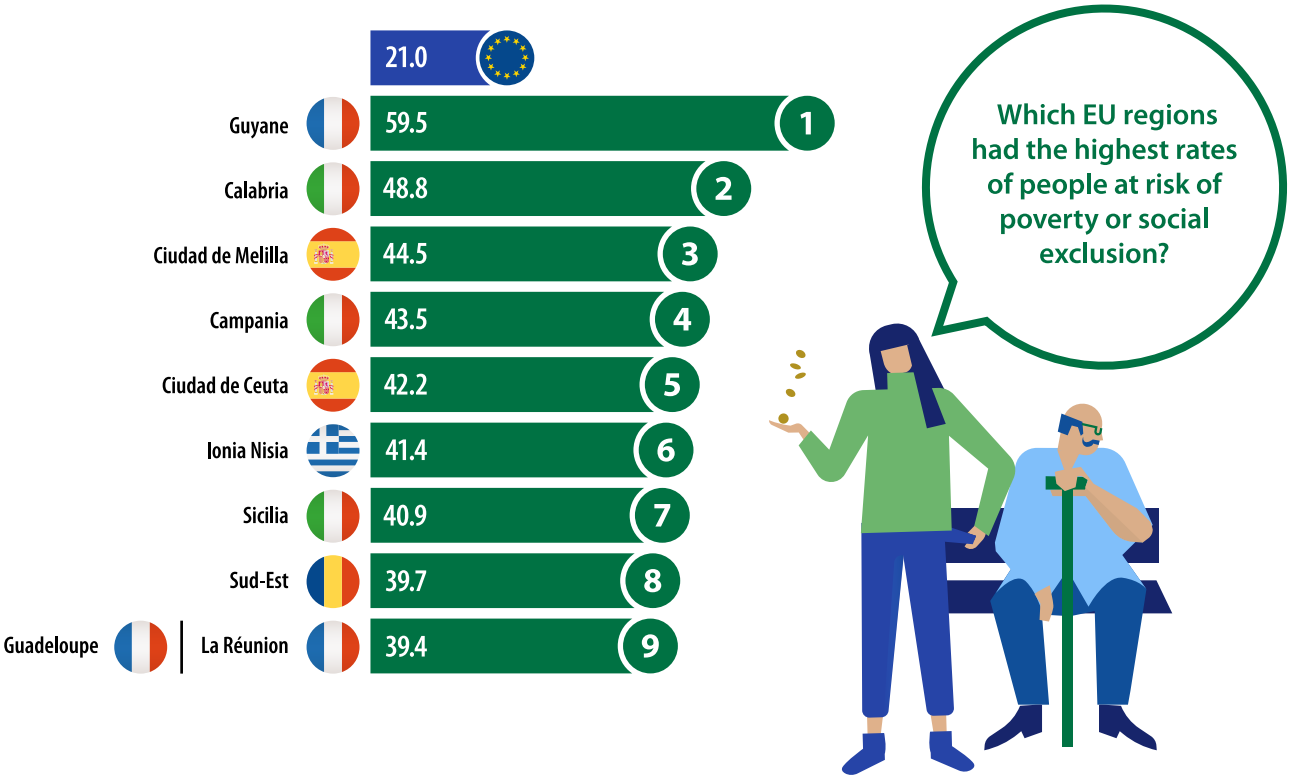
By global standards, most people living in the European Union (EU) enjoy relatively high standards of living. This reflects the EU's high income/wealth levels and its network of established social protection systems that provide a safety net for many less fortunate people. Nevertheless, 93.3 million people in the EU – or 21.0% of the population – were at risk of poverty or social exclusion in 2024. Among EU regions (NUTS level 2), the French outermost region of Guyane recorded the highest rate, at 59.5%. It was the only region in the EU where more than half of the population faced the risk of poverty or social exclusion. The next highest rate was observed in the southern Italian region of Calabria, at 48.8% (see the infographic below for more information).

Sociodemographic characteristics like age, educational attainment, sex and country of birth / citizenship can influence an individual's living conditions. Wider societal developments, such as the impact of globalisation, coupled with unexpected shocks – for example, the global financial and economic crisis, the COVID-19 crisis, the impact of Russia's war of aggression against Ukraine or the cost-of-living crisis – can also have a considerable influence. In some cases, these events can rapidly undo more gradual, long-term reductions in inequality.

Since late 2021, there has been a considerable increase in the cost of living in the EU. Some of the most rapid increases in prices were experienced for goods like energy and food. Price increases for these goods often disproportionately impact the poorest individuals in society, as they tend to allocate a larger proportion of their disposable income to such 'essential goods'. The EU's annual inflation rate rose from 0.7% in 2020 to 9.2% by 2022, before falling back to 6.4% in 2023 and then 2.6% in 2024.

People at risk of poverty or social exclusion

Absolute poverty is a lack of basic human needs, for example, food, shelter, water, sanitation facilities, health or education; in other words, a situation where a household's income is insufficient to afford the basic necessities of life. By contrast, relative poverty concerns a situation where a household's income is below a certain percentage of the median household income of the country where they live.



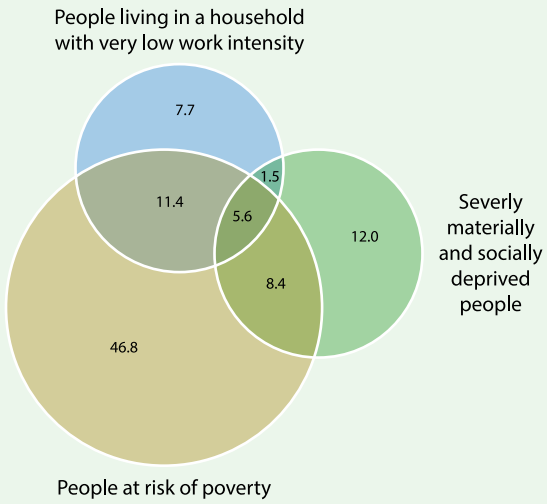
(%, by NUTS 2 regions, 2024)

Source: Eurostat (online data codes: ilc_peps11n and ilc_peps01n)

More about the data: at risk of poverty or social exclusion

The indicator for people at risk of poverty or social exclusion is based on measures of relative poverty, severe material and social deprivation, and quasi-joblessness. The number/rate of people at risk of poverty or social exclusion combines these criteria to cover people who are in at least 1 of the following situations:

- at risk of poverty – people with an equivalised disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income
- facing severe material and social deprivation – people unable to afford at least 7 out of 13 deprivation items (6 related to the individual and 7 related to the household) that are considered desirable, or even necessary, to lead an adequate quality of life
- living in a household with very low work intensity – where adults aged 18 to 64 years (excluding students aged 18 to 24 years and retired people under the age of 65 years) worked for 20% or less of their combined potential working time during the previous 12 months.



Intersections for the at risk of poverty or social exclusion rate (million, EU, 2024)

Source: Eurostat (online data code: ilc_pees01n)

For EU statistics on income and living conditions (EU-SILC):

- the reference period for statistics on income generally refers to the calendar year before the year in which the survey took place
- data for the Finnish regions of Länsi-Suomi and Åland are aggregated (the same value is shown for both regions)
- due to changes in regional boundaries, data are only available for reference year 2024 (not any earlier years) for Utrecht, Zuid-Holland (both the Netherlands), Centro, Grande Lisboa, Península de Setúbal, Alentejo and Oeste e Vale do Tejo (all Portugal)
- there is no information for Mayotte in France
- an earlier reference year is sometimes used for individual regions/countries (see specific footnotes under each map/figure for more information).

On 4 March 2021, the European Commission set out its ambition for a stronger social EU to focus on education, skills and jobs, paving the way for a fair, inclusive and resilient socioeconomic recovery from the COVID-19 crisis, while fighting discrimination, tackling poverty and alleviating the risk of exclusion for vulnerable groups.

The European Pillar of Social Rights Action Plan outlines a set of commitments from policymakers and provides 3 key targets for monitoring progress; 1 of which is to reduce, between 2019 and 2030, the number of people in the EU at risk of poverty or social exclusion by at least 15 million people (of which, at least 5 million should be children).

More than 1 in 5 of the EU's population was at risk of poverty or social exclusion in 2024

Map 5.1 shows the regional distribution of people at risk of poverty or social exclusion across NUTS level 2 regions. In 2024, the regional distribution of this indicator was somewhat skewed, as less than 40% of all EU regions (93 out of the 243 for which data are available) recorded at risk of poverty or social exclusion rates that were higher than the EU average, 4 regions had the same rate, while 146 regions had rates that were lower.

In 2024, there were 25 NUTS level 2 regions where at least 33.0% of the population was at risk of poverty or social exclusion (these regions are shown in the darkest shade of blue in Map 5.1). The highest risks were principally observed in southern, eastern and outermost regions of the EU:

- the 25 regions were concentrated in Greece (5 regions), Bulgaria, Spain, Italy (4 regions each), as well as Romania and the outermost regions of France (3 regions each)
- this group also included 2 predominantly urban regions in western EU countries – the capital region of Belgium (Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest) and Bremen in Germany.

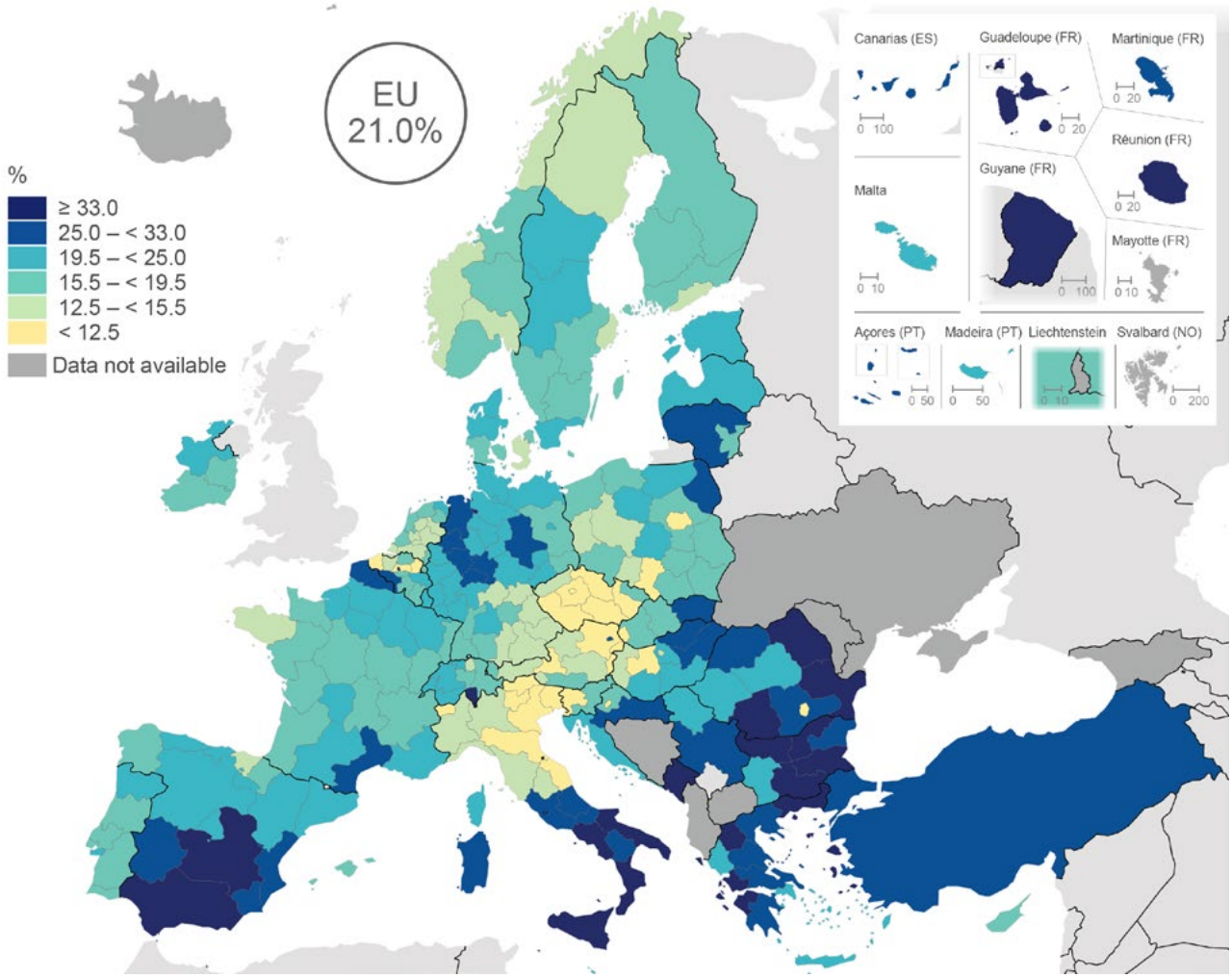
In 2024, there were 5 NUTS level 2 regions across the EU that reported at risk of poverty or social exclusion rates that was more than double the EU average (21.0%). All 5 were located either in the EU's southern countries or its outermost regions, where social and economic challenges tend to be more pronounced.

- The highest rate was in Guyane (France), where 59.5% of the population was at risk.
- In southern Italy, Calabria had a rate of 48.8%, while the neighbouring region of Campania also had a relatively high rate, at 43.5%.
- The Spanish autonomous cities of Melilla (44.5%) and Ceuta (42.2%) completed this group.

At the other end of the distribution, there were 26 NUTS level 2 regions where less than 12.5% of the population was at risk of poverty or social exclusion in 2024 (these regions are shown in a light yellow shade in Map 5.1). This group included:

- 7 regions from northern and central Italy, including Provincia Autonoma di Bolzano/Bozen (6.6%), which had the lowest at risk of poverty or social exclusion rate in the EU
- 6 out of the 8 regions of Czechia, including Jihozápad (8.8%), which had the 3rd lowest rate in the EU
- 3 regions from Vlaams Gewest in northern Belgium
- 3 regions from Austria
- 2 regions from Poland, including the capital region Warszawski stołeczny
- the capital regions of Croatia, Romania, Slovenia and Slovakia; the last of these, Bratislavský kraj, had the 2nd lowest rate in the EU (8.6%)
- the north-western Hungarian region of Közép-Dunántúl.

Map 5.1: People at risk of poverty or social exclusion
(%, by NUTS 2 regions, 2024)



Note: Serbia, NUTS level 1. Türkiye: national data. Länsi-Suomi (FI19) and Åland (FI20) are aggregated (same value for both regions). Switzerland and Serbia: 2023. Montenegro: 2022.

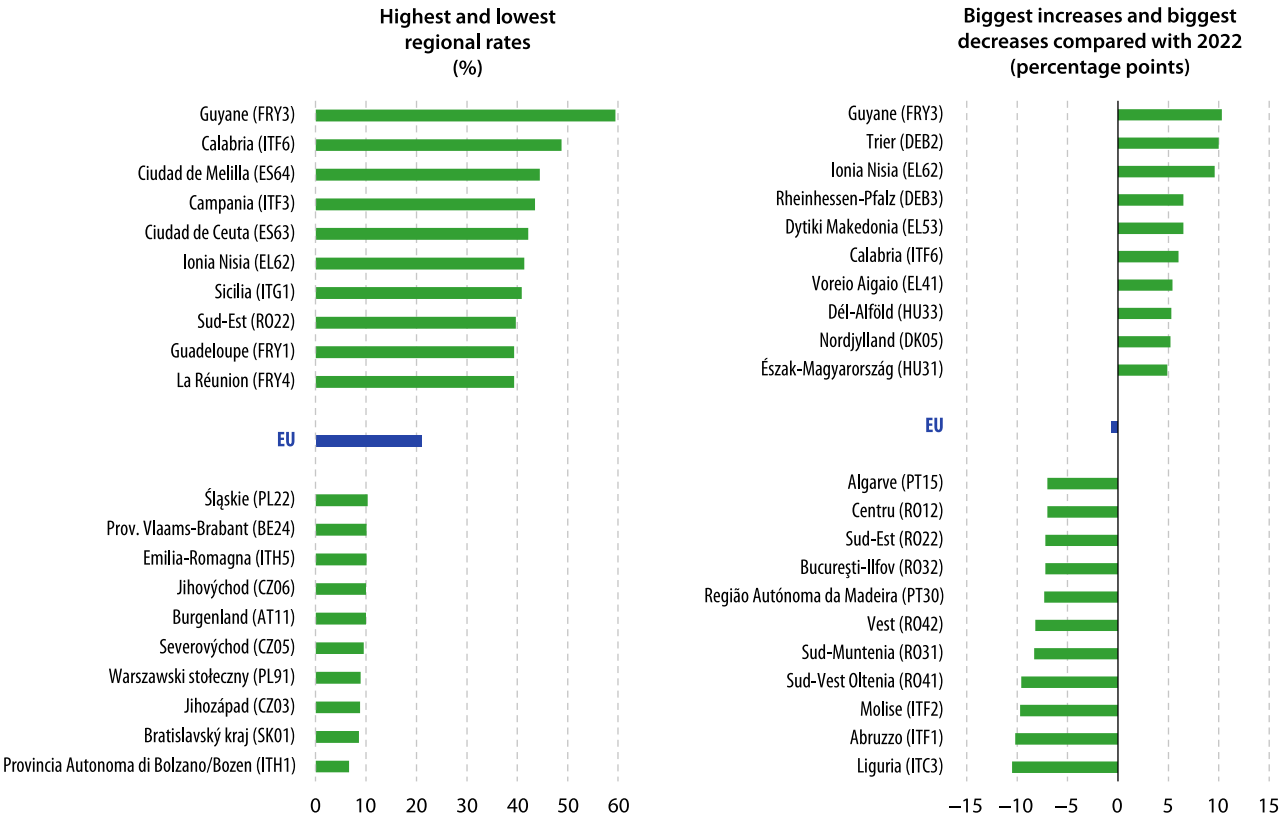
Source: Eurostat (online data codes: ilc_peps11n and ilc_peps01n)

In 2024, people living in the capital regions of eastern EU countries generally faced a lower risk of poverty or social exclusion compared with those living elsewhere. For example, in Romania, the national at risk of poverty or social exclusion rate (27.9%) was 2.3 times as high as the rate recorded in the capital region of Bucureşti-Ilfov (12.0%). A similar pattern was observed in Slovakia, Croatia, Poland, Hungary and Bulgaria, where the national rate was at least 50% higher than in the capital region. This pattern was also present – although generally less pronounced – in several other EU countries: Lithuania, Slovenia, Spain, Portugal, Greece, Sweden, Finland, Ireland, Denmark and France.

By contrast, the situation was reversed in several EU countries. In Belgium, the rate recorded in the capital region was more than double the national average, while in Austria it was 1.7 times as high. The capital regions of 4 more EU countries – Italy, Czechia, the Netherlands and Germany – also recorded somewhat higher risks of poverty or social exclusion compared with their respective national averages.

Figure 5.1 highlights the NUTS level 2 regions with the highest and lowest at risk of poverty or social exclusion rates in 2024. It also presents information on the regions that recorded the biggest increases and decreases in their rates between 2022 and 2024. Across the EU, the at risk of poverty or social exclusion rate fell 0.6 percentage points from 21.6% to 21.0%. Looking more closely at the 236 regions for which data are available, the at risk of poverty or social exclusion rate fell in 134 regions, remained unchanged in 2 regions and increased in 100 regions.

Figure 5.1: People at risk of poverty or social exclusion (by NUTS 2 regions, 2024)



Note: the 1st part of the figure shows the EU regions with the highest and lowest rates in 2024, while the 2nd part shows the regions with the biggest increases and biggest decreases compared with 2022. The rankings include more than 10 regions if several regions have identical values. Utrecht (NL35), Zuid-Holland (NL36), Centro (PT19), Grande Lisboa (PT1A), Península de Setúbal (PT1B), Alentejo (PT1C) and Oeste e Vale do Tejo (PT1D): not available for the comparison with 2022. Mayotte (FRY5): not available.

Source: Eurostat (online data codes: iilc_peps11n and ilc_peps01n)

There were 3 NUTS level 2 regions where the risk of poverty or social exclusion increased by a considerable margin between 2022 and 2024. The French outermost region of Guyane recorded the largest increase, up 10.3 percentage points (from 49.2% to 59.5%). The other 2 regions with notable increases were Trier (Germany) and Ionia Nisia (Greece), where rates rose by 10.0 and 9.6 points, respectively. There were 6 more regions across the EU that reported increases of at least 5.0 points:

- Rheinhessen-Pfalz in Germany – a neighbouring region to Trier (up 6.5 points)
- Dytiki Makedonia and Voreio Aigaio in Greece (up 6.5 points and 5.4 points, respectively)
- Calabria in Italy (up 6.0 points)
- Dél-Alföld in Hungary (up 5.3 points)
- Nordjylland in Denmark (up 5.2 points).

The regions with the largest falls in their at risk of poverty or social exclusion rates were all located in eastern or southern EU countries. The Italian regions of Liguria, Abruzzo and Molise experienced the biggest declines, as their rates fell between 2022 and 2024 by 10.5, 10.2 and 9.7 percentage points, respectively. There were 8 more regions across the EU that reported decreases of at least 7.0 percentage points:

- 6 of the 8 Romanian regions – the exceptions being Nord-Vest and Nord-Est (where rates also fell, although at a more modest pace) – with the largest fall in Sud-Vest Oltenia (down 9.6 points)
- the Portuguese regions of Região Autónoma da Madeira (down 7.3 points) and Algarve (down 7.0 points).

People at risk of poverty

In 2024, 72.1 million people in the EU were at risk of poverty (after social transfers), representing 16.2% of the population. Some of the highest regional rates for people at risk of poverty were concentrated in southern, eastern and Baltic countries. By contrast, some of the lowest rates were recorded in a cluster of regions stretching from central/northern Italy through Austria and into southern Germany, Hungary, Czechia and Poland. Another cluster of regions with low rates was found in northern Belgium and the Netherlands. Several capital regions also recorded relatively low rates.

More about the data: at-risk-of-poverty rate

The at-risk-of-poverty rate (after social transfers) is 1 of 3 criteria used to identify people who are at risk of poverty or social exclusion. It provides information on the share of the population with a level of income that is below a threshold set relative to the median income.

The at-risk-of-poverty rate identifies the proportion of the population who live in a household with an annual equivalised disposable income that is below 60% of the national median. While the threshold is the same for all EU countries in percentage terms (60%), it varies in monetary terms as median incomes differ – sometimes considerably – between countries.

Map 5.2 shows the at-risk-of-poverty rate for NUTS level 2 regions. In 2024, the regional distribution of this rate was relatively skewed: there were 95 regions that recorded a rate equal to or above the EU average of 16.2%, while the remaining 148 regions had lower than average rates.

In 2024, the French outermost region of Guyane reported the highest at-risk-of-poverty rate

The French outermost region of Guyane (53.3%), the autonomous Spanish cities of Melilla (41.4%) and Ceuta (34.6%), and the southern Italian regions of Calabria (37.2%), Campania (35.5%) and Sicilia (35.3%) recorded the highest at-risk-of-poverty rates among NUTS level 2 regions. These were the only regions across the EU where more than 1 in 3 of the population was at risk of poverty in 2024. An additional 25 regions had at-risk-of-poverty rates covering between a quarter and a third of their populations. These 31 regions with the highest at risk of poverty rates are shown in the darkest shade of blue in Map 5.2.

… while the lowest rate was recorded in the Romanian capital region of Bucureşti-Ilfov

By contrast, at the other end of the distribution, there were 27 NUTS level 2 regions where the at-risk-of-poverty rate was below 10.0% in 2024 (as shown by the lightest shade of yellow). Many of these regions were predominantly urban regions (including capitals) or regions with lower unemployment rates, higher standards of living and/or in countries characterised by strong social protection systems. This group of 27 included:

- 5 regions each from Belgium, Czechia and Italy
- 2 regions each from Hungary, Austria and Poland
- the capital region from Croatia, Romania, Slovakia and Finland
- a single region from each of Denmark and Spain.

These 27 regions with a relatively low risk of poverty in 2024 included 7 capital regions, all but 1 from eastern EU countries: Bucureşti-Ilfov in Romania (3.7%), Bratislavský kraj in Slovakia (7.0%), Praha in Czechia (7.5%), Warszawski stołeczny in Poland (8.0%), Budapest in Hungary (9.5%) and Grad Zagreb in Croatia (9.7%); the 7th was Helsinki-Uusimaa in Finland (9.4%).

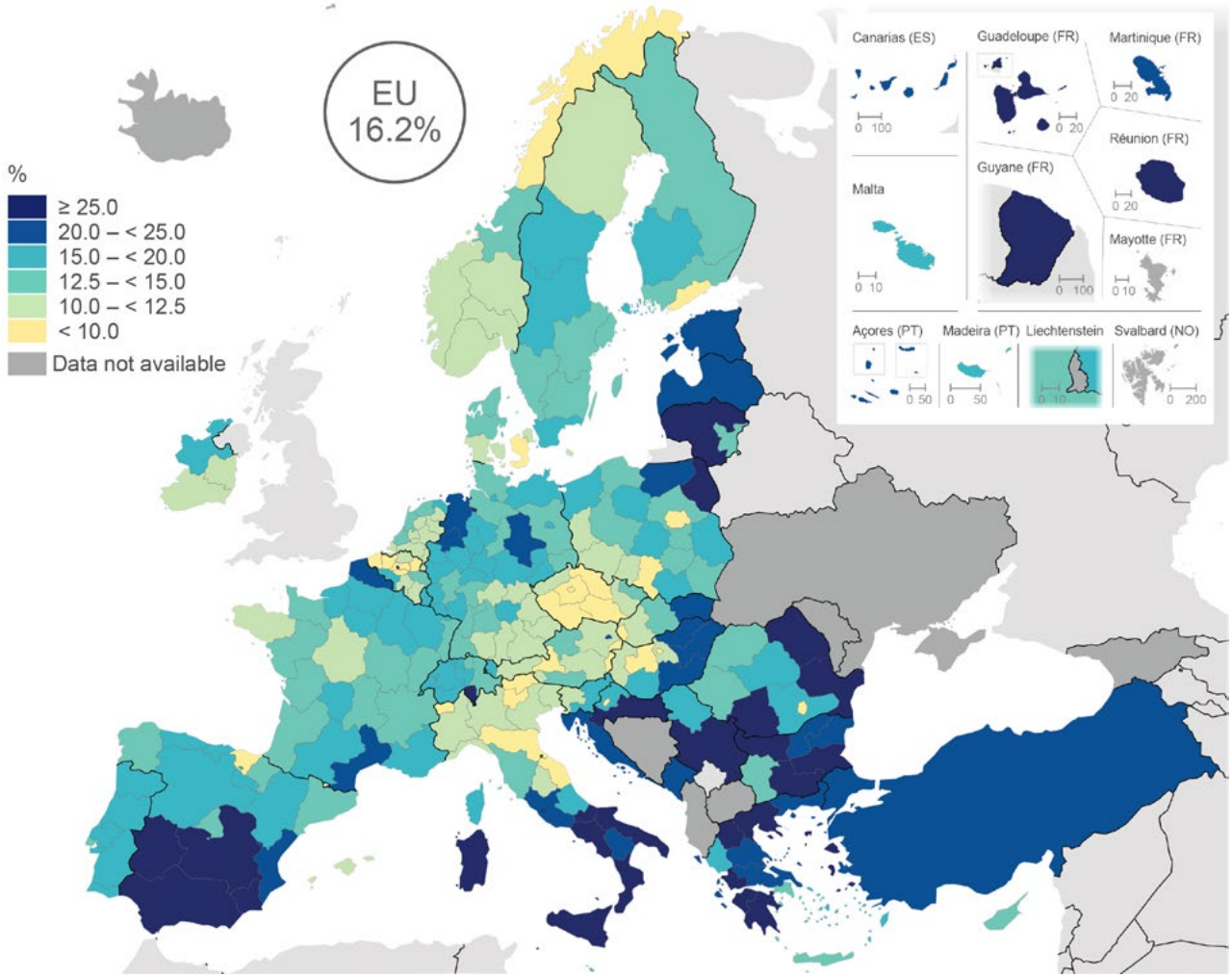
The Romanian capital region of Bucureşti-Ilfov had, by far, the lowest at-risk-of-poverty rate (3.7% in 2024), while rates below 7.0% were also observed in:

- the northern Italian regions of Provincia Autonoma di Bolzano/Bozen and Provincia Autonoma di Trento
- the northern Belgian regions of Prov. Oost-Vlaanderen, Prov. Vlaams-Brabant and Prov. West-Vlaanderen
- Burgenland in eastern Austria.

Across several EU countries – for example, Romania, Italy, France and Belgium – there was a considerable degree of inter-regional variation for at-risk-of-poverty rates.

- In Romania, the at-risk-of-poverty rate in Sud-Vest Oltenia was 8.1 times as high as in the capital region of Bucureşti-Ilfov.
- In Italy, the rate in the southern region of Calabria was 6.3 times as high as in the northern region of Provincia Autonoma di Bolzano/Bozen.
- In France, the rate in the outermost region of Guyane was 5.0 times as high as in the western region of Bretagne.
- In Belgium, the rate in the capital region of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest was 4.6 time\s as high as in Prov. Oost-Vlaanderen.

Map 5.2: At-risk-of-poverty rate
(%, by NUTS 2 regions, 2024)



Note: Serbia, NUTS level 1. Türkiye: national data. Länsi-Suomi (FI19) and Åland (FI20) are aggregated (same value for both regions). Switzerland and Serbia: 2023. Montenegro: 2022.

Source: Eurostat (online data codes: ilc_li41 and ilc_li02)

In 2024, the redistributive impact of social transfers reduced the risk of monetary poverty across the EU from 24.7% to 16.2%

More about the data: social transfers

The at-risk-of-poverty rate before social transfers measures a hypothetical situation where social transfers are absent; pensions, such as old-age and survivors' (widows' and widowers') benefits, are counted as income (before social transfers) and not as social transfers.

It is possible to assess the impact and redistributive effects of welfare policies by comparing at-risk-of-poverty rates before and after social transfers. Such transfers cover assistance that is given by central, state or local institutional units and include, among other types of transfers, unemployment benefits, sickness and invalidity benefits, housing allowances, social assistance and tax rebates.

Figure 5.2 illustrates how the redistributive impact of social transfers reduces the risk of monetary poverty, reflecting, among other factors, historical, political, economic and cultural influences. In 2024, the EU's at-risk-of-poverty rate before social transfers was 24.7%; this was 8.5 percentage points lower, at 16.2%, after social transfers.

Figure 5.2 is split into 2 parts: the left-hand side presents the EU regions with the highest and lowest at-risk-of-poverty rates before social transfers and the right-hand side presents similar information after social transfers. In 2024, there were 2 NUTS level 2 regions where more than half of the population was at risk of poverty before social transfers:

- the French outermost region of Guyane (64.3%)
- the southern Italian region of Campania (52.8%).

The other 9 regions in the EU where, in 2024, more than 40.0% of the population was at risk of poverty before social transfers were:

- 2 more outermost regions in France – La Réunion and Guadeloupe
- 3 more regions in southern Italy – Calabria, Sicilia and Puglia
- the Spanish regions of Ciudad de Melilla and Ciudad de Ceuta
- the capital region of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (Belgium)
- Bremen (Germany).

At the lower end of the distribution, there were 2 NUTS level 2 regions where, in 2024, less than 10.0% of the population faced the risk of monetary poverty before social transfers:

- the Romanian capital region of Bucureşti-Ilfov (5.8%)
- the northern Italian region of Provincia Autonoma di Bolzano/Bozen (7.1%).

Relatively low at-risk-of-poverty rates before social transfers were also recorded in several other capital regions in eastern EU countries:

- Bratislavský kraj in Slovakia (10.2%)
- Praha in Czechia (11.4%)
- Budapest in Hungary (12.1%)
- Grad Zagreb in Croatia (12.3%).

The right-hand side of Figure 5.2 shows the regions with the highest and lowest at-risk-of-poverty rates after social transfers. Taking account of the redistributive impact of social transfers, Guyane was the only region in the EU where more than half of the population continued to be at risk of monetary poverty in 2024, while Ciudad de Melilla was the only other region where this risk affected more than 40.0% of the population. There were 6 other regions where the at-risk-of-poverty rate after social transfers was more than twice as high as the EU average, namely:

- Calabria, Campania and Sicilia (Italy)
- Ciudad de Ceuta (Spain)
- Guadeloupe and La Réunion (France).

Across many regions in western and northern EU countries, it was common for social transfers to markedly reduce the risk of poverty. In 2024, this risk was reduced by at least 8.5 percentage points – the EU average – in:

- every region of Belgium, Denmark, Ireland and Finland
- 24 of the 26 regions of France (the exceptions being the eastern regions of Franche-Comté and Alsace)
- 6 of the 8 regions of Sweden (the exceptions being the capital region of Stockholm and Mellersta Norrland)
- a similar pattern was also observed in Estonia.

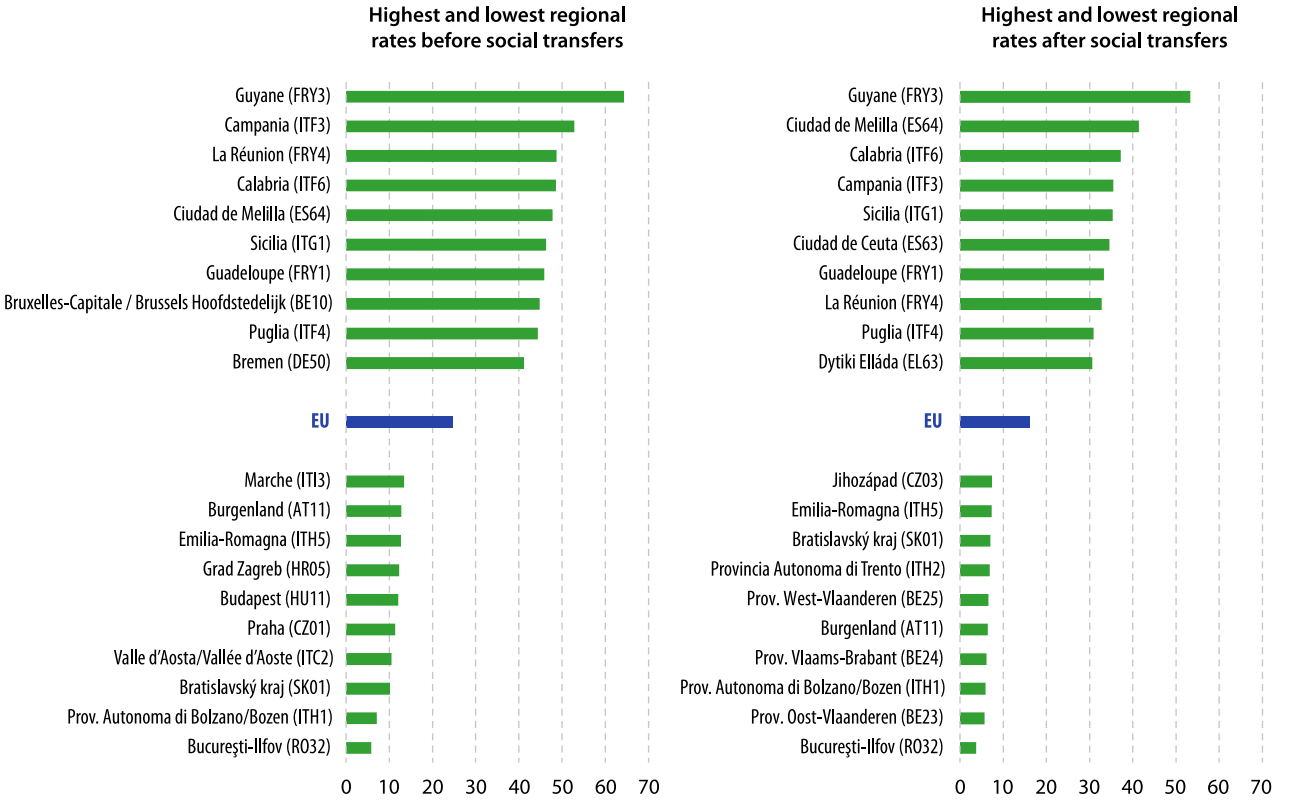
In some cases, the redistributive impact of social transfers was considerable. In 2024, the at-risk-of-poverty rate was reduced by at least 14.0 percentage points in:

- several regions of Belgium – Prov. Hainaut (where the at-risk-of-poverty rate was 20.5 points lower after social transfers, the largest reduction recorded among EU regions), Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (18.3 points lower), Prov. Luxembourg (14.8 points lower) and Prov. Liège (14.0 points lower)
- the southern Italian regions of Campania (17.3 points lower) and Abruzzo (17.0 points lower)
- the French outermost region of La Réunion (15.9 points lower)
- the German region of Bremen (15.3 points lower)
- the Irish region of Southern (15.2 points lower)
- the Danish regions of Nordjylland (14.6 points lower) and Midtjylland (14.0 points lower).

In addition to the 11 regions mentioned above, a further 104 NUTS level 2 regions across the EU recorded a fall of at least an 8.5 percentage point fall in their at-risk-of-poverty rates due to social transfers – matching or exceeding the average reduction observed across the whole of the EU.

At the other end of the scale, there were 31 NUTS level 2 regions in the EU where the redistributive impact of social transfers reduced the at-risk-of-poverty rate by less than 5.0 percentage points in 2024. These regions were principally concentrated in Greece, northern and central Italy, Portugal, Romania and Spain. In other countries, this group included the capital regions of Hungary, Croatia, Slovakia, Czechia and Lithuania.

Figure 5.2: At-risk-of-poverty rate before and after social transfers
(%, by NUTS 2 regions, 2024)



Note: the figure shows the EU regions with the highest and lowest rates before and after social transfers. Mayotte (FRY5): not available.

Source: Eurostat (online data codes: ilc_li10_r, ilc_li41, ilc_li10 and ilc_li02)

Severe material and social deprivation, and economic strain

The severe material and social deprivation rate measures the share of people whose living conditions are severely constrained by an enforced lack of items that are necessary and desirable to lead an adequate life. It reflects enforced inability to afford basic goods, services or social activities – such as a meal with protein, adequate heating, or spending social time with family and/or friends.

The EU's severe material and social deprivation rate rose during the cost-of-living crisis, peaking at 6.8% in 2023. A year later, it fell 0.4 percentage points, returning to a level that was similar to that recorded before the crisis. In 2024, there were 27.5 million people across the EU that were facing severe material and social deprivation; this was equivalent to 6.4% of the total population.

More about the data: severe material and social deprivation

The severe material and social deprivation rate is 1 of 3 criteria used to identify people at risk of poverty or social exclusion. It is defined as the share of people who are unable to afford at least 7 out of 13 items (6 related to the individual and 7 related to the household) that are considered desirable – or even necessary – to lead an adequate quality of life

List of items related to the individual

- having an internet connection
- replacing worn-out clothes by some new ones
- having 2 pairs of properly fitting shoes (including a pair of all-weather shoes)
- spending a small amount of money each week on themselves
- having regular leisure activities
- getting together with friends/family for a drink/meal at least once a month

List of items related to the household

- capacity to face unexpected expenses
- capacity to afford paying for 1-week annual holiday away from home
- capacity to being confronted with payment arrears (on mortgage or rental payments, utility bills, hire purchase instalments or other loan payments)
- capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every 2nd day
- ability to keep home adequately warm
- have access to a car/van for personal use
- replacing worn-out furniture

In 2024, the highest severe material and social deprivation rates were recorded in the south-eastern corner of the EU, peaking in Ionia Nisia (Greece) and Sud-Est (Romania), where more than 1 in 4 of the population faced such deprivation

Map 5.3 shows the regional distribution of severe material and social deprivation rates. In 2024, the highest rates among NUTS level 2 regions were concentrated across Greece, Romania, Bulgaria, the outermost regions of France and Hungary. The lowest rates were observed in northern and central Italy, Slovenia, Austria, Croatia, the Netherlands, Poland and northern Sweden. Of the 243 regions for which data are available, 150 had rates below the EU average of 6.4%, 3 had the same rate, and 90 recorded higher than average rates.

In 2024, Ionia Nisia in Greece (28.0%) and Sud-Est in Romania (26.4%) recorded the highest severe material and social deprivation rates. These were the only EU regions where more than 1 in 4 of the population was affected by the enforced inability to afford basic goods, services or social activities. There were 6 other regions in the EU where more than 20.0% of the population faced severe material and social deprivation:

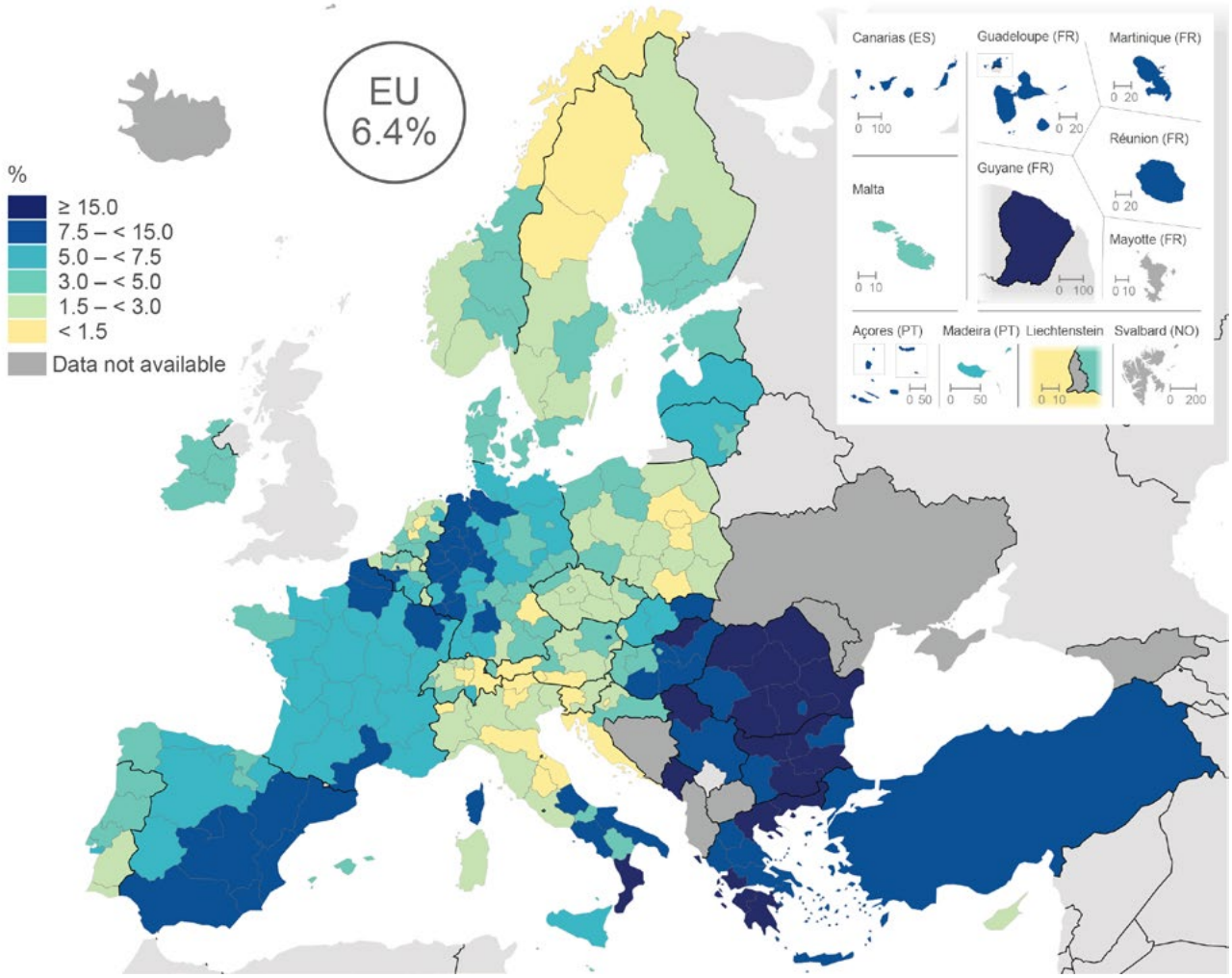
- Calabria in Italy (24.9%)
- Yugoiztochen (22.7%), Yuzhen tsentralen (22.1%) and Severen tsentralen (21.6%) in Bulgaria
- Anatoliki Makedonia, Thraki in Greece (21.4%)
- Sud-Muntenia in Romania (20.3%).

At the other end of the distribution, every region of Czechia, Denmark, Ireland, Croatia, the Netherlands, Poland, Slovenia, Finland and Sweden had a severe material and social deprivation rate that was below the EU average of 6.4% in 2024; this was also the case in Estonia, Cyprus, Latvia, Luxembourg and Malta.

In 2024, there were 6 regions in the EU with severe material and social deprivation rates that were less than 1.0%:

- the northern Italian regions of Provincia Autonoma di Bolzano/Bozen and Provincia Autonoma di Trento recorded the lowest rates in the EU (both 0.1%)
- the Slovenian capital region of Zahodna Slovenija (0.7%)
- the Polish region of Mazowiecki regionalny (0.9%)
- 2 more Italian regions – Marche and Valle d'Aosta/Vallée d'Aoste (both 0.9%).

Map 5.3: Severe material and social deprivation rate
(%, by NUTS 2 regions, 2024)



Note: Serbia, NUTS level 1. Türkiye: national data. Länsi-Suomi (FI19) and Åland (FI20) are aggregated (same value for both regions). Switzerland and Serbia: 2023. Montenegro: 2022.

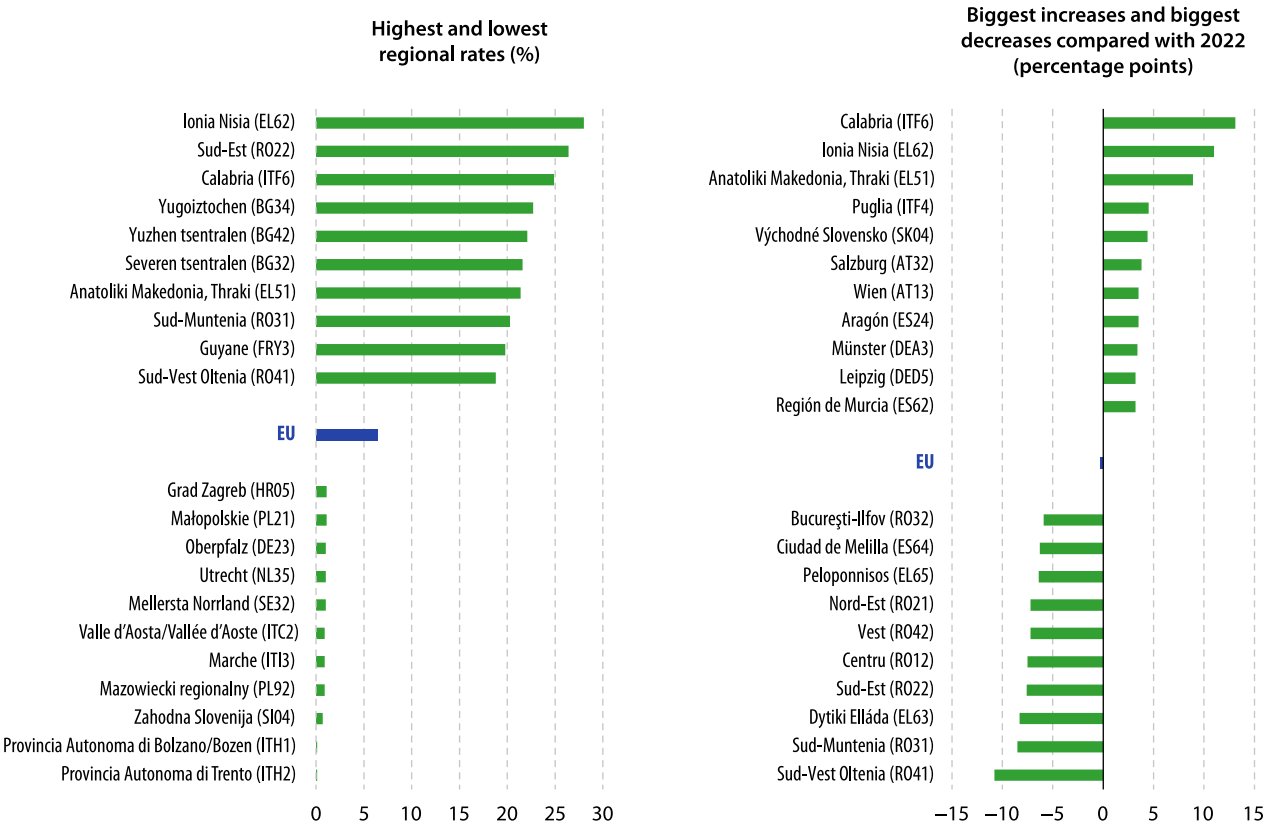
Source: Eurostat (online data codes: ilc_mdsd18 and ilc_mdsd11)

Figure 5.3 highlights the NUTS level 2 regions that recorded the biggest increases and decreases in their severe material and social deprivation rates between 2022 and 2024. Across the EU, this rate fell from 6.7% to 6.4% – a decrease of 0.3 percentage points. Looking more closely at the 236 regions for which data are available, the severe material and social deprivation rate fell in 131 regions during the period under consideration, remained unchanged in 5 regions and increased in 100 regions.

There were 2 NUTS level 2 regions that recorded double-digit increases in their severe material and social deprivation rates between 2022 and 2024. The biggest increase was in the southern Italian region of Calabria, up 13.1 percentage points (from 11.8% to 24.9%). There was also a marked increase in Ionia Nisia (Greece), where the rate increased 11.0 points (from 17.0% to 28.0%). Anatoliki Makedonia, Thraki (also Greece) was the only other region in the EU to record an increase of more than 4.5 points, with its rate up 8.9 points (from 12.5% to 21.4%).

There were 10 NUTS level 2 regions that recorded a fall of more than 5.0 percentage points for their severe material and social deprivation rate between 2022 and 2024. This group included 7 out of the 8 regions in Romania (the exception being Nord-Vest), 2 regions from Greece and a single region from Spain. The Romanian regions of Sud-Vest Oltenia and Sud-Muntenia and the Greek region of Dytiki Elláda experienced the biggest declines, as their rates fell by 10.8, 8.5 and 8.3 percentage points, respectively.

Figure 5.3: Severe material and social deprivation rate
(by NUTS 2 regions, 2024)



Note: the 1st part of the figure shows the EU regions with the highest and lowest rates in 2024, while the 2nd part shows the regions with the biggest increases and biggest decreases compared with 2022. The rankings include more than 10 regions if several regions have identical values. Utrecht (NL35), Zuid-Holland (NL36), Centro (PT19), Grande Lisboa (PT1A), Península de Setúbal (PT1B), Alentejo (PT1C) and Oeste e Vale do Tejo (PT1D): not available for the comparison with 2022. Mayotte (FRY5): not available.

Source: Eurostat (online data codes: ilc_mdsd18 and ilc_mdsd11)

Economic strain has gained renewed attention in light of the ongoing cost-of-living crisis. Rising inflation, surging energy prices and challenges around housing affordability have placed considerable pressure on household budgets, particularly among vulnerable groups. Indicators of economic strain can reveal growing disparities in financial resilience, which may be used to understand where support is most needed to address economic insecurity.

The cost-of-living crisis reflects prices increasing at a faster pace than wages, such that purchasing power falls. The surge in prices of food and energy, as well as other goods and services, may be attributed, at least in part, to Russia's military aggression against Ukraine. For example, concerns over supply shortages, along with international sanctions placed on Russian energy exports, led to an increase in the price of energy products, while prices for foodstuffs and fertilisers also rose strongly. Another contributing factor to rising inflation was a post-pandemic surge in demand.

More about the data: economic strain

Economic strain refers to a set of indicators that measure self-perceived financial difficulties of households. This concept is covered by a group of indicators collected as part of the EU-SILC survey, designed to capture material hardship and/or financial stress.

While economic strain is not generally used as a headline indicator within EU policy development, it does play a key role in understanding living conditions and poverty (beyond income-based measures). Various measures of economic strain are included in composite indicators such as the severe material and social deprivation rate. Some of the most common measures include, whether households:

- can keep their home adequately warm
- can afford a meal with meat, chicken, fish (or vegetarian equivalent) every 2nd day
- can afford unexpected financial expenses
- have arrears on mortgage/rent, utility bills, hire purchase instalments or other loan payments.

The data presented in the 4 maps below relate to the share of the population affected by each measure of economic strain. The data are shown as indices, relative to the EU average (that is set equal to 100.0); higher values indicate that people living in a particular region have greater difficulty affording the specific goods and/or services.

In Kentriki Elláda (Greece) and Sur (Spain), more than 1 in 5 people were unable to keep their home adequately warm in 2024

The 1st part of Map 5.4 highlights the share of the population living in households that are struggling to keep their homes adequately warm. In 2024, this issue affected 9.2% of the EU population. Among NUTS level 1 regions, the highest incidence was observed in Kentriki Elláda (Greece), where 21.2% of people lived in households struggling to keep their homes adequately warm. This was more than 11 times as high as the share recorded in the Polish region of Makroregion województwo mazowieckie (1.9%). In comparison with the EU average, a notably higher share of people in regions of Bulgaria, Greece and Spain lived in households unable to keep their homes adequately warm, with regional shares sometimes more than twice as high as the EU average. By contrast, many regions across the Nordic EU countries and Poland, reported significantly lower levels, with shares that were often less than half the EU average; this was also the case in Estonia, Luxembourg, Austria and Slovenia.

In 2024, more than 1 in 5 people in the Romanian region of Macroregiunea Unu were unable to afford a meal with protein (meat, chicken, fish or vegetarian equivalent) every 2nd day

The 2nd part of Map 5.4 depicts the share of people who could not afford a meal containing protein every 2nd day; this economic strain impacted 8.5% of the EU population in 2024. The highest share across NUTS level 1 regions was recorded in the Romanian region of Macroregiunea Unu (22.9%), which was almost 20 times as high as in Cyprus, where the lowest share was recorded (1.2%). The share of people who could not afford a meal containing protein every 2nd day was more than twice as high as the EU average in:

- both Bulgarian regions
- Saarland (Germany)
- Alföld és Észak (Hungary)
- Macroregiunea Unu (Romania)
- Slovakia.

In Bremen (Germany) and Severna i Yugoiztochna Bulgaria (Bulgaria), more than half of the population was unable to face unexpected financial expenses in 2024

The 3rd part of Map 5.4 shows the proportion of people who were unable to manage unexpected financial costs; across the EU, 30.0% of the population was affected by this economic strain in 2024. Among NUTS level 1 regions, the lowest share was recorded in the northern Belgian region of Vlaams Gewest (13.2%). Relatively low shares – less than half the EU average – were also observed in 3 out of the 4 regions of the Netherlands (with the exception of West-Nederland).

At the other end of the scale, more than half of the population was unable to manage unexpected financial costs in 2024 in the northern German region of Bremen (52.4%) and in Severna i Yugoiztochna Bulgaria (51.5%). Relatively high shares – of at least 40.0% – were also recorded in Yugozapadna i Yuzhna tsentralna Bulgaria, 3 out of 4 Greek regions (excluding the capital region of Attiki), the Spanish regions of Sur and Canarias, the French outermost regions, the Italian regions of Sud and Isole, the Baltic countries of Latvia and Lithuania, and the Romanian regions of Macroregiunea Doi and Macroregiunea Patru.

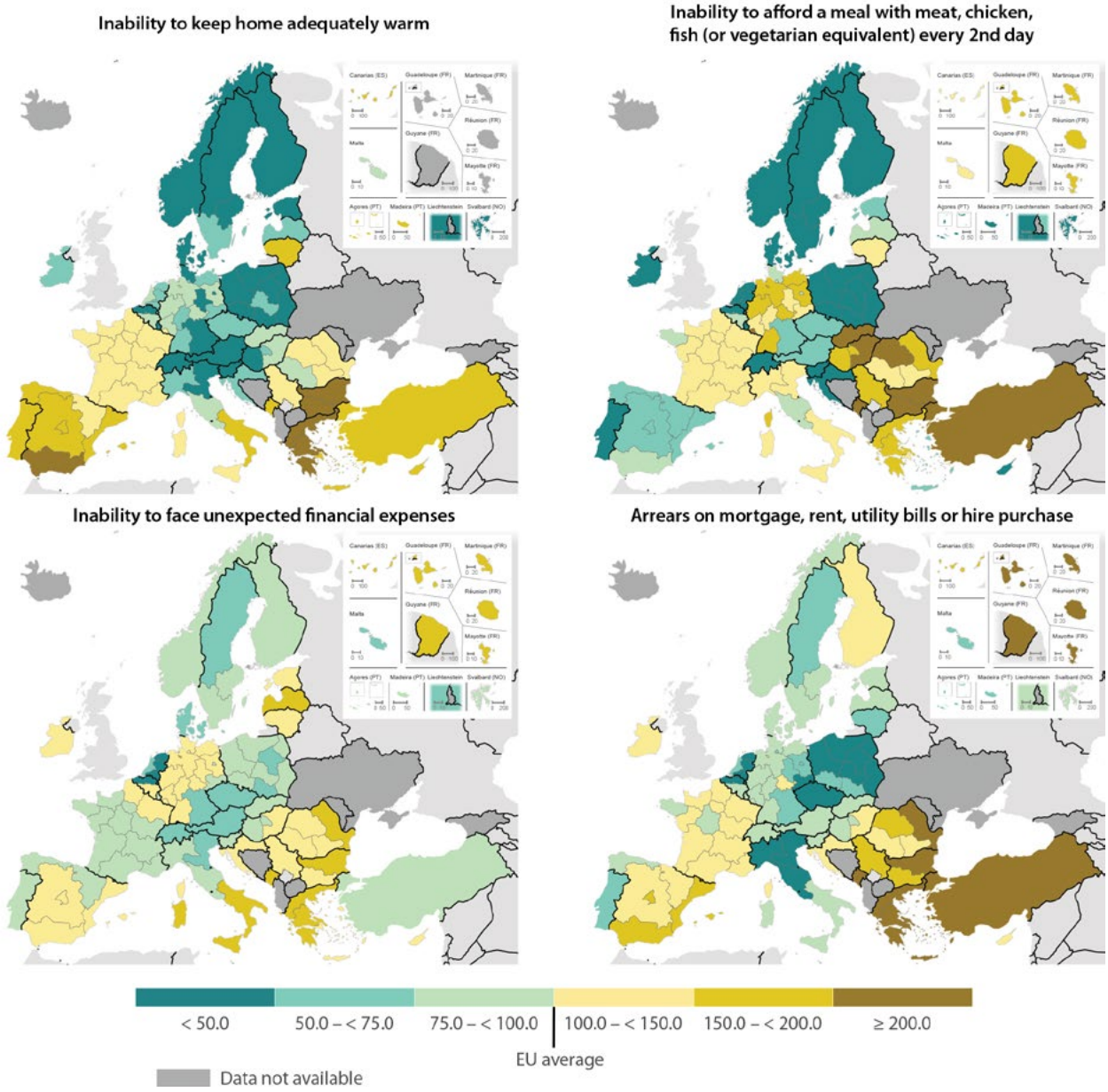
In all 4 Greek regions, more than 40% of the population had arrears on mortgage, rent, utility bills or hire purchase payments in 2024

The final part of Map 5.4 focuses on the share of individuals falling behind on payments for mortgages, rent, utilities or hire purchase agreements. In 2024, these issues affected 9.2% of the EU population. The highest regional shares (among NUTS level 1 regions) were

recorded in Greece, with more than 40% of the population falling behind on payments in all 4 regions. The highest share was recorded in Kentriki Elláda, at 45.8%. The share of people who were in arrears on mortgage, rent, utility bills or hire purchase payments was more than twice as high as the EU average in every region of Greece, the Bulgarian region of Severna i Yugoiztochna Bulgaria, the French outermost regions and the Romanian region of Macroregiunea Doi.

By contrast, Noord-Nederland (2.1%) had the lowest share of people falling behind on payments for mortgages, rent, utilities or hire purchase agreements in 2024. There were several other regions across the EU where the share of people in arrears was less than half the EU average: Vlaams Gewest (Belgium), Czechia, Sachsen (Germany), Nord-Est, Nord-Ovest and Centro (Italy), 2 more Dutch regions (Oost-Nederland and Zuid-Nederland), and 5 out of the 7 regions in Poland (the exceptions being Makroregion południowy and Makroregion południowo-zachodni).

Map 5.4: Economic strains
(index relative to EU average = 100, by NUTS 1 regions, 2024)



Note: based on the share of the population impacted by each economic strain. A meal with protein is a meal with meat, chicken, fish (or vegetarian equivalent). Austria, Portugal, Serbia and Türkiye: national data. Switzerland and Serbia: 2023. Montenegro: 2022.

Source: Eurostat (online data codes: ilc_mdes01_r, ilc_mdes03_r, ilc_mdes04_r, ilc_mdes05_r, ilc_mdes01, ilc_mdes03, ilc_mdes04 and ilc_mdes05)

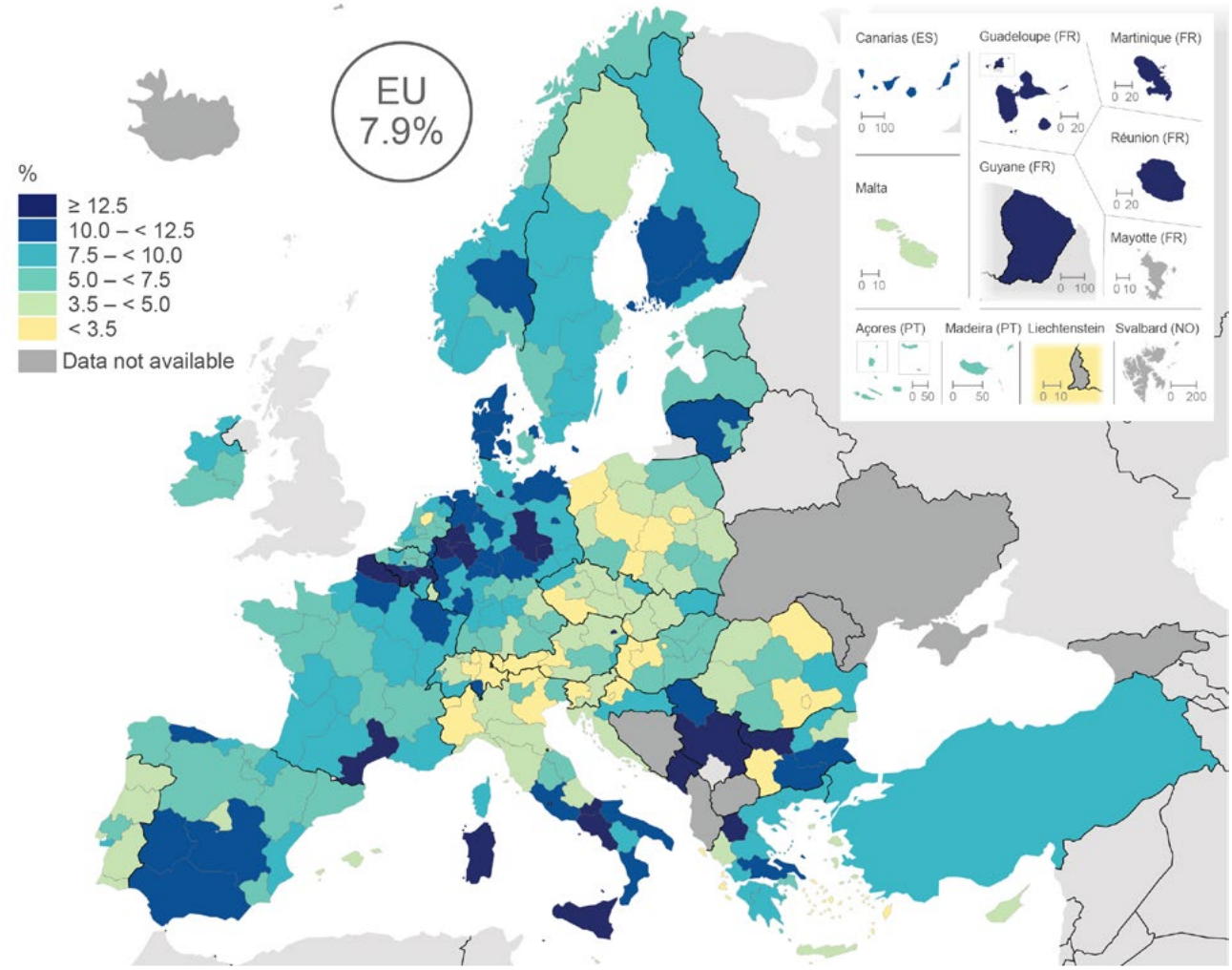
People living in a household with very low work intensity

In 2024, there were 26.2 million people (aged 0 to 64 years) across the EU living in a household with very low work intensity, representing 7.9% of this subpopulation. In 2021, the share had been 9.0%. It declined relatively sharply in 2022 (by 0.7 percentage points), followed by smaller decreases in 2023 (0.3 points) and 2024 (a further 0.1 points).

More about the data: very low work intensity

The share of people living in a household with very low work intensity is 1 of the 3 criteria used to identify people at risk of poverty or social exclusion. Working-age adults with low work intensity are defined as people aged 18 to 64 years (excluding students aged 18 to 24 years and retired people under the age of 65 years) who worked for 20% or less of their combined potential working time during the previous 12 months. Households composed only of children, of students younger than 25 years and/or of people aged 65 years or more are excluded from the calculation of this indicator.

Map 5.5: People living in households with very low work intensity
(%, by NUTS 2 regions, 2024)



Note: Serbia, NUTS level 1. Türkiye: national data. Länsi-Suomi (FI19) and Åland (FI20) are aggregated (same value for both regions). Switzerland and Serbia: 2023. Montenegro: 2022.

Source: Eurostat (online data codes: ilc_lvhl21n and ilc_lvhl11n)

In 2024, low work intensity was concentrated in clusters of regions across western EU countries and southern Italy

Of the 243 NUTS level 2 regions for which data are available, there were 104 regions that had shares of people living in households with very low work intensity that were higher than the EU average (7.9%), while there were 139 that had lower than average shares. Map 5.5 highlights those regions across the EU with a relatively high share of people living in households with very low work intensity in 2024 (as shown by the darkest shade of blue). There were 26 such regions, each with a share of at least 12.5%:

- 7 (predominantly urban) regions in Germany
- 6 regions in France (4 of which were the outermost regions)
- 4 regions in Belgium – the capital Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest and 3 in Région wallonne
- 4 regions in Italy, located either in the south or on islands
- the 2 autonomous Spanish cities of Melilla and Ceuta
- Austria's capital region, Wien
- Dytiki Makedonia in Greece
- Severozapaden in Bulgaria.

By contrast, there were 27 regions across the EU where fewer than 3.5% of people were living in households with very low work intensity in 2024 (as shown by the lightest shade of yellow in Map 5.5). These 27 regions were widely dispersed across 12 different EU countries, including Poland (5 predominantly western regions), Italy (4 northern regions), Hungary (3 western regions), Austria (3 western regions) and Romania (3 eastern regions).

Figure 5.4 is split into 2 parts: the left-hand side presents information for the NUTS level 2 regions with the highest and lowest shares of people living in a household with very low work intensity in 2024; the right-hand side presents the biggest increases and decreases in these shares between 2022 and 2024. In 2024, the French outermost region of Guyane (35.4%) had, by far, the highest share. The next highest shares – where more than 1 in 5, but less than 1 in 4 people were living in a household with very low work intensity – were observed in:

- Campania in Italy (24.4%)
- the French outermost regions of Guadeloupe (23.5%) and La Réunion (21.9%)
- Bremen in Germany (22.9%)
- the autonomous Spanish region of Ciudad de Ceuta (21.9%)
- the Belgian regions of Prov. Hainaut (20.5%) and Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (20.3%).

At the lower end of the distribution, there were 8 NUTS level 2 regions where, in 2024, the share of people living in a household with very low work intensity was less than 2.0%. The Romanian capital region of Bucureşti-Ilfov (0.6%) and the Slovak capital region of Bratislavský kraj (0.8%) had the lowest shares and were the only regions in the EU where fewer than 1.0% of people were living in a household with very low work intensity. The 3rd lowest share was also recorded in a capital region of an eastern EU country, Warszawski stołeczny in Poland (1.1%). The other 5 regions with shares below 2.0% included:

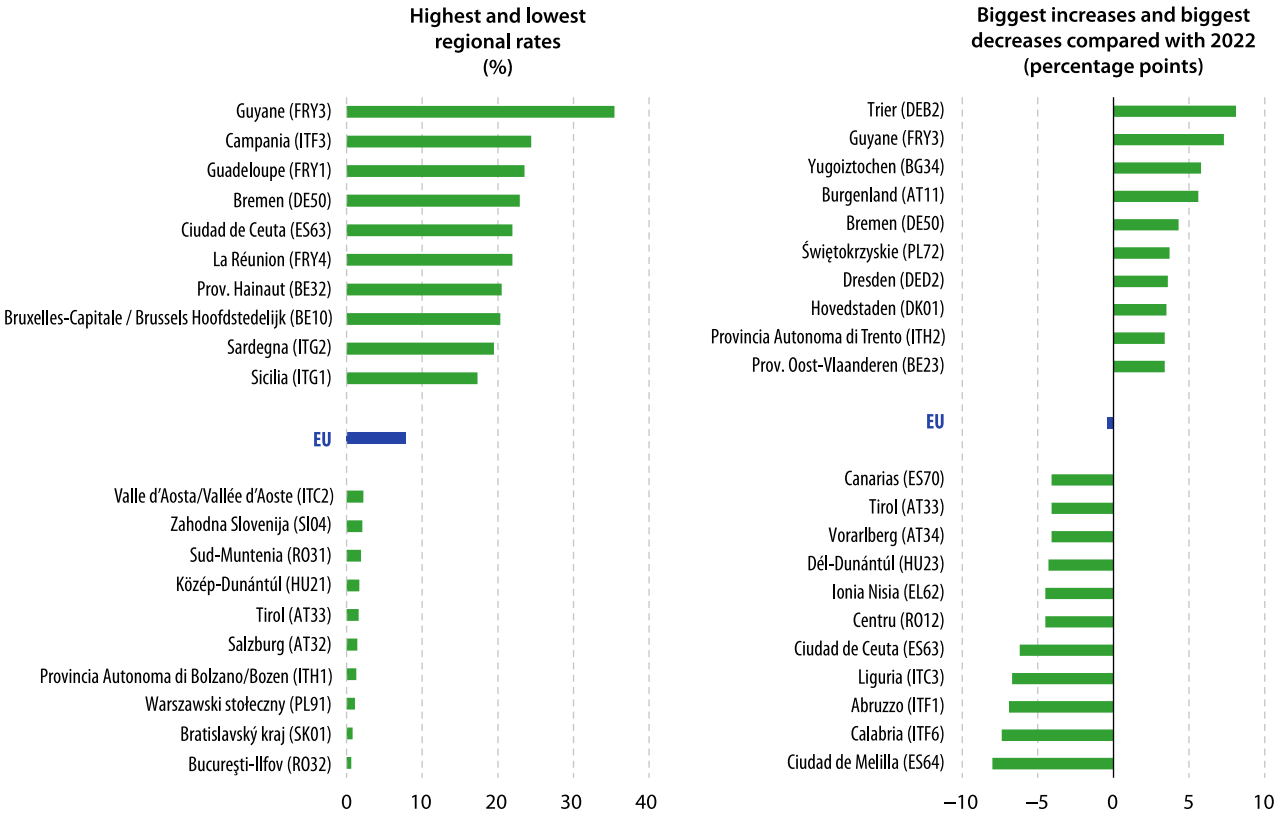
- Provincia Autonoma di Bolzano/Bozen in Italy (1.3%)
- the western Austrian regions of Salzburg (1.4%) and Tirol (1.6%)
- Közép-Dunántúl in Hungary (1.7%)
- Sud-Muntenia in Romania (1.9%).

The right-hand side of Figure 5.4 shows the regions that experienced the biggest increases and decreases in their share of people living in a household with very low work intensity between 2022 and 2024. Across the EU, there was a 0.4 percentage points decrease in this share. During the same period, the share of people living in a household with very low work intensity fell in almost 2 out of 3 (150 out of 236) NUTS level 2 regions for which data are available, while there was an increase in 86 regions.

The Spanish autonomous city of Melilla recorded the largest decrease in its share of people living in a household with very low work intensity, down 8.0 percentage points between 2022 and 2024. Marked reductions were also observed in 3 Italian regions – Calabria (down 7.4 points), Abruzzo (down 6.9 points) and Liguria (down 6.7 points) – as well as in Spain's other autonomous city, Ceuta (down 6.2 points). No other region in the EU reported a decrease that was greater than 4.5 points.

Among the 86 regions that reported a rising share of people living in a household with very low work intensity between 2022 and 2024, the highest increases were recorded in the western German region of Trier (up 8.1 percentage points) and the French outermost region of Guyane (up 7.3 points). Relatively large increases – ranging from 4.3 to 5.8 points – were also observed in Yugoiztochen (Bulgaria), Burgenland (Austria) and Bremen (Germany).

Figure 5.4: People living in households with very low work intensity
(by NUTS 2 regions, 2024)



Note: the 1st part of the figure shows the EU regions with the highest and lowest shares in 2024, while the 2nd part shows the regions with the biggest increases and biggest decreases compared with 2022. The rankings include more than 10 regions if several regions have identical values. Utrecht (NL35), Zuid-Holland (NL36), Centro (PT19), Grande Lisboa (PT1A), Península de Setúbal (PT1B), Alentejo (PT1C) and Oeste e Vale do Tejo (PT1D): not available for the comparison with 2022. Mayotte (FRY5): not available.

Source: Eurostat (online data codes: ilc_lvhl21n and ilc_lvhl11n)

Income distribution

Gross domestic product (GDP) per inhabitant has traditionally been used to assess regional divergence/convergence in overall living standards. However, this commonly used measure fails to account for income paid/received across borders. It also fails to capture the distribution of income within a population and thereby does little to reflect economic inequalities. Alternative/broader measures can help provide a more comprehensive and nuanced understanding of economic and societal developments.

The unequal distribution of income and wealth has gained prominence in political and socioeconomic discourse since the global financial and economic crisis and, more recently, during the cost-of-living-crisis. This inequality not only reflects a wider concentration of wealth among a small privileged group – raising concerns about social cohesion, fairness, and long-term economic stability – but also highlights persistent disparities between regions, particularly those considered to have been 'left behind'.

More about the data: income inequality

The income quintile share ratio (S80/S20) measures the inequality of income distribution. It is calculated as the ratio between the share of income received by the 20% of the population with the highest income (the top quintile) and the share of income received by the 20% of the population with the lowest income (the bottom quintile). High values for this ratio suggest that there are considerable disparities in the distribution of income between upper and lower income groups.

The reference period for income statistics refers to the calendar year before the year in which the survey took place. Income statistics for Belgium and Serbia refer to NUTS level 1 regions, while there are only national data available for France and Türkiye.

In 2024, the EU's income quintile share ratio was 4.7 – in other words, the combined income received by the 20% of people with the highest incomes was 4.7 times as high as the combined income received by the 20% with the lowest incomes.

Across the EU, the Slovak capital region of Bratislavský kraj had the lowest income quintile share ratio, at 2.5 in 2024

Map 5.6 shows the regional distribution of the income quintile share ratio. In 2024, this distribution was skewed: 148 out of the 210 regions for which data are available had ratios below the EU average, 8 regions had the same ratio, while 54 regions reported income disparities above the EU average. The highest income disparities were recorded in the Spanish autonomous cities and parts of Bulgaria and Italy, while the most equitable distributions of income were observed in parts of Czechia, Slovakia and the Netherlands.

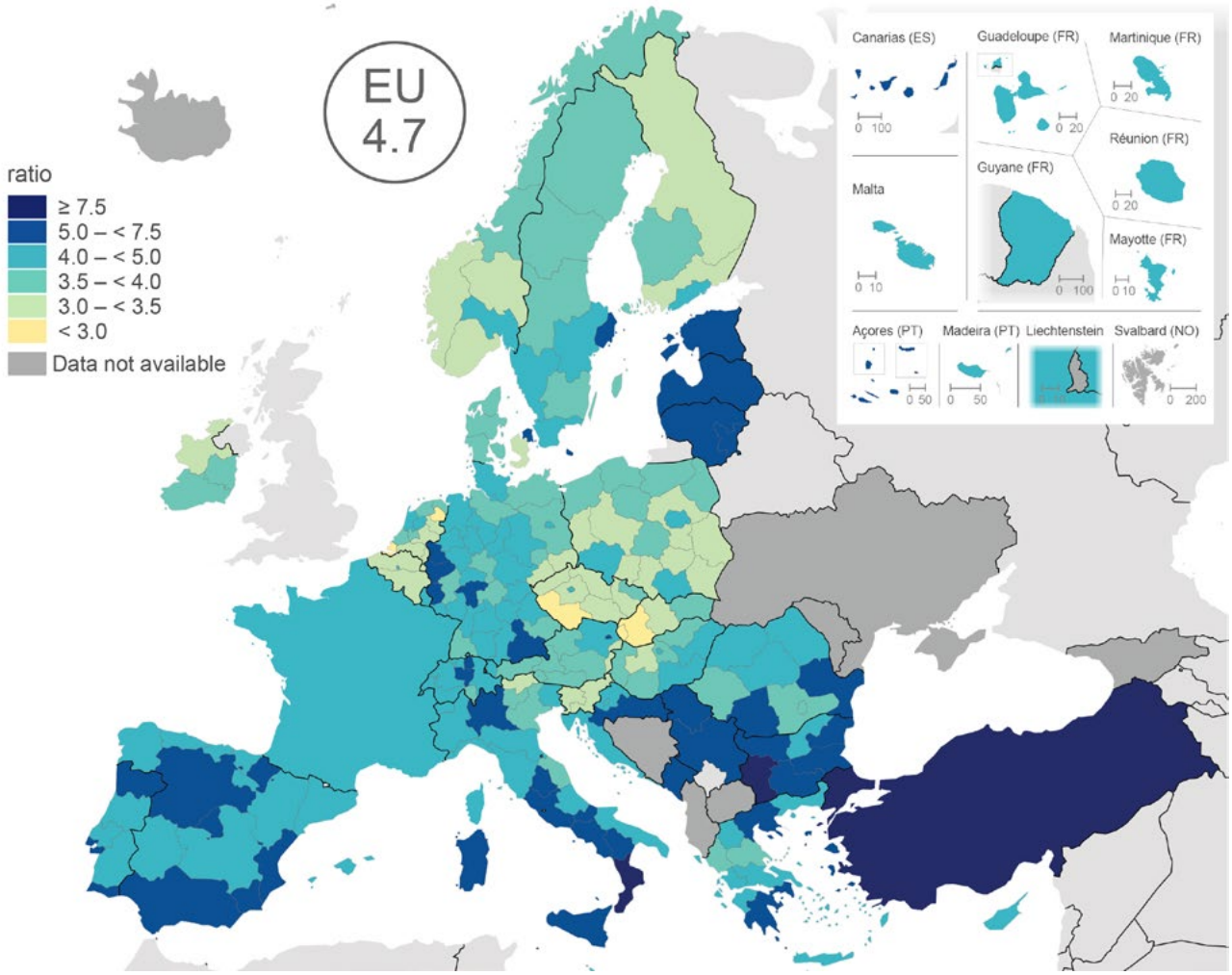
At the top end of the distribution, there were 4 NUTS level 2 regions where the income quintile share ratio was at least 7.5 in 2024 (as shown by the darkest shade of blue in Map 5.6). The Spanish regions of Ciudad de Melilla had the highest income quintile share ratio, at 9.7. The other 3 regions – the Bulgarian capital region of Yugozapaden, the Spanish region of Ciudad de Ceuta and the southern Italian region of Calabria – each had a ratio of 7.6.

At the other end of the distribution, the share of income held by the highest earning 20% of the population in 2024 in Bratislavský kraj – the Slovak capital region – was 2.5 times as high as that held by the lowest earning 20%. This was the lowest income quintile share ratio among NUTS level 2 regions. There were 4 other regions across the EU with ratios below 3.0 (as shown by the lightest shade of yellow in Map 5.6):

- Drenthe and Zeeland in the Netherlands (2.6 and 2.8, respectively)
- Západné Slovensko in Slovakia (2.8)
- Jihozápad in Czechia (2.9).

In many multi-regional EU countries, income distribution in the capital region differed significantly from that in the rest of the country. In 2024, capital regions often recorded the highest income quintile share ratios, as seen in Belgium, Bulgaria, Czechia, Denmark, Ireland, Hungary, the Netherlands, Austria, Poland, Finland and Sweden. For instance, the ratios in the Belgian and Austrian capitals – Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest and Wien – were 1.4 times as high as their respective national averages. By contrast, the pattern was reversed in Germany, Croatia, Lithuania, Romania and Slovakia, where national averages exceeded the ratios recorded in each capital region. For example, income quintile share ratios for Romania and Slovakia were 1.3 times as high as those in Bucureşti-Ilfov and Bratislavský kraj, respectively.

Map 5.6: **Income quintile share ratio (S80/S20)**
(ratio, by NUTS 2 regions, 2024)



Note: Belgium and Serbia, NUTS level 1. France and Türkiye: national data. Länsi-Suomi (FI19) and Åland (FI20) are aggregated (same value for both regions). Switzerland and Serbia: 2023. Montenegro: 2022.

Source: Eurostat (online data codes: ilc_di11_r and ilc_di11)

Criminal justice

More about the data: crime and criminal justice statistics

The statistics presented in this section are based on official figures for police-recorded offences (criminal acts), classified according to the International Classification of Crime for Statistical Purposes (ICCS).

The number of police-recorded crimes varies considerably across the EU: this may reflect, among other factors, different rates for reporting crimes to the police (especially for minor offences), different laws in each EU country and different police practices for recording crimes.

The data shown in this section are based on crime rates, the number of police-recorded crimes per 100 000 inhabitants for NUTS level 2 regions. These rates were subsequently converted into indices to show deviations from the national average in each country (with the national average = 100).

Domestic burglary is defined as breaking in and stealing, in other words, getting unauthorised access to a dwelling for theft or intent of theft (with or without forcing locks, doors, windows, and so on).

Theft is defined as taking property unlawfully – without violence, force, threat, coercion or deception – with the intent to keep it permanently without consent. Theft of motorised land vehicles includes stealing cars, motorcycles, buses, coaches, lorries, trucks, bulldozers and so on.

Intentional homicide is defined as killing a human being wilfully and illegally; in other words, the intent was to cause death or serious injury, but not necessarily that it was planned beforehand. This is a wider concept than murder, for which also planning and other criteria are considered. Intentional homicide statistics:

- include murder, deadly assault, assassination, terrorism, femicide, infanticide, voluntary manslaughter, extrajudicial killings and illegal killing by police or military
- exclude attempted homicide, justifiable self-defence, assisted suicide, euthanasia and abortion.

Special care should be taken when analysing the statistics presented below, as there may be very low counts of intentional homicides in some regions. Counts can vary considerably over time, especially in jurisdictions with small populations, whereby a small increase/decrease in the number of homicides may lead to a relatively large change in crime rates.

You can find more information about how crimes are classified across EU regions in the metadata.

Table 1 highlights the region within each country with the highest incidence of domestic burglaries, motor vehicle thefts and intentional homicides in 2023. Note these figures are normalised, using incidence rates per 100 000 inhabitants to enable more relevant comparisons between regions of different population sizes; these rates were subsequently converted to indices so that each region may be compared with its national average. As such, cross-country comparisons should not be made.

- In Belgium, Czechia, Lithuania and Slovenia, capital regions – Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest, Praha, Sostinės regionas and Zahodna Slovenija – consistently recorded the highest incidence rate for all 3 crimes.
- Midtjylland (Denmark), Provence-Alpes-Côte d'Azur (France), Algarve (Portugal) and Bucureşti-Ilfov (Romania) recorded the highest incidence rates for domestic burglaries and for motor vehicle thefts.
- In Spain, Ciudad de Ceuta recorded the highest incidence rate for motor vehicle thefts and for intentional homicides. A similar situation was observed in Italy, as the highest incidence rate for motor vehicle thefts was in Campania which also had the joint highest rate – with Calabria – for intentional homicides.
- In Slovakia, Východné Slovensko recorded the highest incidence rate for domestic burglaries and for intentional homicides.
- In all of the remaining multi-regional EU countries, different regions recorded the highest incidence rates for each of the 3 crimes covered in this section.

Capital and coastal regions have some of the highest incidence rates for domestic burglaries

Based on the latest information available, there were an estimated 703 500 police-recorded domestic burglaries across the EU in 2023 (including 2021 data for Luxembourg and excluding Ireland, Cyprus and Hungary). Within several EU countries, the capital region – specifically those of Belgium, Czechia, Croatia, Lithuania, Austria, Romania and Slovenia – recorded the highest incidence of domestic burglaries.

In relative terms (compared with national averages), the highest incidence of domestic burglaries was recorded in Bremen (Germany), where burglaries were 2.8 times as likely as the national average. Relatively high indices – more than twice as high as the national average – were also observed in Wien (the Austrian capital region; 2.2 times) and Algarve (southern Portugal; 2.1 times).

In 2023, there was a relatively high incidence of motor vehicle thefts in the capital regions of Romania, Poland and Germany

In 2023, police recorded 477 300 motor vehicle thefts across the EU (including 2022 data for Ireland, 2021 data for Germany, and excluding Cyprus and Hungary). There were 12 multi-regional EU countries where the capital region recorded the highest incidence of motor vehicle theft, namely, Belgium, Czechia, Germany, Ireland, Greece, Lithuania, the Netherlands, Poland, Romania, Slovenia, Slovakia and Finland.

In relative terms, the highest incidence rates of motor vehicle theft in 2023 were recorded in:

- Romania, where police in the capital region of Bucureşti-Ilfov were 5.6 times as likely to record an offence as was the situation for the national average
- Poland, where police in the capital region of Warszawski stołeczny were 4.3 times as likely to record an offence as was the situation for the national average
- Germany, where police in the capital region of Berlin were 4.1 times as likely to record an offence as was the situation for the national average.

In 2023, there was a very high incidence of intentional homicide in French outermost regions

In 2023, there were 3 930 police-recorded intentional homicides within the EU, marking an increase of 1.5% compared with 2022. Most EU countries had a relatively narrow range of inter-regional variation for incidence rates of intentional homicides. There were 6 multi-regional EU countries where the capital region recorded the highest incidence of intentional homicide – namely, Belgium, Czechia, Denmark, Lithuania, Hungary and Slovenia. By contrast, the capital regions of Bulgaria, Spain, France, Italy, Slovakia and Finland recorded rates that were below their respective national averages.

However, there were a few outliers with much higher incidence rates, including several of the outermost regions of France and the autonomous Spanish city of Ceuta. In relative terms, the French outermost region of Guyane had the highest incidence of intentional homicide in 2023, at 16.1 times the French national average.
The 2nd and 3rd highest rates in France were also recorded in outermost regions: Guadeloupe (7.3 times the national average) and Martinique (4.7 times). In Spain, the highest incidence rate for intentional homicide was recorded in Ciudad de Ceuta (8.6 times the national average).

Table 5.1: Police-recorded offences
(index relative to national average = 100, by NUTS 2 regions, 2023)

	Burglary of private residential premises		Theft of a motorised land vehicle		Intentional homicide	
Belgium	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (BE10)	166.4	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (BE10)	199.9	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (BE10)	228.6
Bulgaria	Severozapaden (BG31)	166.7	Yugoiztochen (BG34)	130.6	Severoiztochen (BG33) and Yugozapaden (BG41)	108.3
Czechia	Praha (CZ01)	149.4	Praha (CZ01)	172.1	Praha (CZ01)	133.3
Denmark	Midtjylland (DK04)	121.2	Midtjylland (DK04)	156.4	Hovedstaden (DK01)	122.2
Germany	Bremen (DE50)	279.5	Berlin (DE30)	408.7	Hamburg (DE60)	187.5
Estonia	–	–	–	–	–	–
Ireland	–	:	Eastern and Midland (IE06)	147.5	Southern (IE05)	133.3
Greece	Kentriki Makedonia (EL52)	140.8	Attiki (EL30)	173.9	Ionia Nisia (EL62) and Sterea Elláda (EL64)	142.9
Spain	Comunitat Valenciana (ES52)	157.7	Ciudad de Ceuta (ES63)	234.3	Ciudad de Ceuta (ES63)	857.1
France	Provence-Alpes-Côte d'Azur (FRL0)	138.2	Provence-Alpes-Côte d'Azur (FRL0)	166.7	Guyane (FRY3)	1 608.3
Croatia	Grad Zagreb (HR05)	155.3	Jadranska Hrvatska (HR03)	145.9	Sjeverna Hrvatska (HR06)	185.7
Italy	Emilia-Romagna (ITH5)	143.1	Campania (ITF3)	266.0	Campania (ITF3) and Calabria (ITF6)	150.0
Cyprus	–	–	–	–	–	–
Latvia	–	–	–	–	–	–
Lithuania	Sostinės regionas (LT01)	110.2	Sostinės regionas (LT01)	113.1	Sostinės regionas (LT01)	112.5
Luxembourg	–	–	–	–	–	–
Hungary	–	:	–	:	Budapest (HU11)	128.6
Malta	–	–	–	–	–	–
Netherlands	Limburg (NL42)	111.2	Noord-Holland (NL32)	144.1	–	:
Austria	Wien (AT13)	216.7	Salzburg (AT32)	132.5	Burgenland (AT11) and Steiermark (AT22)	162.5
Poland	Dolnośląskie (PL51)	171.5	Warszawski stołeczny (PL91)	425.0	Zachodniopomorskie (PL42)	162.5
Portugal	Algarve (PT15)	205.7	Algarve (PT15)	209.2	Península de Setúbal (PT1B)	228.6
Romania	Bucureşti-Ilfov (RO32)	149.3	Bucureşti-Ilfov (RO32)	563.8	Nord-Est (RO21)	171.4
Slovenia	Zahodna Slovenija (SI04)	117.3	Zahodna Slovenija (SI04)	152.4	Zahodna Slovenija (SI04)	116.7
Slovakia	Východné Slovensko (SK04)	126.5	Bratislavský kraj (SK01)	197.8	Východné Slovensko (SK04)	118.2
Finland	Etelä-Suomi (FI1C)	106.4	Helsinki-Uusimaa (FI1B)	119.8	Pohjois- ja Itä-Suomi (FI1D)	141.7
Sweden	Östra Mellansverige (SE12)	124.7	Norra Mellansverige (SE31)	109.2	–	:
Norway	–	:	Agder og Sør-Østlandet (NO09)	138.0	Trøndelag/Tröndelage (NO06)	214.3
Switzerland	Région lémanique (CH01)	131.4	Région lémanique (CH01)	132.9	Région lémanique (CH01)	200.0
Albania	Veri (AL01)	128.6	Veri (AL01)	154.9	Veri (AL01)	150.0
Serbia	Autonomous Province of Vojvodina (RS12)	132.7	City of Belgrade (RS11)	145.6	Autonomous Province of Vojvodina (RS12)	116.7
Türkiye	Hatay, Kahramanmaraş, Osmaniye (TR63)	224.1	Gaziantep, Adıyaman, Kilis (TRC1)	253.2	Adana, Mersin (TR62)	212.0

Note: based on data per 100 000 inhabitants. The table shows for each country and each offence, the region with the highest index. Estonia, Cyprus, Latvia, Luxembourg and Malta: single regions at NUTS level 2.

Source: Eurostat (online data codes: crim_gen_reg and crim_off_cat)

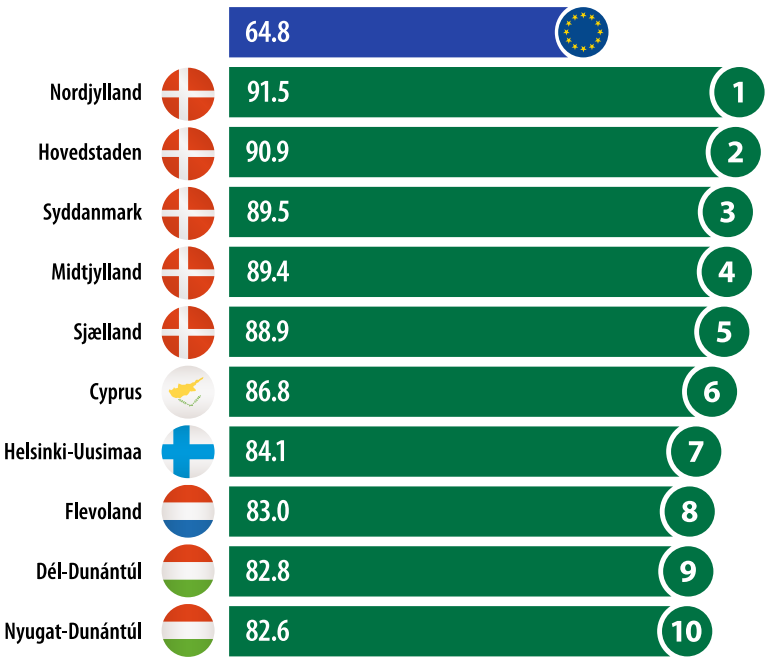
6. Digital society

People use information and communication technologies (ICTs) for work, study, news, communication, entertainment, online transactions and interacting with public services. ICT innovations also create new business opportunities. To take full advantage of these technologies, fast and reliable internet access is essential.

Europe's *Digital Decade* policy has 12 key targets for 2030, among which:

- at least 80% of people aged 16 to 74 years should have at least basic digital skills
- at least 75% of EU enterprises should use cloud computing, data analytics, or artificial intelligence in their business operations.

To support these goals, the *Digital Services Act* (Regulation (EU) 2022/2065) regulates online platforms to prevent illegal activities and misinformation, while protecting user rights. Meanwhile, the *Artificial Intelligence (AI) Act* (Regulation (EU) 2024/1689) manages AI risks and promotes trust in AI systems.



(%, during the 3 months preceding the survey, people aged 16–74 years, by NUTS 2 regions, 2024)

Note: Germany and Greece, NUTS level 1. Croatia: national data. France: 2023.

Source: Eurostat (online data codes: isoc_r_iuse_i and isoc_ci_ac_i)

More about the data: survey on the use of ICT in households and by individuals

Household surveys collect data on ICT usage and are usually conducted during the 2nd quarter of each year, although the precise date can vary between EU countries. In general, the data presented below usually refer to the 1st quarter of the reference year; they concern activities carried out by people during the 3 months prior to the survey.

Most of the ICT statistics presented below cover people aged 16 to 74 years, although the 1st section covers household internet access and the final section covers workplace use of the internet and enterprise use of artificial intelligence.

Data are generally presented for NUTS level 2 regions. Exceptions include Germany, Greece and Türkiye (where the data refer to level 1 regions), as well as Croatia, Norway and Albania (where national data are usually presented).

When making comparisons over time – Figures 1 to 4 compare the situation in 2024 with that in 2019; note, there are breaks in series for the EU, Germany and Ireland in 2021.

The infographic above shows that in 2024 nearly 2 in 3 people aged 16 to 74 years in the EU used social networks. Among NUTS level 2 regions, all 5 Danish regions had participation rates within the range of 88.9% to 91.5%, higher than in any other region of the EU. The northern Danish region of Nordjylland and the capital region of Hovedstaden had the highest rates, both exceeding 90.0%. Outside of Denmark, the next highest shares were recorded in Cyprus (86.8%), the Finnish capital region of Helsinki-Uusimaa (84.1%), the Dutch region of Flevoland (83.0%) and the western Hungarian regions of Dél-Dunántúl (82.8%) and Nyugat-Dunántúl (82.6%).

Households with access to the internet

Internet access comes in a variety of forms:

- broadband access includes cable and fibre-optic connections that deliver high-speed internet through traditional infrastructure
- wireless access includes options like Wi-Fi and mobile broadband that are generally accessed via routers or cellular networks
- satellite internet reaches remote areas and offers connectivity when other technological options are limited.

In 2024, every household had access to the internet at home in the Dutch regions of Flevoland, Groningen and Zeeland

Within this section, connection to the internet (or 'access') does not refer to 'connectability' (can a connection be provided in the household's street or local area), but rather to 'connectivity', in other words, whether anyone in the household is able to use the internet at home if so desired. In 2024, the share of EU households connected to the internet at home was 94.2%.

Map 6.1 shows the regional distribution of household access to the internet. These data are crucial for understanding the remainder of the information presented within this chapter, as restricted internet access reduces the share of people who can go online and engage in specific internet activities.

In 2024, there were 19 NUTS level 2 regions across the EU where at least 98.0% of households had access to the internet at home (as shown by the darkest shade in Map 6.1). This group included:

- all 12 regions in the Netherlands
- the capital regions of Spain, Luxembourg and Hungary
- an additional Spanish region – Ciudad de Ceuta
- Podkarpackie in Poland
- Pohjois- ja Itä-Suomi in Finland, and
- Mellersta Norrland in Sweden.

In 2024, the 7 regions in the EU with the highest proportions of households having access to the internet at home were all located in the Netherlands: Flevoland, Groningen and Zeeland (all 100.0%), Utrecht (99.8%), Gelderland (99.2%), Noord-Brabant (99.0%) and the capital region of Noord-Holland (98.9%).

By contrast, there were 23 regions across the EU where fewer than 9 out of 10 households had access to the internet at home in 2024 (as shown by the lightest shade in Map 6.1). These 23 regions were spread across several EU countries: 4 from each of (southern) Italy and Portugal, 3 each in Bulgaria and Germany, 2 each in Greece, France and Slovakia, as well as Croatia and single regions from Belgium and Lithuania. The central Greek region of Kentriki Elláda (80.5%) and the southern Italian region of Calabria (84.7%) were the only regions to report less than 85.0% of all households having access to the internet at home.

As well as showing the regions that had the highest and lowest shares of households with access to the internet in 2024, Figure 6.1 also provides information about the regions that experienced the biggest and smallest changes compared with 2019. The proportion of EU households connected to the internet had been 89.7% in 2019. This share rose 4.5 percentage points – during the

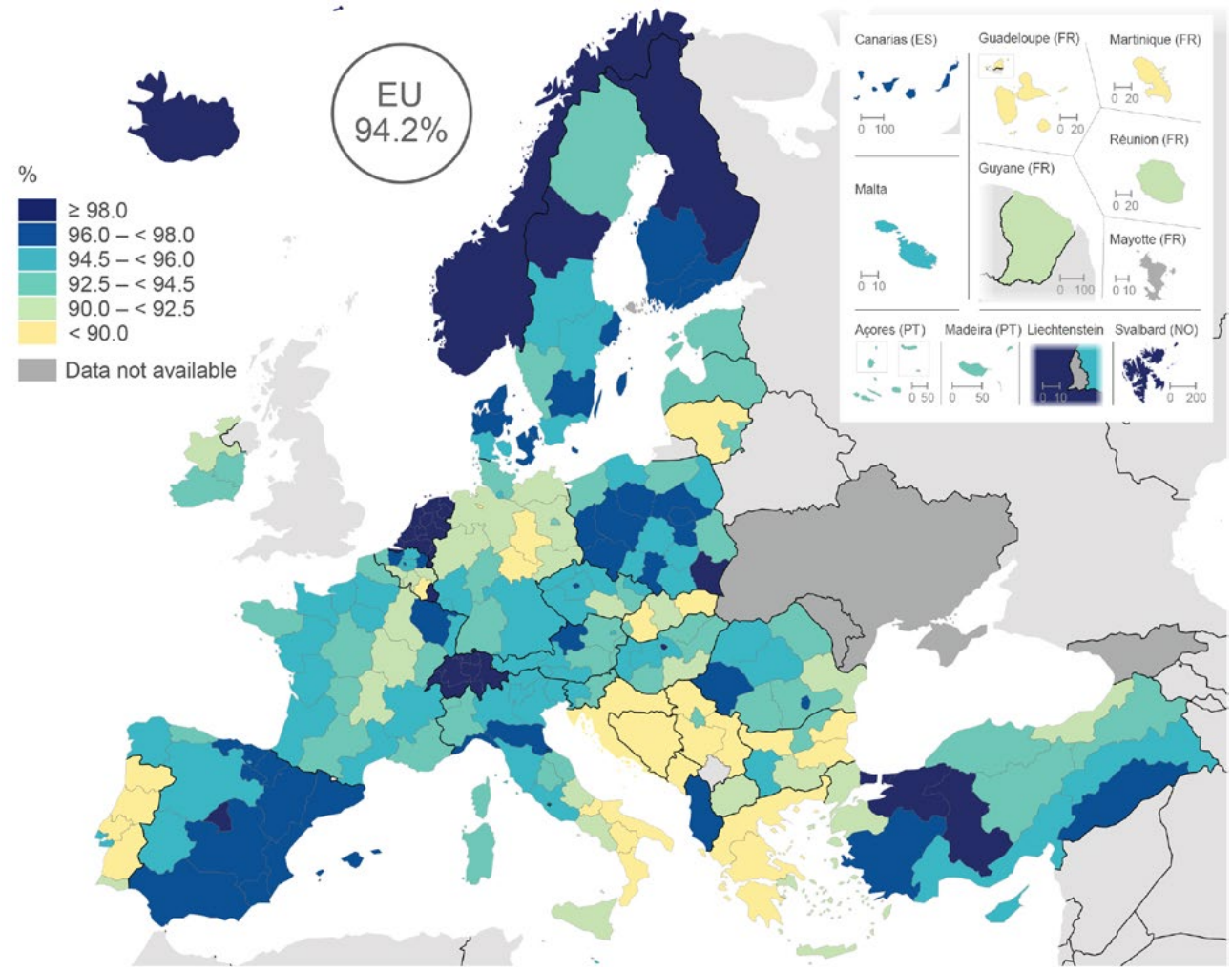
most recent 5-year period for which data are available – to reach 94.2% by 2024.

Between 2019 and 2024, the Greek region of Nisia Aigaiou, Kriti recorded the largest increase in household internet access at home, its share rising 23.0 percentage points to 91.7%. There were also substantial gains in:

- 3 Bulgarian regions – Severen tsentralen, Severozapaden and Yugozapaden – as their internet access rates increased 17.7 to 19.7 points
- 4 additional regions – La Réunion (France), Severozápad (Czechia) and 2 more Bulgarian regions, Yuzhen tsentralen and Severoiztochen – where the share rose by more than 15.0 points.

During the period 2019 and 2024, there were 25 regions across the EU that reported a fall in their share of households with internet access at home. The biggest declines were in 4 German regions – Niedersachsen, Thüringen, Sachsen-Anhalt and Bremen – with reductions of at least 4.6 percentage points. Bremen, in northern Germany, recorded the sharpest decline, as its share of households with internet access at home fell 9.2 points.

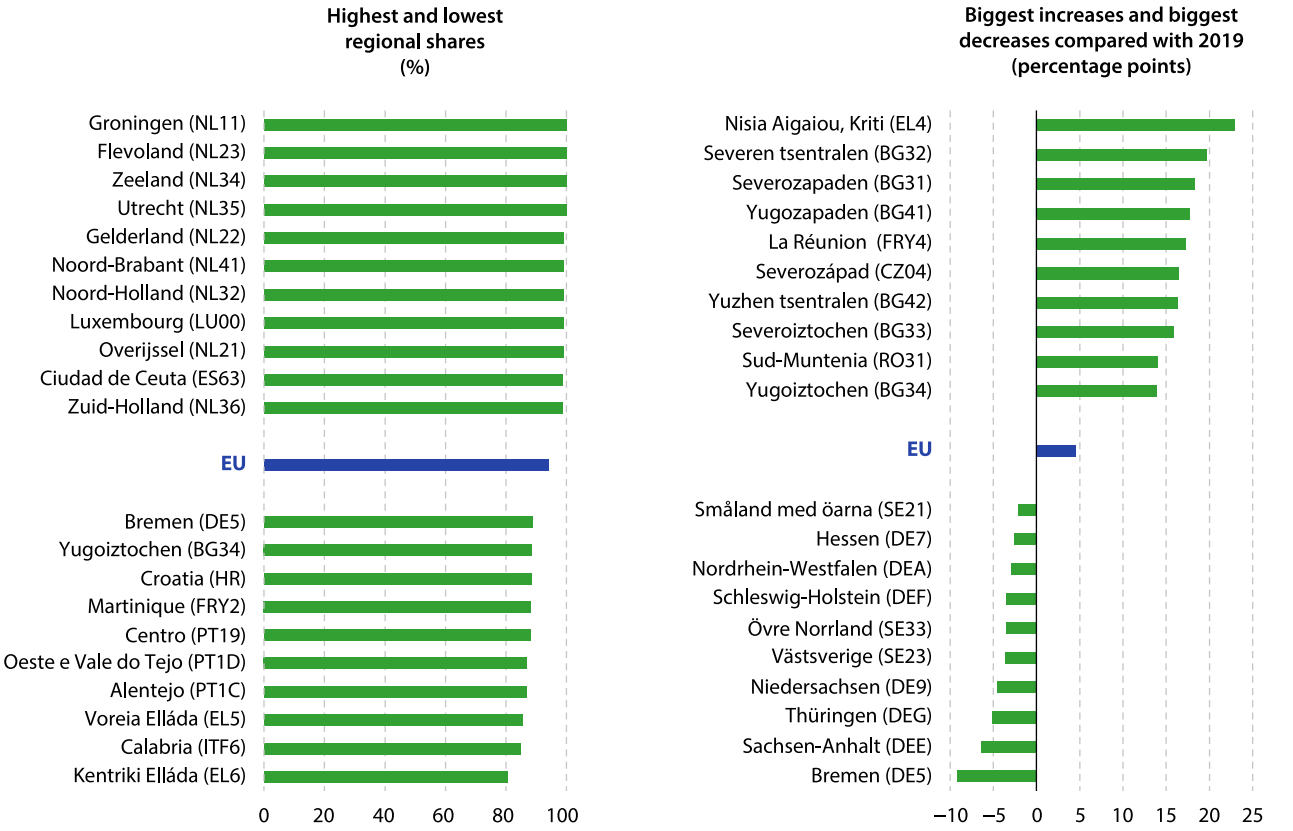
Map 6.1: Households with access to the internet at home
(% of all households, by NUTS 2 regions, 2024)



Note: Germany, Greece and Türkiye, NUTS level 1. Croatia, Norway and Albania: national data. Switzerland and Albania: 2023. Iceland: 2021. Corse (FRM0): low reliability.

Source: Eurostat (online data codes: isoc_r_iacc_h and isoc_ci_in_h)

Figure 6.1: Households with access to the internet at home
(by NUTS 2 regions, 2024)



Note: the 1st part of the figure shows the EU regions with the highest and lowest shares in 2024, while the 2nd part shows the regions with the biggest increases and biggest decreases compared with 2019. The rankings include more than 10 regions if several regions have identical values. Germany and Greece: NUTS level 1. Poland: comparison with 2019, NUTS level 1. Croatia: national data. Portugal: comparison with 2019, national data. EU, Germany and Ireland: breaks in series. Ciudad de Ceuta (ES63): low reliability. Mayotte (FRY5) and Åland (FI20): not available. Utrecht (NL35) and Zuid-Holland (NL36): not available for comparison with 2019.

Source: Eurostat (online data codes: isoc_r_iacc_h and isoc_ci_in_h)

Daily internet users

Internet users are defined as people aged 16 to 74 years using the internet at home, at work, or elsewhere, for private or professional purposes, and regardless of the device or the type of connection used.

In 2024, almost 9 out of every 10 people aged 16 to 74 years in the EU made use of the internet on a daily basis

In 2024, 88.3% of people aged 16 to 74 years in the EU reported using the internet on a daily basis during the 3 months preceding the ICT survey. This share was 2.4 percentage points higher than in 2023, and 11.4 points higher than in 2019. The last few years have been characterised by slower growth in the share of people using the internet on a daily basis, as this indicator approaches saturation for many groups in society (particularly among younger generations).

In 2024, more than 3 out of 4 people used the internet on a daily basis in every region of the EU, except for Yuzhen tsentralen (Bulgaria), Podlaskie (Poland) and Kentriki Elláda (Greece)

Map 6.2 shows the share of people making daily use of the internet within each NUTS level 2 region. In 2024, there were clear disparities along broad geographical lines: northern and western regions generally recorded higher levels of daily internet use than southern or eastern regions. There were 105 regions where the share of people using the internet daily was above the EU average of 88.3%, while a slightly lower number (102 regions) had a share that was below; Extremadura (Spain) had the same value as the EU average.

In 2024, several regions across the Netherlands ranked among those with the highest concentrations of daily internet users. In fact, the Netherlands accounted for 8 out of the 10 EU regions with the highest shares, with Zeeland recording a peak of 99.3%. Outside of the Netherlands,

2 Irish regions – Eastern and Midland, and Northern and Western – were the only other regions in the EU where the share of daily internet users exceeded 98.0%.

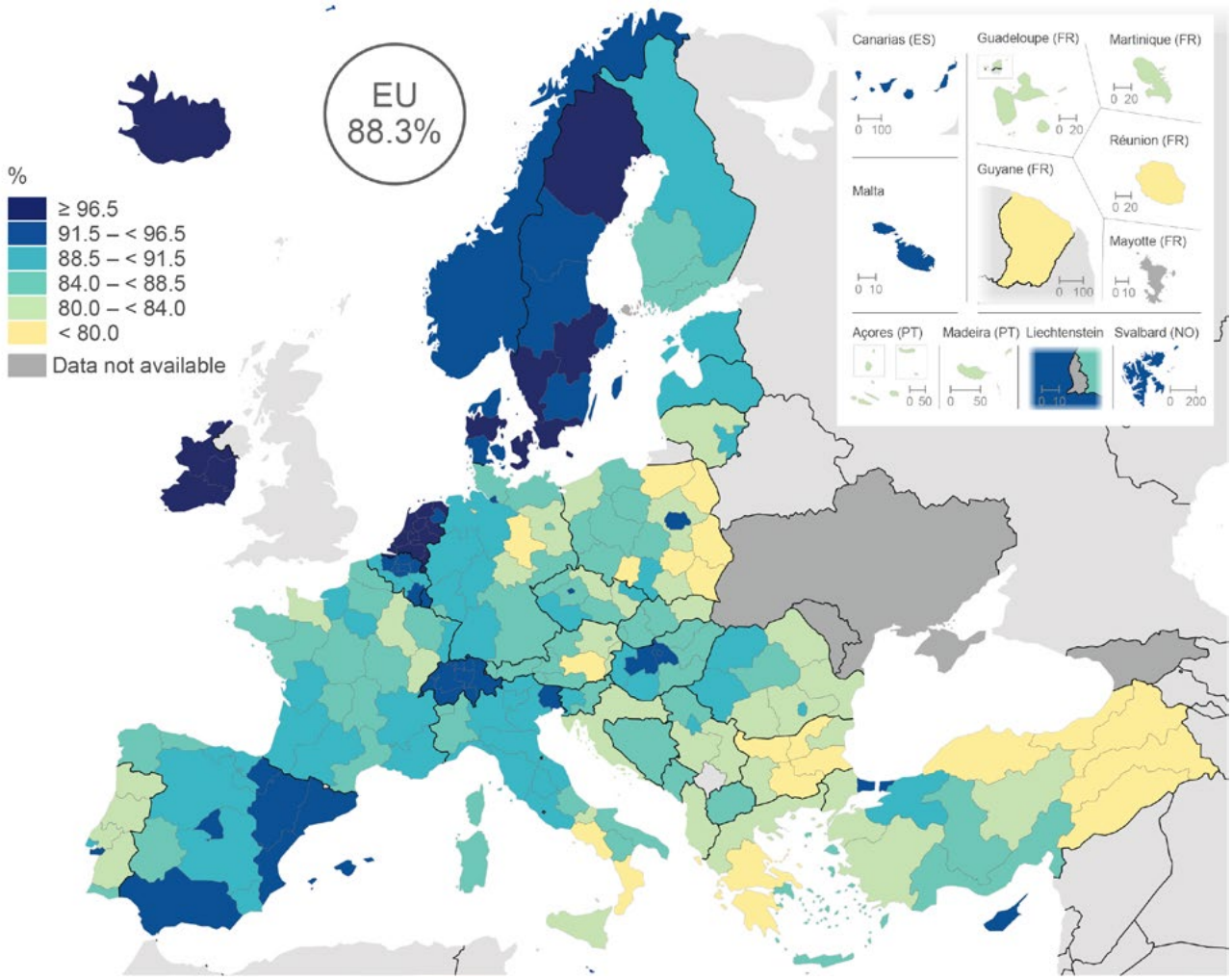
There were 17 EU regions where less than 80.0% of people used the internet on a daily basis in 2024 (they are shown by the lightest shade in Map 6.2). This group included 6 regions from Poland, 4 regions from Bulgaria, 2 (outermost) regions of France, 2 regions from (southern) Italy, as well as a single region from each of Germany, Greece and Austria. The lowest shares were in:

- the southern Bulgarian region of Yuzhen tsentralen (73.0%)
- the north eastern Polish region of Podlaskie (73.6%)
- the central Greek region of Kentriki Elláda (74.9%).

As well as showing the regions with the highest and lowest shares of daily internet users in 2024, Figure 6.2 also presents information about the overall change in the share of daily internet users between 2019 and 2024.

- Daily internet usage in the Nord-Est region of Romania increased 33.9 percentage points between 2019 and 2024, reaching 83.3%. There were 9 other EU regions with increases above 25.0 points, including 7 more from Romania, as well as La Réunion (France) and Nisia Aigaiou, Kriti (Greece).
- Conversely, there were 7 regions across the EU where the share of daily internet users fell between 2019 and 2024. They were located exclusively in Germany (4 regions) and Finland (3 regions), with the Finnish capital region of Helsinki-Uusimaa recording the largest fall (down 5.2 points).

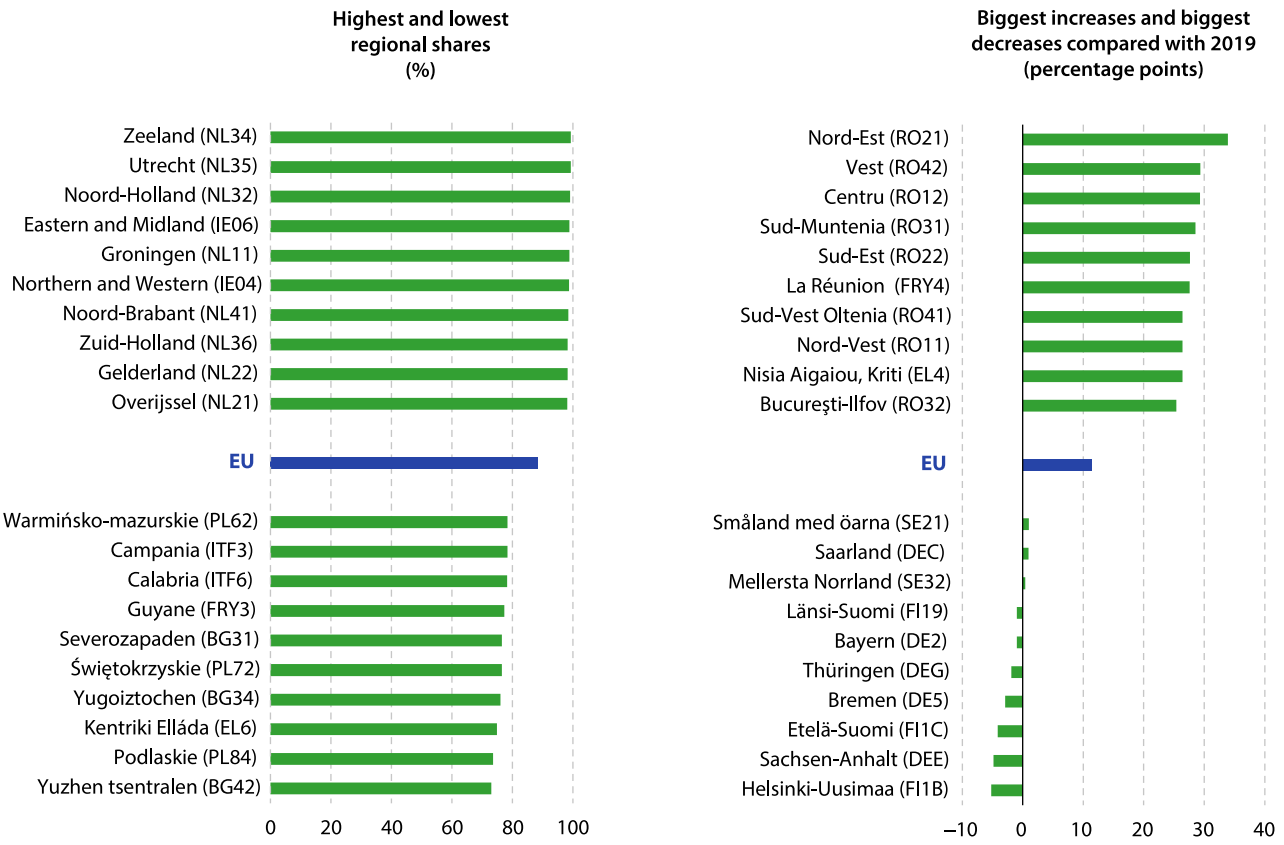
Map 6.2: Daily internet users
(% of people aged 16–74 years, by NUTS 2 regions, 2024)



Note: during the 3 months preceding the survey. Germany, Greece and Türkiye: NUTS level 1. Croatia, Norway and Albania: national data. Switzerland and Albania: 2023. Iceland: 2021. Corse (FRM0): low reliability.

Source: Eurostat (online data codes: isoc_r_iuse_i and isoc_ci_ifp_fu)

Figure 6.2: Daily internet users
(people aged 16–74 years, by NUTS 2 regions, 2024)



Note: during the 3 months preceding the survey. The 1st part of the figure shows the EU regions with the highest and lowest shares in 2024, while the 2nd part shows the regions with the highest increases and lowest changes (positive and negative) compared with 2019. Germany and Greece: NUTS level 1. Poland: comparison with 2019, NUTS level 1. Croatia: national data. Portugal: comparison with 2019, national data. EU, Germany and Ireland: breaks in series. Mellersta Norrland (SE32): low reliability. Mayotte (FRY5) and Åland (FI20): not available. Utrecht (NL35) and Zuid-Holland (NL36): not available for comparison with 2019.

Source: Eurostat (online data codes: isoc_r_iuse_i and isoc_ci_ifp_fu)

Activities on the internet

The widespread adoption of mobile devices like smartphones and tablets has significantly increased people's use of the internet, while the variety of activities carried out online has also expanded rapidly. Some of the most popular activities on the internet include:

- learning and skills development
- remote work
- accessing information
- entertainment
- staying connected with family and friends
- engaging with government services
- online shopping (e-commerce).

PARTICIPATION IN SOCIAL NETWORKS

Social networks are online platforms that enable individuals to connect, interact and share content with others. Some of the most popular networks include Facebook, Instagram, TikTok, Snapchat or X (formerly Twitter). These platforms typically allow users to create personal profiles, share photos and videos, and communicate with others through messaging, comments or other forms of interaction.

Almost 2 out of 3 people across the EU used social networks in 2024

In 2017, 51.8% of the EU's population aged 16 to 74 years used social networks during the 3 months preceding the ICT survey; this was the 1st time that a majority of people in the EU used social networks. Despite a small fall in 2021, the share of people using social networks generally rose at a steady pace across the EU, reaching 64.8% by 2024.

Social networks are among the most popular activities on the internet for young people (defined here as those aged 16 to 24 years). In 2024, the share of young people using social networks was 2.9 times as high as the share recorded for older people (defined here as those aged 65 to 74 years). Looking in more detail at recent developments, the proportion of young people using social

networks across the EU fell from 87.0% in 2018 to a relative low of 83.4% by 2023 (note there is a break in series in 2021). There was a sharp rebound in 2024, with the share of young people participating in social networks reaching a new peak of 88.6%. During the same period, the proportion of older people using social networks increased every year, up from 16.9% in 2018 to 30.3% by 2024.

In 2024, around 9 out of 10 people across every region of Denmark used social networks

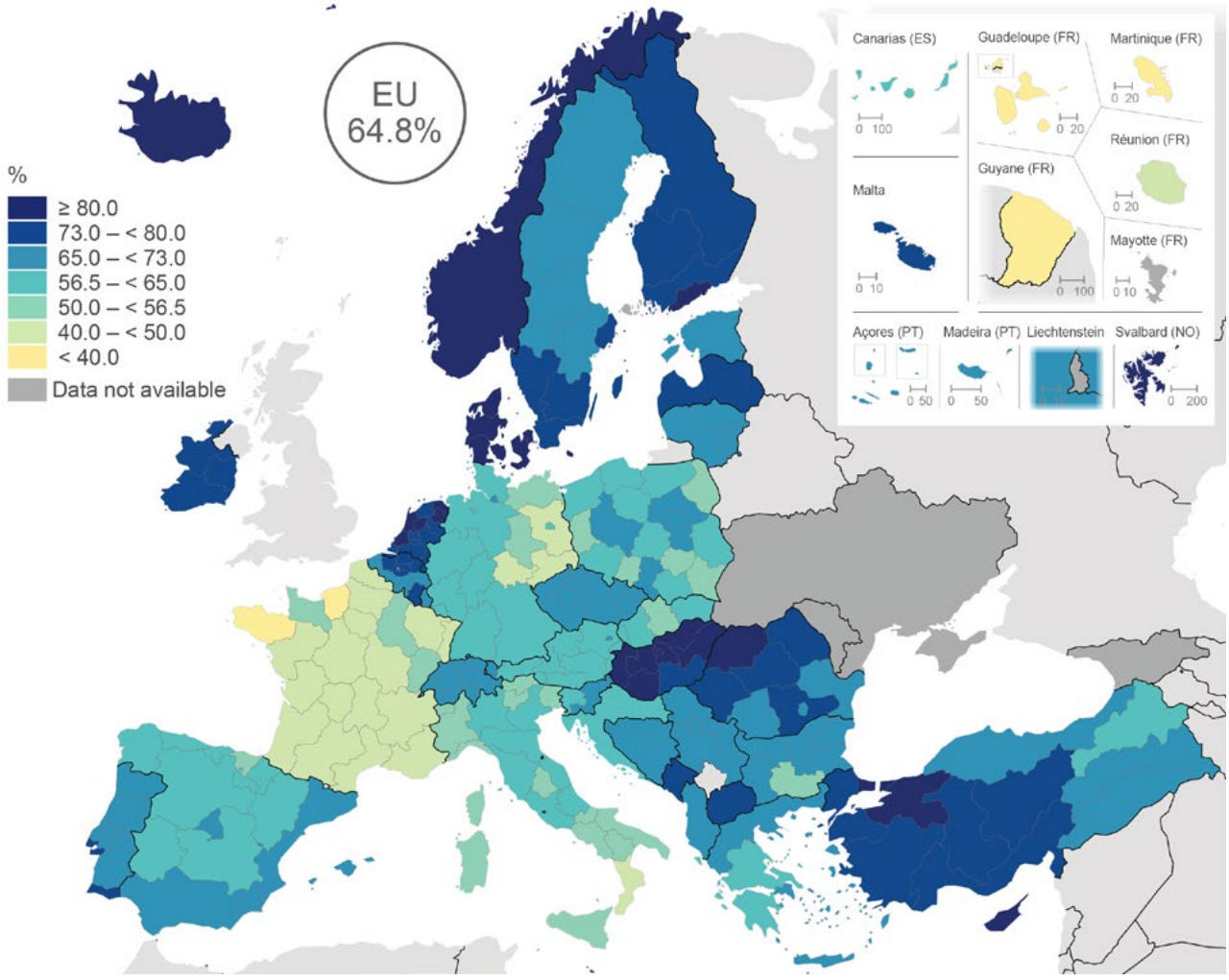
Among NUTS level 2 regions, the proportion of people using social networks was evenly distributed around the EU average. In 2024, there were 105 regions that had shares above the EU average and 102 regions with shares below; the Spanish island region of Canarias had a share that was identical to the EU average. Contrary to the situation for most ICT indicators, there were also relatively high shares recorded in several eastern and southern EU countries.

Some of the highest shares of people using social networks were concentrated in regions across Denmark, Cyprus, the Netherlands and Hungary.

Map 6.3 shows the regional distribution of people aged 16 to 74 years using social networks. In 2024, there were 20 NUTS level 2 regions across the EU where at least 80.0% of people used social networks (as shown by the darkest shade of blue). The 5 regions that compose Denmark recorded the highest shares in the EU – within the range of 88.9% to 91.5% – with a peak of 91.5% in Nordjylland. The rest of this group of 20 consisted of:

- Cyprus
- the Finnish capital region of Helsinki-Uusimaa
- 5 regions from the Netherlands
- 7 out of the 8 regions in Hungary (Dél-Alföld was the exception)
- Nord-Vest in Romania.

Map 6.3: Participation in social networks
(% of people aged 16–74 years, by NUTS 2 regions, 2024)



Note: during the 3 months preceding the survey. Germany, Greece and Türkiye, NUTS level 1. Croatia, Norway and Albania: national data. France, Switzerland and Albania: 2023. Iceland: 2021. Corse (FRM0): low reliability.

Source: Eurostat (online data codes: isoc_r_iuse_i and isoc_ci_ac_i)

At the other end of the distribution, 26 regions across the EU reported that less than half of the population aged 16 to 74 years used social networks in 2024 (they are shown by the 2 lightest shades in Map 6.3). Among these 26 regions, 22 were located in France (2023 data). The others included Sachsen, Thüringen and Brandenburg in eastern Germany, along with Calabria in southern Italy. There were 5 French regions recording the lowest shares, all below 40.0%: Haute-Normandie (38.5%), Bretagne (38.5%), Guadeloupe (30.0%), Martinique (29.2%) and Guyane (22.2%).

INTERNET BANKING

In recent years, the EU's banking sector has seen significant growth in online services. Consumers now visit their local branch less frequently or not at all, the number of branches has contracted, and online transfers and e-payments have become the norm. Internet banking reduces the demand for local branches and their related costs. Furthermore, it may often greater convenience, allowing banking transactions and other banking activities to be carried out at any time of day and from almost anywhere. However, while internet banking has numerous benefits, it also presents challenges, such as:

- accessibility issues
- security and privacy concerns
- technical disruptions to services.

Across the EU, more than 2 out of 3 people made use of internet banking in 2024

In 2024, 67.2% of the EU's population aged 16 to 74 years used the internet for banking during the 3 months preceding the ICT survey. Map 6.4 shows the share of people using internet banking across NUTS level 2 regions. Over 90.0% of people in every region of Denmark, the Netherlands and Finland used internet banking. In Belgium, Czechia, Ireland, Sweden and the Baltic countries a majority of regions also recorded relatively high shares (at least 80.0%); this was also the case in Cyprus.

In 2024, the Dutch region of Utrecht had the highest regional share of people using internet banking

A more detailed investigation of the latest information shown in Map 6.4 reveals that there were 3 NUTS level 2 regions where the proportion of people using internet banking was at least 98.0%, namely:

- the central Dutch region of Utrecht (98.3%)
- the Danish capital region of Hovedstaden (98.2%)
- the northern Dutch region of Groningen (98.0%).

The share of people making use of internet banking was often unusually high in capital regions, compared with their neighbouring regions. In 2024, this situation was particularly noticeable in Praha (Czechia), Comunidad de Madrid (Spain), Budapest (Hungary) and Warszawski stołeczny (Poland).

In 2024, the lowest shares of people using internet banking were recorded in Bulgaria, Romania and southern Italy

In 2024, several eastern and southern regions of the EU had relatively low shares of people using internet banking; this was particularly the case in Bulgaria, Romania, and – to a somewhat lesser degree – southern Italy. This pattern might be attributed to a range of different factors, including:

- many of these regions are predominantly rural, characterised by low levels of internet connectivity and digital literacy
- many of these regions have relatively elderly population structures, with people preferring traditional cash transactions and having security concerns about online banking.

At the lower end of the distribution, the lowest use of internet banking in 2024 was recorded in: Sud-Vest Oltenia (17.6%) in Romania, Yuzhen tsentralen (18.4%) and Severozapaden (19.3%) in Bulgaria. Less than half of all people aged 16 to 74 years made use of internet banking in every region of Bulgaria and Romania. This was also the case in several other regions across the EU:

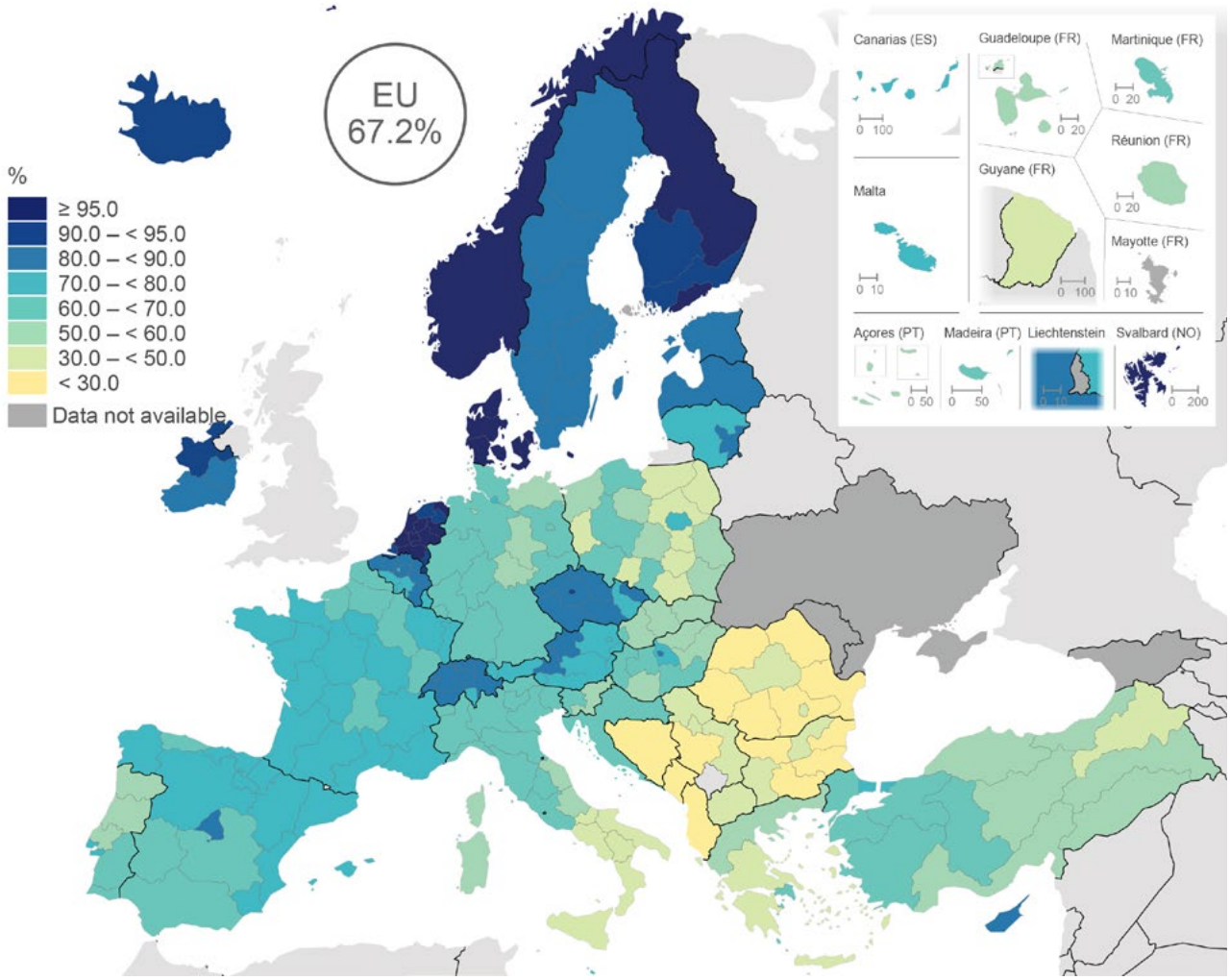
- the southern Italian regions of Puglia, Molise, Basilicata, Sicilia, Campania and Calabria
- the Polish regions of Małopolskie, Podlaskie, Opolskie, Mazowiecki regionalny, Świętokrzyskie, Lubuskie and Warmińsko-mazurskie
- the Greek regions of Kentriki Elláda and Nisia Aigaiou, Kriti
- the French outermost region of Guyane.

There were 10 regions in the EU where the share of people using internet banking fell between 2019 and 2024

The share of people using internet banking rose across the EU during a 5-year period from 2019 to 2024, up from 54.6% to 67.2%. The proportion of people using internet banking increased in the vast majority of EU regions (178 out of 188), often a relatively fast pace. There were 115 regions where the share rose by at least 10.0 percentage points, with 43 of these reporting growth of at least 20.0 percentage points.

In Cyprus, the share of people using internet banking doubled, rising from 40.5% in 2019 to 80.5% in 2024. This was the largest increase among EU regions (see Figure 6.4). Yugozapaden in Bulgaria (up 33.6 percentage points) and Northern and Western in Ireland (up 30.0 points) also recorded rapid growth. By contrast, at the lower end of the distribution, there were 10 EU regions where the share of people using online banking fell between 2019 and 2024. They were principally located across Germany and Sweden, with Ciudad de Ceuta in Spain (-19.2%), Övre Norrland in Sweden (-10.7%) and Corse in France (-9.5%) experiencing the largest reductions.

Map 6.4: Use of internet banking
(% of people aged 16–74 years, by NUTS 2 regions, 2024)



Note: during the 3 months preceding the survey. Germany, Greece and Türkiye, NUTS level 1. Croatia, Norway and Albania: national data. Switzerland and Albania: 2023. Iceland: 2021. Corse (FRM0): low reliability.

Source: Eurostat (online data codes: isoc_r_iuse_i and isoc_ci_ac_i)

Figure 6.3: Use of internet banking
(people aged 16–74 years, by NUTS 2 regions, 2024)

Note: during the 3 months preceding the survey. The 1st part of the figure shows the EU regions with the highest and lowest shares in 2024, while the 2nd part shows the regions with the biggest increases and biggest decreases compared with 2019. Germany and Greece: NUTS level 1. Poland: comparison with 2019, NUTS level 1. Croatia: national data. Portugal: comparison with 2019, national data. EU, Germany and Ireland: breaks in series. Ciudad de Ceuta (ES63) and Corse (FRM0): low reliability. Mayotte (FRY5) and Åland (FI20): not available. Utrecht (NL35) and Zuid-Holland (NL36): not available for comparison with 2019.

Source: Eurostat (online data codes: isoc_r_iuse_i and isoc_ci_ac_i)

E-commerce

More about the data: defining e-commerce

For statistical purposes, e-commerce is defined as 'buying goods or services through electronic transactions, including the placing of orders for goods or services over the internet; payment and the ultimate delivery of the goods or service may be conducted either online or offline. Orders via manually typed e-mails are excluded'.

E-commerce has the potential to simplify the process of comparing different wholesale or retail offers. It can reshape distribution networks and consumption patterns, expanding consumer choice and influencing price competition, especially in relatively remote regions of the EU. Additionally, e-commerce removes the time burden of travelling to physical stores and disconnects shopping from traditional opening hours.

In 2024, 60.2% of people aged 16 to 74 years in the EU reported that they had ordered goods or services over the internet in the 3 months preceding the ICT survey. The share of people using the internet to order goods or services was higher than the EU average in every region of Czechia, Denmark, Ireland, France (except the outermost regions), the Netherlands, Slovakia, Finland and Sweden; this was also the case in Estonia, Cyprus, Luxembourg and Malta. By contrast, the share of the population using e-commerce was below the EU average for every region of Bulgaria, Italy, Lithuania, Portugal, Romania and Slovenia; this was also the case in Croatia (national data) and Latvia.

In Utrecht, more than 9 out of 10 people ordered goods or services over the internet in 2024

In 2024, there were 23 EU regions where at least 80.0% of the population aged 16 to 74 years ordered goods or services over the internet in the 3 months preceding the ICT survey (as shown by the darkest shade in Map 6.5).

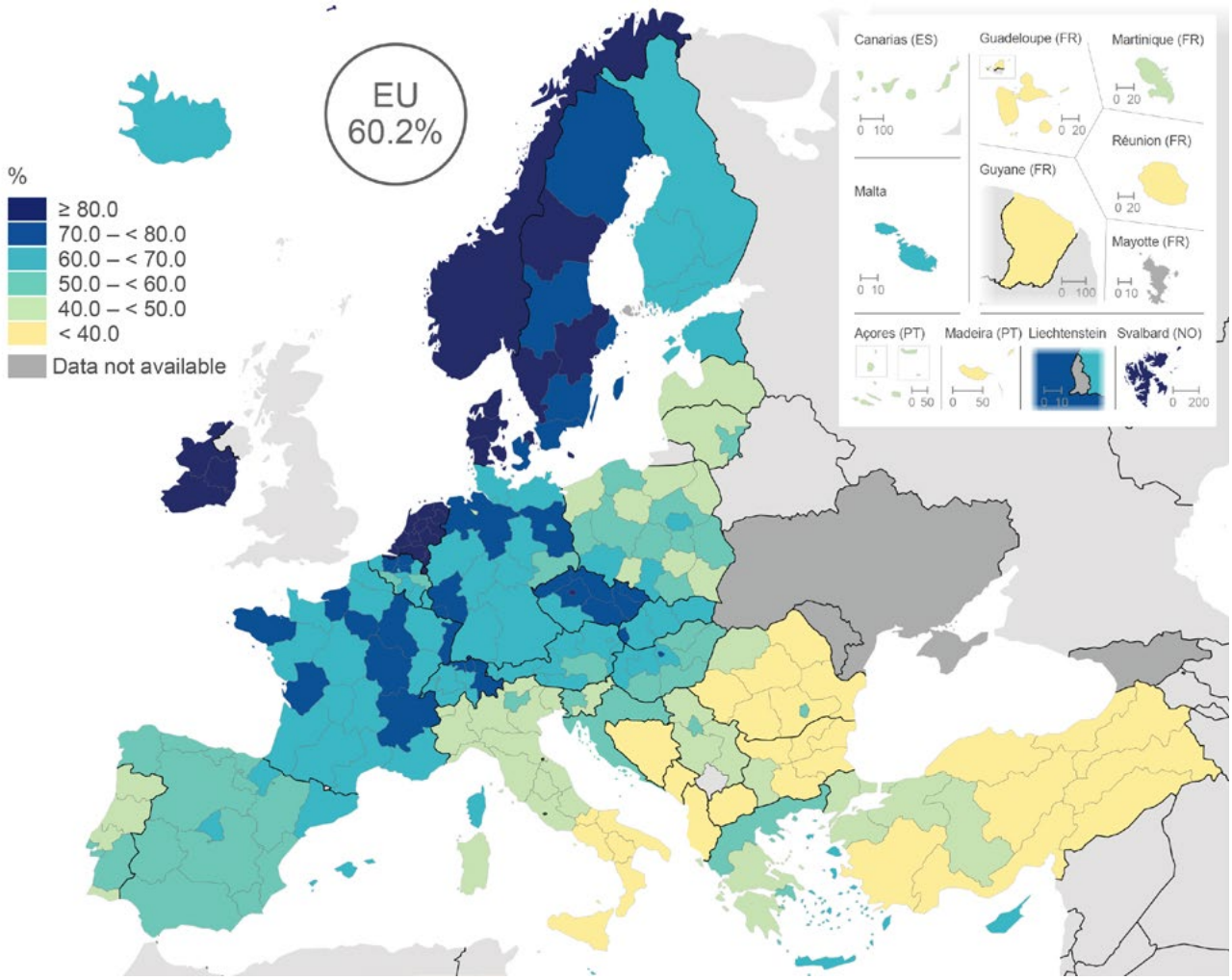
- Approximately half of these 23 regions with a high propensity to make use of e-commerce were located in the Netherlands (all 12 regions).
- The remainder were spread across Denmark (4 regions), Ireland (all 3 regions), Sweden (3 regions) and the Czech capital region of Praha.

At the top end of the distribution, the central Dutch region of Utrecht had the highest share of people ordering goods or services over the internet (91.5% in 2024). Its neighbouring region of Flevoland (89.5%) had the next highest share, followed by the Irish region of Northern and Western (88.3%).

In 2024, there were 21 EU regions where less than 40.0% of the population ordered goods or services over the internet (as shown by the lightest shade in Map 6.5). These regions were primarily located in eastern and southern regions of the EU, including Romania (6 regions), Bulgaria (5 regions) and southern Italy (6 regions). This group also included 3 outermost regions of France and 1 autonomous region of Portugal, where geographical isolation likely impacted the use of e-commerce.

At the bottom end of the distribution in 2024, the south-eastern Bulgarian region of Yugoiztochen had the lowest share of people ordering goods and services over the internet (21.7%). There were 2 other regions in the EU with shares below 25.0%: the Caribbean region of Guadeloupe (24.2%) and the north-western Bulgarian region of Severozapaden (24.9%).

Map 6.5: Ordering goods or services over the internet
(% of people aged 16–74 years, by NUTS 2 regions, 2024)



Note: during the 3 months preceding the survey. Ordering goods or services for private use. Germany, Greece and Türkiye, NUTS level 1. Croatia, Norway and Albania: national data. Switzerland and Albania: 2023. Iceland: 2021. Corse (FRM0): low reliability.

Source: Eurostat (online data codes: isoc_r_blt12_i and isoc_ec_ib20)

In the Czech region of Severozápad, the proportion of people ordering goods or services over the internet increased most between 2019 and 2024

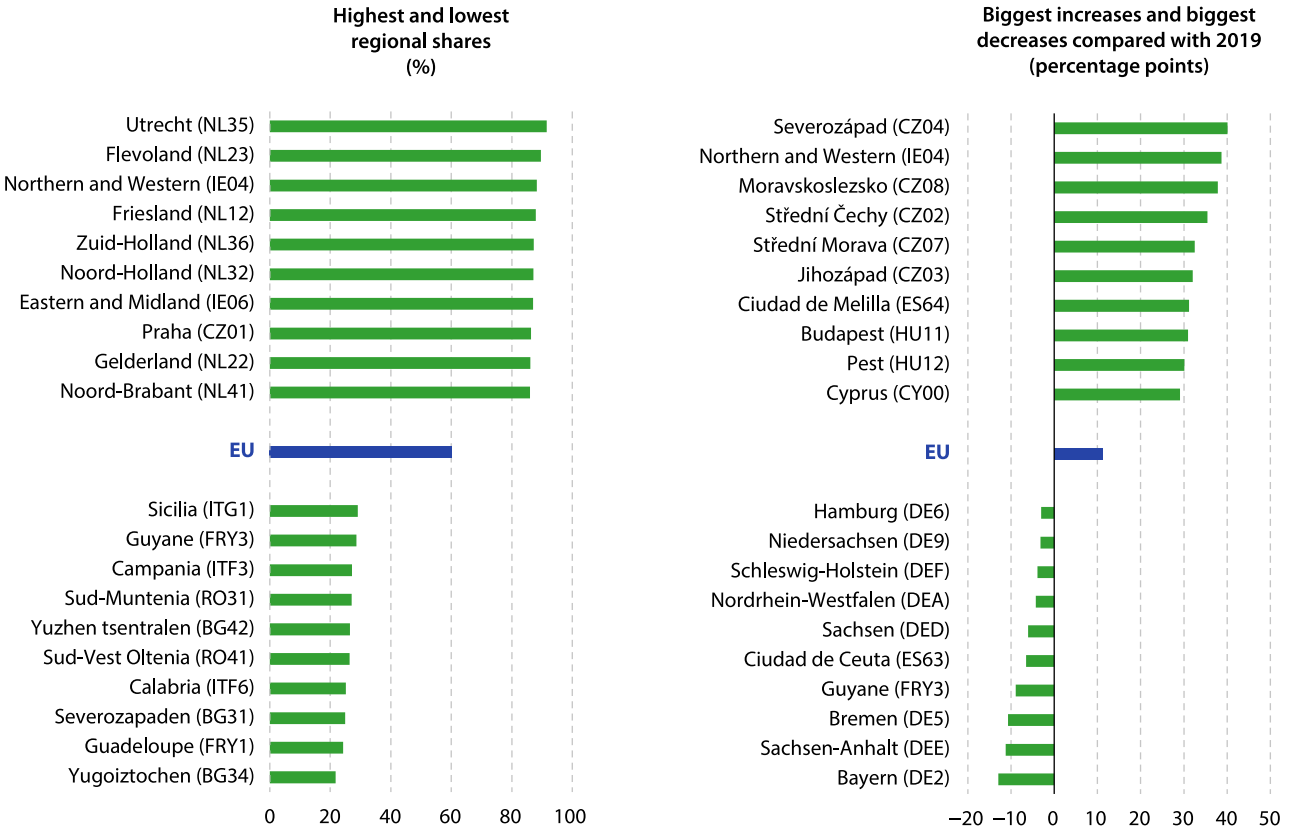
As well as showing those regions that had the highest and lowest shares of people ordering goods and services over the internet in 2024, Figure 6.4 also provides information about those regions that experienced the biggest and smallest changes compared with 2019. Across the EU, the proportion of people making use of e-commerce increased by 11.2 percentage points, rising from 49.0% in 2019 to 60.2% by 2024.

Between 2019 and 2024, the north-western Czech region of Severozápad recorded the largest increase in its proportion of people ordering goods or services over the internet, with its share rising 40.1 percentage points (from 33.8% to 73.9%). Substantial gains were also registered in:

- the Irish region of Northern and Western, where the use of e-commerce increased 38.7 points
- 2 additional regions in Czechia – Moravskoslezsko and Střední Čechy – where the use of e-commerce increased 37.9 points and 35.5 points, respectively.

During the same period, there were 15 regions across the EU where the proportion of people ordering goods or services over the internet fell between 2019 and 2024. The biggest declines occurred in the German regions of Bayern, Sachsen-Anhalt and Bremen; these were the only regions in the EU to report decreases of more than 10.0 percentage points, with the sharpest decline in Bayern, down 12.9 points.

Figure 6.4: Ordering goods or services over the internet
(people aged 16–74 years, by NUTS 2 regions, 2024)



Note: during the 3 months preceding the survey. Ordering goods or services for private use. The 1st part of the figure shows the EU regions with the highest and lowest shares in 2024, while the 2nd part shows the regions with the biggest increases and biggest decreases compared with 2019. Germany and Greece: NUTS level 1. Poland: comparison with 2019, NUTS level 1. Croatia: national data. Portugal: comparison with 2019, national data. EU, Germany and Ireland: breaks in series. Ciudad de Ceuta (ES63): low reliability. Mayotte (FRY5) and Åland (FI20): not available. Utrecht (NL35) and Zuid-Holland (NL36): not available for comparison with 2019.

Source: Eurostat (online data codes: isoc_r_blt12_i, isoc_ec_ib20 and isoc_ec_ibuy)

ICT usage in enterprises

More about the data: ICT usage in enterprises

The information presented in this section is based on results of an EU survey on ICT usage and e-commerce in enterprises.

The European Commission's priorities for 2024 to 2029 focus on boosting productivity through digital technologies. This comprises, among others, investing in:

- digital infrastructures
- supercomputing, semiconductors, the Internet of Things and quantum computing
- other strategic technologies (such as artificial intelligence, space, clean tech and biotech).

Regional ICT statistics are presented for NUTS level 2 regions. They cover enterprises with 10 or more people employed (employees and self-employed people) in NACE Sections C to N (excluding K) and Group 95.1, in other words, the non-financial business economy. Exceptions are Belgium (where the data refer to NUTS level 1 regions) and Czechia, Germany, Ireland, Greece, France, Italy, the Netherlands, Poland, Portugal, Finland, Sweden, Serbia and Türkiye (where national data are presented). Data for Romania relate to reference year 2023 (instead of 2024). Data for Albania relate to reference year 2022 (instead of 2024).

More than 3 out of 5 people employed in the EU's non-financial business economy made workplace use of the internet in 2024

In 2024, some 62.9% of people employed in the EU's non-financial business economy used the internet for business purposes. Map 6.6 shows that a relatively high proportion of the workforce in the Nordic EU countries and the Netherlands used the internet for business purposes. By contrast, eastern and southern EU regions tended to report relatively low shares of their workforces making workplace use of the internet. This pattern was repeated both for industry/construction and for services.

The distribution of internet use at work was relatively uneven across the EU. A total of 59 regions reported a share of their workforce using the internet for business purposes that was lower than the EU average in 2024, while only 25 regions had above-average shares. However, it should be noted that this imbalance is, at least in part, the result of only national data being available for some EU countries which have many regions: Germany, France and the Netherlands all had shares above the EU average and are each included as just 1 region in these counts; somewhat balancing the situation, the national shares for Italy and Poland were below the EU average. At the top end of the ranking, Sweden and Finland (both national data) were the only regions to report shares of more than 85.0%. More broadly, the share of employed people using the internet for business purposes was above 75% (as shown by the 2 darkest shades of blue in Map 6.6) in:

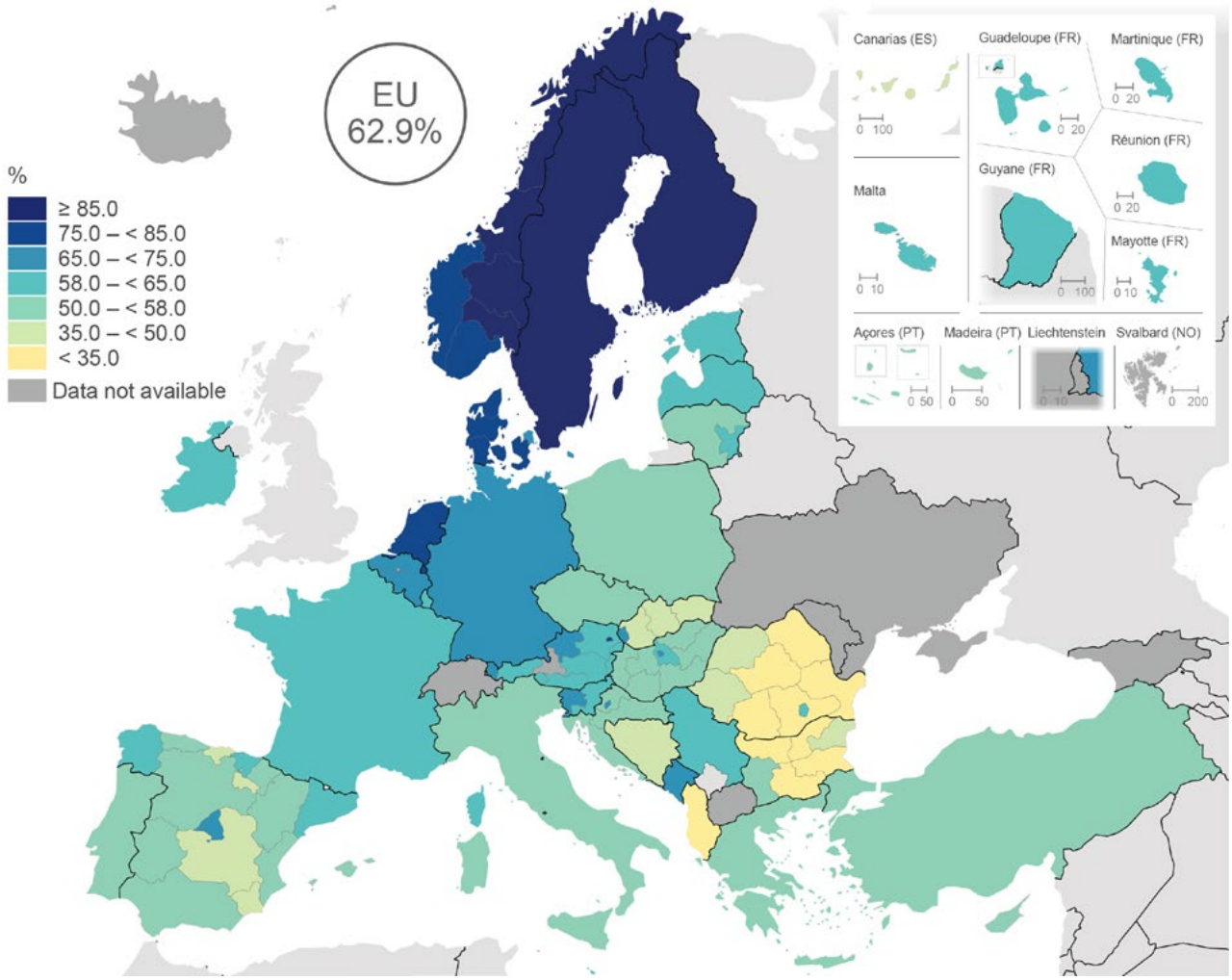
- Sweden
- Finland
- the Danish regions of Midtjylland, Sjælland, Nordjylland, and Syddanmark
- the Netherlands (also national data)
- the Austrian capital region of Wien.

A lack of digital infrastructure and workplace connectivity may potentially affect – among other matters – remote working opportunities, productivity and competitiveness. Across the EU, there were 22 regions that reported less than half of their workforce used the internet for business purposes in 2024 (as shown by the 2 lightest shades in Map 6.6). This group was composed of regions from 4 different EU countries, namely:

- Romania (7 out of 8 regions, the exception being the capital region of Bucureşti-Ilfov; 2023 data)
- Bulgaria (5 out of 6 regions, the exception being the capital region of Yugozapaden)
- Slovakia (3 out of 4 regions, the exception being the capital region of Bratislavský kraj)
- Spain (7 out of 19 regions that were predominantly rural, islands or autonomous cities).

The southerly Romanian regions of Sud-Vest Oltenia and Sud-Est recorded the lowest shares of their workforces using the internet for business purposes, at 22.5% and 23.7%, respectively (2023 data).

Map 6.6: Internet use at work
(% of employed people, by NUTS 2 regions, 2024)



Note: covers enterprises with 10 or more people employed. Belgium: NUTS level 1. Czechia, Germany, Ireland, Greece, France, Italy, the Netherlands, Poland, Portugal, Finland, Sweden, Serbia and Türkiye: national data. Niederösterreich (AT12), Kärnten (AT21) and Romania: 2023. Albania: 2022.

Source: Eurostat (online data codes: isoc_r_ci_cm_pn2 and isoc_ci_cm_pn2)

There were only 2 regions across the EU where more than 30.0% of enterprises made use of artificial intelligence in 2024: Midtjylland in Denmark and the Belgian capital region of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest

More about the data: artificial intelligence

Artificial intelligence (AI) refers to the ability of machines or computers to perform tasks that typically require human intelligence. The statistics presented below concern enterprises making use of at least 1 of the following AI technologies:

- performing analysis of written language
- converting spoken language into machine-readable format
- generating written or spoken language
- identifying objects or persons based on images
- using machine learning
- automating different workflows or assisting in decision-making
- enabling physical movement of machines via autonomous decisions based on observation of surroundings.

As with the previous section on workplace use of the internet, the statistics below cover all enterprises with 10 or more people employed in NACE Sections C to N (excluding K) and Group 95.1, in other words, the non-financial business economy.

In 2024, 13.5% of enterprises with 10 or more people employed in the EU's non-financial business economy made use of AI when conducting their business. This share was growing at a rapid pace, with the latest annual increase equivalent to a gain of 5.5 percentage points (up from 8.0% in 2023).

The Danish region of Midtjylland (35.0%) and the Belgian capital region of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (31.7%) had the highest shares of enterprises making use of at least 1 AI technology. Other regions with relatively high shares in 2024 included:

- another Danish region, Sjælland (28.1%)
- the Austrian and Slovenian capital regions of Wien (26.5%) and Zahodna Slovenija (23.6%)
- Sweden (25.1%), Finland (24.4%) and the Netherlands (23.1%) – all national data
- Vlaams Gewest in Belgium (24.8%; NUTS level 1)
- Luxembourg (23.7 %).

The share of enterprises using AI technologies was particularly low in many of the same regions that were characterised by low levels of workplace use of the internet. This suggests that factors – such as the structural composition of regional economies or infrastructure gaps – may account for some of the differences observed. In 2024, the lowest enterprise adoption rates for AI were generally recorded in regions located across Bulgaria, Spain, Hungary, Romania (2023 data) and Poland. There were only 8 regions across the EU that had less than 2.5% of all enterprises making use of AI, including:

- 7 out of the 8 regions in Romania (the exception being the capital region of Bucureşti-Ilfov), with the lowest shares in Sud-Vest Oltenia (0.2%), Sud-Est (0.4%), Nord-Vest (0.8%) and Nord-Est (0.9%)
- the Spanish autonomous region of Ciudad de Melilla (1.5%).

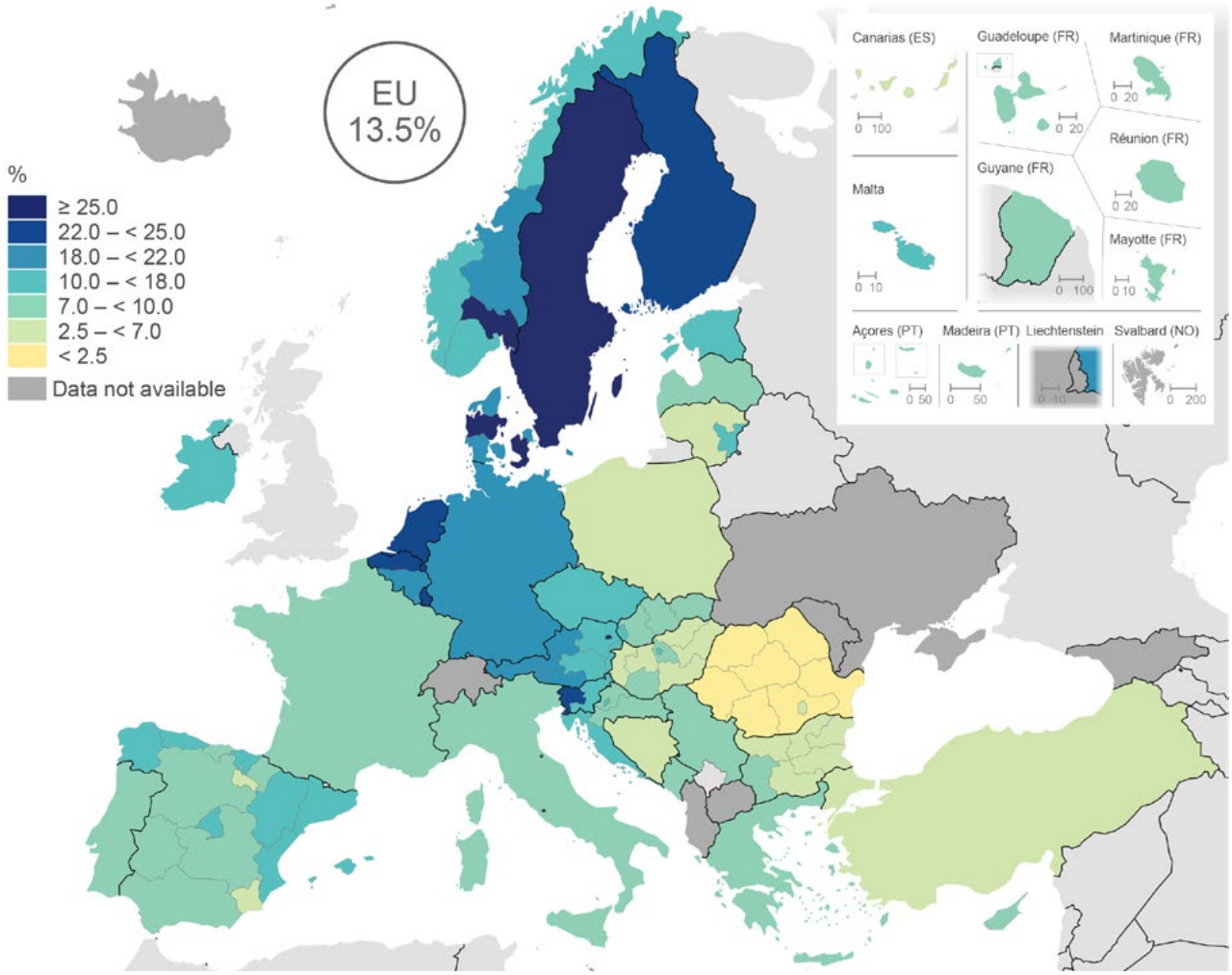
There were considerable inter-regional variations in the share of enterprises making use of AI. In 2024, the largest absolute differences were in:

- Denmark, from a high of 35.0% in Midtjylland to a low of 18.8% in the neighbouring region of Nordjylland, a difference of 16.2 percentage points
- Spain, from a high of 15.6% in Comunidad de Madrid to a low of 1.5% in Ciudad de Melilla, a difference of 14.1 percentage points
- Austria, from a high of 26.5% in the capital region of Wien to a low of 12.7% for the easternmost region of Burgenland, a difference of 13.8 percentage points.

There were also considerable differences in relative terms, for example:

- in Romania, the highest share in Bucureşti-Ilfov (3.6%) was 18 times as high as the lowest share in Sud-Vest Oltenia (0.2%).

Map 6.7: **Enterprise use of artificial intelligence**
(% of enterprises, by NUTS 2 regions, 2024)



Note: covers enterprises with 10 or more people employed. Belgium: NUTS level 1. Czechia, Germany, Ireland, Greece, France, Italy, the Netherlands, Poland, Portugal, Finland, Sweden, Serbia and Türkiye: national data. Romania: 2023.

Source: Eurostat (online data codes: isoc_r_eb_ain2 and isoc_eb_ain2)

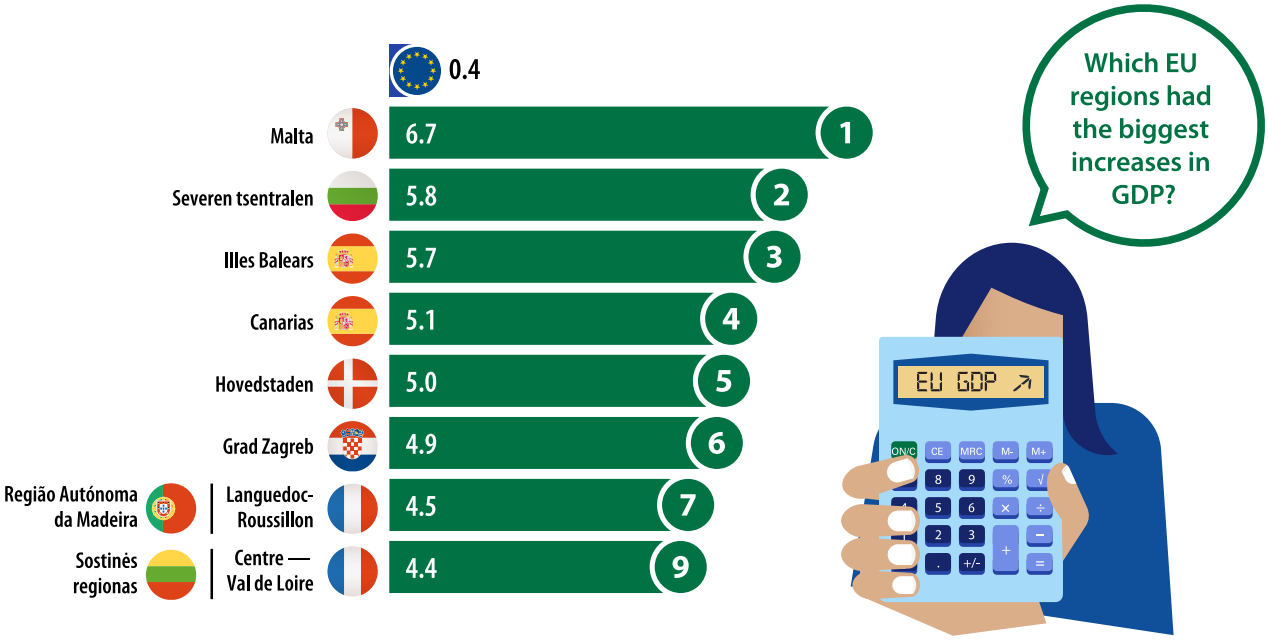
Economy and finance

7. Economy

In February 2022, Russia launched a war of aggression against Ukraine, prompting ongoing financial, humanitarian and military support to Ukraine from the EU. In July 2022, the European Central Bank (ECB) raised its key interest rates for the 1st time in 11 years, starting a period of successive interest rate hikes. By late 2022, euro area inflation was in double digits, driven by rising energy costs and supply chain disruptions. However, inflation declined significantly during the 2nd half of 2023, easing economic pressures.

Despite the geopolitical situation and several atypical economic shocks – such as the global financial and economic crisis, the European sovereign debt crisis, Brexit and the COVID-19 pandemic – the EU's economy grew overall, in real terms, by 24.3% between 2008 and 2023. That said, economic activity increased at a modest pace across the EU in 2023. Gross domestic product (GDP) grew 0.4% in real terms, which was considerably lower than in either of the previous 2 years (following a rebound of 6.4% in 2021 and further growth of 3.5% in 2022). In the aftermath of the COVID-19 pandemic, the attention of policymakers and economists turned to long-term, structural challenges, such as population ageing, climate change, weak productivity growth, the cost-of-living crisis, rising income and wealth inequality, as well as territorial disparities within and among EU countries.

The infographic below shows the EU regions with the highest annual growth rates in 2023. The Mediterranean island region of Malta saw its economic activity rise 6.7% in real terms. There were 4 other regions where GDP increased by at least 5.0%: Severen tsentralen in Bulgaria (up 5.8%), the Spanish island regions of Illes Balears (up 5.7%) and Canarias (up 5.1%), as well as the Danish capital region of Hovedstaden (up 5.0%).



(% annual change in real terms, by NUTS 2 regions, 2023)

Source: Eurostat (online data code: nama_10r_2gvagr)

Regional gross domestic product (GDP)

The EU's GDP at market prices was €17.2 trillion in 2023, equivalent to an average of €38 100 per inhabitant. Behind these aggregated figures for the whole of the EU, the economic performance of individual regions varied considerably; these patterns of development are explored in more detail below.

LARGEST REGIONAL ECONOMIES IN THE EU

In 2023, there were 10 NUTS level 2 regions within the EU where GDP was in excess of €250 billion. The capital region of France – Ile-de-France – had, by far, the largest regional economy (€860 billion of GDP), followed by the northern Italian region of Lombardia (€490 billion) and the southern German region of Oberbayern (€350 billion). The other 7 regions within this group all had levels of GDP within the range of €250 billion to €300 billion: Comunidad de Madrid (Spain), Eastern and Midland (Ireland), Rhône-

Alpes (France), Cataluña (Spain), Düsseldorf, Stuttgart and Darmstadt (all Germany). These 10 regions with the highest levels of GDP collectively accounted for 21.1% of the EU's economic output. By comparison, the 137 regions across the EU with the lowest levels of GDP accounted for approximately the same proportion of output (21.0%).

More about the data: measuring the size of an economy

The central measure of national accounts, GDP, summarises the economic position of a country or a region. This well-known balance has traditionally been divided by the total number of inhabitants to create a proxy measure for evaluating overall living standards and/or competitiveness, through the derived indicator of GDP per inhabitant.

While GDP continues to be used for monitoring economic developments, playing an important role in economic decision-making, it is complemented by other indicators to inform policy debates on, for example, social and environmental issues. This is because GDP does not take account of externalities such as environmental sustainability or other issues, like income distribution or social inclusion. These are increasingly seen as important drivers for sustainable development and the overall quality of life.

In order to compensate for price level differences between countries, GDP can be converted using conversion factors known as purchasing power parities (PPPs). The use of PPPs, rather than market exchange rates, results in data being denominated in an artificial common currency unit called a purchasing power standard (PPS). In contrast to euro-based (€) series, a series denominated in PPS tends to have a levelling effect, as countries and regions with very high GDP per inhabitant in euro terms also tend to have relatively high price levels. For example, the cost of living in Luxembourg is generally much higher than the cost of living in Bulgaria.

Regional economic statistics are usually reported in current price (or 'nominal') terms; in other words, their current value during the particular reference year in question. To make comparisons over time, it is usually more revealing to use data in constant price (or real) terms, where values are adjusted to take account of price changes; in other words, they have been deflated. During periods of high inflation – such as the recent cost-of-living crisis – a time series presented in current price terms will show faster growth than a series in constant price terms. For example, imagine GDP rose from 1 year to the next from €100.0 billion to €110.0 billion, while inflation was 8.0%. In constant price terms using the prices of the 1st year, GDP in the 2nd year would be €101.85 billion. This results in a growth rate of 1.85% in real terms, compared with a 10.0% growth rate in nominal (or current price) terms.

In 2023, the Eastern and Midland region of Ireland had a level of GDP per inhabitant that was 2.5 times as high as the EU average

In 2023, the highest levels of GDP per inhabitant in PPS were located in:

- isolated regions, including most of the capital regions of EU countries and several other regions located in Ireland, Spain and France
- a band of regions running from the Nordic EU countries, down through Germany and the Benelux countries into Austria and northern Italy.

Map 7.1 is based on regional GDP per inhabitant (adjusted for purchasing power and then shown as an index based on a percentage of the EU average). The regional distribution of GDP per inhabitant was relatively skewed insofar as fewer than 40% of NUTS level 2 regions – or 92 out of 244 regions for which data are available – reported a level of GDP per inhabitant in 2023 that was equal to or above the EU average (as shown by the teal shades in Map 7.1).

In 2023, there were 16 NUTS level 2 regions across the EU where GDP per inhabitant was at least 50% above the EU average – as shown by the darkest shade of teal in Map 7.1. Among these relatively 'wealthy' regions, Eastern and Midland – the Irish capital region – had the highest level of regional GDP per inhabitant, with a ratio that was 2.5 times as high as the EU average. There were 2 other regions with ratios that were more than 2.0 times as high as the EU average: Luxembourg (2.4) and the Irish region of Southern (2.3). The remainder of this group of 16 regions with relatively high levels of GDP per inhabitant included:

- 9 capital regions, namely those of Czechia, Belgium, Romania, the Netherlands, Denmark, Hungary, France, Poland and Sweden
- the German regions of Hamburg and Oberbayern
- the northern Italian region of Provincia Autonoma di Bolzano/Bozen
- the Dutch region of Utrecht.

In the vast majority of EU countries, the capital region had the highest level of GDP per inhabitant in 2023. The 3 exceptions were:

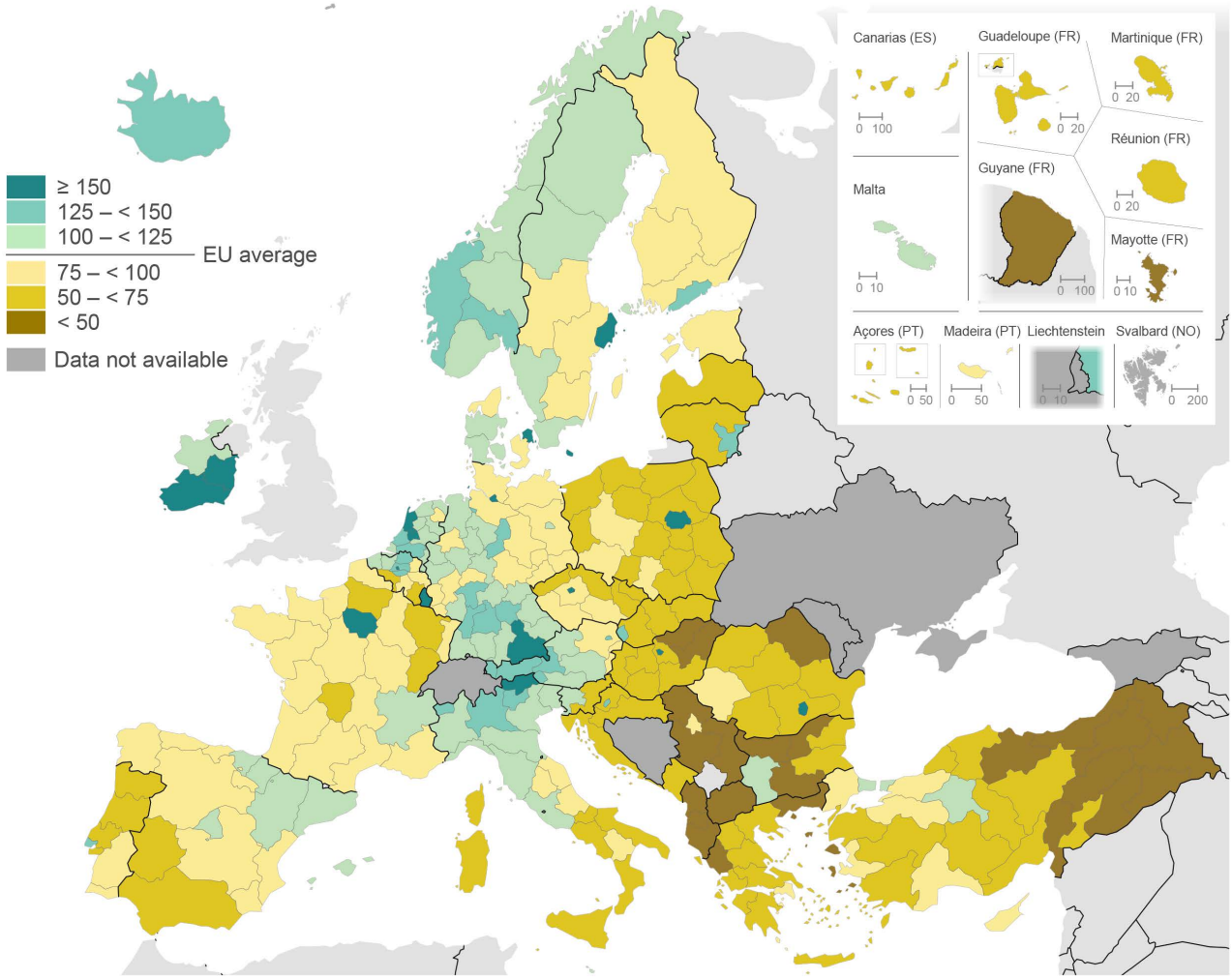
- Germany, where Hamburg, Oberbayern, Darmstadt, Stuttgart, Bremen, Mittelfranken, Karlsruhe and Braunschweig recorded higher levels than the capital region of Berlin, while Tübingen and Oberpfalz had the same level
- Italy, where Provincia Autonoma di Bolzano/Bozen, Lombardia, Valle d'Aosta/Vallée d'Aoste, Provincia Autonoma di Trento and Emilia-Romagna recorded higher levels than the capital region of Lazio
- Austria, where Salzburg recorded a higher level than the capital region of Wien.

More about the data: comparing GDP per inhabitant across EU regions

Some of the economic differences between regions may reflect the (sometimes artificial) administrative boundaries that are used to delineate regions. It is often the case that part of the income generated in 'wealthy' regions may be attributed to labour input from commuters who live in surrounding regions where, among other possible advantages, housing and other costs may be lower.

In addition, some regions with high levels of GDP are characterised by a strong presence of multinational enterprises. This may distort their levels of economic activity, especially if assets (for example, technology patents) are domiciled in a region. For example, the Southern region of Ireland hosts several of the world's top technology and pharmaceutical businesses.

Map 7.1: GDP per inhabitant
(index relative to EU average = 100, by NUTS 2 regions, 2023)



Note: based on purchasing power standards (PPS). Norway and Albania: 2021.

Source: Eurostat (online data codes: nama_10r_2gdp and nama_10_pc)

Map 7.1 also highlights that many of the regions with relatively low levels of GDP per inhabitant are concentrated in the south-east corner of Europe or outermost regions of the EU. In 2023, 11 NUTS level 2 regions across the EU recorded GDP per inhabitant that was less than 50% of the EU average; they are shown by the darkest shade of gold. Bulgaria and Greece each had 3 such regions, while France and Hungary each had 2, and Romania had a single region. The French outermost region of Mayotte reported the lowest level of regional GDP per inhabitant, at 28% of the EU average. The next lowest ratios were in the Bulgarian regions of Yuzhen tsentralen (41%) and Severozapaden (42%), another French outermost region, Guyane (42%), and the Greek region of Voreio Aigaio (also 42%).

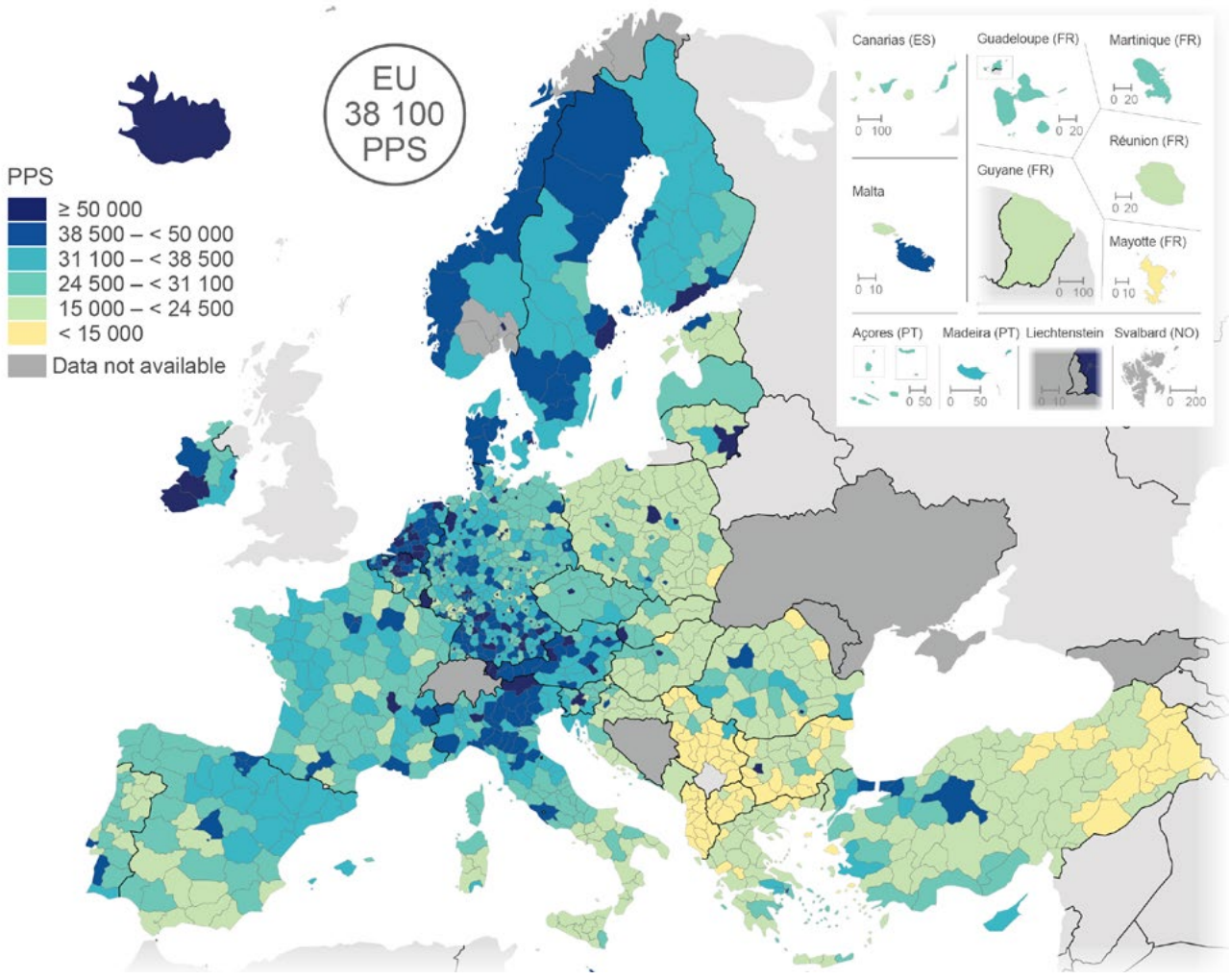
Dublin had the highest level of GDP per inhabitant in 2023, at 139 500 PPS …

Map 7.2 provides a similar analysis of GDP per inhabitant in PPS, based on more detailed NUTS level 3 regions. The increased detail/granularity of the data allows a finer analysis of economic disparities, for example, identifying how seemingly 'wealthier' cities differ from their surrounding areas.

Many of the regions with high levels of GDP per inhabitant in 2023 are characterised by advanced economic development, serving as important economic hubs, where innovation thrives, and wealth is concentrated.

- The Irish regions of Dublin (139 500 PPS) and South-West (137 300 PPS) recorded the highest levels of GDP per inhabitant among NUTS level 3 regions in the EU; both regions are home to numerous multinational enterprises in sectors such as information technology, pharmaceuticals and medical devices.
- The German regions of Wolfsburg, Kreisfreie Stadt (136 500 PPS) and Ingolstadt, Kreisfreie Stadt (128 600 PPS) had the next highest levels of GDP per inhabitant (2022 data); both of these regions are major hubs for the motor vehicle manufacturing.
- Paris in France (126 900 PPS) and München, Landkreis in Germany (119 500 PPS; 2022 data) were the only other NUTS level 3 regions in the EU to report levels of GDP per inhabitant that were more than 3.0 times as high as the EU average.

Map 7.2: GDP per inhabitant
(purchasing power standards (PPS), by NUTS 3 regions, 2023)



Note: Iceland, national data. Germany, Greece, Spain, Italy, Austria, Poland and Serbia: 2022. Norway and Albania: 2021.

Source: Eurostat (online data code: nama_10r_3gdp)

… while the French outermost region of Mayotte had the lowest level, at 10 500 PPS

At the opposite end of the spectrum, the NUTS level 3 regions with the lowest levels of GDP per inhabitant were primarily rural areas, less economically developed compared with major urban centres. In 2023, most of the regions with the lowest levels of GDP per inhabitant were located across Bulgaria, Greece (2022 data) and Romania. However, there were also single regions from France, Hungary and Poland where economic activity fell below the level of 15 000 PPS per inhabitant (as shown by a yellow shade in Map 7.2).

- The French outermost region of Mayotte recorded the lowest level of GDP per inhabitant, at 10 500 PPS.
- The Bulgarian regions of Sliven, Silistra and Haskovo – characterised by limited investment, a focus on traditional agricultural or industrial sectors, and a peripheral location – reported levels of GDP per inhabitant ranging from 11 000 PPS to 11 400 PPS.

In 2023, Champagne-Ardenne in France was the most specialised region in the EU for agriculture, forestry and fisheries

Agriculture, forestry and fisheries play a crucial role in many rural regions of the EU. These regions leverage abundant natural resources to shape their local economies, preserve cultural traditions, and support both economic and environmental sustainability. For example:

- Toscana and Puglia in Italy are renowned for their olive oil production
- Normandie and Bretagne in France are known for their dairy/livestock farming
- several regions across the Baltic and Nordic EU countries are specialised in forestry
- Galicia and Principado de Asturias in north-western Spain are among the most important fishing regions in the EU.

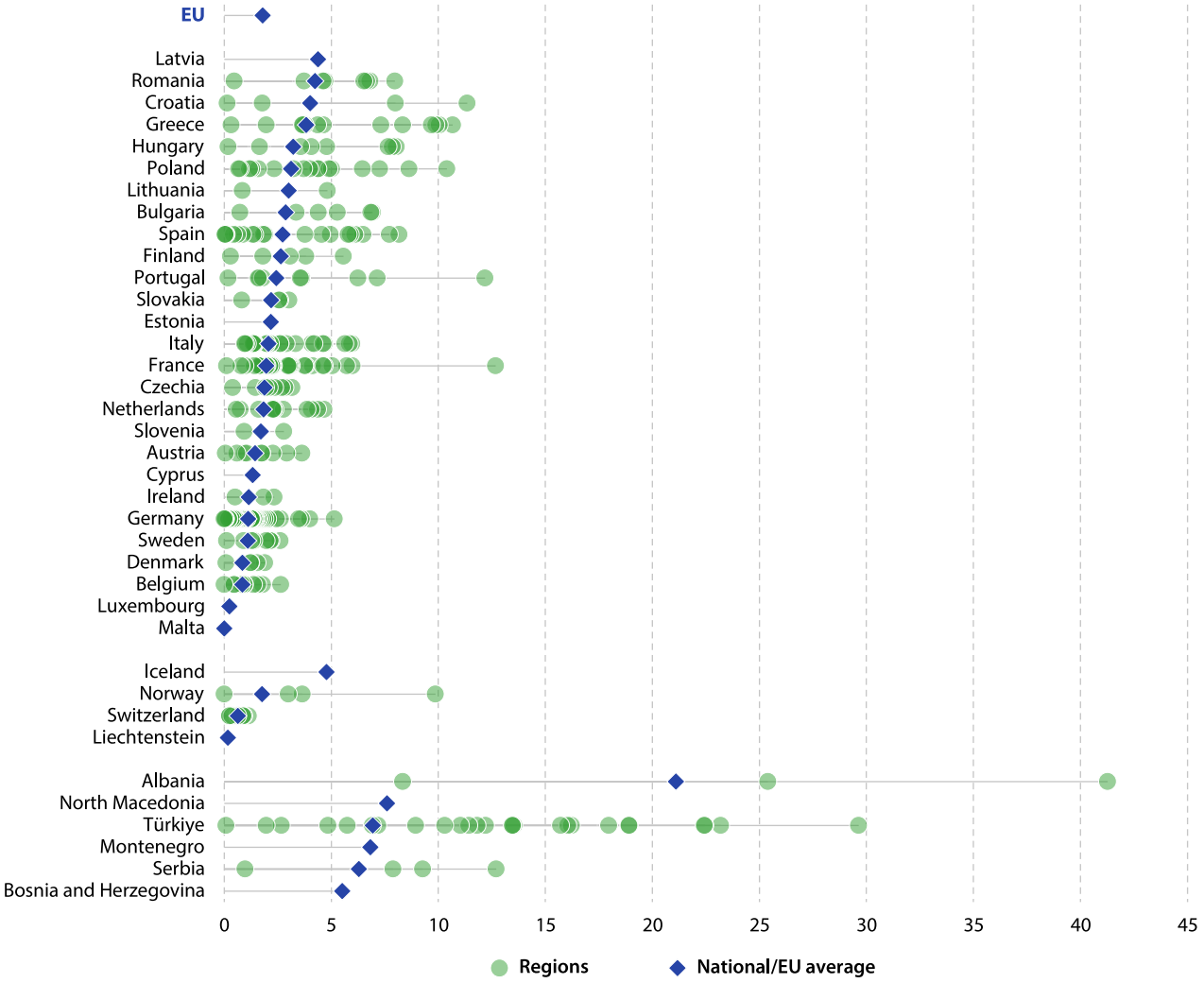
In 2023, agriculture, forestry and fisheries contributed 1.8% to the EU's total gross value added. Figure 7.1 shows the relative share of these sectors in the total economic activity of NUTS level 2 regions. There were 6 regions within the EU where agriculture, forestry and fisheries accounted for more than a tenth of total gross value added.

- Champagne-Ardenne in France (12.7%; 2022 data) had the highest share, followed by the Portuguese region of Alentejo (12.2%) and the Croatian region of Panonska Hrvatska (11.4%).
- The Greek regions of Thessalia and Peloponnisos, and Mazowiecki regionalny In Poland (which surrounds the Polish capital; 2022 data) were the only other EU regions where agriculture, forestry and fisheries contributed a double-digit share to overall economic activity.

Variations in the share of agriculture, forestry and fisheries in total gross value added reflect a range of factors, including geography, history, culture, economic diversification and government policies. Some regions are naturally predisposed for agriculture, such as those with rolling plains or fertile soils. By contrast, mountainous or arid regions often lack the necessary conditions for extensive farming, while densely populated regions tend to have seen their agricultural land repurposed for housing, commercial use or infrastructure. The largest inter-regional differences were observed in:

- France (2022 data), with a 12.6 percentage point gap, as Champagne-Ardenne (12.7%) had the highest share, while the capital region of Ile-de-France (0.1%) had the lowest
- Portugal, with a difference of 12.0 points, with Alentejo (12.2%) recording the highest share and the capital region of Grande Lisboa (0.2%) the lowest.

Figure 7.1: Regional specialisation in agriculture, forestry and fisheries
(% share of total gross value added, by NUTS 2 regions, 2023)



Note: Germany, Ireland, France, the Netherlands, Poland, Liechtenstein and Serbia, 2022. Norway, Switzerland and Albania: 2021. Innlandet (NO02), Oslo og Viken (NO08) and Agder og Sør-Østlandet (NO09): not available.

Source: Eurostat (online data codes: nama_10r_3gva and nama_10_a10)

Income

Having analysed GDP from the output side, this section focuses on income. Information is presented for primary income (from paid work and self-employment, as well as from interest, dividends and rents) and for disposable income.

HOUSEHOLD PRIMARY INCOME RELATIVE TO GDP

More about the data: analysing regional statistics for net primary income

Within regional accounts, GDP is recorded where it is generated (a person's place of work), whereas income is recorded at their place of residence (where people live). As a result, the ratio of net primary income to GDP is generally lower in regions that concentrate economic activity, such as capital regions and other major urban/metropolitan centres, and higher in regions where inter-regional commuters – people who work and live in 2 different regions – live.

Furthermore, the kind of economic activity that takes place in a region affects the relationship between net primary income and GDP. For regions specialised in capital (tangible or intangible) intensive activities, the remuneration of workers will generally constitute a lower share of the value added than in regions that are specialised in more labour intensive activities.

Regional statistics on primary income are available for all the vast majority of NUTS level 2 regions in the EU; the only exceptions are Utrecht and Zuid-Holland (both in the Netherlands).

Primary income includes earnings from wages/salaries and self-employment, as well as income from investments like interest, dividends and rents; it reflects household income before taxes and transfers. In 2022, EU households received a total of €10.2 trillion of primary income, while the EU's GDP was €16.1 trillion. As such, average household primary income was 63.1% of GDP. This ratio was somewhat skewed, insofar as 89 out of 244 NUTS level 2 regions for which data are available had a ratio that was lower than the EU average.

In capital regions, the impact of commuting often results in relatively low ratios of household primary income to GDP

Across the EU, there were 16 NUTS level 2 regions where household primary income accounted for less than 50.0% of GDP (as shown by a yellow shade in Map 7.3).

- A majority of these regions were capital regions, including those of Belgium, Czechia, Denmark, Ireland, Croatia, Hungary, Poland, Portugal and Slovakia.
- Other regions in this group included Övre Norrland (Sweden), Sud-Vest Oltenia (Romania), Hamburg (Germany), Groningen (the Netherlands), Yugoiztochen (Bulgaria), Luxembourg and Southern (Ireland).

The lowest ratio of primary income relative to GDP among NUTS level 2 regions was recorded in the Southern region of Ireland (at 26.6% in 2022). The low value likely reflects Southern being the European headquarters for several multinational enterprises in sectors such as information technology and pharmaceuticals. The low ratios recorded in other regions reflect, at least to some degree, a commuting impact.

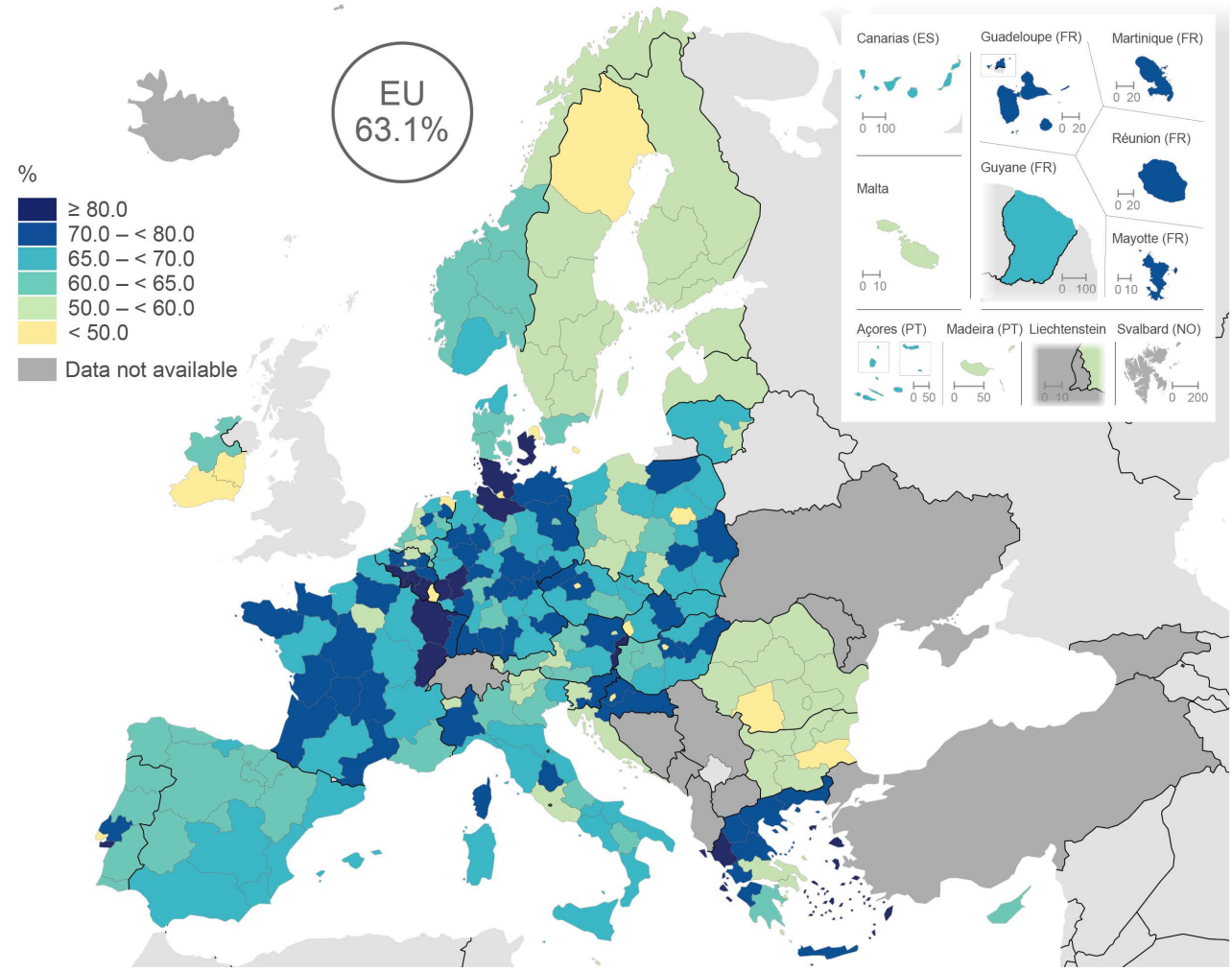
- Many people live outside capital regions but work within them, meaning that GDP is generated in the capital region, while income is accounted for in neighbouring regions. For example, the regional economy of the Czech capital region of Praha benefits from inflows of commuters from the surrounding region of Střední Čechy.
- In a similar vein, the relatively high level of GDP per inhabitant in Luxembourg may, at least in part, be attributed to the impact of cross-border commuters from the neighbouring regions of Prov. Luxembourg (Belgium), Trier (Germany) and Lorraine (France).

In 2022, the highest ratios of household primary income to GDP were recorded in the Belgian region of Prov. Luxembourg and the German region of Trier; a relatively high share of their resident populations are employed in Luxembourg

At the other end of the range, there were 16 NUTS level 2 regions where the ratio of household primary income relative to GDP was equal to or above 80.0% in 2022 (as shown by the darkest shade of blue in Map 7.3).

- The highest ratio was recorded in the Belgian region of Prov. Luxembourg (at 94.2%), followed closely by the German region of Trier (94.0%); as noted above, this reflects many residents working in neighbouring Luxembourg, while their income is recorded in their home region.
- There were 3 other regions that had ratios higher than 90.0%:
  - the German region of Lüneburg (93.0%), where many residents worked in Hamburg
  - the Portuguese region of Península de Setúbal (92.7%), where many residents worked in Grande Lisboa.
- the Greek region of Ionia Nisia (92.1%), where a relatively high share of income comes from remittances sent by emigrants abroad and/or pensions received from other EU countries.

Map 7.3: Household primary income relative to GDP
(% of GDP, by NUTS 2 regions, 2022)



Note: Norway, 2020.

Source: Eurostat (online data codes: nama_10r_2hhinc and nama_10r_2gdp)

NET PRIMARY INCOME PER INHABITANT

As noted above, economic hubs across the EU drive wealth creation, with part of their generated output attributed to commuters who live in surrounding regions. As a result, income per inhabitant in these surrounding regions tends to be relatively high when contrasted with their economic output (as measured by GDP per inhabitant).

In 2022, EU primary income per inhabitant averaged 22 700 PPS. The use of data in PPS, rather than in euro (€), takes account of price level differences between countries; the conversion to PPS takes into account the fact that household expenditure is predominantly related to consumption.

4 German regions – Oberbayern, Hamburg, Stuttgart and Darmstadt – and Utrecht in the Netherlands had the highest levels of net primary income per inhabitant in 2022

There were 26 NUTS level 2 regions with a ratio of net primary income per inhabitant of at least 30 000 PPS in 2022.

- These regions were primarily located in Germany (15 regions), with some of the highest levels of net primary income per inhabitant recorded in Oberbayern (42 100 PPS), Hamburg (35 400 PPS), Stuttgart (34 600 PPS) and Darmstadt (34 100 PPS).
- The Dutch region of Utrecht (36 900 PPS) and Luxembourg (33 400 PPS) had the highest levels of net primary income per inhabitant outside of Germany.
- Apart from Luxembourg, there were 4 capital regions within this group of 26: Ile-de-France (where net primary income per inhabitant averaged 32 900 PPS), Noord-Holland (32 200 PPS), Bucureşti-Ilfov (30 900 PPS) and Stockholm (30 100 PPS).

It is worth noting that, in euro terms, Luxembourg had the highest level of net primary income per inhabitant (€45 700). This figure was slightly above the €45 600 per inhabitant recorded for Oberbayern, while the Danish capital region of Hovedstaden had the 3rd highest ratio (€41 900 per inhabitant). The relatively high cost of living in both Luxembourg and Hovedstaden meant that they ranked 6th and 41st, respectively, when based on data in PPS terms (that compensate for price level differences).

The results above focus on absolute levels of primary income. To have a further insight into income distribution, Map 7.4 expresses income levels as indices relative to national averages, thereby highlighting regional disparities in income distributions. The results for 2022 were skewed insofar as across the EU there were:

- 77 regions that had indices above their national average
- 6 regions that had indices equal to their national average
- 161 regions that had indices below their national average.

The regions with the highest indices in 2022 and therefore a high concentration of net primary income per inhabitant were generally capital regions and/or economic hubs. This pattern was particularly pronounced in eastern and southern EU countries, for example, net primary income per inhabitant was:

- 2.3 times as high as the Romanian average in Bucureşti-Ilfov
- 1.7 times as high as the Slovakian average in Bratislavský kraj
- 1.6 times as high as the Hungarian and the Bulgarian averages in Budapest and Yugozapaden
- 1.5 times as high as the Italian average in Provincia Autonoma di Bolzano/Bozen.

There were 23 NUTS level 2 regions where the ratio of net primary income per inhabitant was at least 20.0% above the national average in 2022 (they are shown with a dark teal shade in Map 7.4). They included:

- 14 capital regions, with Ile-de-France (France), Sostinės regionas (Lithuania), Stockholm (Sweden) and Helsinki-Uusimaa (Finland) the only capital regions from outside of eastern or southern EU countries
- 3 regions in northern Italy – Provincia Autonoma di Bolzano/Bozen, Lombardia and Emilia-Romagna – all of which recorded higher net primary income per inhabitant than the capital region of Lazio
- Oberbayern in southern Germany, which had a higher level of net primary income per inhabitant than the capital region of Berlin
- Utrecht in the Netherlands, which had a higher level of net primary income per inhabitant than the capital region of Noord-Holland
- País Vasco in Spain, which had a relatively high concentration of net primary income per inhabitant, though below that recorded in the capital region of Comunidad de Madrid
- Prov. Vlaams-Brabant in northern Belgium, which had a higher level of net primary income per inhabitant than the capital region of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest
- the Greek regions of Notio Aigaio and Ionia Nisia, which had relatively high concentrations of net primary income per inhabitant, though below that recorded in the capital region of Attiki.

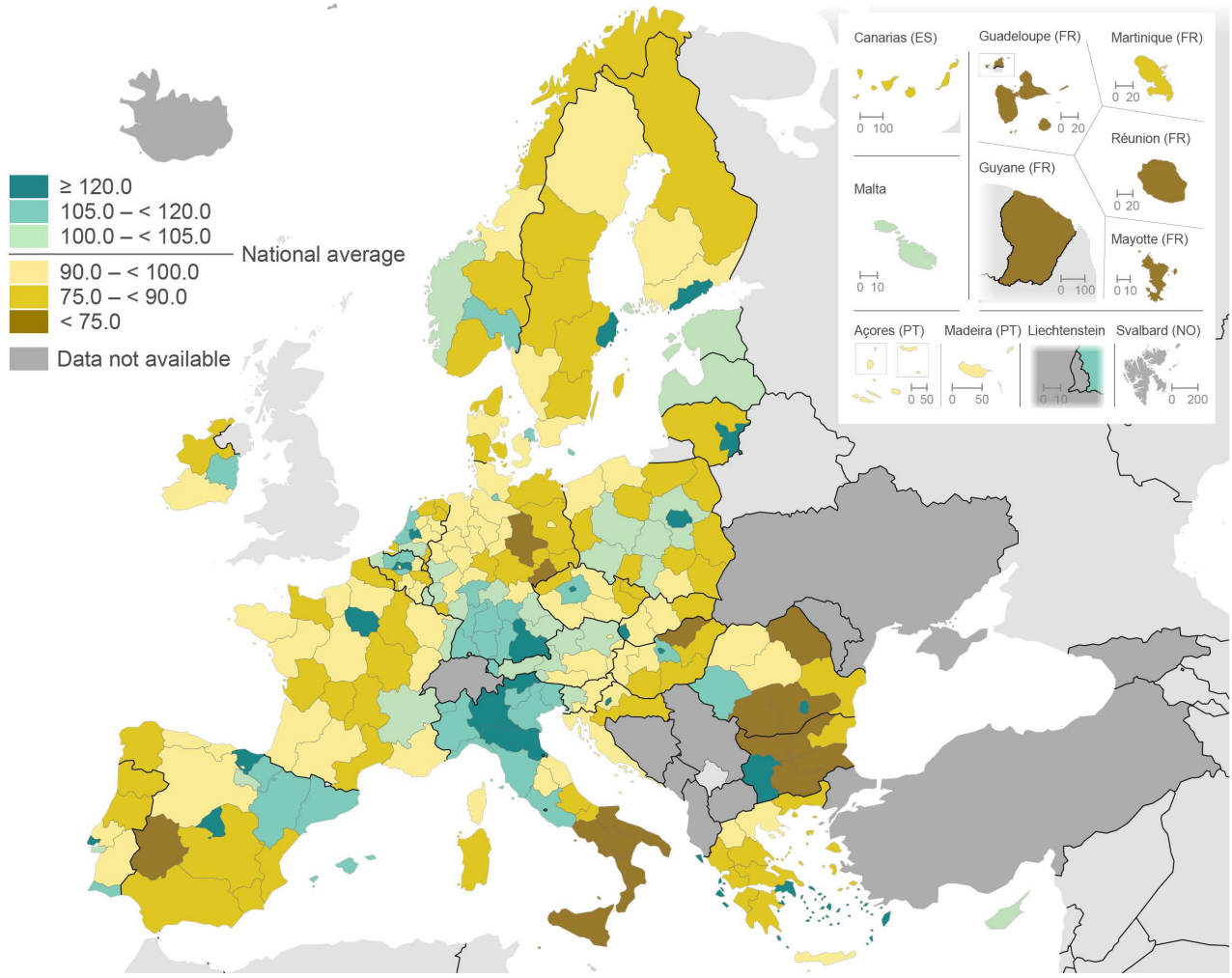
As outlined above, there were approximately twice as many regions (161 out of 244 for which data are available across the EU) that recorded net primary income per inhabitant below (rather than above) their national average in 2022. This may be linked, among others, to factors such as geography, demographic patterns, the distribution of education and skills, economic diversification/ concentration or regional patterns of innovation and investment.

At the bottom end of the distribution, there were 20 NUTS level 2 regions across the EU where net primary income per inhabitant in 2022 was less than 75.0% of the national average (as shown by the darkest shade of gold in Map 7.4). This group of 20 regions was composed of:

- 5 regions from southern Italy, with the lowest index recorded in Calabria
- 4 regions from Bulgaria, with the lowest index recorded in Severozapaden
- 4 outermost regions from France, with the lowest index – both in France and across the whole of the EU – recorded in Mayotte
- 3 regions from Romania, with the lowest index recorded in Nord-Est
- 2 regions from eastern Germany, with the lowest indices recorded in Chemnitz and Sachsen-Anhalt
- single regions from Spain (Extremadura) and Hungary (Észak-Magyarország).

Among this group of 20 regions, the highest levels of net primary income per inhabitant in 2022 were recorded in the 2 German regions of Chemnitz and Sachsen-Anhalt (both 22 000 PPS). While their income levels were slightly below the EU average (22 700 PPS), they were nevertheless considerably higher than for any other region within this group. The next highest income levels were recorded in the French outermost regions of Guadeloupe (16 400 PPS) and La Réunion (16 100 PPS). At the lower end of the distribution, 8 out of this group of 20 had levels of net primary income per inhabitant that were below 10 000 PPS. Severoiztochen in Bulgaria was the only other region in the EU – outside of this group of 20 – to record a level of income below this level.

Map 7.4: Net primary income per inhabitant
(index relative to national average = 100.0, by NUTS 2 regions, 2022)



Note: based on purchasing power standards (PPS). Norway: 2020.

Source: Eurostat (online data codes: nama_10r_2hhinc)

Table 7.1 shows the annual change in household primary income and the compensation of employees for 2022. These rates of change provide an opportunity to understand the dynamics of income distribution, the health of the labour market and shifts in the sources of household income. If the annual change in household primary income is rising faster, this suggests that income from non-labour sources (for example, investments or social transfers) is growing more rapidly than the compensation of employees, which may be an indication of rising inequalities and/or a shift in how households are earning their income. Conversely, if the compensation of employees grows at a faster rate than household primary income, this suggests that wages are driving income growth in households.

Table 7.1a: Household primary income
(annual change in %, by NUTS 2 regions, 2022)

	Region with highest rate of change		EU / national average	Region with lowest rate of change	
EU	Yugozapaden (BG41)	21.0	8.0	–4.3	Åland (FI20)
Belgium	Bruxelles-Capitale / Brussels Hoofdstedelijk (BE10)	12.2	10.8	9.5	Prov. Hainaut (BE32)
Bulgaria	Yugozapaden (BG41)	21.0	16.2	5.4	Severozapaden (BG31)
Czechia	Střední Čechy (CZ02)	20.1	16.0	13.0	Praha (CZ01)
Denmark	Hovedstaden (DK01)	6.4	5.5	4.3	Sjælland (DK02)
Germany	Mecklenburg-Vorpommern (DE80)	9.9	8.1	7.0	Darmstadt (DE71)
Estonia			13.8		
Ireland	Eastern and Midland (IE06)	12.0	11.2	10.2	Northern and Western (IE04)
Greece	Notio Aigaio (EL42)	15.3	6.9	3.4	Anatoliki Makedonia, Thraki (EL51)
Spain	Illes Balears (ES53)	18.6	8.4	4.9	Extremadura (ES43)
France	Mayotte (FRY5)	8.0	6.8	1.9	Limousin (FRI2)
Croatia	Sjeverna Hrvatska (HR06)	14.7	12.9	11.1	Panonska Hrvatska (HR02)
Italy	Provincia Autonoma di Bolzano/Bozen (ITH1)	8.3	6.9	4.8	Friuli-Venezia Giulia (ITH4)
Cyprus	–	–	13.5	–	–
Latvia	–	–	12.0	–	–
Lithuania	Sostinės regionas (LT01)	15.7	15.3	15.1	Vidurio ir vakarų Lietuvos regionas (LT02)
Luxembourg	–	–	7.2	–	–
Hungary	Pest (HU12)	14.8	11.0	5.9	Dél-Alföld (HU33)
Malta	–	–	7.9	–	–
Netherlands	Flevoland (NL23)	9.2	7.5	6.2	Groningen (NL11)
Austria	Salzburg (AT32)	10.9	8.9	7.7	Vorarlberg (AT34)
Poland	Mazowiecki regionalny (PL92)	15.9	11.8	9.8	Warszawski stołeczny (PL91)
Portugal	Algarve (PT15)	17.7	9.4	6.7	Região Autónoma dos Açores (PT20)
Romania	Bucureşti-Ilfov (RO32)	18.3	13.6	8.0	Sud-Est (RO22)
Slovenia	Vzhodna Slovenija (SI03)	9.2	9.1	9.0	Zahodna Slovenija (SI04)
Slovakia	Bratislavský kraj (SK01)	11.3	10.4	9.3	Stredné Slovensko (SK03)
Finland	Helsinki-Uusimaa (FI1B)	8.1	6.0	–4.3	Åland (FI20)
Sweden	Stockholm (SE11)	1.9	1.1	0.1	Småland med öarna (SE21)

Note: Estonia, Cyprus, Latvia, Luxembourg and Malta do not have any regional breakdown at NUTS level 2.

Source: Eurostat (online data code: nama_10r_2hhinc)

In 2022, the highest growth rate for household primary income was in the Bulgarian capital region of Yugozapaden, up 21.0% ...

In 2022, household primary income across the EU increased 8.0%, while the compensation of employees was 6.2% higher; these values are in current price terms and therefore do not take into account price changes during the period under consideration. Across NUTS level 2 regions, the Bulgarian capital region of Yugozapaden recorded the highest growth rate for household primary income (up 21.0%), followed by the Czech region of Střední Čechy (up 20.1%) that encircles the capital region of Praha. Household primary income also rose at a rapid pace in:

- several tourism-dependent regions – such as Illes Balears (Spain) and Algarve (Portugal) – which had experienced a low level of economic activity during 2021 due to the COVID-19 crisis
- several capital regions – for example, Bucureşti-Ilfov (Romania), Sostinės regionas (Lithuania) and Budapest (Hungary)
- a number of regions that encircle capital regions – for example, Mazowiecki regionalny (Poland) and Pest (Hungary)
- the remaining regions of Czechia, as the slowest rate of change was recorded in the capital region of Praha (where household primary income nevertheless grew by 13.0%).

Table 7.1b: Compensation of employees
(annual change in %, by NUTS 2 regions, 2022)

	Region with highest rate of change		EU / national average	Region with lowest rate of change	
EU	Vidurio ir vakarų Lietuvos regionas (LT02)	17.9	6.2	–1.3	Åland (FI20)
Belgium	Bruxelles-Capitale / Brussels Hoofdstedelijk (BE10)	10.6	9.4	8.4	Prov. Luxembourg (BE34)
Bulgaria	Yugozapaden (BG41)	16.0	14.8	12.0	Severen tsentralen (BG32)
Czechia	Střední Čechy (CZ02)	13.9	11.6	6.3	Praha (CZ01)
Denmark	Hovedstaden (DK01)	7.3	6.7	6.0	Sjælland (DK02)
Germany	Trier (DEB2)	8.8	6.0	5.3	Sachsen-Anhalt (DEE0)
Estonia	–	–	13.3	–	–
Ireland	Eastern and Midland (IE06)	10.4	9.6	8.4	Northern and Western (IE04)
Greece	Notio Aigaio (EL42)	11.3	4.7	2.1	Anatoliki Makedonia, Thraki (EL51)
Spain	Illes Balears (ES53)	15.9	8.6	5.6	Ciudad de Ceuta (ES63)
France	Provence-Alpes-Côte d'Azur (FRL0)	9.0	7.3	0.8	Limousin (FRI2)
Croatia	Jadranska Hrvatska (HR03)	16.5	14.5	12.7	Panonska Hrvatska (HR02)
Italy	Valle d'Aosta/Vallée d'Aoste (ITC2)	8.0	6.2	3.7	Friuli-Venezia Giulia (ITH4)
Cyprus	–	–	11.4	–	–
Latvia	–	–	12.3	–	–
Lithuania	Vidurio ir vakarų Lietuvos regionas (LT02)	17.9	16.5	14.3	Sostinės regionas (LT01)
Luxembourg	–	–	8.4	–	–
Hungary	Pest (HU12)	12.4	9.5	6.1	Dél-Alföld (HU33)
Malta	–	–	8.9		–
Netherlands	Flevoland (NL23)	9.2	7.2	6.0	Groningen (NL11)
Austria	Tirol (AT33)	9.8	7.8	6.6	Niederösterreich (AT12)
Poland	Śląskie (PL22)	11.7	10.3	8.4	Warszawski stołeczny (PL91)
Portugal	Algarve (PT15)	15.0	9.8	7.3	Região Autónoma dos Açores (PT20)
Romania	Nord-Vest (RO11)	16.8	14.6	11.8	Sud-Vest Oltenia (RO41)
Slovenia	Zahodna Slovenija (SI04)	8.0	7.7	7.5	Vzhodna Slovenija (SI03)
Slovakia	Bratislavský kraj (SK01)	11.0	7.7	5.7	Stredné Slovensko (SK03)
Finland	Helsinki-Uusimaa (FI1B)	12.4	6.8	–1.3	Åland (FI20)
Sweden	Stockholm (SE11)	2.1	1.2	–0.1	Mellersta Norrland (SE32)

Note: Estonia, Cyprus, Latvia, Luxembourg and Malta do not have any regional breakdown at NUTS level 2.

Source: Eurostat (online data code: nama_10r_2hhinc)

… while the Lithuanian region of Vidurio ir vakarų Lietuvos regionas had the highest growth rate for employee compensation, up 17.9%

Employee compensation is defined (within national accounts) as remuneration, in cash or in kind (such as a company car or vouchers for meals), payable by an employer to an employee in return for work done; it also includes payments linked to social contributions (such as health or pension contributions). Most EU regions with high annual growth rates for household primary income also had relatively high growth rates for the compensation of employees. In 2022, there were 8 NUTS level 2 regions in the EU where the compensation of employees increased by at least 15.0%. They included:

- Vidurio ir vakarų Lietuvos regionas in Lithuania, which had the highest growth rate (up 17.9%)
- Nord-Vest and Bucureşti-Ilfov in Romania
- Yugozapaden and Severozapaden in Bulgaria
- the tourism-focused regions of Jadranska Hrvatska (Croatia), Illes Balears and Algarve.

Among NUTS level 2 regions, the autonomous Finnish archipelago of Åland was the only region in the EU to experience a decline in household primary income in 2022 (down 4.3%). Åland also recorded the lowest regional rate of change for the compensation of employees (down 1.3%). The northern Swedish region of Mellersta Norrland was the only other EU region to record a negative change, albeit modest, with the compensation of employees down 0.1%.

Productivity and investment indicators

This final section provides further information about the compensation of employees (detailing the level of remuneration per hour worked), alongside information on labour productivity (defined here as gross value added per person employed); these indicators may be used to analyse patterns/developments of regional competitiveness.

COMPENSATION OF EMPLOYEES

One of the principal areas of interest/concern for many employees is their level of remuneration; this has become an even greater preoccupation during the cost-of-living crisis. The data presented in Table 7.2 refer to gross (in other words, before tax) hourly compensation in euro (€).

Luxembourg had the highest level of employee compensation, €55.0 per hour in 2022

In 2022, an employee working in the EU received, on average, gross compensation of €26.6 for every hour that they worked. Luxembourg had the highest level of compensation across NUTS level 2 regions in the EU, at €55.0 per hour. At the other end of the distribution, the Romanian region of Nord-Est had the lowest level of compensation (€6.2 per hour). As such, the ratio between the highest and lowest levels of employee compensation was 8.9 : 1. The distribution of employee compensation was symmetrically centred on the EU average, insofar as 122 regions had values that were higher than the mean, while 121 regions had values that were below; there was 1 region that had the same level of employee compensation – the Spanish capital region of Comunidad de Madrid.

At the top end of the distribution, there were 26 NUTS level 2 regions in the EU where the average level of employee compensation was at least €40.0 per hour in 2022. These regions were principally concentrated in Belgium (8 regions), Germany (also 8 regions), Denmark (all 5 regions), the Netherlands (3 regions) and also included Luxembourg, as well as the capital region of Ile-de-France (France).

There were 41 NUTS level 2 regions where employee compensation was less than €10.0 per hour worked in 2022. They were predominantly located across eastern EU countries and included:

- 16 of the 17 regions from Poland, the exception being the capital region of Warszawski stołeczny
- 7 of the 8 regions from each of Hungary and in Romania, the exceptions being the capital regions of Budapest and Bucureşti-Ilfov
- 5 of the 6 regions from Bulgaria, the exception being the capital region of Yugozapaden
- Panonska Hrvatska and Sjeverna Hrvatska that are both located in Croatia
- the only exceptions – from outside of eastern EU countries – were 4 Greek regions, namely, Voreio Aigaio, Ipeiros, Notio Aigaio and Kriti.

In 2022, the only multi-regional EU countries where capital regions did not have the highest level of employee compensation were Germany, Greece, Spain and Italy

Table 7.2 confirms that the highest regional levels of employee compensation were usually recorded in capital regions. This pattern was repeated in 18 of the 22 multi-regional EU countries. This is unsurprising given the high cost of living in many capitals, while most also play an important role as the location for company headquarters, financial services and national administrations, which tend to offer above average levels of compensation. The only exceptions, where the highest level of employee compensation was not recorded in the capital region, were:

- Oberbayern in Germany (€46.2 per hour)
- Dytiki Makedonia in Greece (€13.0 per hour)
- País Vasco in Spain (€27.0 per hour)
- Provincia Autonoma di Bolzano/Bozen in Italy (€30.4 per hour).

Several EU countries had regional distributions of employee compensation that were heavily skewed. This was generally because the capital region had a much higher level of compensation than other regions of the same country. For example:

- someone working in the Romanian capital region of Bucureşti-Ilfov (€13.6 per hour) could expect to earn more than twice as much as an someone working in Nord-Est (€6.2 per hour), where the lowest level of compensation in Romania was recorded
- someone working in the Polish capital region of Warszawski stołeczny (€14.2 per hour) could expect to earn more than twice as much as an someone working in Warmińsko-mazurskie (€6.6 per hour), where the lowest level of compensation in Poland was recorded.

Table 7.2: Compensation of employees
(€ per hour worked, by NUTS 2 regions, 2022)

	Region with highest value		EU / national average	Region with lowest value	
EU	Luxembourg (LU00)	55.0	26.6	6.6	Yuzhen tsentralen (BG42)
Belgium	Bruxelles-Capitale / Brussels Hoofdstedelijk (BE10)	52.9	44.6	38.6	Prov. Luxembourg (BE34)
Bulgaria	Yugozapaden (BG41)	10.6	8.4	6.6	Yuzhen tsentralen (BG42)
Czechia	Praha (CZ01)	23.7	15.6	12.0	Severozápad (CZ04)
Denmark	Hovedstaden (DK01)	49.3	45.0	41.2	Sjælland (DK02)
Germany	Oberbayern (DE21)	46.2	38.4	31.3	Chemnitz (DED4); Sachsen-Anhalt (DEE0)
Estonia	–	–	17.0	–	–
Ireland	Eastern and Midland (IE06)	37.5	35.5	31.5	Northern and Western (IE04)
Greece	Dytiki Makedonia (EL53)	13.0	10.7	9.4	Notio Aigaio (EL42) and Kriti (EL43)
Spain	País Vasco (ES21)	27.0	23.2	19.6	Región de Murcia (ES62)
France	Ile-de-France (FR10)	47.0	37.0	31.8	Poitou-Charentes (FRI3); Guyane (FRY3)
Croatia	Grad Zagreb (HR05)	12.6	10.6	8.4	Panonska Hrvatska (HR02)
Italy	Provincia Autonoma di Bolzano/Bozen (ITH1)	30.4	27.4	20.8	Puglia (ITF4)
Cyprus	–	–	16.7	–	–
Latvia	–	–	12.2	–	–
Lithuania	Sostinės regionas (LT01)	16.9	13.4	11.5	Vidurio ir vakarų Lietuvos regionas (LT02)
Luxembourg	–	–	55.0	–	–
Hungary	Budapest (HU11)	10.0	9.5	8.9	Pest (HU12); Dél-Dunántúl (HU23); Észak-Alföld (HU32)
Malta	–	–	17.2	–	–
Netherlands	Noord-Holland (NL32)	45.2	40.0	35.9	Flevoland (NL23)
Austria	Wien (AT13)	39.5	36.1	30.6	Burgenland (AT11)
Poland	Warszawski stołeczny (PL91)	14.2	8.9	6.6	Warmińsko-mazurskie (PL62)
Portugal	Grande Lisboa (PT1A)	16.6	13.8	12.3	Algarve (PT15); Oeste e Vale do Tejo (PT1D)
Romania	Bucureşti-Ilfov (RO32)	13.6	8.5	6.2	Nord-Est (RO21)
Slovenia	Zahodna Slovenija (SI04)	22.8	21.6	20.1	Vzhodna Slovenija (SI03)
Slovakia	Bratislavský kraj (SK01)	19.7	14.6	13.0	Východné Slovensko (SK04)
Finland	Helsinki-Uusimaa (FI1B)	37.8	34.0	31.0	Pohjois- ja Itä-Suomi (FI1D)
Sweden	Stockholm (SE11)	37.7	31.9	28.3	Småland med öarna (SE21)
Iceland	–	–	48.9	–	–
Norway	–	–	50.7	–	–
Switzerland	–	–	62.9	–	–
Serbia	City of Belgrade (RS11)	7.7	7.3	6.5	Region Šumadije i Zapadne Srbije (RS21)

Note: Estonia, Cyprus, Latvia, Luxembourg and Malta do not have any regional breakdown at NUTS level 2. Norway and Switzerland: national data.

Source: Eurostat (online data codes: nama_10r_2lp10 and nama_10_lp_ulc)

REAL LABOUR PRODUCTIVITY

More about the data: analysing regional statistics for labour productivity

Labour productivity can be defined as GDP (or gross value added) divided by a measure of labour input, typically the number of people employed or the total number of hours worked. The information presented in Map 7.5 is based on labour productivity per hour worked, which should not be influenced by changes in the structure of the employment market. For instance, the ratio is not impacted if there is a shift from full-time to part-time work, or if working hours are curtailed (for example, due to labour market restrictions such as those imposed during the COVID-19 crisis).

High labour productivity may be linked to the efficient use of labour and/or reflect the skills and experience of the labour force. These in turn may result from the specific mix of activities present in each regional economy as some activities, for example, knowledge-intensive industrial activities, business or financial services tend to be characterised by higher levels of labour productivity (as well as higher levels of employee compensation).

In 2022, people working in the EU generated an average of €46.7 in value for each hour worked. This figure, when based on GDP per hour worked in 2015 prices, can be used to create indices which measure real productivity improvements adjusted for inflation; these indices are presented relative to the EU average, set at 100.0.

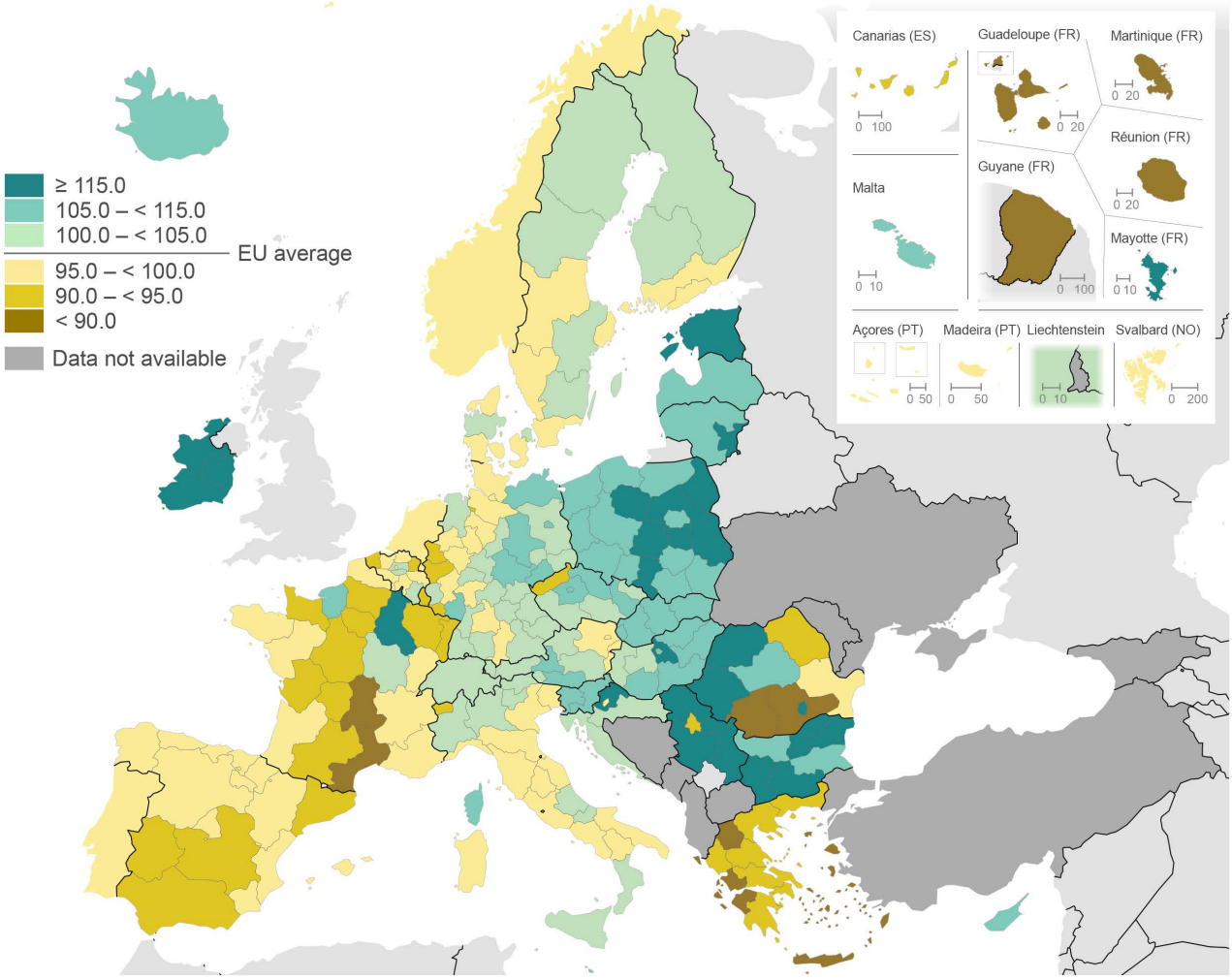
Map 7.5 shows the development of labour productivity across NUTS level 2 regions compared with the EU average from 2015 to 2022. If the value for a region exceeds 100.0 then that region's productivity growth outpaced the EU average during the period under consideration; if a region's value is below 100.0, then that region's productivity growth lagged behind the EU average. As such, the information shown highlights changes in labour productivity over time (relative to the EU average); the map does not compare absolute levels of labour productivity. Regions with an above average rate of change either closed the productivity gap with the EU average or widened their advantage, while regions with a lower than average rate of change either fell further behind the EU average or saw their productivity advantage narrow.

Real changes in labour productivity were evenly distributed, insofar as 112 (out of 225) NUTS level 2 regions had indices that were above the EU average in 2022, the same number of regions that had indices that were below the EU average; in the Italian region of Provincia Autonoma di Bolzano/Bozen, labour productivity grew at the same pace as the EU average. There were 22 NUTS level 2 regions where real labour productivity grew at least 15% faster than the EU average between 2015 and 2022 (as shown by the darkest shade of teal in Map 7.5). They were predominantly located in eastern EU countries with the highest counts in Poland (6 regions), Bulgaria (4 regions) and Romania (3 regions), while there were also single regions from each of Croatia and Hungary. The remainder of this group was composed of all 3 regions from Ireland, 2 regions from France, the capital region of Lithuania, as well as Estonia.

Between 2015 and 2022, 14 NUTS level 2 regions across the EU experienced a decline in real labour productivity or recorded growth that was at least 10% slower than the EU average (as indicated by the darkest shade of gold in Map 7.5). This group of 14 regions included:

- 6 regions from Greece
- 6 regions from France, 4 of which were outermost regions, together with Auvergne and Languedoc-Roussillon
- 2 regions from Romania, Sud-Muntenia and Sud-Vest Oltenia.

Map 7.5: Development of real labour productivity
(index relative to EU average = 100.0, by NUTS 2 regions, 2015–22)



Note: based on € per hour worked in 2015 prices. The map highlights changes in labour productivity over time (relative to the EU average), it doesn't compare absolute levels of labour productivity. The Netherlands, Portugal, Norway and Switzerland: national data.

Source: Eurostat (online data codes: nama_10r_2rlp, nama_10_gdp and nama_10_a10_e)

8. Business

Presented according to the activity classification NACE, the information presented in this chapter is split into 3 parts.

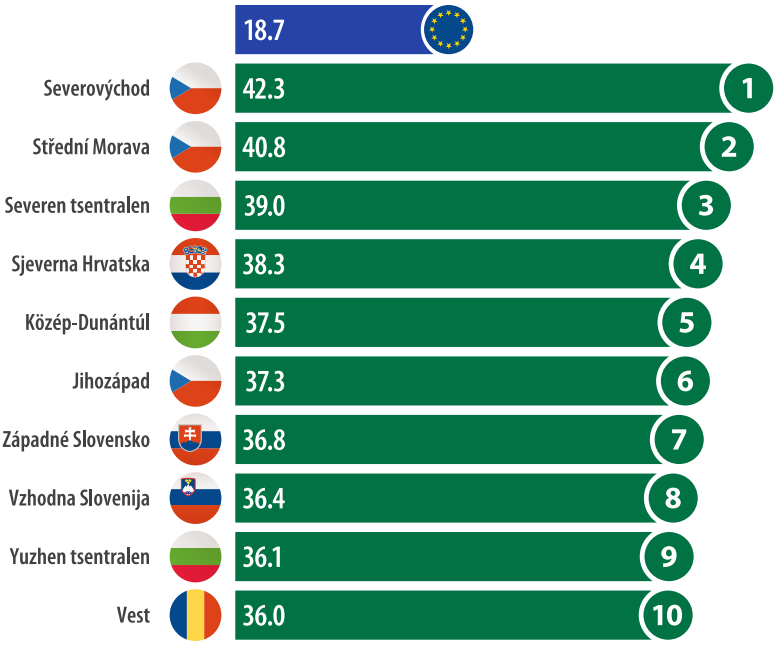
- The 1st is based on a selection of regional business demography statistics – indicators from this dataset include enterprise birth and death rates, as well as the share of high-growth enterprises.
- The 2nd presents structural business statistics for the business economy, manufacturing and market services; these statistics provide valuable information about regional patterns of specialisation and concentration.
- The 3rd is based on business innovation statistics which provide information on the introduction of new or significantly improved goods, services and/or business processes.

As part of the European Commission's priorities for 2024 to 2029, *A new plan for Europe's sustainable prosperity and competitiveness* sets out a strategic vision for strengthening the EU's economic resilience, while advancing environmental sustainability and social well-being. This includes:

- making business easier and faster
- building a clean industrial deal
- working to make business activities more circular and sustainable
- making the economy more resilient
- increasing productivity with digital technological diffusion
- putting research and innovation at the heart of the EU economy
- turbo charging investment
- tackling skills and labour gaps.

In line with these priorities, this year's edition of the *Eurostat regional yearbook* focuses on knowledge-intensive market services, knowledge-intensive high-technology services and innovation-active enterprises.

The *Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation* (COM(2025) 85 final) will mobilise over €100 billion to support clean manufacturing. The European Commission will adopt a new framework to accelerate the rollout of renewable energy, decarbonise industry



(% share of regional business economy employment, by NUTS 2 regions, 2022)

Note: manufacturing activities are covered by NACE Section C. Voreio Aigaio (EL41) and Ionia Nisia (EL62): not available. The infographic is based on non-confidential data (some NACE activities are not available which may impact the total calculated for the overall size of the business economy).

Source: Eurostat (online data codes: sbs_r_nuts2021 and sbs_sc_ovw)

and ensure sufficient manufacturing capacity for clean technologies. The aim is to boost demand for EU-made clean products by introducing sustainability, resilience and 'made in Europe' criteria into both public and private procurement.

In 2022, manufacturing activities accounted for 18.7% of total employment within the EU's business economy. In the Czech regions of Severovýchod and Střední Morava, more than 2 in 5 people were employed in the manufacturing sector (see the infographic above).

Business demography

More about the data: business demography statistics

Business demography statistics are presented for the business economy – defined here as NACE Sections B to N and P to R and Divisions 95 and 96 – covering industry, construction, distributive trades and other market services.

Business demography indicators are presented for 2022; the latest information for enterprise death rates is provisional.

High-growth enterprises are of particular interest to policymakers insofar as they can improve the economic performance of a region, create employment opportunities and, if sustained, change its economic structure. A high-growth enterprise is an enterprise that grows over a specified period of time at a rapid pace when measured in terms of its number of employees. In this publication, the time period from 2019 to 2022 is used. As such, high-growth enterprises are specifically defined as those which meet – simultaneously – 2 conditions:

- at least 10 employees in 2019
- average employee growth of more than 10% per year between 2019 and 2022.

High-growth enterprises might create new markets or compete in existing markets with domestic or foreign companies. Therefore, their growth does not translate one-to-one into growth of the national economy. However, their capacity to create or conquer markets correlates positively with the overall economic performance of a country.

For the enterprise birth rate, data are not available for NUTS level 2 regions in Belgium, Serbia and Türkiye; national data are shown instead. For the enterprise death rate, data for Voreio Aigaio and Notio Aigaio in Greece refer to 2021 (not 2022).

Business demography statistics provide information about the events in the life cycle of an enterprise. They cover, among other stages:

- the birth of new enterprises
- the growth and survival of existing enterprises (with particular interest centred on their employment impact)
- enterprise deaths.

These indicators provide an important insight into business dynamics, as new enterprises / fast-growing enterprises tend to be very agile and may improve the overall level of efficiency and productivity within an economy.

ENTERPRISE BIRTHS AND DEATHS

In 2022, the EU's enterprise birth rate was 10.5%

The enterprise birth rate measures the number of new enterprises born during a year in relation to the total population of active enterprises in the same year. In 2022, there were 3.4 million enterprise births within the EU's business economy. When expressed relative to the total number of enterprises (32.6 million), this equated to an enterprise birth rate of 10.5%.

In 2022, the regional distribution of enterprise birth rates for the business economy was relatively skewed insofar as 37.2% of NUTS level 2 regions (87 out of 234) reported a rate that was equal to or above the EU average, while the remaining 62.8% of regions had rates below the average. This indicates a tendency for entrepreneurial activity to be geographically concentrated in the EU.

Map 8.1 shows that enterprise birth rates were relatively homogeneous in some EU countries, highlighting that the underlying national business environment, administrative, macro- and socioeconomic conditions likely have an important impact. For example, every NUTS level 2 region of France (except Limousin), Lithuania and Portugal had an enterprise birth rate of at least 12.0%; similarly high rates were also recorded in Estonia, Latvia and Malta.

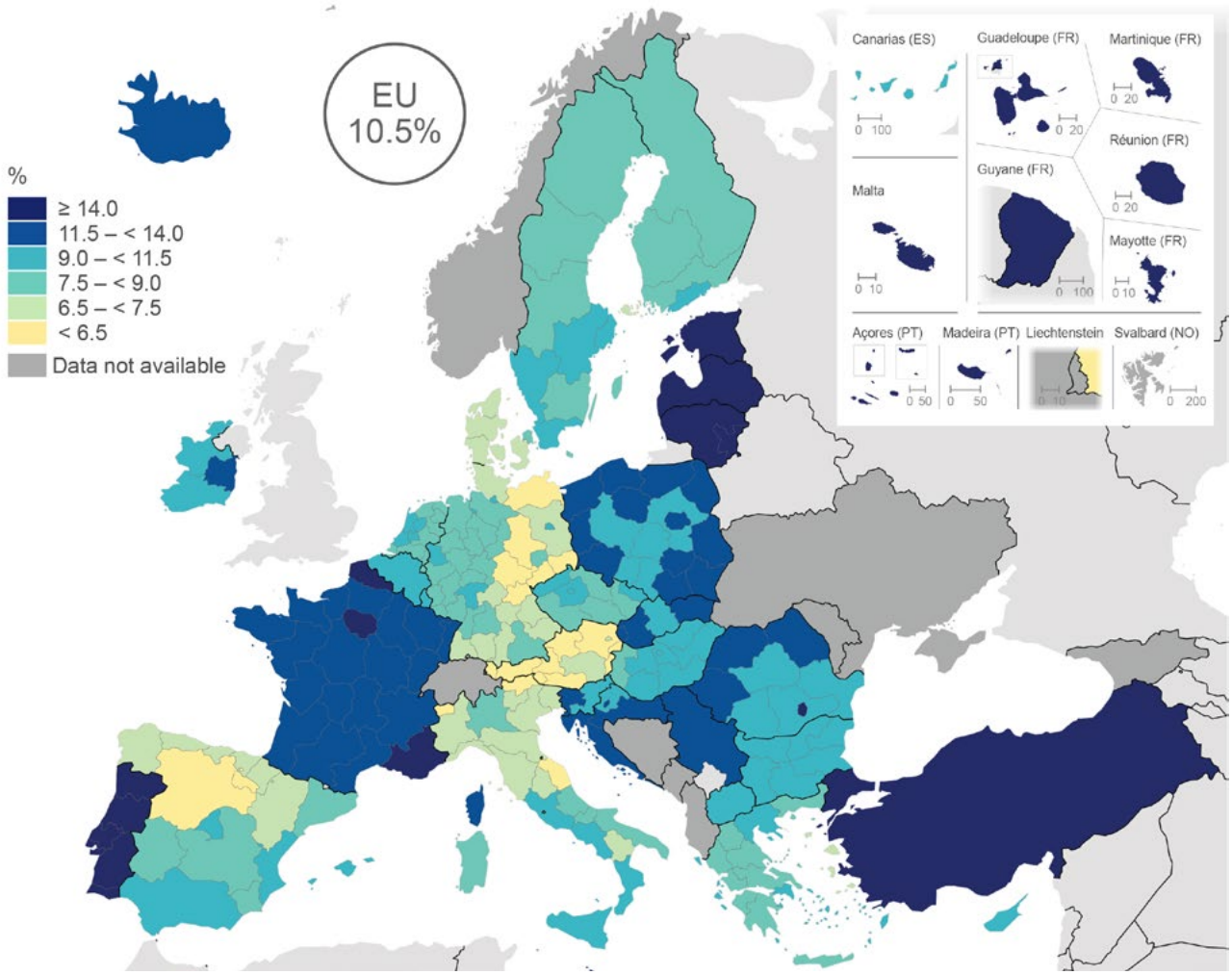
Predominantly urban regions – especially those in and around capital cities – often record the highest enterprise birth rates. In 2022, the capital regions of Czechia, Denmark, Germany, Ireland, Greece, Italy, Lithuania, Austria, Poland, Romania, Slovenia and Finland posted the highest rates of enterprise creation in their respective countries. Several factors may drive these high rates of business formation, including the presence of an innovative environment, research clusters, technology hubs, easier market access, modern infrastructure, or a concentration of skilled labour.

In 2022, 23 NUTS level 2 regions across the EU recorded an enterprise birth rate of at least 14.0% within their business economies (as indicated by the darkest shade of blue in Map 8.1).

- The highest rates were observed in Portugal (all 9 regions) and France (8 regions).
  - A peak of 20.5% was recorded in the southern Portuguese region of Península de Setúbal; Grande Lisboa, Algarve and Região Autónoma da Madeira also featured among the 10 EU regions with the highest enterprise birth rates.
  - In France, the outermost regions posted the highest rates of enterprise creation: Guyane, Martinique and Mayotte recorded rates of 19.4%, 19.1% and 18.8%, respectively – the 2nd, 3rd and 4th highest among EU regions. Outside of its outermost regions, the capital region of Ile-de-France had the highest rate of business formation in France, at 16.2%.
- This group of 23 regions with enterprise birth rates of at least 14.0% also included all 4 regions in the Baltic countries, along with Bucureşti-Ilfov (the capital region of Romania) and Malta.

Rural and less economically developed regions often have lower enterprise birth rates. This may reflect economies which are stable or where existing enterprises successfully adapt to change; alternatively, it may reflect barriers to entrepreneurial activity, for example, cultural attitudes towards risk-taking and entrepreneurship or limited access to capital or skilled labour. In 2022, 18 NUTS level 2 regions had enterprise birth rates for the business economy below 6.5% (they are shown with a yellow shade in Map 8.1). These regions were primarily located in Austria (7 regions) and Germany (6 regions), with the remainder of this group consisting of 3 regions from Italy and 2 from Spain.

Map 8.1: Enterprise birth rate
(% of enterprise births among active enterprises, by NUTS 2 regions, 2022)



Note: in the business economy (defined as NACE Sections B to S, excluding Section O and Division 94). Belgium, Serbia and Türkiye: national data.

Source: Eurostat (online data codes: bd_hgnace_r and bd_l_form)

- In Austria, the lowest enterprise birth rates were recorded in western regions of Tirol and Salzburg (both 5.7%), while Vorarlberg, Niederösterreich and Kärnten also featured among the 10 EU regions with the lowest rates.
- In Germany, the neighbouring eastern regions of Thüringen (4.8%) and Chemnitz (5.1%) had the lowest enterprise birth rates, while Sachsen-Anhalt also featured among the 10 EU regions with the lowest rates.
- In Spain, the northern region of La Rioja had the lowest enterprise birth rate, at 5.8% (which was the 5th lowest rate in the EU).
- In Italy, the northern region of Provincia Autonoma di Bolzano/Bozen had the lowest rate, at 6.2% (which was the 10th lowest rate in the EU).

ENTERPRISE DEATH RATE

In 2022, the EU's enterprise death rate was 8.7%

In 2022, 2.8 million enterprises definitively ceased activity within the EU's business economy; expressed relative to the total enterprise population, this equated to an enterprise death rate of 8.7%. The distribution of enterprise death rates was somewhat skewed: almost 2 out of 5 NUTS level 2 regions for which data are available (138 out of 234, or 59.0%) reported rates below the EU average.

Enterprise death rates for the business economy tended to be within a relatively narrow range across most EU countries. There was generally less variation in enterprise death rates between different regions of the same country than was the case for enterprise birth rates. Nevertheless, it was relatively common for regions with high enterprise birth rates to also record high enterprise death rates. This is not surprising, as dynamic and innovative enterprises entering a market may be in a position to drive less productive incumbents out of the market ('creative destruction'). Moreover, a more risk-prone culture might lead to the creation of new enterprises that, however, do not stand the test of time.

Figure 8.1 highlights the NUTS level 2 regions with the highest and lowest enterprise death rates within their business economies in 2022. At the top of the distribution:

- Estonia reported the highest enterprise death rate, at 25.1%
- the only other regions in the EU with rates above 20.0% were all located in Bulgaria – Yugozapaden (22.5%), Severoiztochen (21.6%) and Yugoiztochen (21.1%)
- there were 3 additional Bulgarian regions that recorded enterprise death rates in the range of 15.0% to 20.0% – Yuzhen tsentralen, Severozapaden and Severen tsentralen – which was also the case for the outermost region of Mayotte (France) and the capital region of Eastern and Midland (Ireland).

At the other end of the spectrum, the lowest enterprise death rates were consistently observed in Greece. All 13 Greek regions occupied the bottom ranks of the distribution in 2022, with rates consistently below 5.0%. The island regions of Notio Aigaio (1.6%; 2021 data), Voreio Aigaio (1.9%; 2021 data) and Kriti (2.0%) had the lowest death rates. Outside of Greece, the Austrian regions of Salzburg (5.1%) and Tirol (5.2%) had the lowest enterprise death rates; Belgium (5.2%; national data) had a comparable rate.

HIGH-GROWTH ENTERPRISES

In 2022, 9.2% of all enterprises in the EU were high-growth enterprises

There were 155 600 high-growth enterprises across the EU in 2022 (see the shaded box above for a definition). High-growth enterprises accounted for 9.2% of the total number of active enterprises with at least 10 employees in the EU's business economy. There was a relatively even distribution of high-growth enterprises among NUTS level 2 regions: 110 regions out of the 234 for which data are available (or 47.0%) recorded shares that were equal to or above the EU average.

The presence of high-growth enterprises reflects, at least in part, the underlying structure of each region's business economy. Several factors tend to support rapid enterprise growth:

- relatively small enterprises often grow faster than larger ones – a pattern often referred to as the 'catch-up' process
- enterprises located in regions specialised in dynamic sectors of the economy such as information and communication technologies, life sciences or knowledge-intensive services typically grow more rapidly
- a favourable business environment – such as a well-developed innovation ecosystem, easy access to capital, and a skilled workforce – also helps enterprises expand.

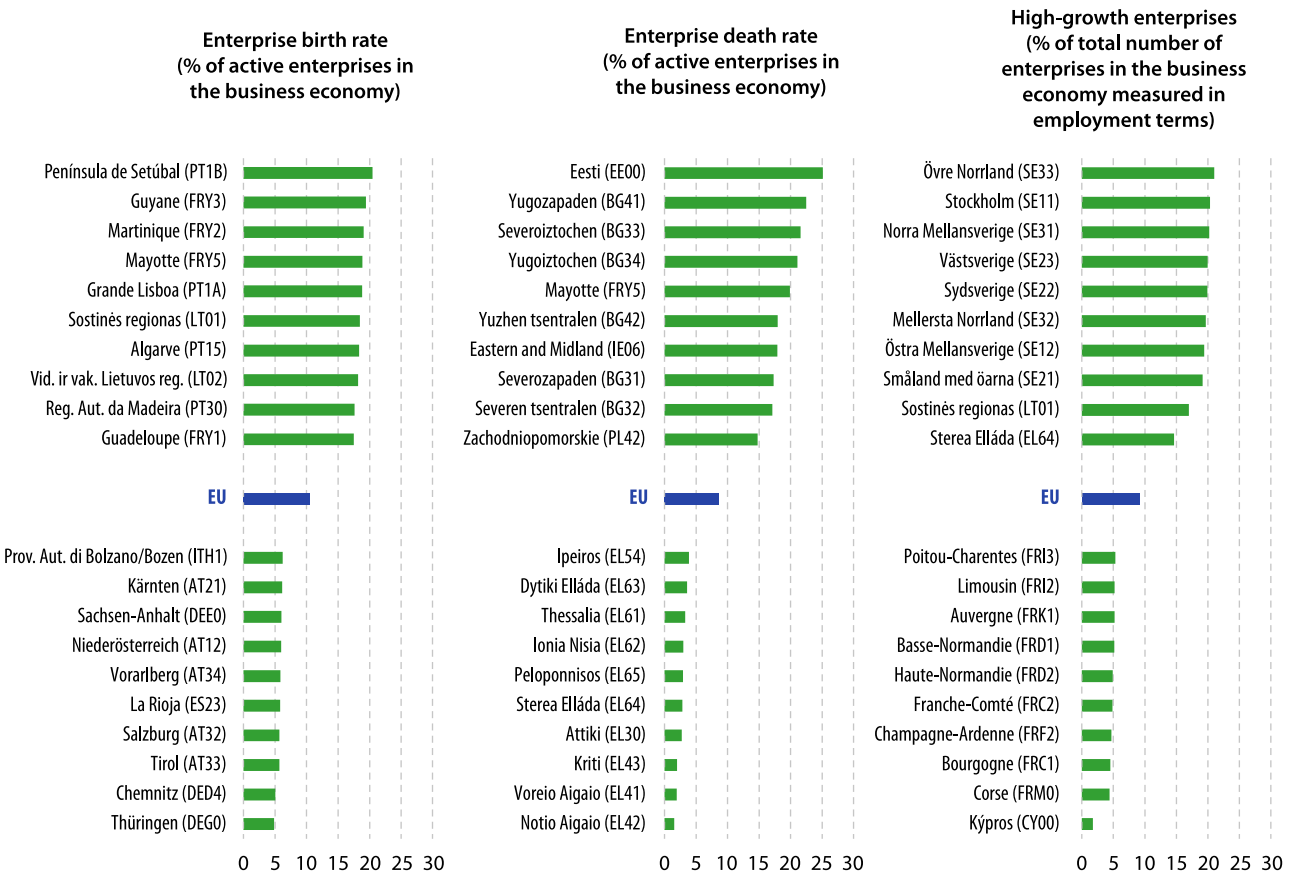
The final part of Figure 8.1 highlights the NUTS level 2 regions with the highest and lowest shares of high-growth enterprises. In 2022, at least 1 in 5 enterprises in 4 Swedish regions – Övre Norrland, Stockholm, Norra Mellansverige and Västsverige – were classified as high-growth enterprises. The northernmost region of Övre Norrland recorded the highest share, at 21.0%. In fact, the 8 Swedish regions had the 8 highest shares of high-growth enterprises. The next highest shares were observed in the Lithuanian capital region of Sostinės regionas (17.0%) and in the central Greek region of Sterea Elláda (14.6%).

In 2022, most EU countries reported that their capital region had the highest share of high-growth enterprises on their national territory. This pattern likely reflects factors such as a favourable business climate (as mentioned above) alongside a critical mass of potential business and/or household clients. Exceptions included Greece, Spain, France, Italy, the Netherlands, Romania, Slovenia and Sweden, although:

- Comunidad de Madrid had the 2nd highest share in Spain, behind the autonomous Ciudad de Melilla
- Ile-de-France had the 4th highest share in France, behind the outermost regions of Mayotte, Guyane and La Réunion
- Stockholm had the 2nd highest share in Sweden, behind Övre Norrland.

Figure 8.1 also highlights the 10 NUTS level 2 regions with the lowest shares of high-growth enterprises. They consisted of 9 regions from France and Cyprus; the latter had the lowest share of high-growth enterprises in the EU, at 1.8%. Looking more closely and leaving Cyprus aside, the next 15 lowest shares were all located in France, including 5 predominantly rural regions – Haute-Normandie, Franche-Comté, Champagne-Ardenne, Bourgogne and Corse – where the share of high-growth enterprises was below 5.0%.

Figure 8.1: Business demography
(by NUTS 2 regions, 2022)



Note: high-growth enterprises are defined as those with employment growth of more than 10%; rates of change are calculated as average annualised rates over a 3-year period for the number of (paid) employees in the business economy; to be classified as high growth, an enterprise must have had at least 10 employees at the beginning of the period. Enterprise death rate: Voreio Aigaio (EL41) and Notio Aigaio (EL42), 2021.

Source: Eurostat (online data codes: bd_hgnace_r, bd_l_form and bd_hg)

Regional patterns of employment specialisation and concentration

MANUFACTURING

Lombardia had the largest regional workforce for its manufacturing sector in 2022, with 906 500 people

In 2022, the EU's business economy – comprising NACE Sections B to N and P to R, as well as Divisions 95 and 96 – employed 160.4 million people. Manufacturing (NACE Section C) – which involves the production of goods and the provision of industrial services for domestic use (investment, further processing or consumption) and/or for export – accounted for 18.7% of the business economy workforce, approximately 30.0 million people. For context, employment in the manufacturing sector was similar to that for distributive trades, which had an 18.6% share of the business economy workforce.

More about the data: structural business statistics

Structural business statistics (SBS) provide detailed data on economic activities across hundreds of sectors, broken down by enterprise size (micro, small, medium-sized and large enterprises) and by region. They provide data covering issues such as labour input, value added, productivity, profitability and investment. This information can be used to explore (among other issues) structural shifts in an economy, national or regional specialisations, and sectoral patterns.

The legal basis for European business statistics changed with the adoption of Regulation (EU) 2019/2152 on European business statistics in November 2019. It created a cross-cutting legal framework for the collection, compilation, transmission and dissemination of statistics, covering the economic activities of market producers within the business economy (as defined by NACE Rev. 2 Sections B to N, P to R and Divisions 95 and 96).

Map 8.2 shows the relative importance of the manufacturing sector in terms of its employment share within business economies. In 2022, 119 out of 242 NUTS level 2 regions for which data are available – equivalent to 49.2% of all regions – reported a higher share of manufacturing employment than the EU average of 18.7%.

The northern Italian region of Lombardia had the largest manufacturing workforce in the EU, with 906 500 people employed in 2022; this region is specialised in mechanical engineering, metal working, textiles and clothing. Only 2 other regions across the EU employed more than 0.5 million people within manufacturing:

- Stuttgart (south-west Germany), where 614 200 people worked in the manufacturing sector, with a specialisation in the manufacture of motor vehicles
- Veneto (north-east Italy), where 548 700 people worked in the manufacturing sector, with specialisations in textiles and clothing, woodworking and furniture.

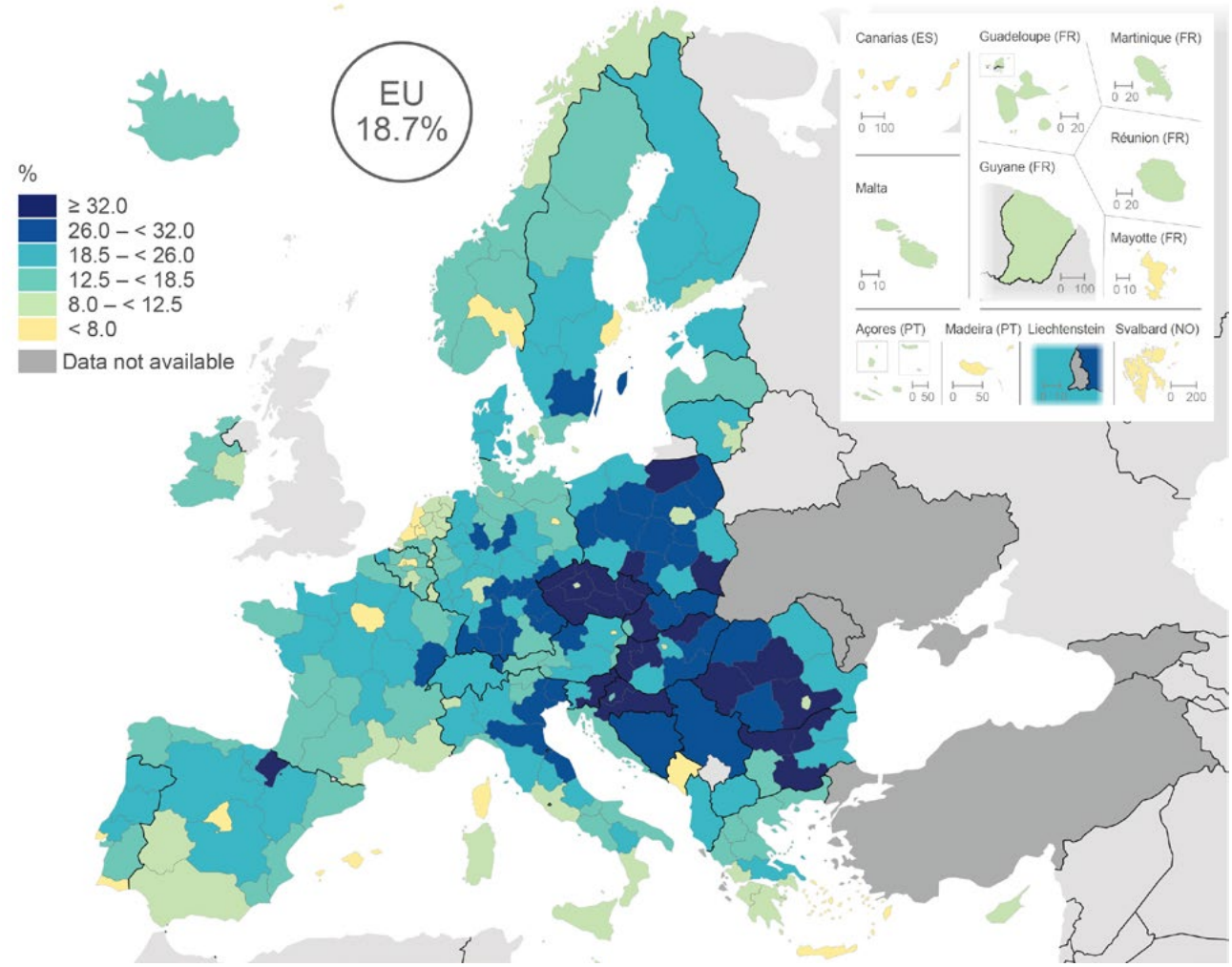
Across the EU, 24 NUTS level 2 regions had at least 32.0% of their business economy workforce employed within manufacturing in 2022 (as shown by the darkest shade of blue in Map 8.2); all but 1 of these 24 regions were located in eastern EU countries. The manufacturing sector provided work to at least 32.0% of the business economy workforce in:

- 7 out of the 8 regions in Czechia (the capital region of Praha being the only exception) – the highest employment shares across the EU were reported in Severovýchod (41.8%) and Střední Morava (40.3%)
- 3 regions from each of Bulgaria, Hungary, Poland and Romania, with the highest shares in each country reported in Severen tsentralen (38.4%), Közép-Dunántúl (36.6%), Podkarpackie (34.8%) and Vest (35.7%)
- 2 Croatian regions, with a peak of 37.7% in Sjeverna Hrvatska
- the regions of Západné Slovensko in Slovakia (36.3%), Vzhodna Slovenija in Slovenia (35.9%) and Comunidad Foral de Navarra in Spain (32.0%).

At the other end of the scale, there were 21 NUTS level 2 regions where manufacturing activities accounted for less than 8.0% of the business economy workforce in 2022. This group primarily included capital regions and/or regions with well-known tourist destinations, both of which are typically dominated by service activities. Leaving aside the atypical autonomous Spanish cities of Ceuta and Melilla, the lowest shares were recorded in the:

- southern Portuguese region of Algarve (3.3%)
- Greek island region of Nisia Aigaio (3.4%).

Map 8.2: Employment in manufacturing
(% of business economy employment, by NUTS 2 regions, 2022)



Note: Switzerland, Albania and Serbia, national data.

Source: Eurostat (online data codes: sbs_r_nuts2021, sbs_sc_ovw and sbs_ovw_act)

The EU's manufacturing base has migrated eastwards

The manufacturing sector has long been regarded as a cornerstone of economic prosperity in the EU. However, over several decades it has experienced wide-ranging transformations, through outsourcing, globalisation, changes to business paradigms (such as just-in-time manufacturing), the growing importance of digital technologies, or concerns linked to sustainable production and the environment.

There has generally been an eastward shift in the EU's manufacturing base during the last 2 to 3 decades, reflecting, among other factors, differences in:

- labour costs
- taxes and subsidies
- flows of foreign direct investment (FDI) and the presence of multinational enterprises
- natural resource endowments
- environmental standards.

Eastern EU countries have been increasingly used as manufacturing bases by enterprises from other EU countries (in particular neighbouring countries such as Germany) and by enterprises from non-EU countries wanting a manufacturing base within the EU's single market. These enterprises often form an integral part of international supply chains, with relatively highly skilled workforces.

In 2022, the 3 largest manufacturing subsectors in the EU – in employment terms and as defined by NACE divisions – were the:

- manufacture of food products (NACE Division 10) with 4.3 million people or 2.7% of the business economy workforce

- manufacture of fabricated metal products, except machinery and equipment (NACE Division 25), with 3.7 million people, or 2.3%
- manufacture of machinery and equipment not elsewhere classified (NACE Division 28), with 3.1 million people, or 1.9%.

There were only 3 other manufacturing subsectors which accounted for at least 1.0% of the EU's business economy workforce: the manufacture of motor vehicles, trailers and semi-trailers (NACE Division 29; 1.5%), the manufacture of rubber and plastic products (NACE Division 22; 1.0%) and the manufacture of electrical equipment (NACE Division 27; 1.0%).

Figure 8.2 presents data for 24 different manufacturing subsectors. Each bar represents employment in a specific manufacturing subsector as a share of the business economy workforce. The left- and right-hand ends of each bar show the regions with the lowest and highest shares, while the point where the blue and green segments of each bar meet indicates the EU average. For example, in the manufacture of food products, the Greek region of Ipeiros recorded the highest regional share, with 8.7% of its business economy workforce employed in this activity in 2022 – 3.3 times as high as the EU average of 2.7%.

Primary processing activities are often located close to the source of raw materials

Figure 8.2 also highlights how employment in various manufacturing subsectors was often highly skewed. In some activities, a few regions recorded very high employment shares, while most other regions had relatively low shares. In statistical terms, this kind of distribution can be referred to as being 'positively skewed' and typically results in a long right-hand tail. In Figure 8.2, this can be seen for those manufacturing activities that have long green bars (representing the upper end of the distribution) and relatively short blue bars (the lower end). For example, the 5 EU regions with the largest workforces in the manufacture of leather and related products (NACE Division 15) – Toscana, Veneto, Marche (all in Italy), Norte (Portugal) and Comunitat Valenciana (Spain) – together accounted for 40% of the EU's total employment in this subsector.

Manufacturing subsectors that involve primary processing were often located close to the source of their raw materials. This was the case for the manufacture of food products, as there were 4 regions where this subsector accounted for at least 7.5% of employment within the business economy in 2022: Ipeiros and Thessalia (both in Greece), Bretagne (France) and Mazowiecki regionalny (which surrounds the capital region of Poland). La Rioja in Spain (2.9%), Champagne-Ardenne in France (2.1%), Alentejo in Portugal (1.6%) and Trier in Germany (also 1.6%) had the highest employment shares for the manufacturing of beverages (NACE Division 11). Regions specialised in the manufacture of textiles (NACE Division 13) were often located close to an abundant supply of water; Norte in Portugal (2.6%) had the highest regional share. The Croatian region of Panonska Hrvatska had the highest employment share (4.5%) for the manufacture of wood and wood products, except furniture (NACE Division 16), while Mellersta Norrland in Sweden had the highest share (3.1%) for the manufacture of paper and paper products (NACE Division 17).

German regions often specialise in export-orientated subsectors

Germany exports a relatively high proportion of its manufacturing output; this is particularly the case for its motor vehicles, machinery, electrical and chemical subsectors. In 2022 and among NUTS level 2 regions of the EU:

- Braunschweig in northern Germany had the highest employment share (12.0%) for the manufacture of motor vehicles, trailers and semi-trailers
- Tübingen in south-west Germany had the highest employment share (7.8%) for the manufacture of machinery and equipment not elsewhere classified
- Rheinhessen-Pfalz in western Germany had the highest employment share (5.6%) for the manufacture of chemicals and chemical products (NACE Division 20)
- Oberpfalz in south-eastern Germany had the highest employment share (4.8%) for the manufacture of electrical equipment (NACE Division 27).

The manufacture of transport equipment is characterised by clusters of economic activity

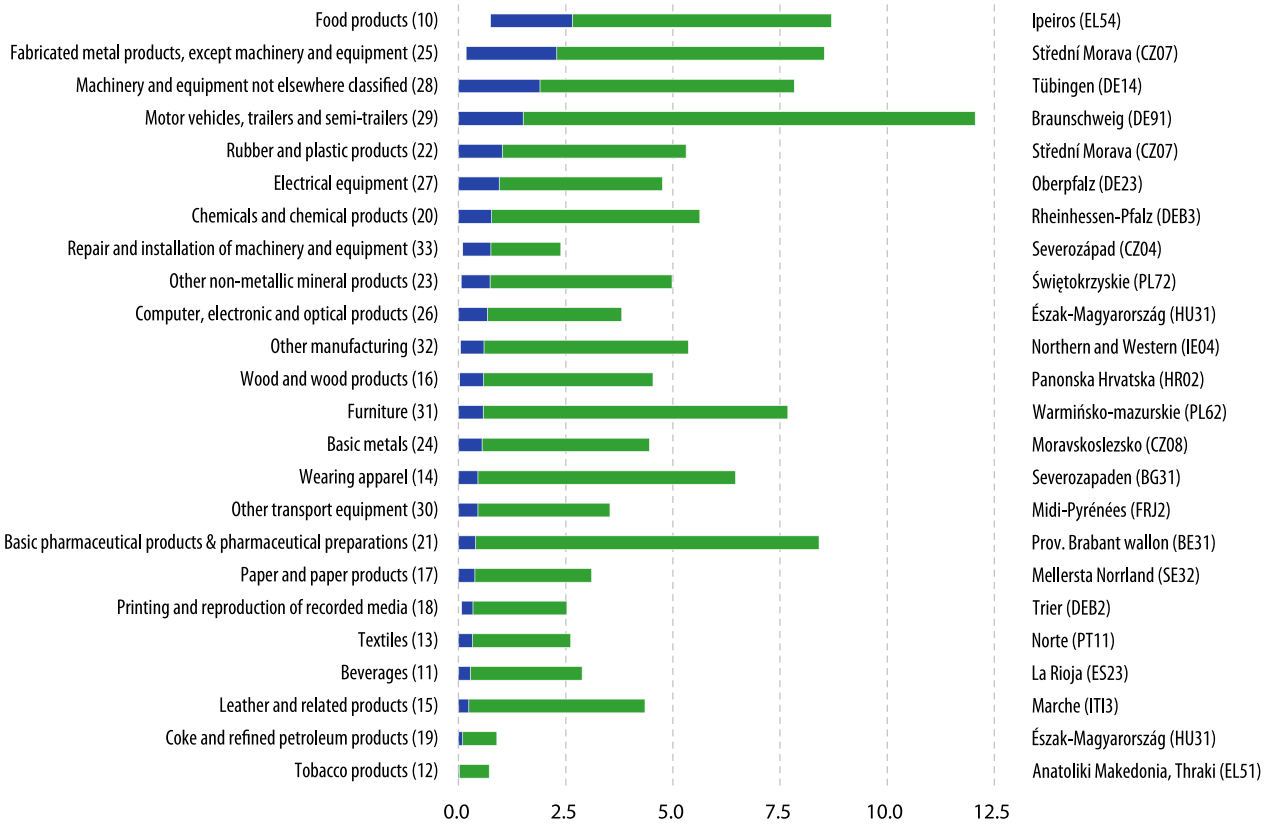
In the EU, clusters of economic activity and highly integrated production chains characterise the manufacture of transport equipment. Over time, some production has moved to exploit efficiency gains in global value chains. For example, this process has seen a redeployment of production towards several eastern EU countries.

In 2022, aside from Braunschweig in Germany (mentioned above), the highest levels of employment specialisation for the manufacture of motor vehicles, trailers and semi-trailers were observed in:

- the Romanian region of Vest (with an 11.0% share of business economy employment)
- Střední Čechy and Severovýchod in Czechia (10.3% and 7.7%, respectively)
- the westernmost Hungarian region of Nyugat-Dunántúl (9.9%).

The French region of Midi-Pyrénées was the most specialised region in the EU for the manufacture of other transport equipment (NACE Division 30), as these activities provided employment to 3.5% of its business economy workforce, with a significant presence in the aerospace subsector.

Figure 8.2: Regional specialisation among manufacturing activities
(% of business economy employment, by NUTS 2 regions, 2022)



Note: includes estimates made for the purpose of this publication. The EU average is shown by the point where the green and blue parts of each bar meet; the range of regional values across NUTS level 2 regions is shown by the bar (above/below the EU average in green/blue); the name of the region with the highest value is also shown. NACE codes are given in brackets after each of the activity labels. The figure is based on non-confidential data (some activities are not available for a small number of regions).

Source: Eurostat (online data codes: sbs_r_nuts2021, sbs_sc_ovw and sbs_ovw_act)

MARKET SERVICES

Some market service activities are widely spread across the EU territory, whereas others are concentrated within close proximity to a mass of potential clients

In 2022, market services – comprising NACE Sections G to N, P to R, as well as Divisions 95 and 96 – employed 112.7 million people, accounting for 70.3% of total employment across the EU's business economy.

There were 15 NUTS level 2 regions across the EU where market services provided more than 85.0% of the business economy workforce in 2022:

- the capital regions of Berlin (Germany), Attiki (Greece), Comunidad de Madrid (Spain), Noord-Holland (the Netherlands), Wien (Austria) and Grande Lisboa (Portugal)
- the popular holiday destinations of Ionia Nisia, Notio Aigaio, Kriti (all in Greece), Canarias (Spain) and Algarve (Portugal)
- 3 additional regions from the Netherlands – Flevoland, Utrecht and Zuid-Holland – as well as the northern German region of Hamburg.

Figure 8.3 presents information for 43 different market service activities, highlighting the NUTS level 2 regions with the highest degrees of employment specialisation. Variations in employment specialisation may reflect, among other issues, access to skilled labour, the adequate provision of infrastructure, climatic and geographic conditions, proximity to a critical mass of customers, market access or legislative constraints.

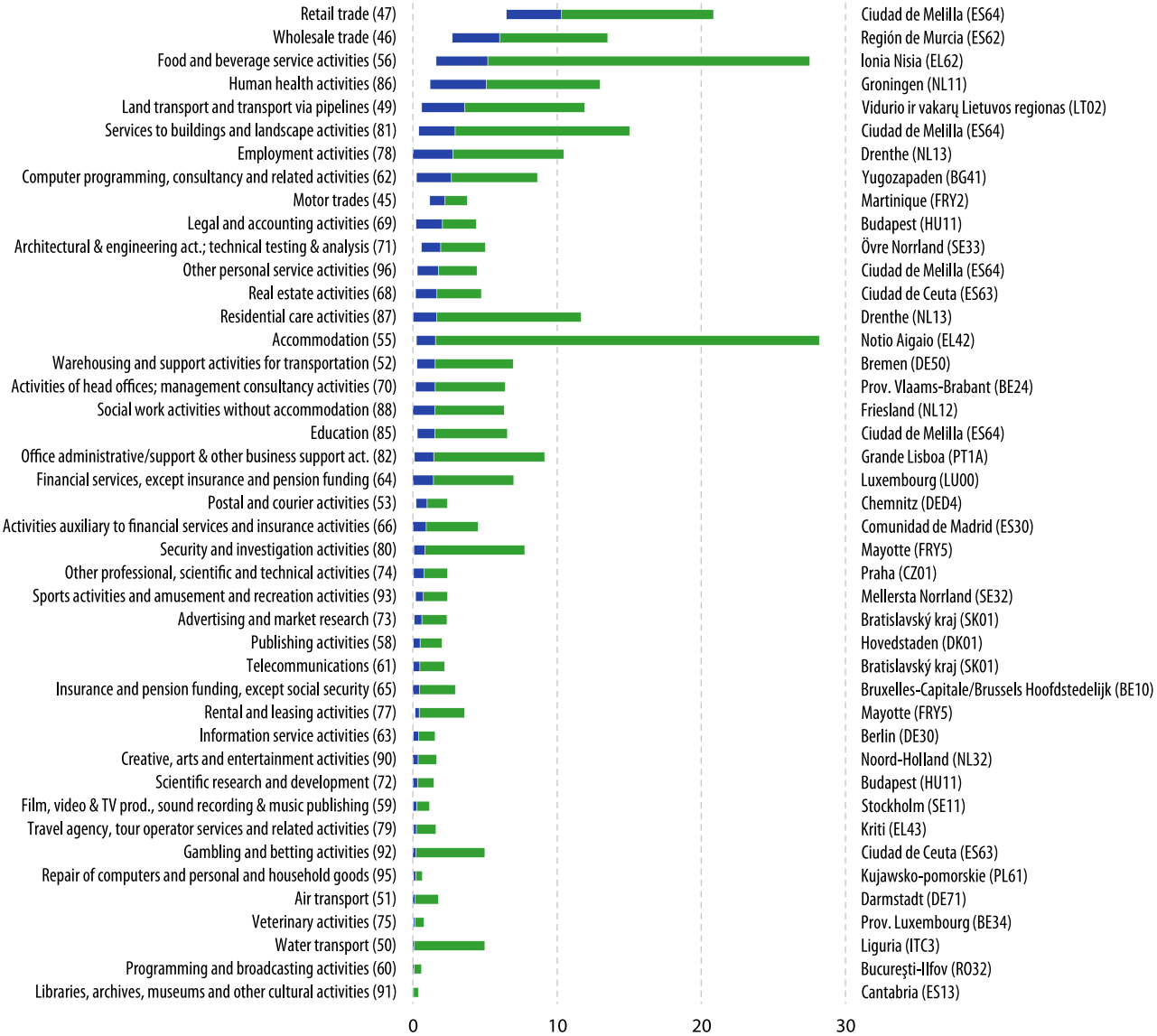
Retail trade (NACE Division 47) accounted for 10.3% of the EU's business economy workforce in 2022. Wholesale trade (NACE Division 46) had the next highest share, at 6.0%,

followed by food and beverage service activities (NACE Division 56; 5.2%) and human health activities (NACE Division 86; 5.1%). These are all examples of service activities that are found in every NUTS level 2 region of the EU.

Capital regions were among some of the most specialised regions for a range of service activities that rely on the close proximity of a large number of potential clients (be these other businesses, households or governments). For example, in 2022:

- the Área Metropolitana de Lisboa (Portugal) had the highest employment share for office administrative/support and other business support activities, at 9.1%
- Yugozapaden (Bulgaria) for computer programming, consultancy and related activities (8.6%)
- Comunidad de Madrid for activities auxiliary to financial services and insurance activities (4.5%)
- Budapest (Hungary) for legal and accounting activities (4.4%)
- Bruxelles-Capitale/Brussels Hoofdstedelijk (Belgium) for insurance and pension funding, except social security (2.9%)
- Praha (Czechia) for other professional, scientific and technical activities (2.4%)
- Bratislavský kraj (Slovakia) for advertising and market research (2.3%) and for telecommunications (2.2%).

Figure 8.3: Regional specialisation among market service activities
(% of business economy employment, by NUTS 2 regions, 2022)



Note: includes estimates made for the purpose of this publication. The EU average is shown by the point where the green and blue parts of each bar meet; the range of regional values across NUTS level 2 regions is shown by the bar (above/below the EU average in green/blue); the name of the region with the highest value is also shown. NACE codes are given in brackets after each of the activity labels. The figure is based on non-confidential data (some activities are not available for a small number of regions).

Source: Eurostat (online data codes: sbs_r_nuts2021, sbs_sc_ovw and sbs_ovw_act)

KNOWLEDGE-INTENSIVE SERVICES

More about the data: knowledge-intensive services

Knowledge-intensive services are defined as services that rely heavily on knowledge, skills and innovation to provide value. These services are typically found in subsectors such as information technology, financial services, business consulting, legal services and other specialised professional services. They require a highly-educated workforce and are often considered as essential drivers of economic growth for advanced economies.

Within this section a distinction is made between 2 different aggregates:

- **knowledge-intensive market services** (excluding financial intermediation and high-tech services), composed of the following activities: water transport (NACE Division 50); air transport (NACE Division 51); legal and accounting activities (NACE Division 69); activities of head offices, management consultancy activities (NACE Division 70); architectural and engineering activities, technical testing and analysis (NACE Division 71); advertising and market research (NACE Division 73); other professional, scientific and technical activities (NACE Division 74); employment activities (NACE Division 78); security and investigation activities (NACE Division 80)
- **knowledge-intensive high-technology services**, composed of the following activities: motion picture, video and television programme production, sound recording and music publishing activities (NACE Division 59); programming and broadcasting activities (NACE Division 60); telecommunications (NACE Division 61); computer programming, consultancy and related activities (NACE Division 62); information service activities (NACE Division 63); scientific research and development (NACE Division 72).

In Helsinki-Uusimaa – the capital region of Finland – knowledge-intensive market services accounted for 20.0% of the business economy workforce in 2022

The information presented in Map 8.3 highlights regional patterns of employment specialisation and concentration for knowledge-intensive market services (excluding financial intermediation and high-tech services). In 2022, these services employed 17.5 million people across the EU, accounting for just over a tenth (10.9%) of the business economy workforce.

Among NUTS level 2 regions, the highest numbers of people employed in knowledge-intensive market services in 2022 were found in:

- the French capital region of Ile-de-France (961 700 people employed)
- the northern Italian region of Lombardia (510 000)
- the Spanish capital region of Comunidad de Madrid (439 000).

In 2022, knowledge-intensive market services accounted for at least 16.0% of the business economy workforce in 27 regions across the EU (as shown by the darkest shade of blue in Map 8.3). This group consisted mainly of capital regions, but also included several densely-populated regions in Belgium and the Netherlands.

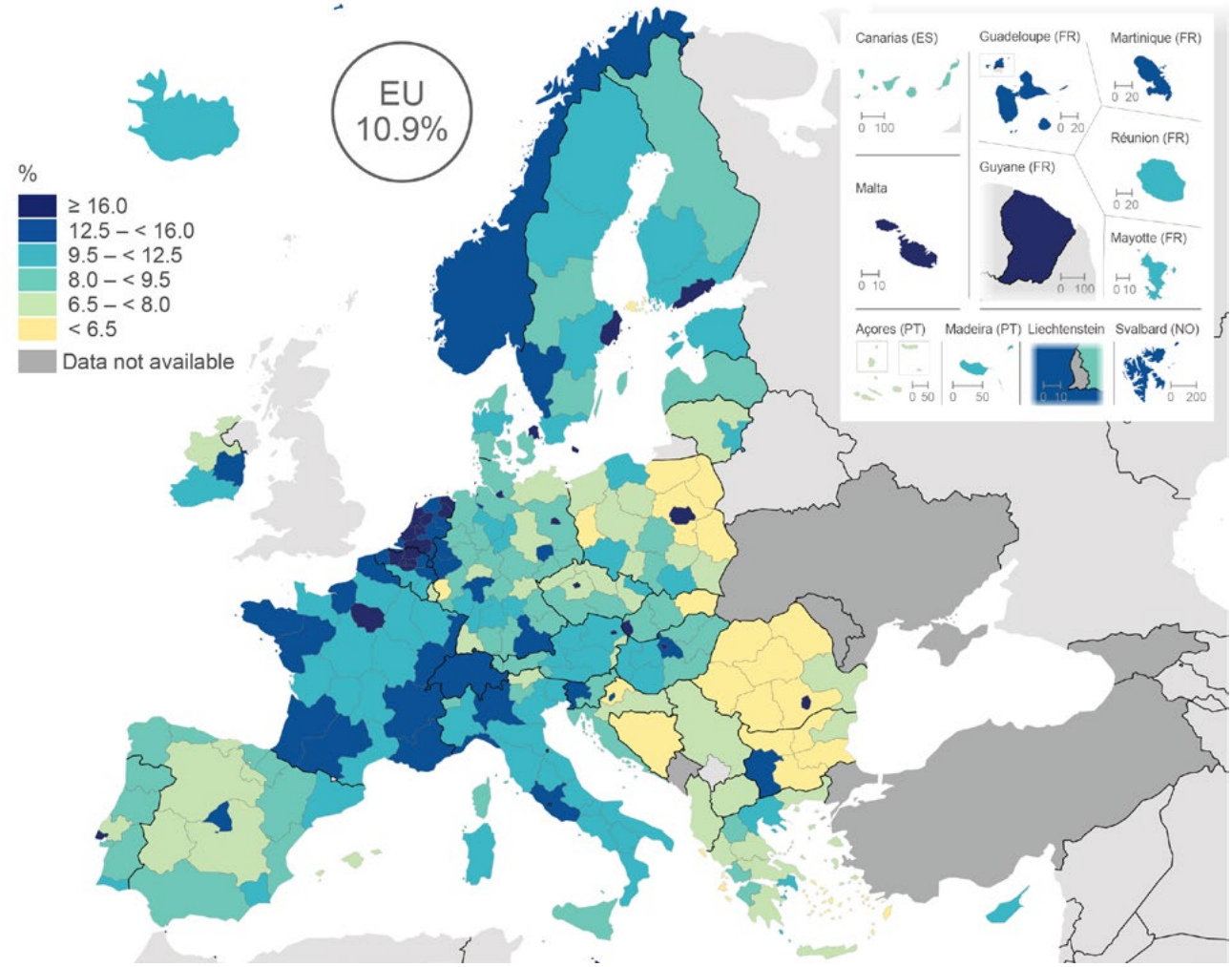
The highest regional share was recorded in Helsinki-Uusimaa – the capital region of Finland – where, in 2022, 20.0% of the business economy workforce was employed in knowledge-intensive market services (almost double the EU average). The next highest regional shares were recorded in:

- the Czech capital region of Praha (19.3%)
- the French capital region of Ile-de-France, as well as the Belgian region of Prov. Brabant wallon and the Dutch region of Zuid-Holland (all 19.2%)
- the Dutch capital region of Noord-Holland (18.9%)
- the Hungarian and Slovakian capital regions of Budapest and Bratislavský kraj (both 18.0%).

Within some EU countries there were considerable inter-regional contrasts, suggesting an urban-rural divide in the development of knowledge-intensive market services. This was particularly apparent in several eastern EU countries, where rural regions face structural challenges related to infrastructure, outward migration and low investment levels. For example, the share of knowledge-intensive market services in the business economy workforce of:

- the Slovakian capital region of Bratislavský kraj (18.0%) was 3.6 times as high as in the eastern region of Východné Slovensko (5.0%)
- the Bulgarian capital region of Yugozapaden (12.7%) was 3.2 times as high as in the north-western region of Severozapaden (4.0%)
- the Romanian capital region of Bucureşti-Ilfov (16.3%) was 3.0 times as high as in the north-eastern region of Nord-Est (5.4%).

Map 8.3: Employment in knowledge-intensive market services
(% of business economy employment, by NUTS 2 regions, 2022)



Note: Norway, Switzerland, Albania and Serbia, national data.

Source: Eurostat (online data codes: sbs_r_nuts2021, sbs_sc_ovw and sbs_ovw_act)

KNOWLEDGE-INTENSIVE HIGH-TECHNOLOGY SERVICES

In 2022, knowledge-intensive high-technology services employed 6.9 million people across the EU. There were 6 NUTS level 2 regions where more than 150 000 people were employed in these services – all of them either capital regions or economically dominant hubs for high-tech employment:

- the French capital region of Ile-de-France (447 100)
- the Spanish capital region of Comunidad de Madrid (256 600)
- the German regions of Oberbayern (194 700) and the capital Berlin (172 500)
- the northern Italian region of Lombardia (180 900)
- the Polish capital region of Warszawski stołeczny (177 200).

Knowledge-intensive high-technology services accounted for 4.3% of the EU's business economy workforce in 2022. The regional distribution of this workforce was heavily skewed: only 57 out of 244 NUTS level 2 regions for which data are available reported an employment share equal to or greater than the EU average – equivalent to 23.4% of all regions. Notably, the 14 regions with the highest shares of employment in these services were all capital regions, with double-digit shares observed in:

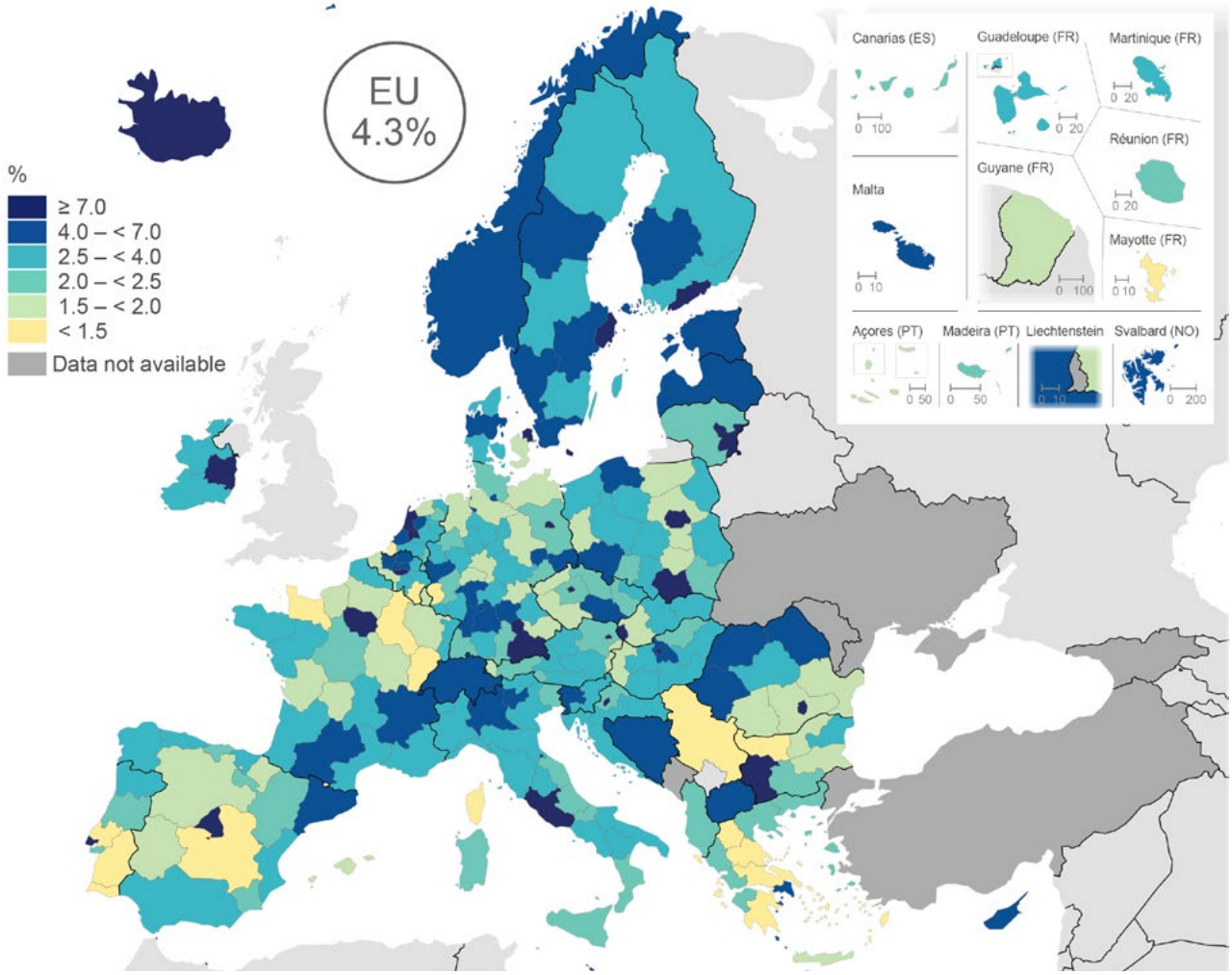
- the Bulgarian capital region of Yugozapaden (12.7%)
- the Hungarian capital region of Budapest (11.0%)
- the Romanian capital region of Bucureşti-Ilfov (10.5%)
- the Croatian capital region of Grad Zagreb (10.3%)
- the Slovakian capital region of Bratislavský kraj (10.1%)
- the German capital region of Berlin (10.0%).

The high concentration of knowledge-intensive high-technology services employment in capital regions may reflect a number of different factors, including:

- the presence of universities and research institutes, supplying skilled labour
- higher levels of digital skills among urban populations
- capital regions acting as magnets for internal migration, attracting talent from smaller cities and rural regions
- relatively high levels of foreign direct investment and offshoring (when global enterprises establish operations in capital cities).

At the lower end of the distribution, there were 21 predominantly rural NUTS level 2 regions – often in southern EU countries – where knowledge-intensive high-technology services accounted for less than 1.5% of the business economy workforce in 2022. Specifically, this group included 6 regions from Greece, 5 regions from France, 3 regions from both Spain and Portugal, as well as individual regions from Belgium, Bulgaria, Germany and the Netherlands. The lowest shares – below 1.0% – were observed in the French outermost region of Mayotte, the autonomous Spanish cities and some of the Greek islands (Ionia Nisia and Notio Aigaio).

Map 8.4: Employment in knowledge-intensive high-technology services
(% of business economy employment, by NUTS 2 regions, 2022)



Note: Norway, Switzerland, Albania and Serbia, national data.

Source: Eurostat (online data codes: sbs_r_nuts2021, sbs_sc_ovw and sbs_ovw_act)

Innovative enterprises

Regional analyses of innovation statistics across the EU are essential for understanding how innovative capacity and performance vary across different territories. This may help identify strengths, disparities and emerging trends, enabling policymakers to design targeted strategies that promote innovation as a key driver of economic growth, resilience and sustainability.

More about the data: innovation

The EU's Community Innovation Survey (CIS) is the EU's primary source of data on innovation activity within businesses. Conducted biennially across the EU, EFTA and candidate countries, the CIS collects harmonised statistics on various types of innovation – 'product innovation', 'business process innovation' – for enterprises of different sizes, across a wide range of economic sectors. It offers a detailed insight into the drivers, barriers and outcomes of innovation. The survey supports comparative analysis across countries and regions, tracking changes over time and informing initiatives to strengthen Europe's innovation capacity and competitiveness in a rapidly changing global economy.

The CIS was first launched in the 1990s and became a regular biennial data collection in 2004. The information presented below relate to the CIS 2022 exercise, which is based on international standards for conceptualising and collecting data on innovation, as laid out in the *Oslo Manual* (4th edition). The data for CIS 2022 were collected on the basis of the new European business statistics framework, as defined in Regulation (EU) 2022/1092. The target population of the CIS 2022 concerns enterprises within NACE Sections B to E, H, J and K, as well as Divisions 46, 71, 72 and 73, hereafter referred to as the 'business economy'. For more information, refer to the European business statistics methodological manual for statistics on business innovation – 2024 edition.

The statistics presented below are based on a 3-year reference period from 2020 to 2022 and cover:

- NUTS level 2 data for 21 EU countries
- NUTS level 1 data for Belgium and Austria
- national data for Denmark, Germany, France and the Netherlands; this is also the case for Norway and Türkiye.

INNOVATION-ACTIVE ENTERPRISES

Approximately 50% of all SMEs in the EU were considered as innovation-active during the period 2020 to 2022

An innovation-active enterprise is 1 which has engaged in any form of innovation activity during a given period, irrespective of whether it resulted in a successful innovation, a new product sold on the market or a new process brought to use, during the last 3 years. As such, it may refer to an enterprise that:

- introduces a product or business process innovation
- has on-going innovation activities
- has abandoned an innovation project (in other words, started but did not complete an innovation)
- or exhibits some or all of the above at the same time.

Based on the latest information from CIS 2022, there were 350 000 small and medium-sized enterprises (SMEs) with 10 to 249 employees that were innovation-active during the period 2020 to 2022; they represented 50.3% of all SMEs across the EU. Map 8.5 shows the regional distribution within the EU, with the highest shares of innovation-active SMEs concentrated in Belgium, Greece, Italy, Slovenia, Finland and Sweden; more than 50% of all SMEs were innovation-active in Denmark, Germany, France and the Netherlands too.

During the period 2020 to 2022, the highest regional counts of innovation-active enterprises were in:

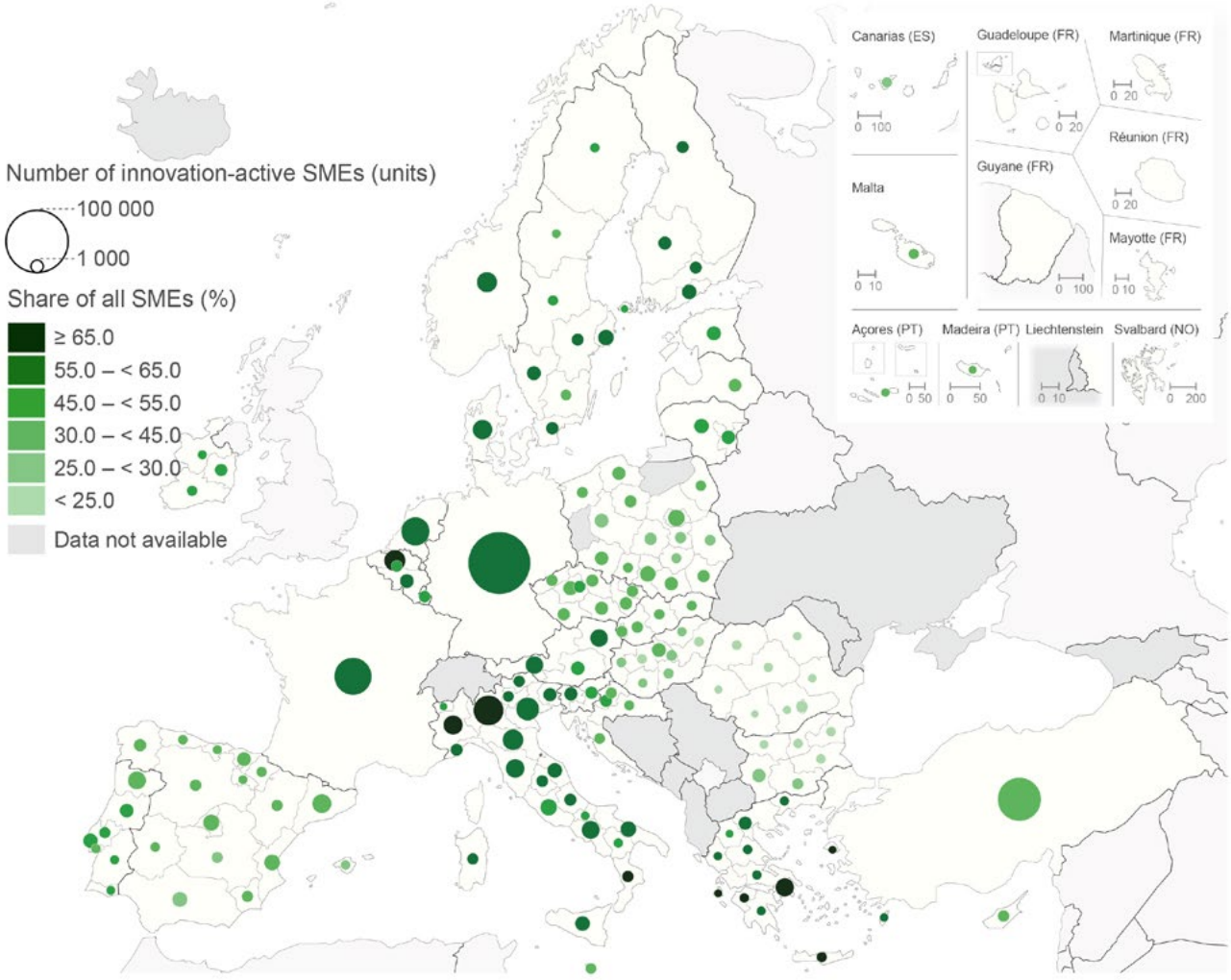
- the northern Italian regions of Lombardia (17 800), Veneto (8 800), Emilia-Romagna (6 600) and Piemonte (5 300)
- the Belgian region of Vlaams Gewest (6 900)
- the Spanish region of Cataluña (5 100).

Over the same period, only 5 regions across the EU reported more than 70.0% of SMEs being innovation-active:

- the Greek regions of Kriti (77.8%), Voreio Aigaio (75.8%) and Ionia Nisia (72.9%)
- the Belgian region of Vlaams Gewest (74.7%)
- the southern Italian region of Calabria (70.3%).

Note that several of these regions had very low overall counts of innovation-active SMEs within the survey's activity coverage. For example, there were fewer than 100 such enterprises in the Greek regions of Voreio Aigaio and Ionia Nisia.

Map 8.5: Innovation-active SMEs
(business economy, by NUTS 2 regions, 2020–22)



Note: enterprises with 10–249 employees. Belgium and Austria: NUTS level 1. Denmark, Germany, France, the Netherlands, Norway and Türkiye: national data.

Source: Eurostat (online data codes: inn_cis13_bas_r and inn_cis13_bas)

Map 8.6 and Map 8.7 provide more detailed information about the innovative activities across the EU, distinguishing between SMEs introducing product innovations and SMEs introducing business process innovations. The former include innovations that introduce a good or service that is new or significantly improved with respect to its characteristics or intended uses (in other words, significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics).

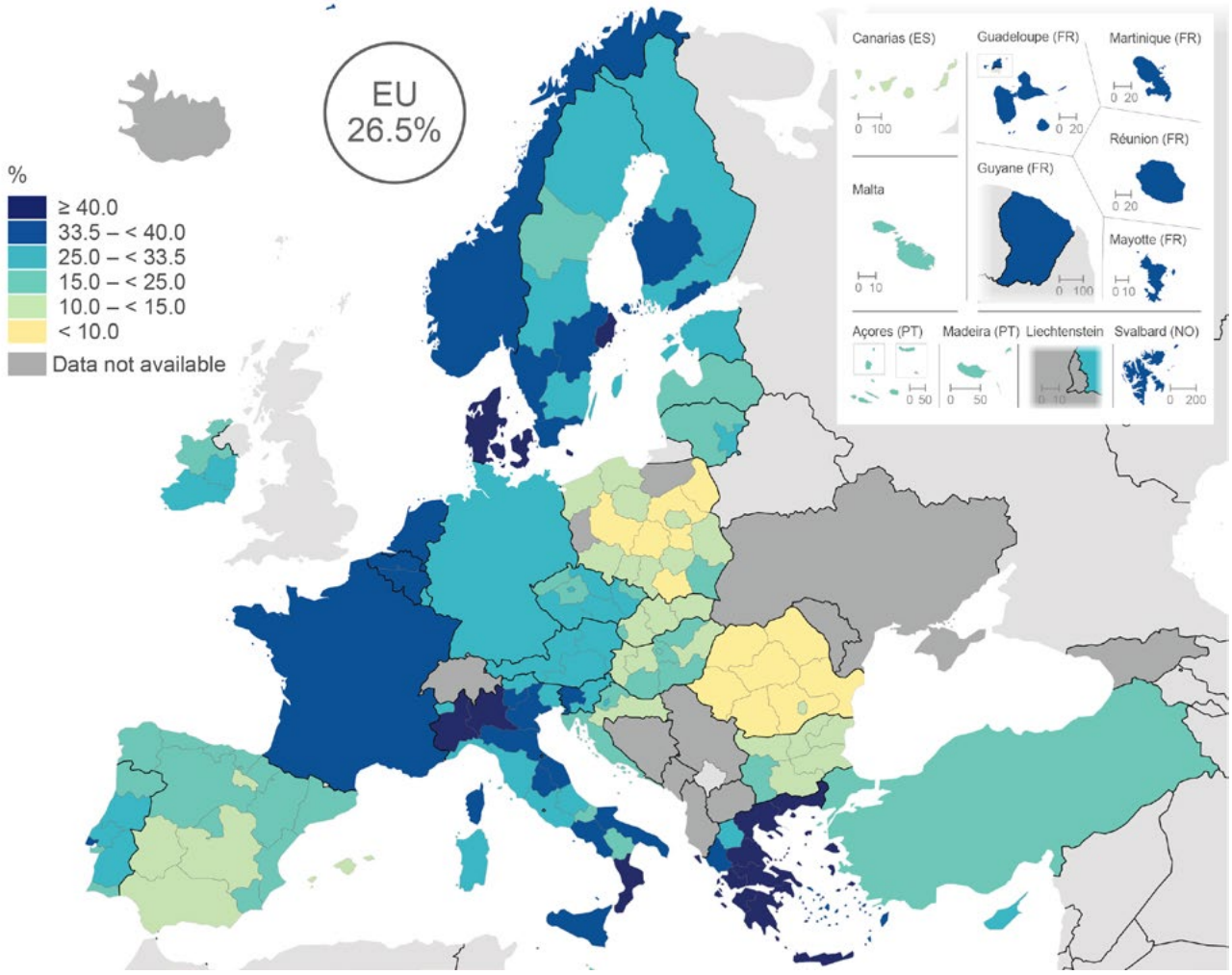
During the period 2020 to 2022, there were 184 500 SMEs across the EU's business economy that introduced product innovations; together, they represented more than 1 in 4 (26.5%) SMEs in the EU. There were 6 NUTS level 2 regions that reported more than 3 000 SMEs introducing product innovations:

- the Italian regions of Lombardia (10 700), Veneto (4 700), Emilia-Romagna (4 100) and Piemonte (3 200)
- the Belgian region of Vlaams Gewest (3 500)
- the Greek capital region of Attiki (3 200).

In relative terms, there were 3 regions across the EU where more than 50% of all SMEs introduced product innovations during the period 2020 to 2022, all in Greece: Voreio Aigaio (67.4%), Ionia Nisia (65.4%) and Kriti (61.2%). In addition to these 3 Greek regions, there were 11 other regions (as well as Denmark; national data) across the EU where more than 40.0% of SMEs introduced product innovations (as shown by the darkest shade of blue in Map 8.6):

- 7 other Greek regions (the exceptions – with shares below 40.0% – were Notio Aigaio, Ipeiros and Dytiki Makedonia)
- 3 Italian regions – Calabria, Lombardia and Piemonte
- the Swedish capital region of Stockholm.

Map 8.6: SMEs introducing product innovations
(% of all SMEs in the business economy, by NUTS 2 regions, 2020–22)



Note: enterprises with 10–249 employees. Belgium and Austria: NUTS level 1. Denmark, Germany, France, the Netherlands, Norway and Türkiye: national data.

Source: Eurostat (online data codes: inn_cis13_bas_r and inn_cis13_bas)

Map 8.7 presents information on the share of SMEs introducing business process innovations. A process innovation involves the implementation of a new or significantly improved production or delivery method (including substantial changes in techniques, equipment and/or software). These innovations also cover new or significantly improved techniques, equipment and software in ancillary support activities, such as purchasing, accounting, computing and maintenance. Process innovations can reduce the unit production or delivery costs, improve quality, or enable the provision of new or significantly improved products. Examples include the introduction of GPS tracking devices in transport services, the implementation of a new reservation system in a travel agency, the development of new project management techniques in a consultancy firm, or the adoption of new methods for pre-producing parts and assembling them into finished products in manufacturing.

During the period 2020 to 2022, there were 290 400 SMEs across the EU's business economy that introduced business process innovations. Together, they represented more than 2 out of 5 (41.7%) SMEs in the EU.

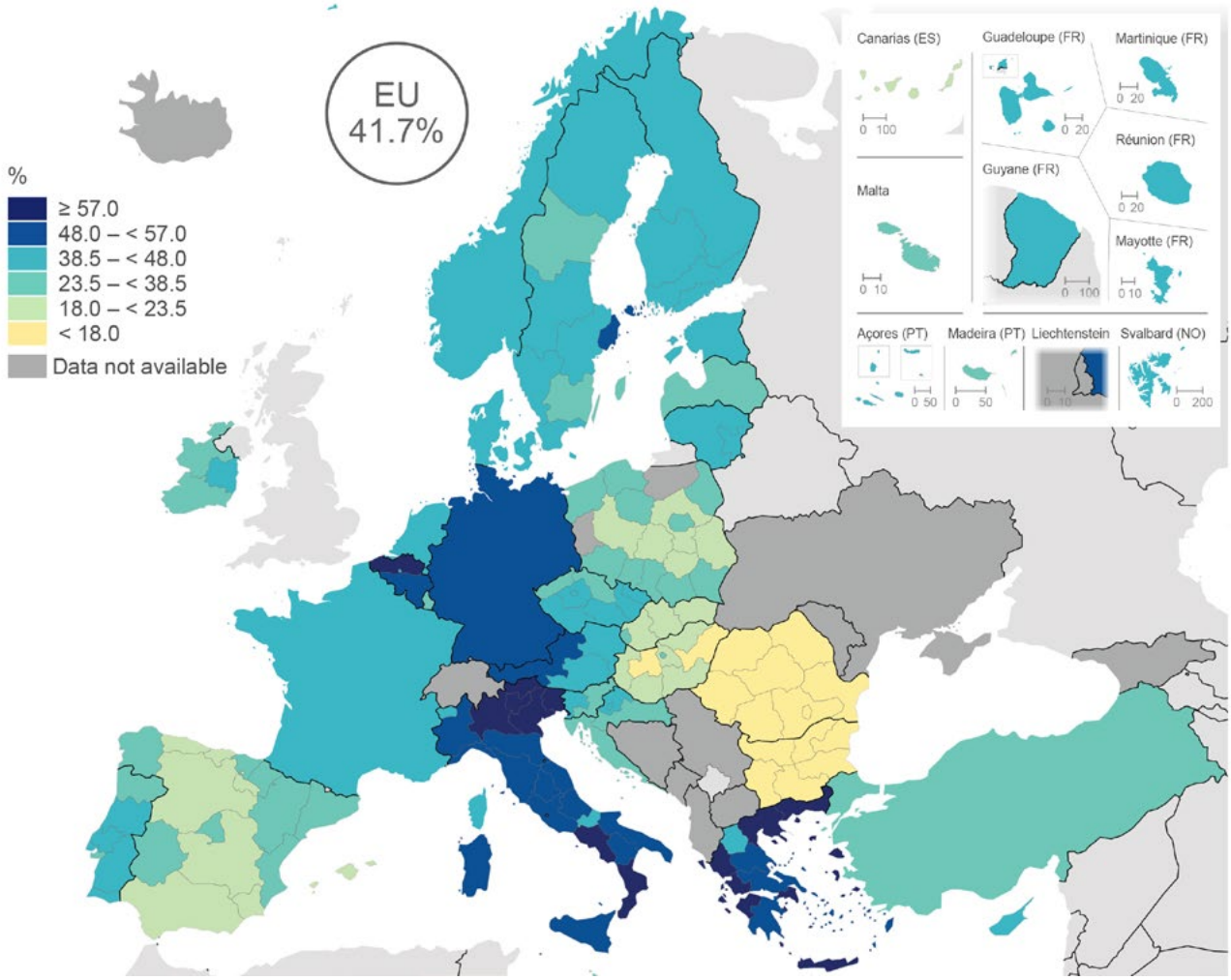
The highest regional count of SMEs introducing business process innovations was recorded in the northern Italian region of Lombardia (15 900) – the same region that had the highest count of SMEs introducing product innovations. There were 12 other regions across the EU that had more than 3 000 SMEs introducing business process innovations:

- 6 of them were located in Italy – Veneto, Emilia-Romagna, Toscana, Piemonte, Campania and Lazio
- the Belgian region of Vlaams Gewest
- the Greek capital region of Attiki
- the Spanish region of Cataluña
- the Portuguese region of Norte
- the Austrian regions of Westösterreich and Ostösterreich (NUTS level 1).

In relative terms, there were 16 NUTS level 2 regions where at least 57.0% of all SMEs introduced business process innovations (as shown by the darkest shade of blue in Map 8.7). These 16 regions were concentrated in Greece (8 regions) and Italy (7 regions), with the Belgian region of Vlaams Gewest (NUTS level 1) being the only other region recording a relatively high share of business process innovators.

More than 3 in 4 SMEs in the Greek island regions of Kriti (75.9%) and Voreio Aigaio (75.8%) introduced business process innovations during the period 2020 to 2022. The next highest share was also recorded in a Greek island region – Ionia Nisia (72.0%) – followed by Vlaams Gewest in Belgium (66.6%) and Calabria in southern Italy (65.2%). As noted above, several of the Greek regions with relatively high shares had quite low overall numbers of SMEs (within the survey's activity coverage) introducing business process innovations; for example, Voreio Aigaio and Ionia Nisia had fewer than 100 each.

Map 8.7: SMEs introducing business process innovations
(% of all SMEs in the business economy, by NUTS 2 regions, 2020–22)



Note: enterprises with 10–249 employees. Belgium and Austria: NUTS level 1. Denmark, Germany, France, the Netherlands, Norway and Türkiye: national data.

Source: Eurostat (online data codes: inn_cis13_bas_r and inn_cis13_bas)

Map 8.5 indicated that just over half (50.3%) of all SMEs in the EU's business economy were innovation-active during the period 2020 to 2022. A higher share of SME employees – 58.0% – worked in innovation-active enterprises, suggesting that, on average, these SMEs were larger than their non-innovating counterparts.

Map 8.8 shows a skewed distribution for the share of employees in innovation-active enterprises: 36 NUTS level 2 regions had shares of employees working in innovation-active SMEs that were above the EU average, while 112 regions had below-average shares. It should be noted that Denmark, Germany, France and the Netherlands are all counted as single regions within the group of 36 with above-average shares, whereas in practice they would represent far larger numbers of regions (if NUTS level 2 data were available). In particular, the German average (71.3%) pulls the EU average up substantially.

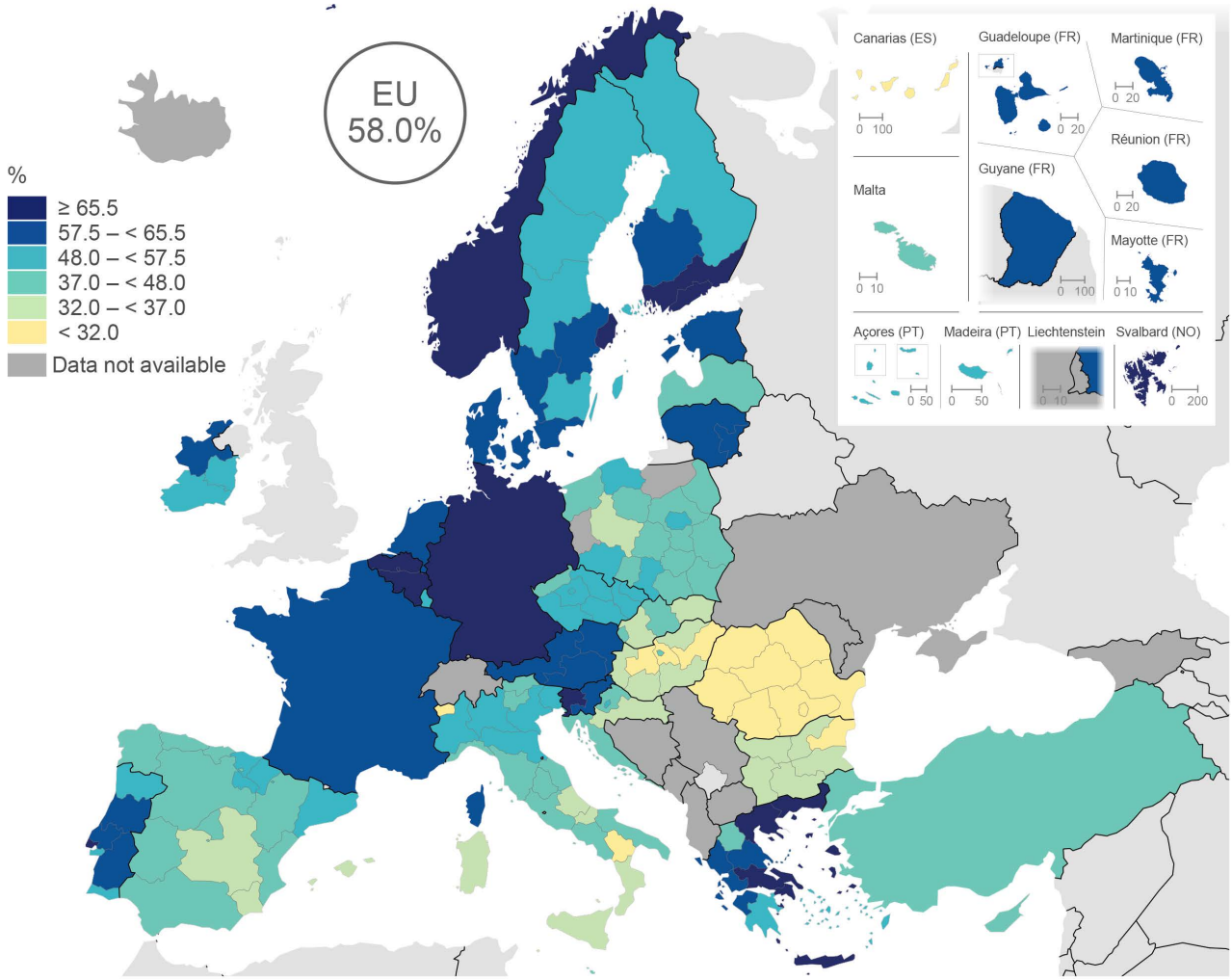
The Italian region of Lombardia had the highest regional count of employees working in innovation-active SMEs, at 432 000. This was considerably larger than in any other region. Only 3 other regions had more than 200 000 employees working in innovation-active SMEs:

- the Belgian region of Vlaams Gewest (284 000; NUTS level 1)
- the Spanish region of Cataluña (232 000)
- the Italian region of Veneto (219 000).

By contrast, there were fewer than 5 000 employees working in innovation-active SMEs in 14 regions, most of which were located in southern EU countries:

- 5 regions in Greece (3 of which were island regions)
- 3 regions in each of Italy and Romania
- 2 island regions in Portugal
- the island region of Åland in Finland.

Map 8.8: Employees in innovation-active SMEs
(% of all employees in SMEs in the business economy, by NUTS 2 regions, 2022)



Note: enterprises with 10–249 employees. Belgium and Austria: NUTS level 1. Denmark, Germany, France, the Netherlands, Norway and Türkiye: national data.

Source: Eurostat (online data codes: inn_cis13_bas_r and inn_cis13_bas)

In the Belgian region of Vlaams Gewest, more than 4 out of 5 SME employees (80.2%) were working for an innovation-active enterprise during the period 2020 to 2022. There were 13 other regions across the EU that recorded shares of at least 65.5% (as shown by the darkest shade of blue in Map 8.8), including the capital regions of Greece, Finland, Slovenia, Belgium, Portugal and Sweden. There was also a relatively high share of SME employees working for innovation-active enterprises in Germany (71.3%).

In 2022, EU SMEs generated €725.9 billion of turnover from innovative products; this figure includes turnover from new or significantly improved products that were new to the market and/or new to the firm. In relative terms, the share of total turnover among SMEs that was derived from innovative products was 8.8%. There was a somewhat skewed distribution: 48 NUTS level 2 regions had shares that were above the EU average; the Austrian region of Südösterreich had the same share as the EU; 71 regions had below-average shares. In particular, the German and French averages (5.3% and 4.4%, respectively) pulled down the EU average.

In absolute terms, the Spanish capital region of Comunidad de Madrid recorded the highest level of turnover derived from innovative products (€23.2 billion in 2022). The next

highest value was recorded in another Spanish region, namely, Cataluña (€18.7 billion), followed by the Greek, Portuguese and Irish capital city regions. It should however be noted that there are no regional data available for Denmark, Germany, France, Italy and the Netherlands.

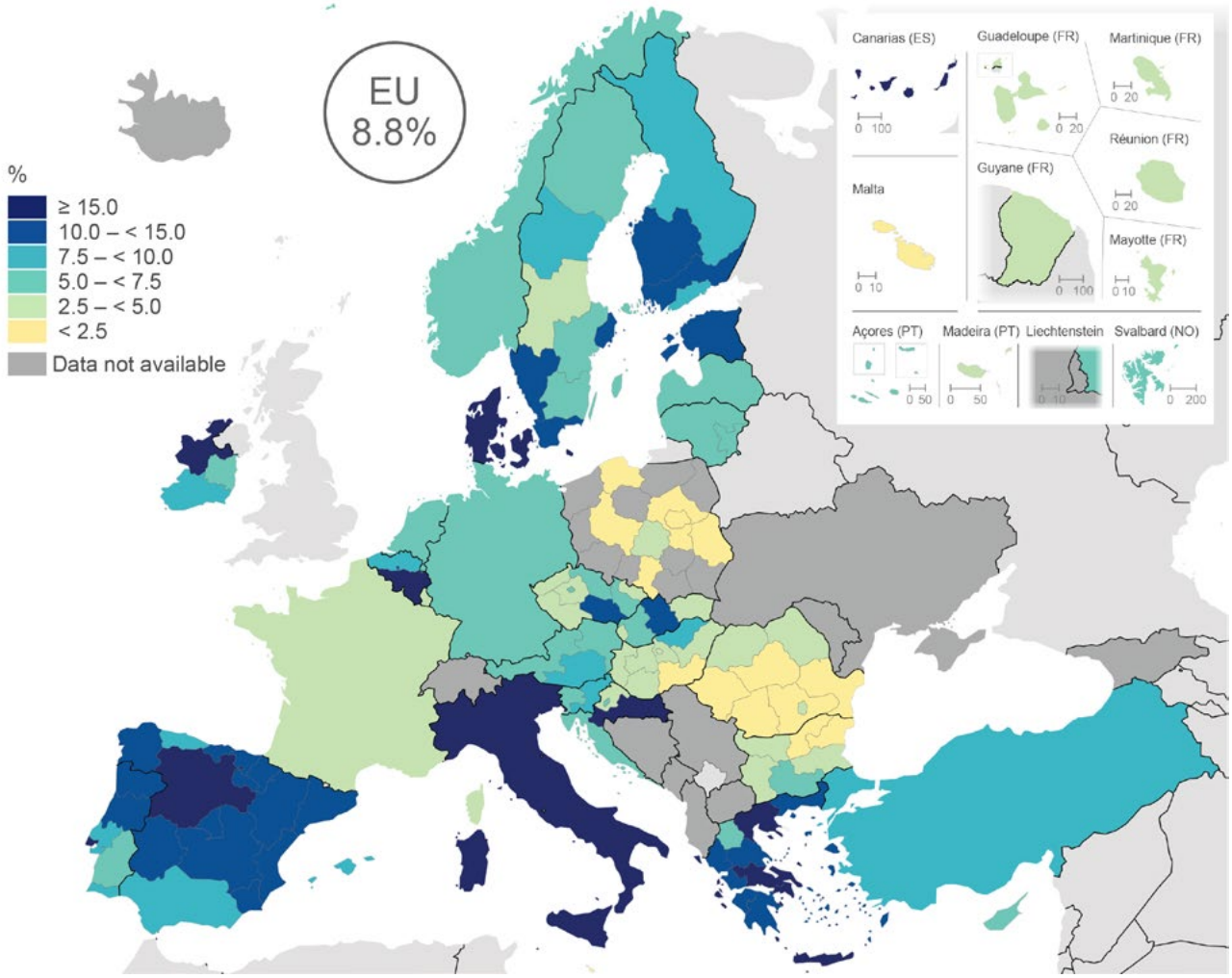
Map 8.9 shows there were 13 regions across the EU where the share of total turnover among SMEs derived from innovative products was at least 15.0% in 2022 (as shown by the darkest shade of blue). These regions were predominantly located in southern EU countries, with a cluster of 5 regions in Greece. Within this group of 13, there were 4 regions that recorded shares of more than 20.0%:

- Panonska Hrvatska in Croatia (33.9%)
- Northern and Western in Ireland (25.4%)
- Denmark (national data only; 24.2%)
- Grande Lisboa in Portugal (22.4%).

By contrast, there were 15 NUTS level 2 regions across the EU that reported a share of total turnover among SMEs derived from innovative products that was below 2.5% (as shown by the lightest shade in Map 8.9). The regions in this group were predominantly located in eastern EU countries, with:

- 6 regions in Poland
- 5 regions in Romania
- 2 regions in Bulgaria
- 1 region in Hungary
- a single southern region, Malta.

Map 8.9: Turnover from innovative products in SMEs
(% of all turnover in SMEs in the business economy, by NUTS 2 regions, 2022)



Note: enterprises with 10–249 employees. Belgium and Austria: NUTS level 1. Denmark, Germany, France, Italy, the Netherlands, Norway and Türkiye: national data.

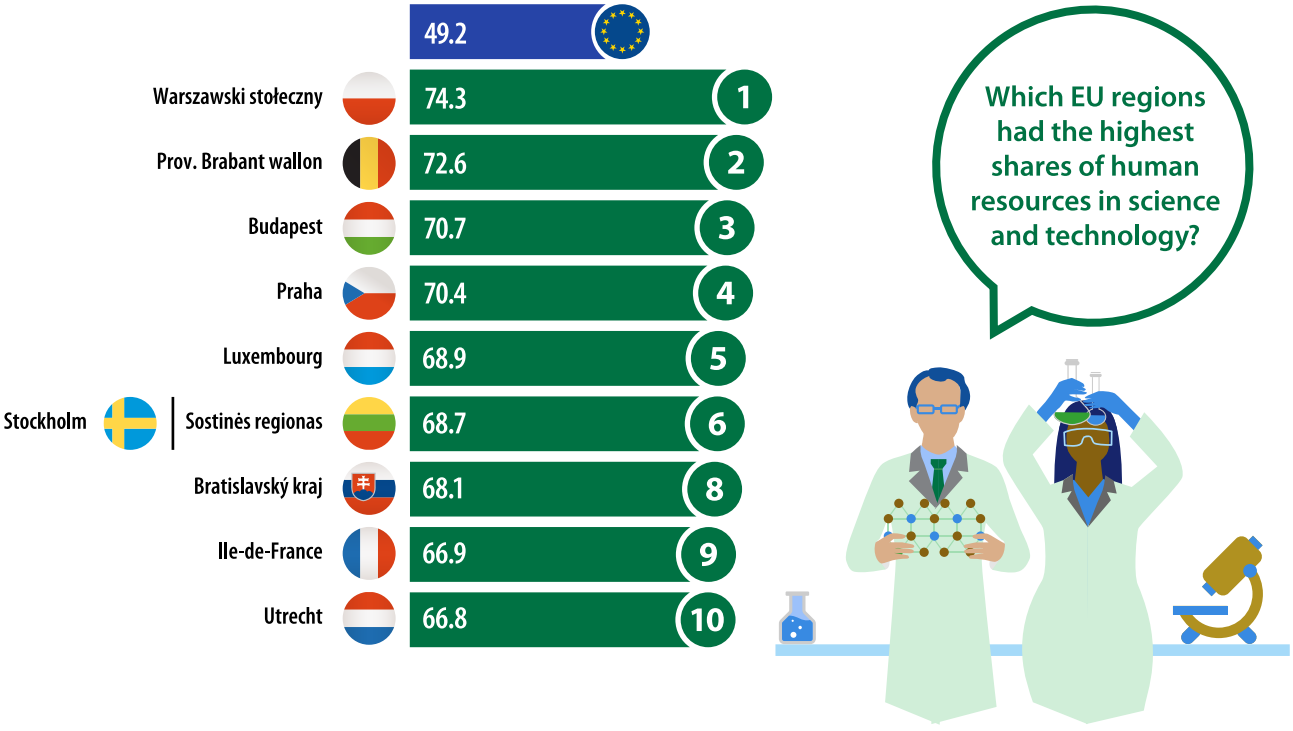
Source: Eurostat (online data codes: inn_cis13_prodt_r, inn_cis13_prodt, inn_cis13_bas_r and inn_cis13_bas)

9. Research and development

Research and development (R&D) is a driver of economic growth, productivity and long-term competitiveness, both within the European Union (EU) and beyond. It has the potential to help solve some of the world's largest economic, societal and ecological challenges; in doing so, it can improve the daily lives of millions of people.

Education, training and lifelong learning play a vital role in developing a region's capacity to innovate. To build and expand its knowledge-based economy, the EU requires a consistent supply of highly skilled and qualified individuals. This chapter presents key statistics on human resources in science and technology (HRST) and employment in high-technology sectors, with a special focus on the role of women in research and development, where EU-wide initiatives aim to increase female participation in science and technology through mentorship, education and targeted support.

The infographic below shows that the Polish capital region of Warszawski stołeczny had the highest share of HRST across NUTS level 2 regions, with nearly 3 out of 4 of its labour force classified as such (74.3%) in 2024. Prov. Brabant wallon (Belgium), along with 2 other capital regions – Budapest (Hungary) and Praha (Czechia) – were the only other regions to report shares above 70.0%.



(% of the labour force, by NUTS 2 regions, 2024)

Note: Mayotte (FRY5), not available.

Source: Eurostat (online data code: hrst_st_rcat)

Core human resources in science and technology

In 2024, there were 126.2 million people aged 15 to 74 years in the EU classified as HRST, representing 49.2% of the EU's labour force. Among them, 101.1 million people met the HRST educational criterion, 80.5 million met the occupational criterion and 55.4 million met both the educational and occupational criteria. This latter group – those who are both qualified in science and technology and employed in related occupations – constitutes what is often referred to as 'core HRST'. These people are the main focus of the information presented in this section.

Map 9.1 shows the distribution of core HRST across NUTS level 2 regions. Regions with high shares of core HRST in their labour force are likely to experience a number of benefits, such as higher productivity, higher wage levels, and clusters of research and technology activity. Factors such as these, in turn, are likely to reinforce their attractiveness to graduates and to (new) businesses, thereby generating spillover effects.

More about the data: statistics on core human resources in science and technology

The criteria used to define human resources in science and technology statistics (HRST) are generally broader than those used to delineate R&D personnel and researchers; the latter refer specifically to occupations. R&D personnel include all people directly engaged in R&D as well as people providing direct services for R&D activities (such as R&D managers, administrators, technicians and clerical staff). Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems, as well as in the management of the projects concerned.

HRST are defined as people who meet at least 1 of the following criteria.

- HRST by education – have successfully completed a tertiary education, as defined by the international standard classification of education (ISCED) levels 5 to 8.
- HRST by occupation – are employed in a science and technology occupation, as defined by the international standard classification of occupations (ISCO) major groups 2 and 3.

Core HRST are defined as people who meet both of the above criteria. These individuals are particularly relevant as they combine formal qualifications with practical engagement in the field. Common roles taken by people classified as core HRST include scientists and engineers, teaching professionals, health professionals, business and administration professionals, information and communications technology (ICT) professionals, lab technicians, medical and pharmaceutical technicians, business and administration associate professionals, and ICT technicians.

In 2024, some of the EU's most populous NUTS level 2 regions were also home to large numbers of core HRST (as denoted by the size of the circles in Map 9.1). The French regions of Ile-de-France and Rhône-Alpes (2.4 million and 1.1 million, respectively), the Spanish regions of Comunidad de Madrid, Cataluña and Andalucía (1.2 million, 1.1 million and 0.9 million, respectively), the Italian region of Lombardia (0.9 million), the German region of Oberbayern (0.8 million) and the Polish region of Warszawski stołeczny (also 0.8 million) were the only EU regions to report more than 0.75 million core HRST. An additional 15 regions each had between 0.50 and 0.75 million core HRST. This group included 5 regions from Germany, 2 regions from each of the Netherlands and Poland, and a single region from each of Ireland, Greece, Spain, France, Italy and Sweden.

Core HRST accounted for approximately 1 in 4 (25.2%) of the EU's labour force in 2024. The regional distribution was uneven: around 1 out of 3 NUTS level 2 regions (88 out of 243 regions for which data are available) reported a share of core HRST above the EU average, while 154 regions had below-average shares and a single region had a share that matched the EU average.

In 2024, there were 60 NUTS level 2 regions where the share of core HRST in the labour force was at least 27.5% (as shown by the darkest shade of green in Map 9.1). This group included:

- all 3 regions in Ireland
- 7 out of 8 regions in Sweden
- 9 out of 11 regions in Belgium
- the capital region of every multi-regional EU country, except Lazio (Italy)
- at least 1 other region in Denmark, Germany, Spain, France, the Netherlands, Poland and Finland
- Cyprus and Luxembourg.

Looking in more detail, Luxembourg (48.4%) and the Hungarian capital region of Budapest (47.3%) recorded the highest shares of core HRST in their labour forces in 2024. There were 5 other regions that had shares of at least 40.0%:

- 3 capital regions – Warszawski stołeczny in Poland (44.8%), Stockholm in Sweden (41.4%) and Grad Zagreb in Croatia (41.0%)
- Prov. Brabant wallon in Belgium (40.7%)
- Utrecht in the Netherlands (40.0%).

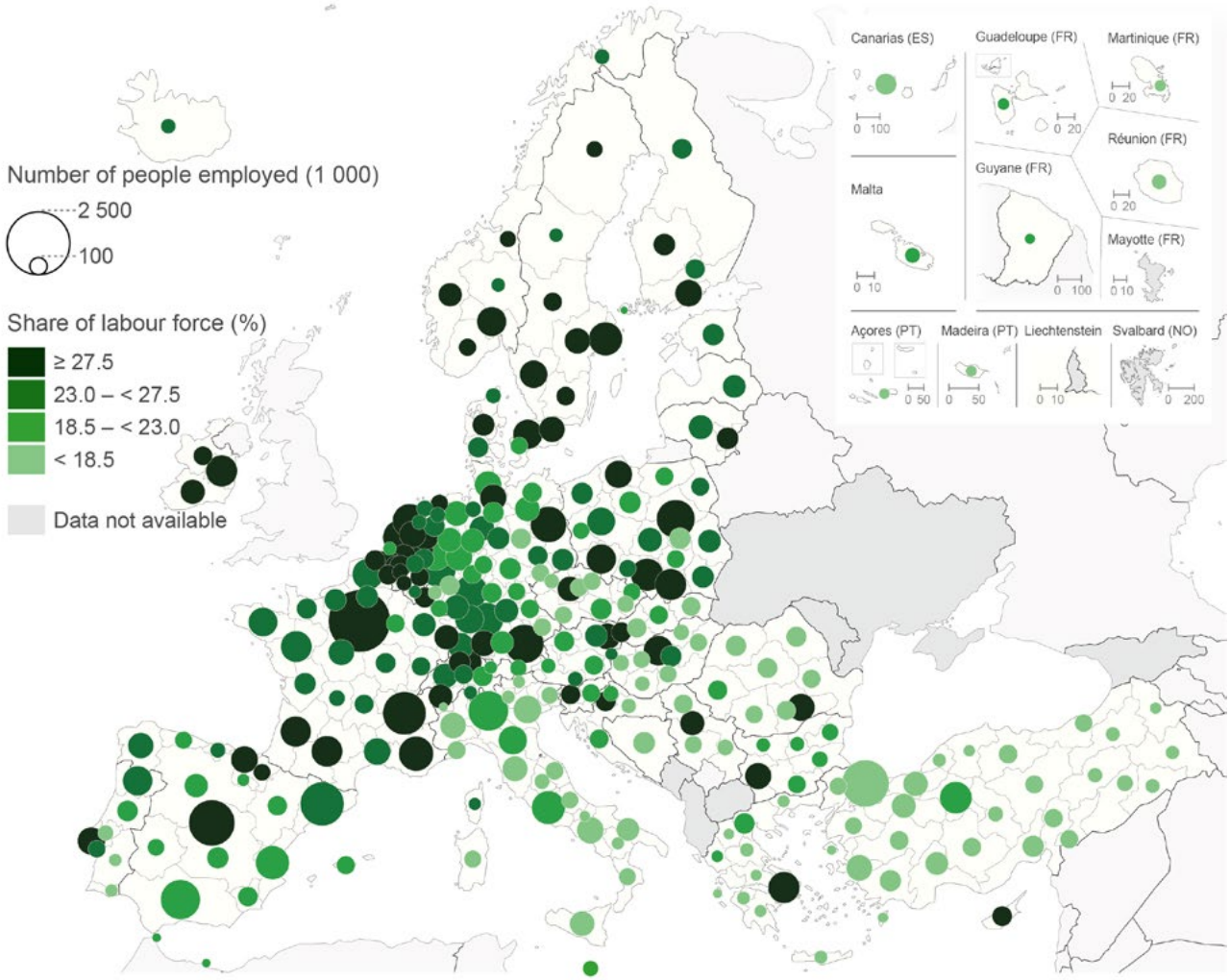
At the lower end of the distribution, 62 NUTS level 2 regions had a share of core HRST in the labour force below 18.5% in 2024 (as shown by the lightest shade of green in Map 9.1). These regions were mostly rural and/or peripheral and were predominantly located in eastern and southern EU countries. Among others, they included:

- 18 out of 21 regions in Italy
- 10 out of 13 regions in Greece
- 6 out of 8 regions in Hungary
- 6 out of 8 regions in Romania
- 5 out of 8 regions in Czechia.

Looking more closely, the Greek region of Sterea Elláda recorded the lowest share of core HRST in its labour force in 2024, at 10.9%. There were 4 other regions that recorded shares below 12.5%:

- 2 more regions from Greece – Ionia Nisia (11.1%) and Notio Aigaio (12.2%)
- Sud-Muntenia in Romania (11.7%)
- Severozápad in Czechia (12.4%).

Map 9.1: Core human resources in science and technology
(by NUTS 2 regions, 2024)



Note: EU = 55.4 million people employed as core human resources in science and technology, equivalent to 25.2% of the labour force. Prov. Vlaams-Brabant (BE24), Corse (FRM0) and Åland (FI20): low reliability.

Source: Eurostat (online data code: hrst_st_rcat)

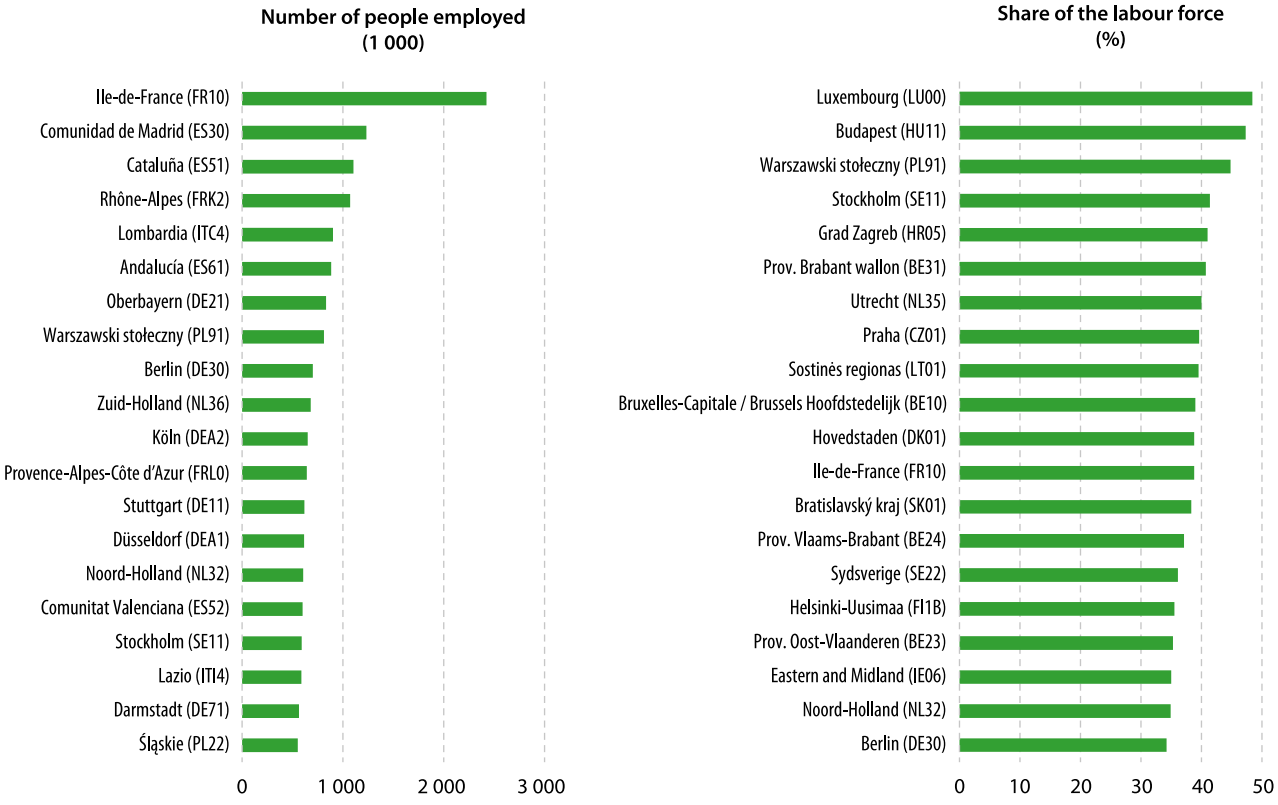
Figure 9.1 provides a summary of the NUTS level 2 regions with the highest numbers of core HRST, as well as those with the highest shares of core HRST in the labour force. In 2024, the capital regions of France, Poland, Germany, the Netherlands and Sweden were the only ones to appear in both rankings:

- Ile-de-France had 2.4 million core HRST, equivalent to 38.8% of its labour force
- Warszawski stołeczny had 0.8 million core HRST, equivalent to 44.8% of its labour force
- Berlin had 0.7 million core HRST, equivalent to 34.2% of its labour force
- Noord-Holland had 0.6 million core HRST, equivalent to 34.9% of its labour force
- Stockholm had 0.6 million core HRST, equivalent to 41.4% of its labour force.

The data shown in Figure 9.1 highlight 2 main patterns: 1st, the absolute number of core HRST is generally higher in the EU's most populous metropolitan regions; 2nd, capital regions often register the highest proportions of core HRST relative to their labour force. Among the 20 NUTS level 2 regions with the highest shares of core HRST, only a few were non-capital regions, namely:

- Prov. Brabant wallon, Prov. Vlaams-Brabant and Prov. Oost-Vlaanderen in Belgium
- Utrecht in the Netherlands
- Sydsverige in Sweden.

Figure 9.1: Core human resources in science and technology
(by NUTS 2 regions, 2024)



Note: the figure shows the 20 EU regions with the highest number of core human resources in science and technology and the highest share of core human resources in science and technology in the labour force. Mayotte (FRY5): not available.

Source: Eurostat (online data code: hrst_st_rcat)

Employment in high-technology sectors

In 2024, there were 10.7 million people employed in high-technology sectors across the EU

High-technology sectors drive economic growth and productivity, and often provide well-paid employment opportunities. In 2024, there were 10.7 million people employed in high-technology sectors across the EU, which represented 5.2% of total employment.

More about the data: employment in high-technology sectors

High-technology sectors comprise high-technology manufacturing sectors and knowledge-intensive high-technology services. The statistics presented for these sectors cover all people (including support staff) who work for enterprises in these sectors, not the number of highly qualified workers.

High-technology sectors are identified in terms of a sectoral approach. Based on division level data:

- high-technology manufacturing covers NACE Divisions 21 and 26 (manufacture of basic pharmaceutical products and pharmaceutical preparations; manufacture of computer, electronic and optical products)
- high-tech knowledge-intensive services cover NACE Divisions 59 to 63 and 72 (motion picture, video and television programme production, sound recording and music publish activities; programming and broadcasting activities; telecommunications; computer programming, consultancy and related activities; information service activities; scientific research and development).

A distinction is made between high-technology manufacturing sectors and knowledge-intensive high-technology services due to the existence of 2 different methodologies:

- R&D intensities are used to distinguish between high, medium-high, medium-low and low-technology manufacturing industries
- the proportion of the workforce that has completed a tertiary education is used to distinguish between knowledge-intensive services and other services.

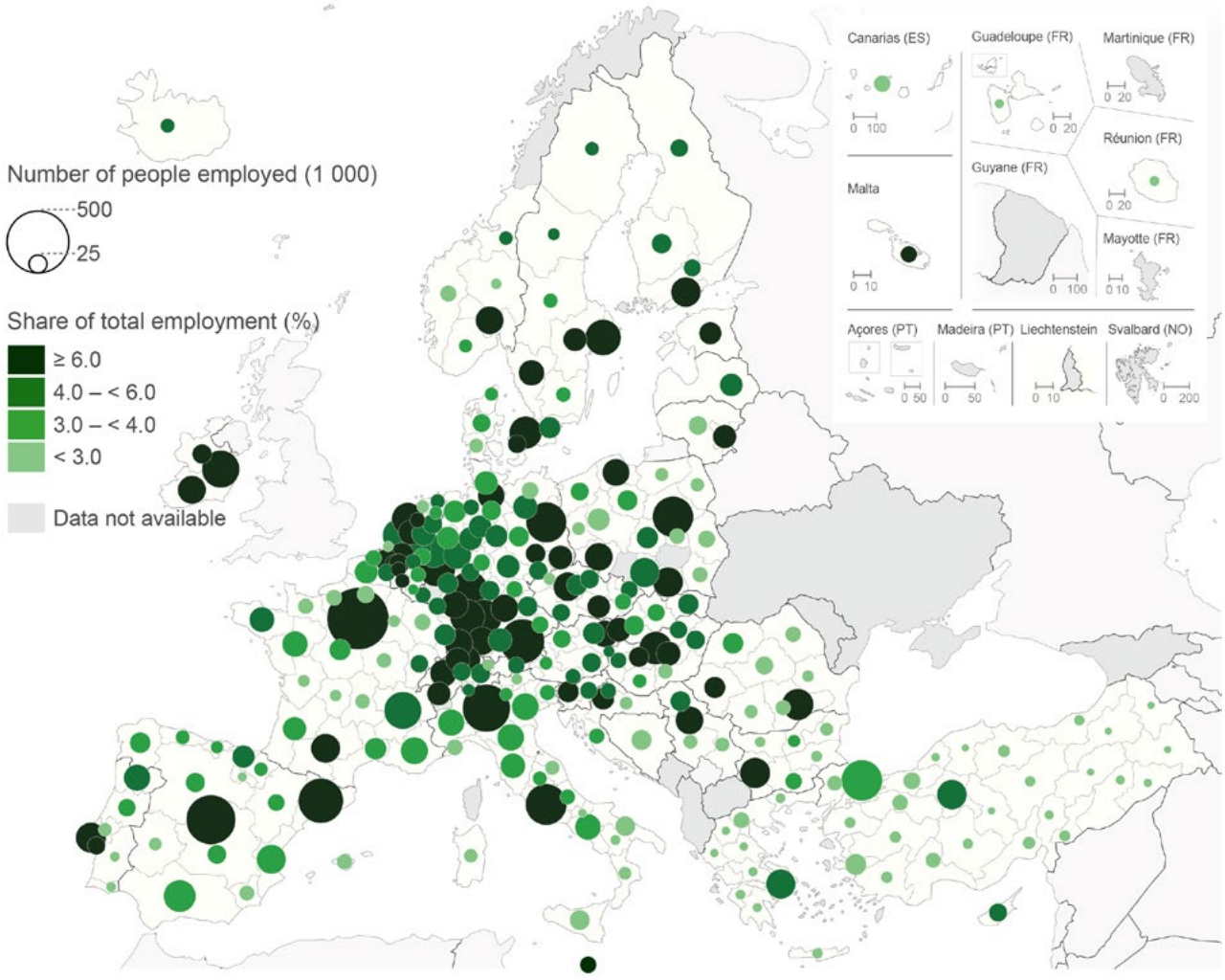
In 2024, 22 NUTS level 2 regions employed at least 100 000 people in high-technology sectors (as shown by the largest circles in Map 9.2). In line with most science and technology indicators, these regions were principally located in some of the EU's largest metropolitan regions, with half of this group (11 out of the 22) being capital regions.

- Almost 0.5 million people (498 000) were employed in high-technology sectors in the French capital region of Ile-de-France.
- There were 2 other regions in the EU where more than 250 000 people were employed in high-technology sectors: the Spanish capital region of Comunidad de Madrid and Lombardia in northern Italy.

To illustrate the skewed nature of the distribution, the 22 regions with at least 100 000 people employed in their high-technology sectors together accounted for 4.0 million people in 2024, equivalent to 37.7% of the EU total. This was similar to the cumulative share of the 175 regions where fewer than 60 000 people were employed in these sectors, which together accounted for 4.2 million people (39.1%).

At the lower end of the distribution, the lowest counts across the EU of people employed in high-technology sectors in 2024 – all around 2 000 people – were observed in the Greek regions of Dytiki Makedonia, Ipeiros and Thessalia, as well as in the southern Italian region of Molise.

Map 9.2: Employment in high-technology sectors
(by NUTS 2 regions, 2024)



Note: EU = 10.7 million people employed in high-technology sectors, equivalent to 5.2% of total employment. High-technology sectors: high-technology manufacturing and knowledge-intensive high-technology services. Ipeiros (EL54) and Guadeloupe (FRY1): 2023. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: htec_emp_reg2)

In 2024, more than 100 000 females were employed in high-technology sectors in the French and Spanish capital regions

In addition to identifying the regions with the highest numbers of people employed in high-technology sectors for both sexes, Figure 9.2 also highlights the importance of these sectors in providing female and male employment.

- In absolute terms, the highest counts of females working in high-technology sectors in 2024 were recorded in the French and Spanish capital regions of Ile-de-France (197 000) and Comunidad de Madrid (114 000).
- 8 other EU regions had more than 50 000 females employed in high-technology sectors in 2024: the capital regions of Berlin (Germany), Eastern and Midland (Ireland), Lazio (Italy) and Warszawski stołeczny (Poland), as well as Oberbayern and Köln (Germany), Cataluña (Spain) and Lombardia (Italy).
- For men, Ile-de-France (302 000), Lombardia (194 000) and Comunidad de Madrid (190 000) recorded the highest counts of male employment in high-technology sectors in 2024.
- 10 other EU regions reported more than 100 000 males employed in high-technology sectors in 2024. This group included all of the regions mentioned above with the highest counts of female employment, as well as Darmstadt (Germany), Rhône-Alpes (France) and the Swedish capital region of Stockholm.

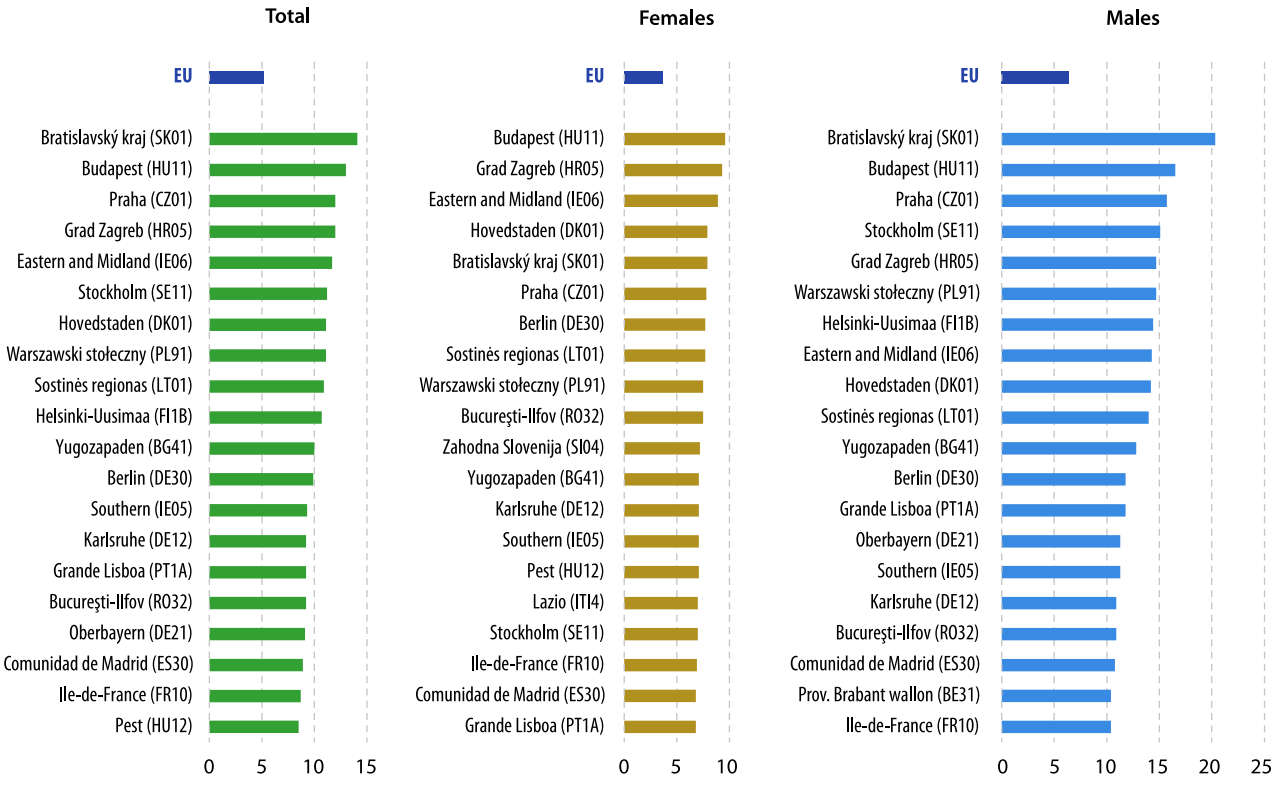
Across the EU, high-technology sectors accounted for 5.2% of total employment in 2024. This share peaked, among NUTS level 2 regions, in the Slovak capital region of Bratislavský kraj (14.1%).

There were 10 other regions – all capital regions – with at least 1 in 10 people from their respective workforces employed in high-technology sectors: those of Hungary, Czechia, Croatia, Ireland, Sweden, Denmark, Poland, Lithuania, Finland and Bulgaria. 5 more capital regions ranked among the top 20 regions with the highest shares – those of Germany, Portugal, Romania, Spain and France.

There was a considerable gender gap in the share of employment within high-technology sectors in 2024. While 3.7% of the EU's female workforce was employed in these sectors, the corresponding share among males was notably higher, at 6.4%.

- The Hungarian capital region of Budapest recorded the highest share of female employment in high-technology sectors, at 9.6%. It was followed by 2 other capital regions – Grad Zagreb in Croatia (9.3%) and Eastern and Midland in Ireland (8.9%) – which were the only other regions in the EU with shares exceeding 8.0% for females.
- For men, the Slovak capital region of Bratislavský kraj had the highest share, at 20.3%. There were 3 other regions that recorded shares above 15.0% for males: Budapest (16.5%), the Czech capital region of Praha (15.7%) and Stockholm (15.1%).
- Among the 20 regions with the highest shares of female employment in high-technology sectors, 17 were capital regions. The only exceptions were Karlsruhe (Germany), Southern (Ireland) and Pest (Hungary).
- A similar pattern was observed for men, with 16 of the 20 regions with the highest male employment shares being capital regions. The exceptions included Karlsruhe and Southern (which also appeared in the female rankings), as well as Oberbayern (Germany) and Prov. Brabant wallon (Belgium).

Figure 9.2: Employment in high-technology sectors
(% of total employment, by sex and NUTS 2 regions, 2024)



Note: the figure shows the EU regions with the highest share of employment in high-technology sectors. High-technology sectors are defined as high-technology manufacturing and knowledge-intensive high-technology services. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: htec_emp_reg2)

Women in research and innovation

In 2024, the EU had 19.6 million people employed as scientists and engineers, this equated to 8.9% of the total labour force.

More about the data: scientists and engineers

Scientists and engineers refer to people who, working in those capacities, use or create scientific knowledge and engineering and technological principles, in other words:

- people with scientific or technological training who are engaged in professional work on science and technology activities
- high-level administrators and personnel who direct the execution of science and technology activities.

Within the context of statistics on human resources in science and technology (HRST), scientists and engineers are people who conduct research, improve or develop concepts, theories and operational methods and/or apply scientific knowledge relating to fields which are covered by the following occupations – as defined in the International standard classification of occupations (ISCO-08):

- science and engineering professionals (ISCO 2-digit code 21)
- health professionals (ISCO 2-digit code 22)
- information and communications technology professionals (ISCO 2-digit code 25).

HRST indicators on scientists and engineers are compiled as head counts; these data may be used to derive the share of scientists and engineers in the total population or their share of the labour force. Statistics are collected for NUTS level 1 and NUTS level 2 regions and cover people aged 15 to 74 years. The data presented here – analysed by sex – are only available at the more aggregated level of detail.

Monitoring female participation in the fields of science and technology provides insight into gender gaps and supports efforts to promote equality and make full use of the potential talent available within the labour force. In 2024, of the 19.6 million people employed across the EU as scientists and engineers, 7.9 million were female – equivalent to 40.4% of the total.

Map 9.3 presents information on the number and share of female scientists and engineers across NUTS level 1 regions. In 2024, the highest counts of female scientists and engineers were recorded in the French capital region of Ile-de-France (327 000) and the western German region of Nordrhein-Westfalen (286 000). There were 5 other regions across the EU where more than 200 000 females were employed as scientists and engineers:

- Este in Spain
- West-Nederland in the Netherlands
- Bayern and Baden-Württemberg in Germany
- Continente in Portugal.

Female scientists and engineers are generally underrepresented across the EU. Out of 91 NUTS level 1 regions for which data are available, 79 had a higher number of male than female scientists and engineers. The 12 regions where females made up a majority of the scientists and engineers in employment (as shown by the darkest shade of green in Map 9.3) included:

- 4 of the 7 regions in Spain – Canarias, Centro, Noroeste and Sur
- Makroregion centralny and Makroregion wschodni in Poland
- Regiões Autónomas dos Açores e da Madeira in Portugal
- Severna i Yugoiztochna Bulgaria in Bulgaria
- Corse in France (2023 data)
- Norra Sverige in Sweden
- Latvia.

As mentioned above, females accounted for 40.4% of all scientists and engineers in the EU. The 3 regions with the highest shares of female scientists and engineers in 2024 were all island regions: Canarias (58.8%), Região Autónoma dos Açores (57.3%) and Região Autónoma da Madeira (56.4%). Several factors may, at least in part, explain this pattern in island regions:

- public sector institutions – such as universities and research institutes – often dominate the local labour market, focusing on fields like environmental science, marine biology or sustainable tourism, which tend to attract more women
- public employers may be more likely to adopt gender equality measures in recruitment and employment
- higher rates of male outward migration may leave a greater share of women in the local workforce
- as some of these island regions are among the least populated regions in the EU, the relatively small size of their labour force may influence the data; relatively small populations may result in greater year-on-year fluctuations and make proportional measures – such as the share of female scientists and engineers – more sensitive to local labour market dynamics.

Indeed, despite having high proportions of female scientists and engineers, many island regions have relatively low overall employment in these professions. For example, the lowest numbers of female scientists and engineers among NUTS level 1 regions were recorded in Região Autónoma da Madeira (4 000), Região Autónoma dos Açores (5 000) and Corse (6 000; 2023 data).

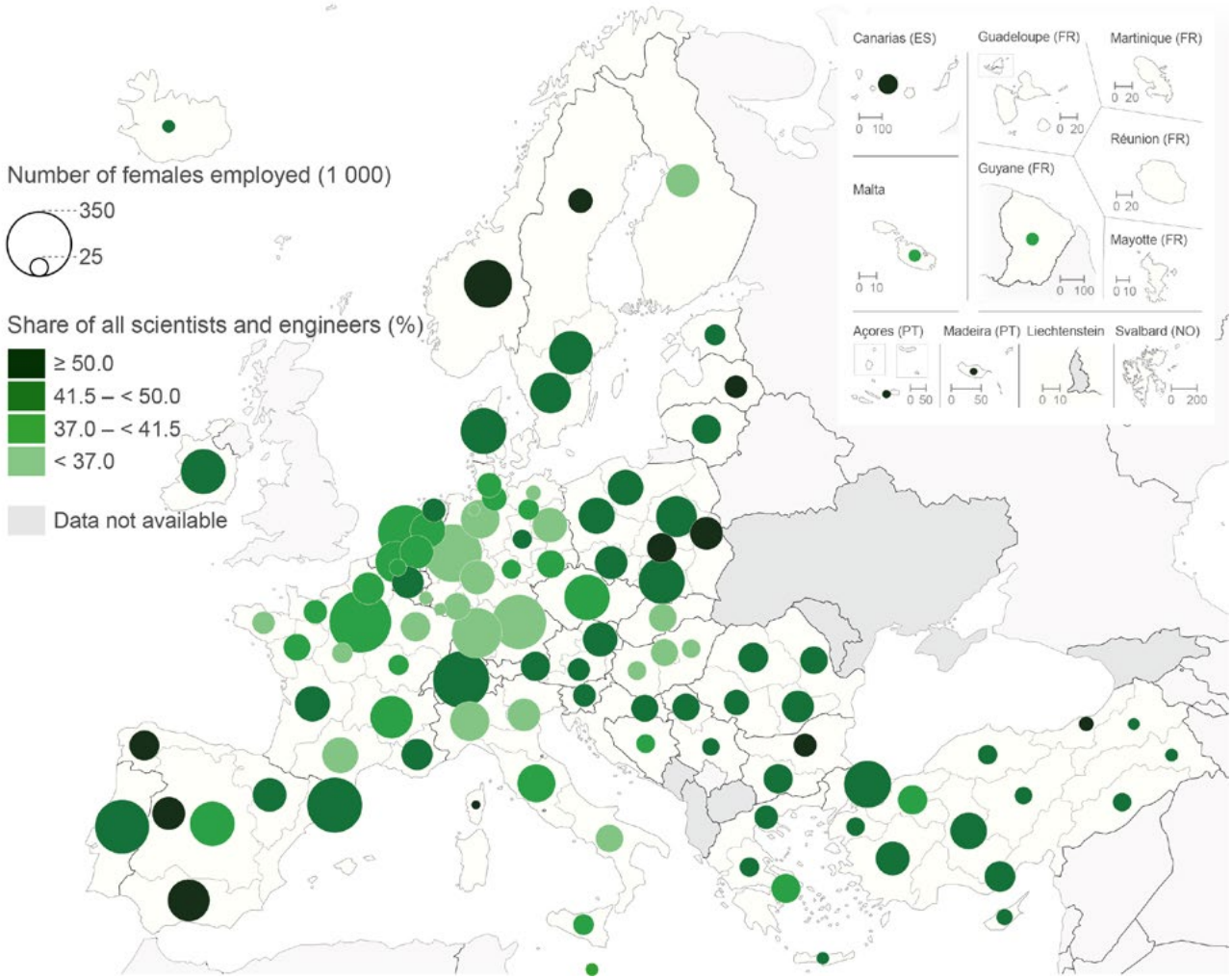
In 2024, females made up fewer than 37.0% of all scientists and engineers in 23 NUTS level 1 regions across the EU (as shown by the lightest shade of green in Map 9.3). This group included:

- 10 regions in Germany, including the capital region of Berlin
- 4 regions in France
- 3 regions in Italy
- all 3 regions of Hungary
- Manner-Suomi in Finland
- Luxembourg
- Slovakia.

Looking in more detail, there were 9 NUTS level 1 regions where women accounted for fewer than 1 in 3 scientists and engineers in 2024. The lowest shares were recorded in the Hungarian region of Közép-Magyarország (30.0%), Manner-Suomi in Finland (30.7%) and Sud in Italy (31.1%). This group of 9 regions also included 4 German regions – Baden-Württemberg, Saarland, Hessen and Bremen – as well as Luxembourg and Bretagne (France).

High-technology sectors include high-technology manufacturing and knowledge-intensive high-technology services. These activities employed 3.6 million females in 2024, equivalent to just over 1 in 3 (33.4%) people employed in high-technology manufacturing and knowledge-intensive high-technology services.

Map 9.3: Female scientists and engineers
(by NUTS 1 regions, 2024)



Note: EU = 7.9 million female scientists and engineers, equivalent to 40.4% of all scientists and engineers. Corse (FRM): 2023. Bremen (DE5), Mecklenburg-Vorpommern (DE8), Saarland (DEC), Corse (FRM), Região Autónoma dos Açores (PT2) and Região Autónoma da Madeira (PT3): low reliability.

Source: Eurostat (online data code: hrst_st_rsex)

In 2024, the highest numbers of females employed in high-technology sectors were, unsurprisingly, found in some of the EU's most populous and research-intensive regions. There were 10 NUTS level 2 regions where more than 50 000 females worked in high-technology sectors. Together, these regions accounted for almost 900 000 females in employment – around 25% of the EU's total female workforce in high-technology sectors. This was roughly equal to the cumulative number of females employed in high-technology sectors across the 138 regions with the lowest counts. The 10 regions with more than 50 000 females employed in high-technology sectors included 6 capital regions.

- The highest employment counts were recorded in the French and Spanish capital regions of Ile-de-France (197 000 females employed in high-technology sectors) and Comunidad de Madrid (114 000).
- Other capital regions with more than 50 000 females employed in high-technology sectors included Lazio (Italy), Berlin (Germany), Warszawski stołeczny (Poland) and Eastern and Midland (Ireland).
- The 4 non-capital regions with a high count of females employed in high-technology sectors were all densely populated, metropolitan areas from some of the largest EU countries: Lombardia (northern Italy), Cataluña (eastern Spain), Oberbayern and Köln (both Germany).

Although some progress has been made in terms of female participation, men continued to dominate the workforce. Among the 218 NUTS level 2 regions for which data are available in 2024, men had a majority of the high-technology workforce in every region (see Map 9.4), underlining the gender employment gap in these sectors.

In 2024, almost 50.0% of Haute-Normandie's high-technology workforce were women

In 2024, there were 55 NUTS level 2 regions where females accounted for more than 36.5% of all employment in high-technology sectors (as shown by the darkest shade of green in Map 9.4). In several eastern EU countries, a large proportion of their regions had relatively high female shares, including:

- all 8 regions of Hungary
- both regions in Slovenia
- 3 out of 4 regions in Croatia
- 4 out of 6 regions in Bulgaria.

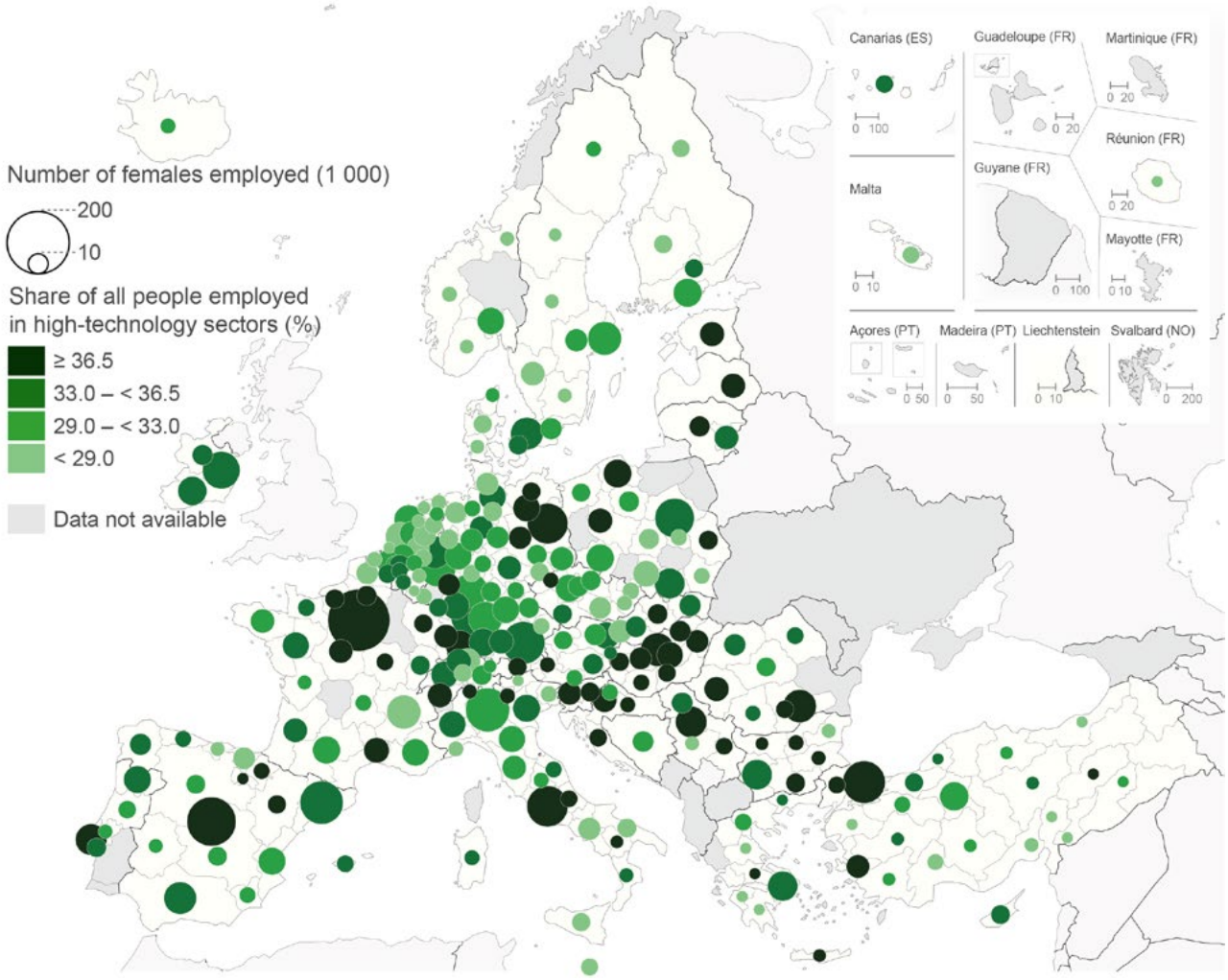
In addition, there were several regions with relatively high female shares in some of the larger western and southern EU countries, including 8 regions in France, 6 regions in Germany and 4 regions in each of Spain and Italy.

At the top end of the distribution, there were a few cases where female participation in high-technology sectors approached parity with men. The highest share was recorded in the northern French region of Haute-Normandie, where females accounted for almost 1 in 2 (49.5%) people employed across high-technology sectors in 2024. The next highest shares were observed in the Hungarian regions of Észak-Magyarország and Észak-Alföld (both 48.3%), followed by the French region of Languedoc-Roussillon (48.0%).

Female representation was considerably lower across a broad range of regions. In 2024, there were 54 NUTS level 2 regions where females made up less than 29.0% of the workforce in high-technology sectors (as shown by the lightest shade of green in Map 9.4). The lowest shares were concentrated in:

- 9 out of 12 regions in the Netherlands
- 7 regions in Germany
- 7 regions in Italy
- 4 out of 8 regions in Sweden
- 4 out of the 9 Greek regions for which data are available
- Luxembourg
- Malta.

Map 9.4: **Female employment in high-technology sectors**
(by NUTS 2 regions, 2024)



Note: EU = 3.6 million females employed in high-technology sectors, equivalent to 33.4% of all people employed in high-technology sectors. Severozapaden (BG31) and Poitou-Charentes (FRI3): 2023. Includes data with low reliability (too many regions to document).

Source: Eurostat (online data code: htec_emp_reg2)

10. Tourism

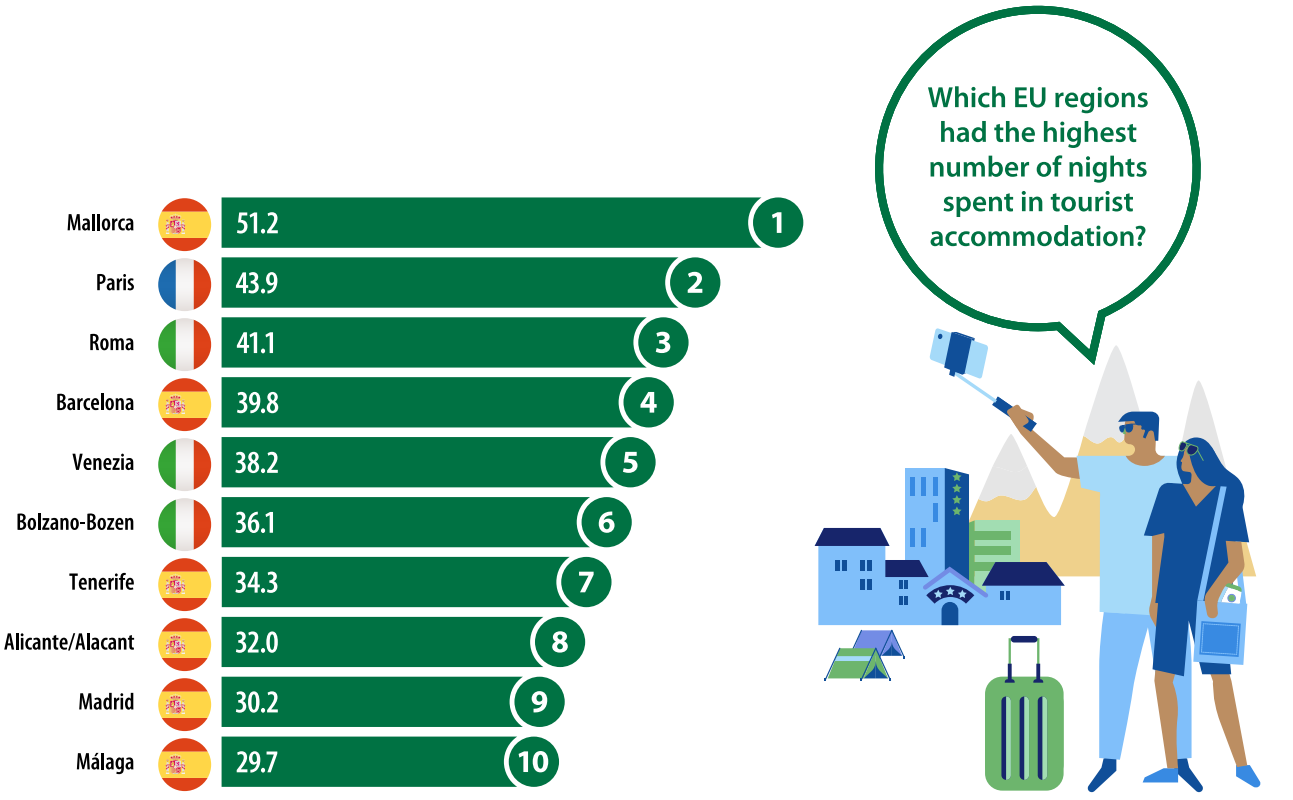
Tourism plays a key role in the European Union (EU) economy, contributing significantly to economic growth, employment and regional development. With diverse landscapes, rich cultural heritage and world-class attractions, the EU is a leading tourist destination. Tourism has the potential to support regional economies, particularly in coastal, mountain or outermost regions, while also fostering cross-border connections; jobs created or maintained by tourism can help counteract industrial or rural decline.

Tourism can also have negative consequences or externalities. It presents economic challenges, such as seasonal employment fluctuations or excessive demand during peak seasons, placing a strain on local infrastructure and/or acting as a nuisance for local communities. Tourism also has an environmental impact: locally through noise, pollution, waste generation, wastewater discharge and habitat loss, and globally through transport emissions. Understanding regional tourism patterns helps policymakers develop strategies for sustainable growth, balancing economic benefits with social and environmental impacts.

In 2019, before the COVID-19 crisis, the number of nights spent in EU tourist accommodation stood at 2.88 billion nights spent. Tourism demand plummeted in 2020, as the number of nights spent by domestic tourists fell 33.4%, while international tourism was hit even harder, down 69.7%. The gradual easing of travel restrictions, renewed consumer confidence and the enduring appeal of EU destinations drove a steady recovery, initially led by domestic tourists. A marked increase in the number of international tourists followed in 2022, as the number of nights spent accelerated. In 2023, the total number of nights spent in EU tourist accommodation surpassed the pre-pandemic total, reaching 2.94 billion.

The infographic below provides information on the EU regions with the highest numbers of nights spent in tourist accommodation during 2023. The list includes popular destinations for:

- beach holidays, such as Mallorca, Tenerife, Alicante/Alacant or Málaga in Spain
- city destinations, such as Barcelona and Venezia, as well as the French, Italian and Spanish capital regions Paris, Roma and Madrid
- mountain destinations, such as Bolzano-Bozen in northern Italy.



(million nights, by NUTS 3 regions, 2023)

Note: there were 2.94 billion nights spent in tourist accommodation across the EU.

Source: Eurostat (online data code: tour_occ_nin3)

Number of nights spent in tourist accommodation

More about the data: tourism statistics

Tourism, in a statistical context, refers to the activity of visitors taking a trip to a destination outside their usual environment, for less than a year. This definition is wider than the common everyday definition, insofar as it encompasses not only private leisure trips but also visits to family and friends, as well as business trips.

Tourism statistics are traditionally collected from suppliers of tourism services through surveys of tourist accommodation establishments or from administrative data. These establishments include all types of accommodation which provide, as a paid service, accommodation for tourists. They are defined according to the activity classification NACE and include:

- hotels and similar establishments (NACE Group 55.1)
- holiday and other short-stay accommodation (NACE Group 55.2)
- camping grounds, recreational vehicle parks and trailer parks (NACE Group 55.3).

The annual statistics presented in this chapter generally refer to 2023. They are typically presented for NUTS level 3 regions, although a more detailed breakdown between domestic and international tourists is only available at NUTS level 2 for Belgium. For Albania (2023) and for Türkiye (2022), only national data are available for the latest year.

In 2023, there were 2.94 billion nights spent in tourist accommodation across the EU, 53.2% of which were accounted for by domestic tourists and 46.8% by international tourists. The number of nights spent in tourist accommodation reflects both the length of stay and the number of tourists and is considered a key indicator for examining tourism developments, even if it does not cover stays at non-rented accommodation, nor same-day visits (without an overnight stay).

Map 10.1 presents regional information on the total number of nights spent in tourist accommodation during 2023 (as denoted by the size of each circle). There were 9 NUTS level 3 regions where the number of nights spent was above 30.0 million, including:

- the Spanish island regions of Mallorca (51.2 million nights spent) and Tenerife (34.3 million)
- the capital regions of Paris in France (43.9 million), Roma in Italy (41.1 million) and Madrid in Spain (30.2 million)
- the coastal regions of Barcelona (39.8 million) and Alicante/Alacant (32.0 million), both in Spain
- the coastal region of Venezia (38.2 million) and the mountainous region of Bolzano-Bozen (36.1 million), both in Italy.

Domestic tourists accounted for a majority (53.2%) of the total nights spent in EU tourist accommodation in 2023. They visited a wide range of destinations, as they accounted for a majority of the nights spent in 943 out of 1 107 NUTS level 3 regions. By contrast, international tourists were often concentrated in a small number of regions that rank among the most frequented tourist destinations in the EU; this may create tourism pressures and have an impact on sustainable development.

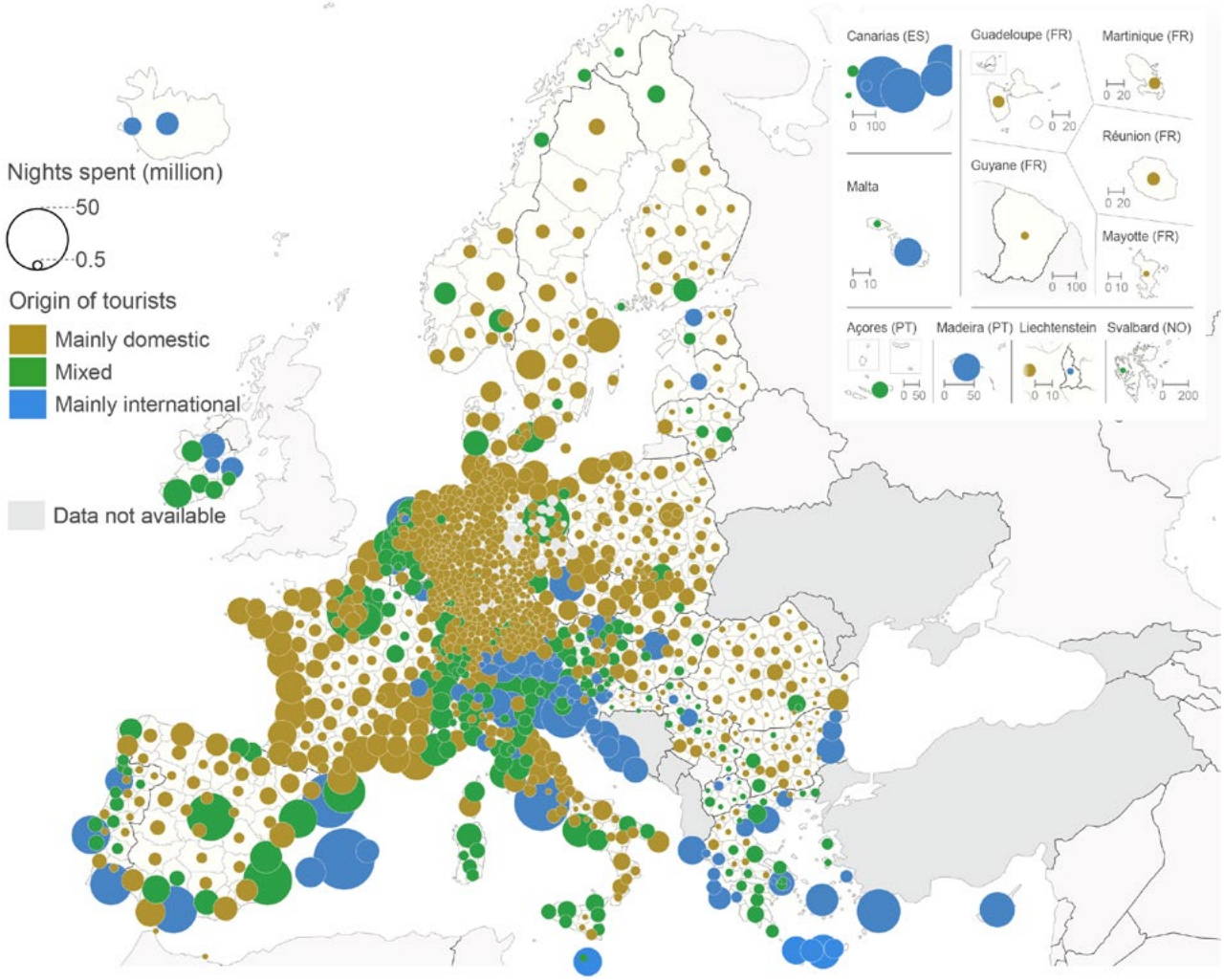
Map 10.1 shows information on the origin of EU tourists, identifying 3 specific groups, namely those regions characterised by:

- a relatively high proportion of nights spent by domestic tourists – gold-coloured circles indicate the 827 regions where domestic tourists accounted for at least 65.0% of the total nights spent
- a relatively equal share of nights spent between domestic and international tourists – green circles indicate the 190 regions where the share of domestic/international tourists was greater than 35.0%, but less than 65.0%
- a relatively high proportion of nights spent by international tourists – blue circles indicate the 90 regions where international tourists accounted for at least 65.0% of the total nights spent.

Looking in more detail, the regions most favoured by international tourists were primarily island, coastal, alpine and capital regions, where tourism generally plays an important role in the local economy. Most of these 90 regions experience considerable tourism pressures, with pronounced peaks in demand, typically during the summer and/or winter seasons. Such pressures need to be balanced with the needs of local communities, with sustainable development contributing to the preservation and protection of natural and urban environments. In addition to 15 capital regions – those of Belgium, Bulgaria, Czechia, Estonia, Ireland, Greece, Croatia, Italy, Latvia, Hungary, Malta, the Netherlands, Austria, Portugal and Slovenia – this group was composed of:

- 20 predominantly island regions in Greece
- 11 predominantly mountainous regions in Austria
- 10 predominantly island and/or coastal regions in Spain
- 10 predominantly urban regions in Italy
- 9 predominantly island and/or coastal regions in Croatia
- 4 Slovenian, 3 Bulgarian, 3 Portuguese, 2 Irish and 1 Dutch region
- Cyprus and Luxembourg.

Map 10.1: Nights spent in tourist accommodation
(by NUTS 3 regions, 2023)



Note: the origin of tourists is defined as a share of total nights spent by mainly domestic (≥ 65.0%), mixed (> 35.0% and < 65.0%), mainly international (≥ 65.0%) tourists. Belgium: NUTS level 2. Several regions in Germany (too many to document): 2022.

Source: Eurostat (online data code: tour_occ_nin3)

Berlin had the highest count of nights spent by domestic tourists in 2023 …

Figure 10.1 shows the most frequented tourist destinations in the EU, based on NUTS level 3 regions. It provides information for those regions with the highest numbers of nights spent in tourist accommodation, detailing the top regions for all tourists, domestic tourists and international tourists.

Capital regions serve as economic, political and financial hubs, attracting professionals for meetings, conferences and other corporate activities. Furthermore, they are also cultural destinations, with historical sites, museums, concert venues, theatres and sporting events. As such, capital regions serve as both business and cultural centres, often with demand from domestic travellers for both professional and leisure purposes. In 2023, the EU regions with the highest number of nights spent by domestic tourists included:

- Berlin in Germany (17.5 million)
- Paris in France (15.5 million)
- Madrid in Spain (14.2 million)
- Roma in Italy (12.9 million).

After the 4 capital regions of the EU's largest economies, the regions with the highest number of nights spent by domestic tourists were primarily coastal areas. In 2023, domestic tourists spent at least 12.0 million nights in 4 other regions:

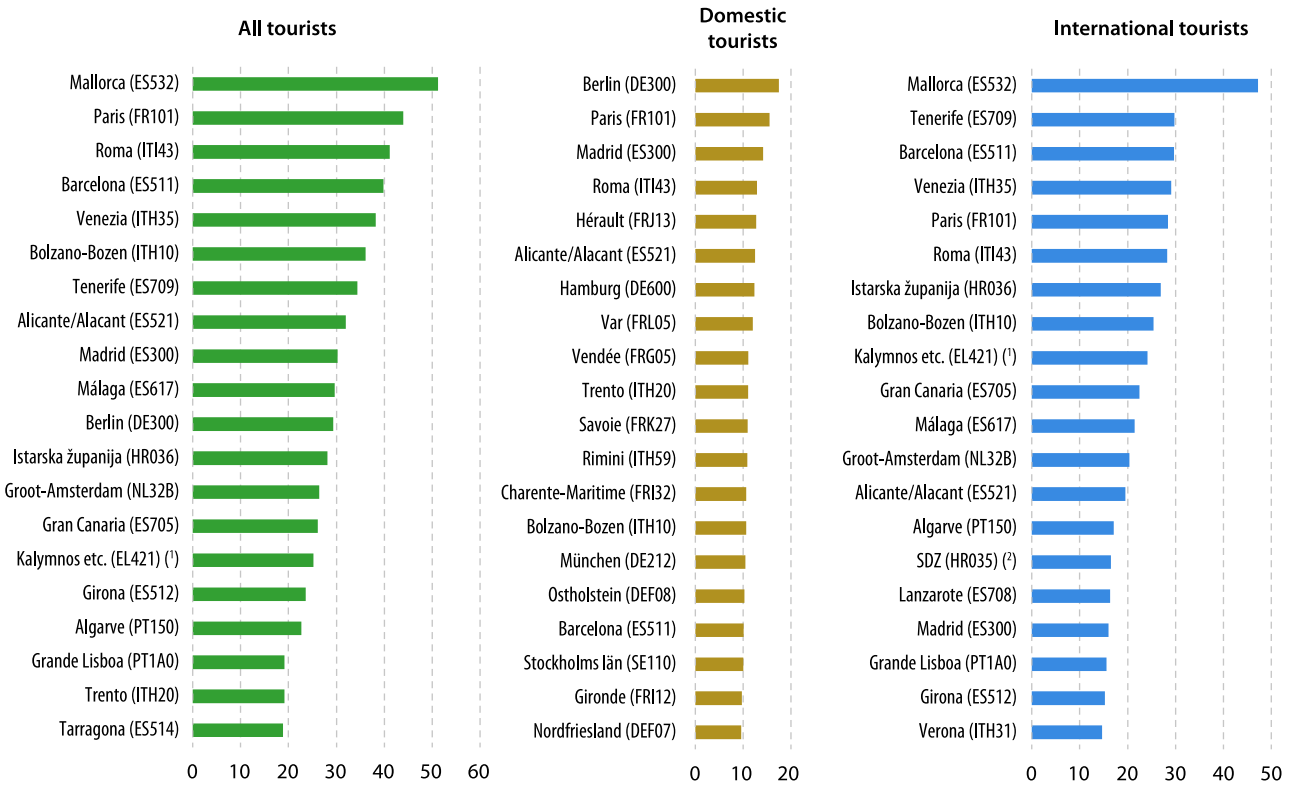
- Hérault (12.7 million) and Var (12.0 million) along France's southern coast, which include popular destinations such as Montpellier, Sète, Saint-Tropez and Fréjus
- Alicante/Alacant (12.5 million) on the south-eastern coast of Spain, which includes popular destinations such as Benidorm, Altea or Calpe
- Hamburg (12.4 million) in northern Germany, a bustling port city known for its maritime heritage, cultural attractions and vibrant neighbourhoods.

… while Mallorca had the highest number of nights spent by international tourists

In 2023, the Spanish island region of Mallorca had, by far, the highest count of nights spent in tourist accommodation by inte\rnational tourists, at 47.2 million. There were 6 regions within the EU where international tourists spent between 26.9 million and 29.8 million nights:

- 2 more Spanish regions – Tenerife (29.8 million) and Barcelona (29.7 million)
- 2 Italian regions – Venezia (29.1 million) and Roma (28.2 million)
- the French capital region of Paris (28.4 million)
- the Croatian coastal region of Istarska županija (26.9 million).

Figure 10.1: Top tourist regions in the EU
(million nights spent in tourist accommodation, by NUTS 3 regions, 2023)



Note: the scales on the numeric axes are different.

(1) Includes also Karpathos – Iroiki Nisos Kasos, Kos, Rodos.
(2) Splitsko-dalmati\nska županija.

Source: Eurostat (online data code: tour_occ_nin3)

Figure 10.2 presents, for each EU country, the most frequented region by domestic and by international tourists (based on the share of the total number of nights spent in tourist accommodation in each country). These relative shares reflect, to some degree, the number of regions in each EU country; Cyprus and Luxembourg are single regions at NUTS level 3 (and hence are not shown).

There were 11 EU countries (out of 25 for which data are presented) where the same region was the most frequented by both domestic and international tourists:

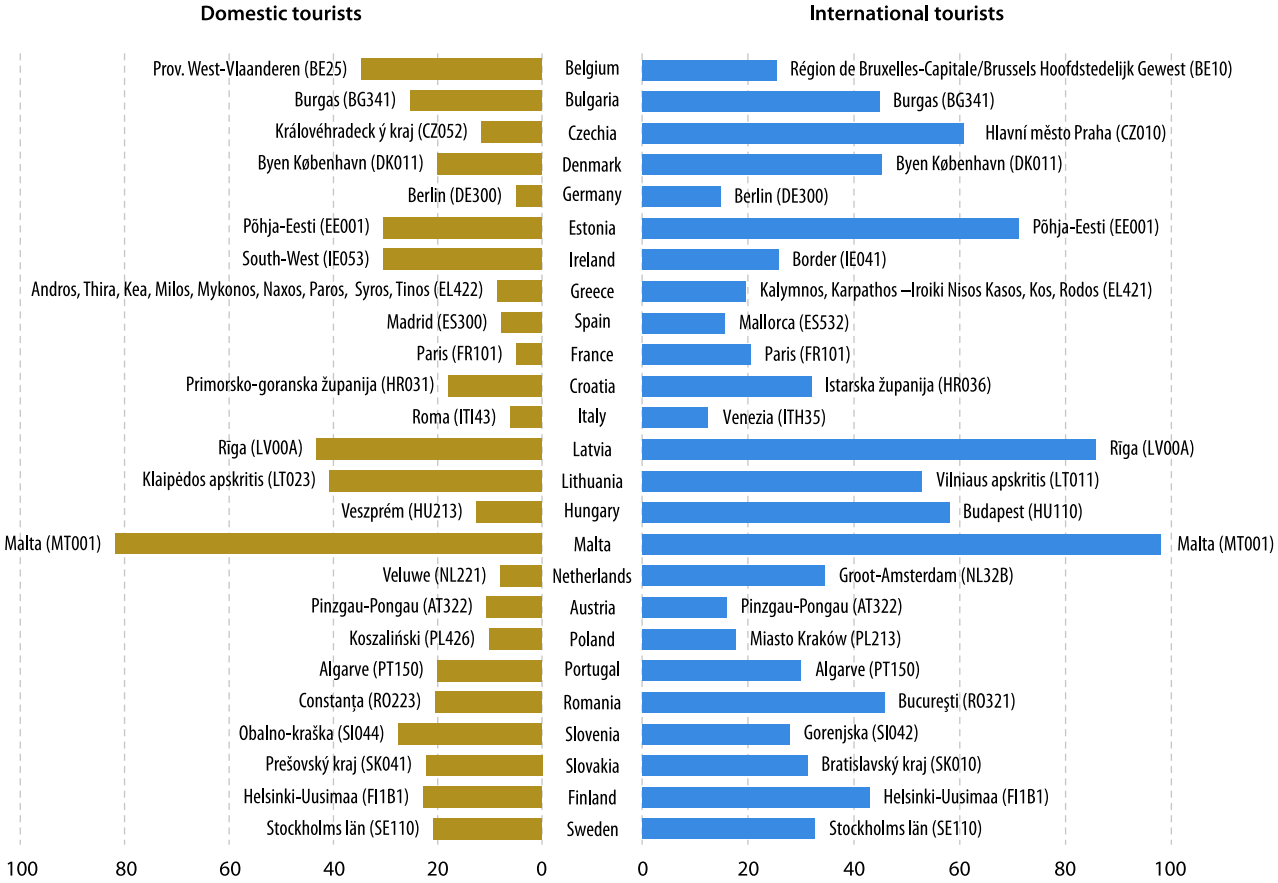
- in Denmark, Germany, Estonia, France, Latvia, Malta, Finland and Sweden this was the capital region – Byen København, Berlin, Põhja-Eesti, Paris, Rīga, the island of Malta, Helsinki-Uusimaa and Stockholms län
- in Bulgaria, Austria and Portugal this was a region other than the capital – Burgas (a coastal region on the Black Sea coast), Pinzgau-Pongau (an Alpine region south of Salzburg) and Algarve (a coastal region on the Atlantic coast).

In half of the remaining EU countries (7 out of 14), the capital region was the most frequented among international tourists; this was the case in Belgium, Czechia, Lithuania, Hungary, the Netherlands, Romania and Slovakia. In the other 7 countries, the most frequented regions for international tourists included:

- the coastal regions of Kalymnos, Karpathos, Kasos, Kos, Rodos in Greece, Mallorca in Spain, Istarska županija in Croatia and Venezia in Italy
- the mountainous region of Gorenjska in Slovenia (which includes the popular tourist attraction of Lake Bled)
- the Border region of Ireland (which includes the rugged landscapes and coastline of Donegal)
- Miasto Kraków in Poland (with its historic old town and rich cultural heritage).

Among the same 14 EU countries (where a different region was most frequented by domestic and by international tourists), the most frequented regions by domestic tourists were often less well-known internationally. Leaving aside the 3 landlocked countries, all but 2 of the most frequented regions for domestic tourists were coastal: Prov. West-Vlaanderen in Belgium, South-West in Ireland, Andros, Thira, Kea, Milos, Mykonos, Naxos, Paros, Syros, Tinos in Greece, Primorsko-goranska županija in Croatia, Roma in Italy, Klaipėdos apskritis in Lithuania, Koszaliński in Poland, Constanța in Romania and Obalno-kraška in Slovenia. The only exceptions were the Spanish capital region of Madrid and the forested region of Veluwe in the centre of the Netherlands. In the landlocked countries, the most frequented regions were Královéhradecký kraj (including the Krkonoše and Orlické mountain ranges) in Czechia, Veszprém (a region including many castles, hills and vineyards near Lake Balaton) in Hungary and Prešovský kraj (including parts of the Tatra mountain range) in Slovakia.

Figure 10.2: Regional concentration of nights spent in tourist accommodation in each EU country
(% share of nights spent, by NUTS 3 regions, 2023)



Note: the figure shows the regions which recorded the highest share of nights spent by tourists (separately for domestic and international tourists) in each EU country. Belgium: NUTS level 2. Cyprus and Luxembourg: single regions at NUTS level 3. Several regions in Germany are not available (too many to document).

Source: Eurostat (online data code: tour_occ_nin3)

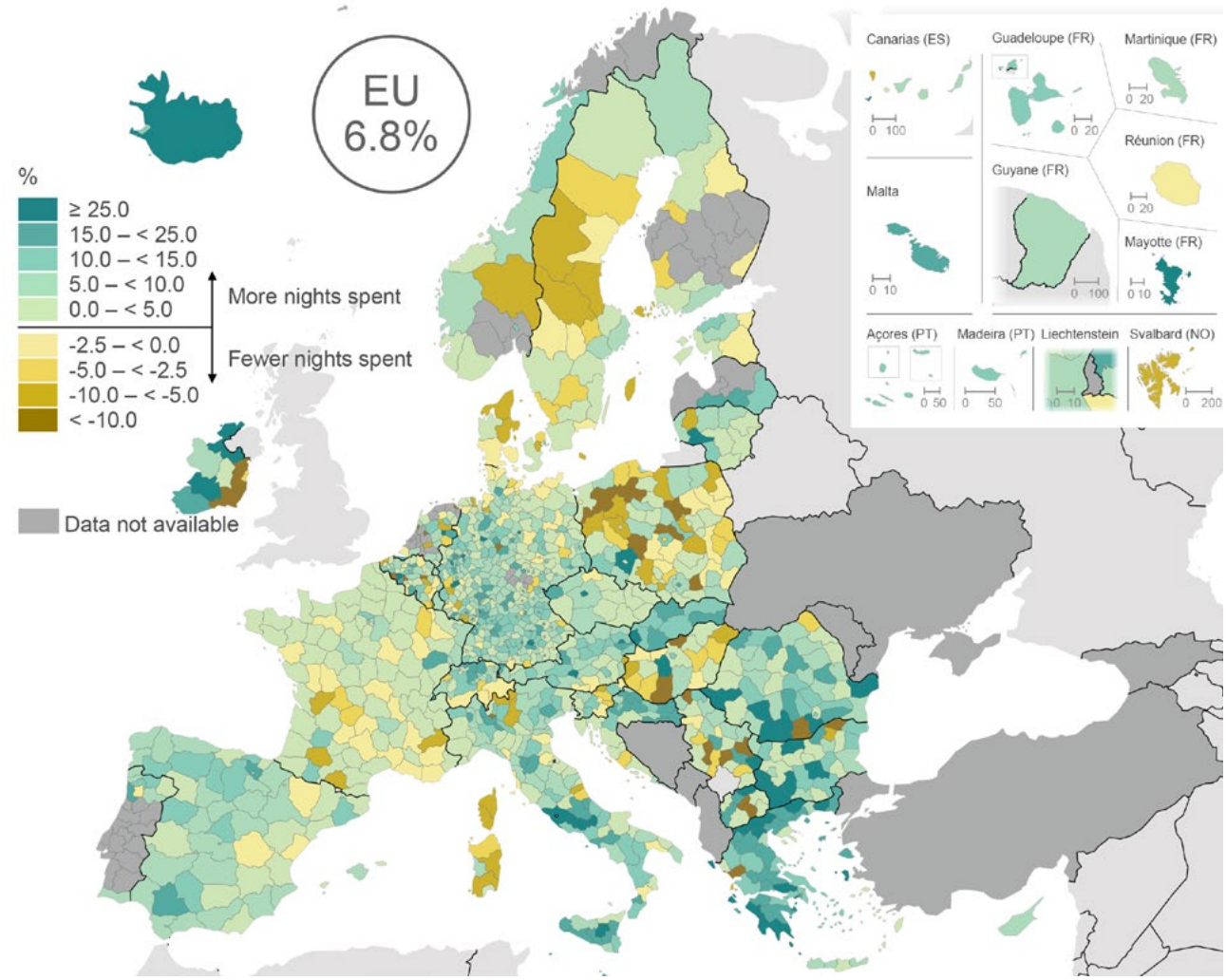
The number of nights spent in EU tourist accommodation increased 6.8% in 2023

Having recovered strongly from the impact of the COVID-19 pandemic during 2022 (up 50.2%), the number of nights spent in tourist accommodation across the EU continued to grow in 2023, albeit at a considerably slower pace, with annual growth of 6.8%.

A majority of NUTS level 3 regions saw the number of nights spent in their tourist accommodation increase between 2022 and 2023. This was the case for 907 out of the 1 117 regions for which data are available (as shown by the teal shades in Map 10.2). At the top end of the distribution, there were 49 regions where the number of nights spent rose by at least 25.0%; they were dispersed across most EU countries. Focusing on those regions that already had at least 1.0 million nights spent in tourist accommodation during 2022, the highest annual rates of change for 2023 were observed in:

- the Border region of Ireland, where the number of nights spent more than doubled, rising from 4.0 million to 8.1 million (up 101.8%)
- Peiraias, Nisoi, a region in close proximity to the Greek capital (up 39.4%)
- the Austrian capital region of Wien (up 30.5%)
- the predominantly urban region of Dortmund in Germany (up 30.0%)
- Blagoevgrad in south-western Bulgaria (up 29.7%).

Map 10.2: Nights spent in tourist accommodation
(% annual change, by NUTS 3 regions, 2023)



Source: Eurostat (online data codes: tour_occ_nin3 and tour_occ_ninat)

In 204 NUTS level 3 regions, the number of nights spent in tourist accommodation fell between 2022 and 2023 (as shown by the golden shades in Map 10.2). At the lower end of the distribution, 23 regions experienced a fall of more than 10.0%. Poland (7 regions), Belgium, Hungary, the Netherlands (each 3 regions) and Ireland (2 regions) were the only EU countries to report more than a single region with a double-digit decline. Focusing on those regions that already had at least 1.0 million nights spent in tourist accommodation during 2022, the lowest annual rates of change for 2023 were observed in:

- Mid-East Ireland, which includes, among other towns, Kildare and Wicklow (down 23.2%)
- Monza e della Brianza, located to the north of Milano in Italy (down 19.4%)
- South-East Ireland, which includes, among other cities and towns, Waterford, Kilkenny and Wexford (down 14.1%)
- Arta, Preveza in north-western Greece (down 11.7%).

Seasonality

Seasonality has a considerable impact on tourism. It is linked to various environmental factors, such as climate or geographical location, as well as socioeconomic factors like public and school holidays or factories closing for annual leave. Tourist arrivals are generally more evenly spread than the number of nights spent across the calendar year, due to a higher concentration of longer stays in the summer months.

In the 3rd quarter of 2023, tourists spent 1.2 billion nights in EU accommodation. As such, the months of July, August and September together accounted for 41.9% of the total nights spent during the year. The 2nd quarter of 2023 accounted for more than 1 in 4 (26.5%) nights spent during 2023, with lower shares for the 4th quarter (17.0%) and the 1st quarter (14.6%).

Map 10.3 shows the total number of nights spent in tourist accommodation during each quarter of 2023 for NUTS level 1 regions.

- In the Austrian region of Westösterreich, more than 1 in 3 (34.7%) of all nights spent in tourist accommodation were during the 1st quarter of the year; the highest regional share in the EU.
- Nearly 1 in 3 (32.5%) of all nights spent in the Finnish archipelago of Åland occurred during the 2nd quarter of the year; the highest regional share in the EU.
- More than 2 out of 3 of all nights spent in Severna i Yugoiztochna Bulgaria (69.3%) and Croatia (68.8%) occurred during the 3rd quarter of the year; the highest regional shares in the EU.
- The Spanish island region of Canarias had the highest share of nights spent during the 4th quarter of the year, at 25.9%, followed closely by the Spanish capital region (25.8%). The distribution of nights spent in Canarias was particularly notable, as it remained evenly balanced throughout the year: the lowest share was 22.6% in the 2nd quarter, while the highest share was 26.5% in the 3rd quarter.

Warm temperatures and relatively high sunshine hours during the winter months may, at least in part, explain the year-round demand for tourist accommodation in Canarias. A similar pattern was also observed in the French outermost regions (Régions Ultrapériphériques Françaises). Many of the other EU regions with relatively stable tourist demand throughout 2023 were predominantly urban regions, where professional travel and weekend visitors help balance summer tourism. This was the case, for example, in the capital regions of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (Belgium) and Comunidad de Madrid (Spain).

At the other end of the spectrum, tourist accommodation in Croatia, Severna i Yugoiztochna Bulgaria (on the Black Sea coast) and the French island region of Corse experienced high levels of seasonal tourism demand. In these 3 coastal destinations, at least 65.0% of the total number of nights spent in tourist accommodation occurred during the 3rd quarter of 2023. This pattern reflects the peak in demand for beach tourism and a substantial influx of visitors for relatively long stays from July to September.

Map 10.3: Nights spent in tourist accommodation
(by NUTS 1 regions, 2023)

Note: the shares of all nights spent in EU tourist accommodation were 14.6% during the 1st quarter, 26.5% during the 2nd quarter, 41.9% during the 3rd quarter and 17.0% during the 4th quarter.

Source: Eurostat (online data code: tour_occ_nin2m)

Tourism pressures

For every 1 000 inhabitants in the EU, an average of 6 574 nights were spent in tourist accommodation during 2023

Since the rise of mass tourism in the 1950s and 1960s, EU regions have been affected by tourism in different ways. Some regions continue to attract very few visitors, while others have seen a significant increases in tourism. This reflects – at least in part – developments such as the emergence of package holidays, low-cost airlines, online booking platforms and alternative forms of accommodation. Additionally, an increasing share of the EU's workforce is choosing to work as digital nomads.

Sustainable tourism aims to preserve and enhance cultural and natural heritage, including the arts, gastronomy or biodiversity. The success of tourism depends on its sustainability, with the quality of destinations often shaped by their natural and cultural environments and their integration into the local community. For the purpose of this publication, tourism intensity is defined as the number of nights spent in tourist accommodation per 1 000 inhabitants.

In 2023, there were 6 574 nights spent in EU tourist accommodation per 1 000 inhabitants. The regional distribution of tourism intensity was heavily skewed, highlighting that mass tourism tends to be concentrated in relatively few regions. The ratio of tourist nights spent per 1 000 inhabitants was higher than the EU average in fewer than 3 out of 10 NUTS level 3 regions (320 out of 1 117 for which data are available). The statistics presented are likely to underestimate the true extent of tourism pressures, given the numerator for the ratio does not include same-day visitors, some people staying in short-stay accommodation offered via online platforms, or people staying in non-rented accommodation (such as 2nd homes, or staying with friends/relatives).

Map 10.4 shows those EU regions that experienced the highest tourism pressures in 2023. A total of 40 NUTS level 3 regions had at least 40 000 nights spent in tourist accommodation per 1 000 inhabitants (as indicated by the darkest shade of blue). At the upper end of the distribution, there were 9 regions with more than 100 000 tourist nights spent per 1 000 inhabitants:

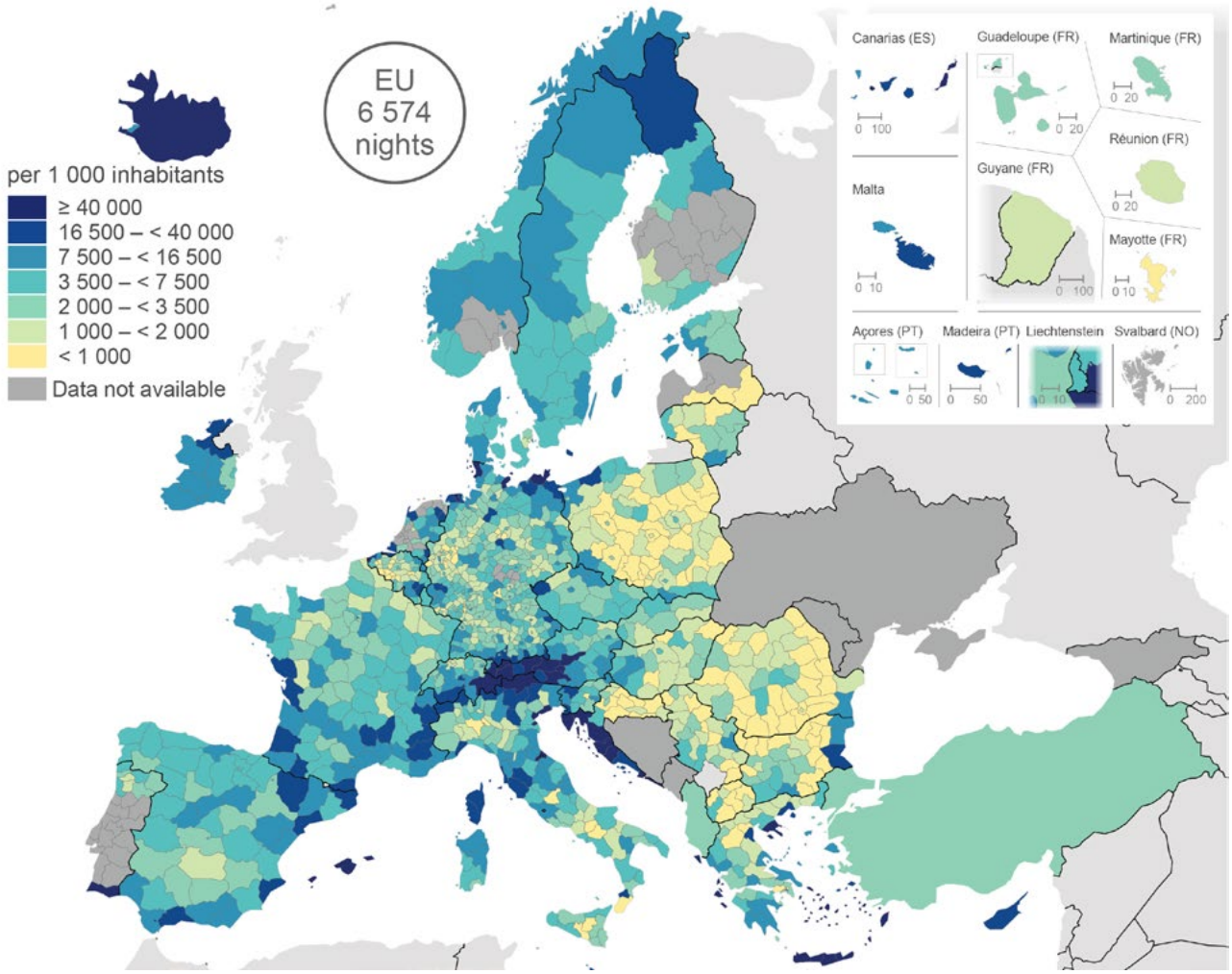
- Zakynthos, a Greek island region in the Ionian Sea, had the highest ratio of tourism intensity, at 149 900 nights spent per 1 000 inhabitants
- Istarska županija on the Adriatic coast in Croatia, had the 2nd highest ratio, at 133 400 nights spent per 1 000 inhabitants
- Fuerteventura and Lanzarote, which are both island regions in Canarias (Spain), had the next highest ratios, at 118 700 nights spent per 1 000 inhabitants and 117 800 nights spent per 1 000 inhabitants, respectively
- 3 more Greek island regions also featured in this group:
  - Kalymnos, Karpathos – Iroiki Nisos Kasos, Kos and Rodos in the Aegean Sea
  - Andros, Thira, Kea, Milos, Mykonos, Naxos, Paros, Syros and Tinos (also in the Aegean Sea)
  - Kerkyra in the Ionian Sea
- while 2 mountainous regions in western Austria also recorded very high ratios of tourism intensity – Tiroler Oberland and Pinzgau-Pongau.

By contrast, there were 128 NUTS level 3 regions across the EU with fewer than 1 000 tourist nights spent per 1 000 inhabitants in 2023 (as shown by the lightest shade of yellow in Map 10.4). Most of these regions were clustered in 5 EU countries:

- Poland (29 regions) – with the southern region of Rybnicki recording its lowest ratio, at 351 nights spent in tourist accommodation per 1 000 inhabitants
- Romania (24 regions), with the southern region of Teleorman having the lowest ratio, at 22 nights spent in tourist accommodation per 1 000 inhabitants
- Germany (20 regions), with the western city of Herne in North Rhine-Westphalia recording its lowest ratio, at 403 nights spent in tourist accommodation per 1 000 inhabitants
- Bulgaria (14 regions), with the north-eastern region of Targovishte having its lowest ratio, at 332 nights spent in tourist accommodation per 1 000 inhabitants
- Belgium (11 regions), with Arr. Soignies, located to the north-east of Mons in the Hainaut region, recording its lowest ratio, at 284 nights spent in tourist accommodation per 1 000 inhabitants.

Alongside Teleorman in Romania, the Greek region of Dytikos Tomeas Athinon – a densely populated region to the west of the capital, largely composed of industrial and/or residential neighbourhoods – was the only other region in the EU with fewer than 100 tourist nights per 1 000 inhabitants in 2023.

Map 10.4: Nights spent in tourist accommodation
(per 1 000 inhabitants, relative to resident population, by NUTS 3 regions, 2023)



Note: Albania and Türkiye, national data. Türkiye: 2022.

Source: Eurostat (online data codes: tour_occ_nin3 and tour_occ_ninat)

For each square kilometre of the EU, an average of 697 nights were spent in tourist accommodation during 2023

An alternative indicator for analysing tourism pressures is tourism density, defined here as the total number of nights spent in tourist accommodation per square kilometre (km^2) of area. In 2023, the EU average was 697 nights spent per km^2.

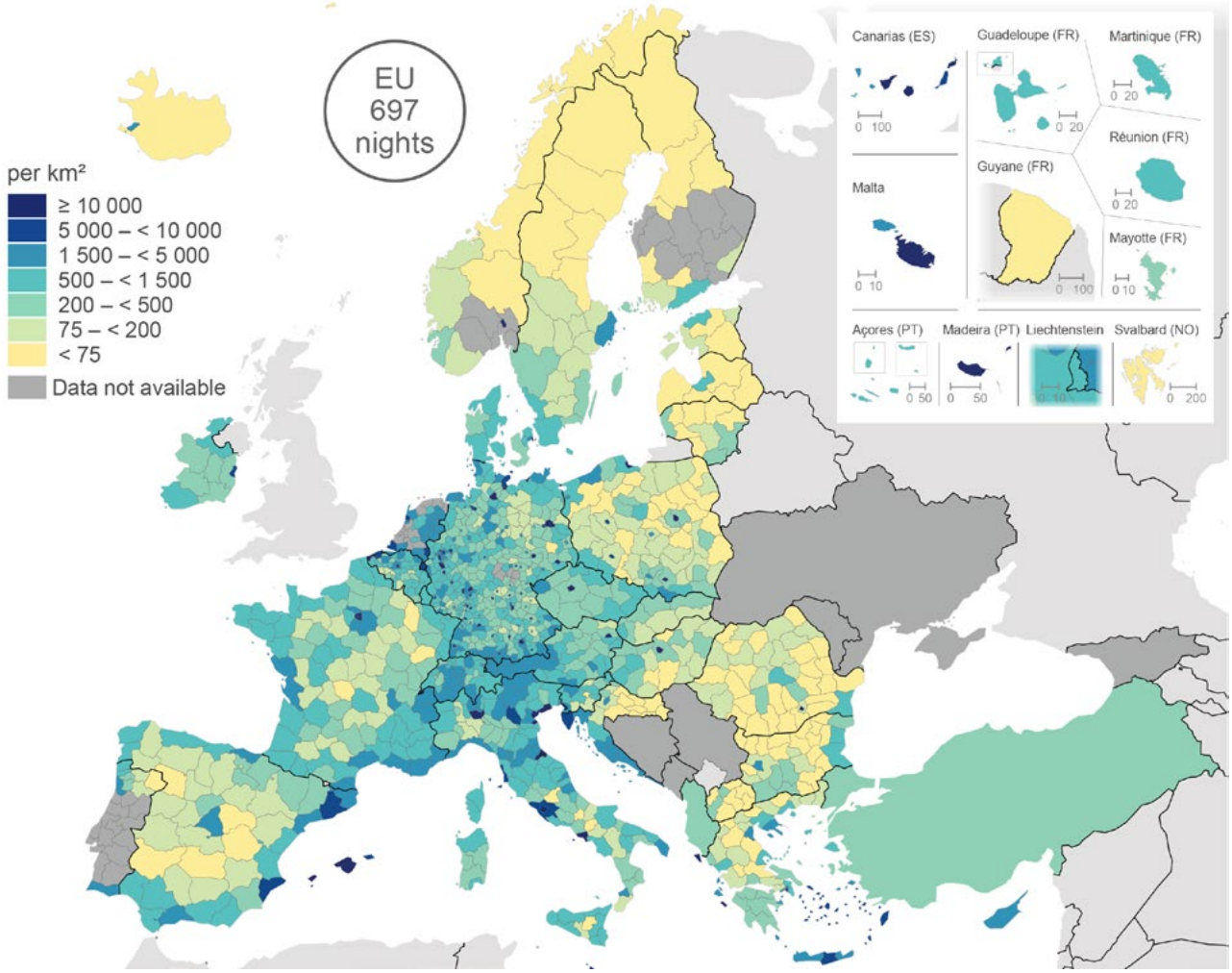
Map 10.5 shows that this measure of tourism pressure was concentrated in predominantly urban regions, which generally have much smaller areas. In 2023, 51 NUTS level 3 regions had a ratio of tourism density of at least 10 000 nights spent per km^2 (as shown by the darkest shade of blue).

The French capital region of Paris was a clear outlier, recording by far the highest concentration of tourists in 2023, with 418 300 nights spent per km^2. This was 4.7 times as high as in any other region of the EU: the Greek capital region – Kentrikos Tomeas Athinon – had the 2nd highest ratio, with 88 500 nights spent per km^2.

There were 15 NUTS level 3 regions in the EU where the ratio of tourism density was higher than 20 000 nights spent per km^2 in 2023. Just over half of this group was composed of capital regions: those of France and Greece (already mentioned above), together with the capital regions of Denmark, Belgium, Austria, Malta, Czechia and Germany. There were also very high ratios recorded in:

- 4 predominantly urban regions of Germany – München, Frankfurt am Main, Düsseldorf and Hamburg
- 2 suburban regions located around the French capital – Hauts-de-Seine and Seine-Saint-Denis
- the popular island region of Lanzarote that forms part of Canarias in Spain.

Map 10.5: Nights spent in tourist accommodation
(per km², relative to area, by NUTS 3 regions, 2023)



Note: Albania and Türkiye, national data. Türkiye: 2022.

Source: Eurostat (online data codes: tour_occ_nin3 and tour_occ_ninat)

At the other end of the distribution, 113 regions had tourism density ratios below 75 nights per km² in 2023 (as shown by the lightest shade of yellow in Map 10.5). These regions were generally concentrated in rural areas of northern, eastern and southern EU countries. The only exceptions were Elbe-Elster in eastern Germany and the French regions of Haute-Saône, Meuse (both in eastern France), Creuse (central France) and Guyane (an outermost region).

At the very bottom of the distribution, 3 regions recorded particularly low tourism density ratios: Călăraşi and Teleorman in southern Romania, as well as Guyane (an outermost region of France), each reporting fewer than 10 tourist nights per km².

Guest nights spent at short-stay accommodation offered via online collaborative economy platforms

Developments in information and communication technologies have had a major impact on the tourist accommodation market. The emergence of online platforms has made it easier for small-scale service providers to advertise/offer their rooms, apartments and holiday homes to potential guests, with a rapid expansion of this market.

More about the data: experimental statistics on short-stay accommodation offered via online platforms

The information presented in this chapter has, up to this point, been based on official tourism statistics, compiled according to *Regulation (EU) No 692/2011*. These statistics provide limited coverage of holiday and short-stay accommodation, as data for holiday homes, apartments and rooms in otherwise private buildings are often outside the scope of tourism registers and surveys.

Official statistics on holiday and short-stay accommodation are generally underestimated, given that several EU countries limit the scope of observations to establishments with, for example, at least 10 bed places. In recent years, this coverage issue has been further compounded by the emergence of online platforms that provide relatively simple methods for private individuals and small enterprises to offer short-stay accommodation; this has led to a surge in the provision of this type of accommodation.

For this reason, Eurostat embarked on an experimental data collection exercise aimed at improving the completeness/coverage of tourism statistics. It is based on a previously unexplored channel, namely data on listings/bookings obtained directly from 4 major online platforms (Airbnb, Booking.com, Tripadvisor and Expedia Group). The exercise is currently restricted to the collection of information on holiday and short-stay accommodation (NACE Group 55.2), reflecting the principal type of accommodation for service providers within the collaborative economy.

In 2023, Málaga in southern Spain was the most frequented region for nights spent in short-stay accommodation offered via selected online booking platforms

The rapid expansion of guest nights spent in short-term accommodation offered via the selected online booking platforms has brought significant benefits to some regions in the EU. Popular destinations have seen increased visitor numbers, driving economic activity, while investment in short-term accommodation can help to revitalise underused or vacant properties.

On the other hand, housing affordability has become a pressing issue in some regions experiencing a surge in the supply of short-stay accommodation, as long-term rental availability decreases and property prices rise. Additionally, an influx of tourists can lead to overcrowding, straining infrastructure and public services, while communities may be displaced as the character of neighbourhoods changes and local culture and identity are eroded.

Figure 10.3 shows the NUTS level 3 regions that recorded the highest number of guest nights spent at short-stay accommodation offered via online booking platforms in 2023. The southern Spanish coastal region of Málaga recorded the highest count, at 17.9 million guest nights, while 7 more regions reported at least 10.0 million guest nights:

- the capital regions of Roma in Italy (13.5 million), Paris in France (12.2 million) and Madrid in Spain (10.1 million)
- 2 more Mediterranean coastal regions in Spain – Barcelona (12.7 million) and Alicante/Alacant (12.0 million)
- 2 coastal regions in other EU countries – Algarve in Portugal (10.4 million) and Splitsko-dalmatinska županija in Croatia (10.0 million).

The information presented in Figure 10.3 on the overall number of guest nights spent at short-stay accommodation offered via online booking platforms can be analysed according to the origin of guests. For example, international guests accounted for approximately 3 out of 4 guest nights spent in Málaga during 2023.

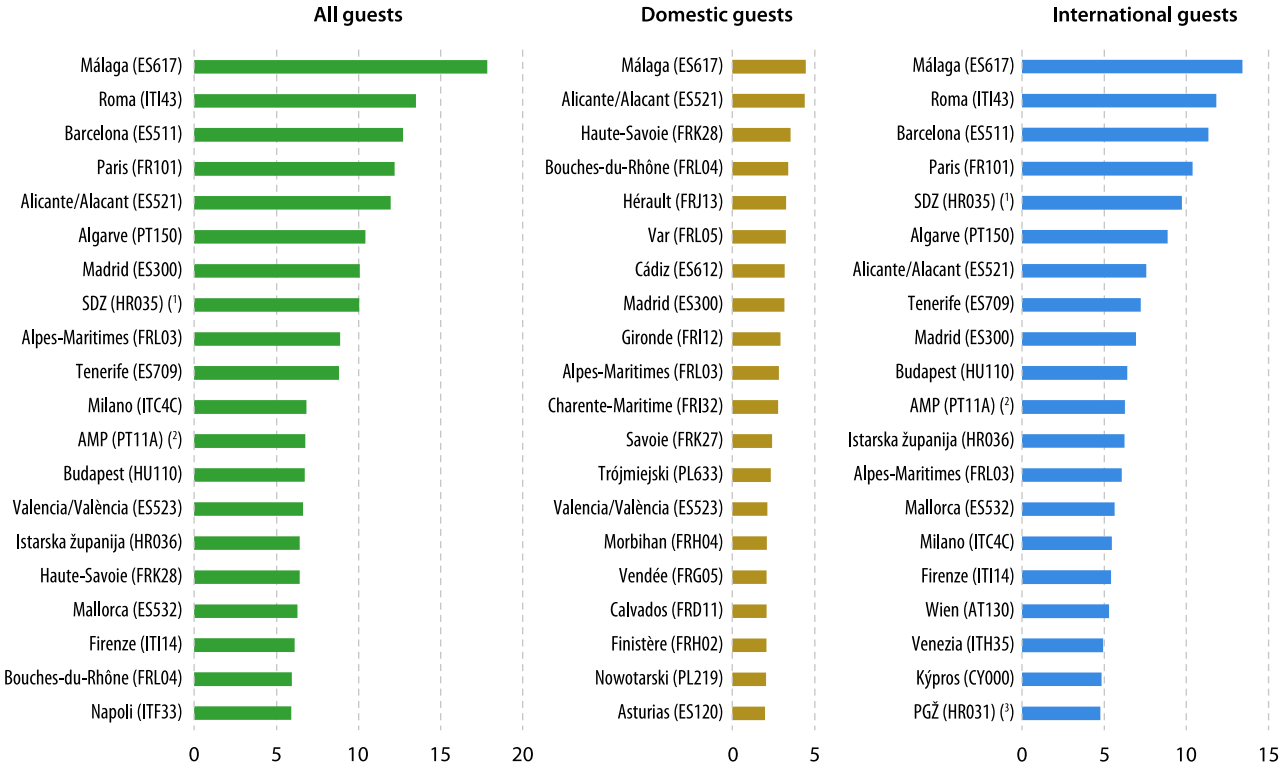
In 2023, the 20 most frequented NUTS level 3 regions for short-stay accommodation booked by domestic guests via the selected online booking platforms were almost exclusively located in Spain and France, with 2 regions from Poland the only exceptions.

- In Spain, the most frequented regions for domestic guests were generally developed, coastal regions on the southern and eastern coastlines – Málaga, Alicante/Alacant, Cádiz and Valencia/València – the only exceptions being the capital region of Madrid and the north-western Atlantic coastal region of Asturias.

- In France, several of the regions most frequented by domestic tourists were relatively rural areas, characterised by their coastline and/or mountains, including:
  - Haute-Savoie and Savoie in the Alps
  - Bouches-du-Rhône, Hérault, Var and Alpes-Maritime on the Mediterranean coast
  - Gironde, Charente-Maritime, Morbihan, Vendée, Calvados and Finistère on the Atlantic coast.
- In Poland, the 2 most frequented regions included:
  - the predominantly urban region of Trójmiejski on the northern coastline that includes Gdańsk, Gdynia and Sopot
  - the predominantly rural, southern region of Nowotarski, which acts as a gateway to the Tatra mountains.

In the list of the 20 most frequented regions by domestic guests, it was generally the case that domestic visitors accounted for a higher share (than international visitors) of the overall number of guest nights in 2023. This pattern was observed in 15 out of the 20 regions, with the exceptions being Málaga, Alicante/Alacant, Madrid, Alpes-Maritimes and Valencia/València.

Figure 10.3: Top tourist regions in the EU for short-stay accommodation offered via selected online booking platforms
(million guest nights, by NUTS 3 regions, 2023)



Note: the scales on the numeric axes are different. The figure shows the regions with the highest number of guest nights spent by all tourists, domestic guests and international guests. Several regions in Germany, Latvia, the Netherlands, Portugal and Finland (too many to document): not available.

(1) Splitsko-dalmatinska županija.
(2) Área Metropolitana do Porto.
(3) Primorsko-goranska županija.

Source: Eurostat (online data code: tour_ce_oan3)

In 2023, 8 different countries featured in the ranking of the 20 most frequented NUTS level 3 regions for short-stay accommodation booked by international guests via the selected online booking platforms. The vast majority of these 20 regions were among Europe's most popular destinations:

- Spain had the highest number of regions, with 6: Málaga, Barcelona, Alicante/Alacant, Tenerife, Madrid and Mallorca
- Italy followed with 4 predominantly urban regions: Roma, Milano, Firenze and Venezia
- there were 3 Croatian regions along the Adriatic coastline: Splitsko-dalmatinska županija (with Split as its capital), Istarska županija (with Pula as its capital) and Primorsko-goranska županija (with Rijeka as its capital)

- the list also included 2 French regions: Paris and Alpes-Maritimes
- 2 Portuguese regions: Algarve and Área Metropolitana do Porto
- the capital regions of Budapest (Hungary) and Wien (Austria), as well as
- Cyprus.

In the list of the 20 most frequented regions by international visitors for 2023, the number of guest nights spent by international visitors was consistently higher than the number for domestic visitors. In absolute terms, the largest differences were recorded in those regions with the highest overall numbers of guest nights: for example, international visitors in Roma spent 10.1 million more guest nights in short-stay accommodation offered via the selected online booking platforms than domestic visitors. The next largest differences between guest nights spent by international and domestic visitors were recorded in Barcelona (9.9 million), Splitsko-dalmatinska županija (9.4 million), Málaga (9.0 million) and Paris (8.6 million). In relative terms, Croatian regions had the biggest disparity, as the number of guest nights spent by international visitors outnumbered that for domestic visitors by a factor of 30 : 1 in both Splitsko-dalmatinska županija and Istarska županija.

Online booking platforms have made it easier for travellers to book accommodation year-round. Although these platforms provide the opportunity for a more even distribution of tourist flows, some destinations continue to experience considerable peaks in demand. Map 10.6 illustrates the seasonality of guest nights spent at short-stay accommodation offered via the selected online booking platforms in each quarter of 2023. Across the EU, there were 719 million guest nights spent at such accommodation in 2023. Of this total, 13.4% were in the 1st quarter of the year, 25.0% in the 2nd quarter, 43.2% in the 3rd quarter and 18.4% in the final quarter.

During the 3rd quarter of 2023, there were 24.6 million guest nights spent in Croatia in short-stay accommodation offered via selected online booking platforms

Map 10.6 shows the number of guest nights spent at short-stay accommodation offered via the selected online booking platforms during each quarter of 2023; the figures are reflected in the size of the circles for each region. Across NUTS level 1 regions, the highest count of guest nights spent was recorded in Croatia, with 24.6 million nights in the 3rd quarter of 2023. A similar analysis for the other quarters reveals that:

- Auvergne-Rhône-Alpes in France had the highest number of guest nights spent during the 1st quarter of 2023, at 6.3 million, reflecting its position as a leading destination for winter sports
- the Spanish region of Este – which includes, among other cities, Barcelona, Alicante/Alacant and Valencia/València – had the highest numbers of guest nights during the 2nd and the 4th quarters, with 13.7 million and 9.1 million, respectively.

In all but 4 of the NUTS level 1 regions for which data are available, the 3rd quarter had the highest share of guest nights spent during 2023, coinciding with the traditional summer peak season. This was particularly evident in Croatia, where 71.2% of all guest nights were spent during this period. Additionally, 16 other regions across the EU reported that the 3rd quarter accounted for more than half of all guest nights spent in 2023. However, 4 regions exhibited a different seasonal pattern:

- in Westösterreich (Austria) and Régions Ultrapériphériques Françaises (France), the 1st quarter of 2023 had the highest share, at 36.3% and 32.1%, respectively
- in the Spanish regions of Canarias and Comunidad de Madrid, the final quarter of 2023 accounted for the highest share, at 30.0% and 28.6%, respectively.

Looking in more detail at seasonal variations, the share of all guest nights spent during:

- the 1st quarter of 2023 ranged from a low of 1.8% in Nisia Aigaiou, Kriti (Greece), Corse (France) and Croatia to a high of 36.3% in Westösterreich
- the 2nd quarter of 2023 ranged from a low of 15.9% in Westösterreich to a high of 31.6% in West-Nederland
- the 3rd quarter of 2023 ranged from a low of 20.9% in Régions Ultrapériphériques Françaises to a high of 71.2% in Croatia
- the 4th quarter of 2023 ranged from a low of 4.6% in Croatia to a high of 30.0% in Canarias.

As was the case for tourist accommodation (see above), predominantly urban regions tended to experience relatively stable demand for short-stay accommodation offered via the selected online booking platforms throughout the year. This was particularly evident in 2023 for the metropolitan region of Nordrhein-Westfalen (Germany), as well as in the capital regions of Comunidad de Madrid (Spain), Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (Belgium) and Yugozapadna i Yuzhna tsentralna Bulgaria (Bulgaria).

Many regions across the EU exhibited seasonal patterns of tourism demand, particularly during the summer months. This was particularly evident in Croatia, Severna i Yugoiztochna Bulgaria (on the Black Sea coast), Kentriki Elláda and Nisia Aigaiou, Kriti (both Greece), as well as in the French island region of Corse. In each of these coastal regions, the 3rd quarter of 2023 accounted for at least 63.8% of all guest nights spent in short-stay accommodation offered via the selected online booking platforms.

Map 10.6: Guest nights spent at short-stay accommodation
(by NUTS 1 regions, 2023)

Note: guest nights spent at short-stay accommodation offered via selected booking platforms. EU shares were 13.4% during the 1st quarter, 25.0% during the 2nd quarter, 43.2% during the 3rd quarter and 18.4% during the 4th quarter.

Source: Eurostat (online data code: tour_ce_omn12)

Environment and natural resources

11. Transport

Transport is vital to the EU economy: it supports global supply chains and daily life, enabling the free movement of people and goods within the EU's single market. However, transport also imposes considerable negative externalities in the form of societal, environmental and material costs, such as greenhouse gas emissions, air pollution, noise, congestion and injuries/fatalities from accidents. With the transport sector accounting for around 25% of the EU's greenhouse gas emissions, EU transport policy seeks to promote environmentally friendly, safe and efficient travel through integrated networks.

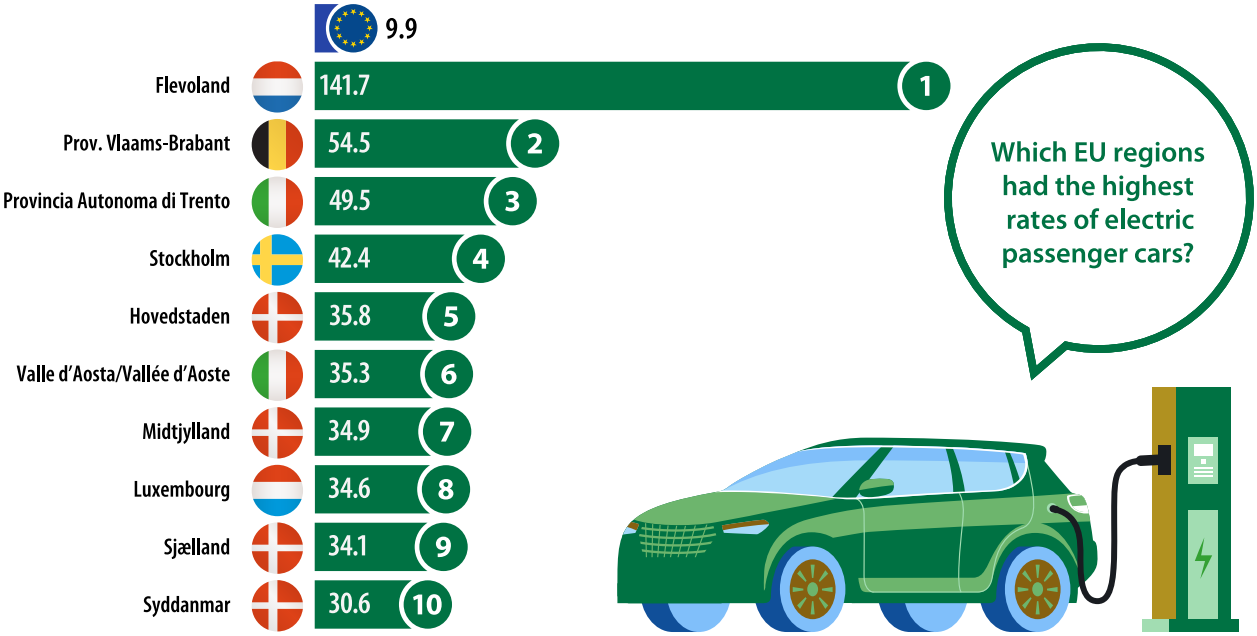
The EU's *Sustainable and Smart Mobility Strategy* (COM(2020) 789 final) part of *The European Green Deal* sets out policy initiatives to achieve a greener and more resilient transport system that remains accessible, affordable and inclusive, while promoting high levels of safety and security across all modes of transport. Within the strategy, there are a number of key milestones, including:

- 30 million zero-emission cars in use by 2030
- a doubling of high-speed rail traffic by 2030
- nearly all new cars, vans, buses and heavy-duty vehicles to be zero-emission by 2050
- a fully operational, multimodal Trans-European Transport Network (TEN-T) connecting Europe sustainably by 2050
- zero-emission large aircraft ready for market by 2050.

The passenger car transformed personal mobility, granting freedom and flexibility while playing a crucial role in economic development. It also carries cultural significance – symbolising status and progress for some, while others choose to forego the use of a car. As the EU transitions towards greener technologies, the passenger car remains central to sustainability and innovation debates.

In 2023, the EU had 256 million registered passenger cars, of which electric vehicles made up 1.7%. On average, there were 9.9 electric cars per 1 000 inhabitants across the EU (see the infographic below). The highest motorisation rate across EU regions was in the Flevoland (central Netherlands), with 141.7 electric cars per 1 000 inhabitants – this high value may reflect, at least in part, the presence of vehicle leasing companies headquartered in the region. Prov. Vlaams-Brabant in Belgium (54.5 electric cars per 1 000 inhabitants) and Provincia Autonoma di Trento in Italy (49.5 per 1 000 inhabitants) had the 2nd and 3rd highest rates. These figures may reflect specific regional characteristics, such as favourable tax schemes, subsides for new vehicle registrations and local policies supporting the expansion of charging infrastructure, all of which make electric vehicle registration/ownership more attractive in these regions.

The selection of information presented for regional transport statistics within the Eurostat regional yearbook changes on an annual basis (covering different modes of transport and focusing on different passenger/freight indicators). Previous editions of the publication can be found at the bottom of this webpage.



(number of electric passenger cars per 1 000 inhabitants, by NUTS 2 regions, 2023)

Note: France, NUTS level 1. Bulgaria and Portugal: national data. Corse (FRM), Utrecht (NL35) and Zuid-Holland (NL36): not available.

Source: Eurostat (online data codes: tran_r_elvehst, road_eqs_carpda, demo_r_d2jan and demo_pjan)

Road transport and accidents

Roads are by far the most common transport mode in the EU for passenger and inland freight transport. The EU's *Sustainable and Smart Mobility Strategy – putting European transport on track for the future* (COM(2020) 789 final) underlines that, although road mobility provides a wide range of benefits to people living in the EU, these are not without costs (for society at large). These externalities include, among other issues, greenhouse gas emissions, pollution, accidents and congestion. The Sustainable and Smart Mobility Strategy identifies 10 flagship areas and a range of intermediate targets for 2030 and 2040 in order to help achieve the EU's ambitious goal of becoming the 'first climate-neutral continent by 2050'. As part of this work, the EU has set itself a target, namely, to ensure that at least 30 million zero-emission vehicles are operating on its roads by 2030.

ELECTRIC PASSENGER CARS

Within the EU, the stock of electric passenger cars reached 4.4 million in 2023; accounting for 1.73% of all passenger cars. The relative importance of electric passenger cars was highest in the Nordic countries, Benelux countries, Austria and Germany. By contrast, electric passenger cars made up a relatively small share of the total stock in most southern and eastern regions of the EU.

The uptake of electric passenger cars reflects, among other factors, income levels, price differentials between electric and other vehicles, subsidies and incentives, infrastructure investment, battery technology, fuel prices, urban policies, the availability and cost of public transport, and environmental consciousness.

During the most recent decade for which data are available, the number of electric cars in the EU has shown remarkable growth:

- their total number passed the threshold of 1.0 million vehicles by 2020 and more than 3.0 million by 2022
- the highest annual growth rates occurred in 2020 and 2021, when the number of electric passenger cars increased 85.3% and 77.5%, respectively
- in absolute terms, the largest annual increase was recorded in 2023, as the number of electric passenger cars rose by 1.4 million.

In 2023, the regional distribution of the share of electric cars among all passenger cars was slightly skewed: in 121 out of the 215 NUTS regions with available data, in other words, 56.3% of the regions, the share of electric passenger cars was below the EU average. Map 11.1 shows that this share was relatively homogeneous within most EU countries, suggesting that factors such as national subsidies and incentives or other national factors likely play an important role in determining the uptake of these vehicles. For example, every region in Vlaams Gewest (northern Belgium), Denmark, the Netherlands, Austria and Sweden recorded a share above the EU average, while Budapest – the capital region of Hungary – was the only region across all of the eastern EU countries to do so.

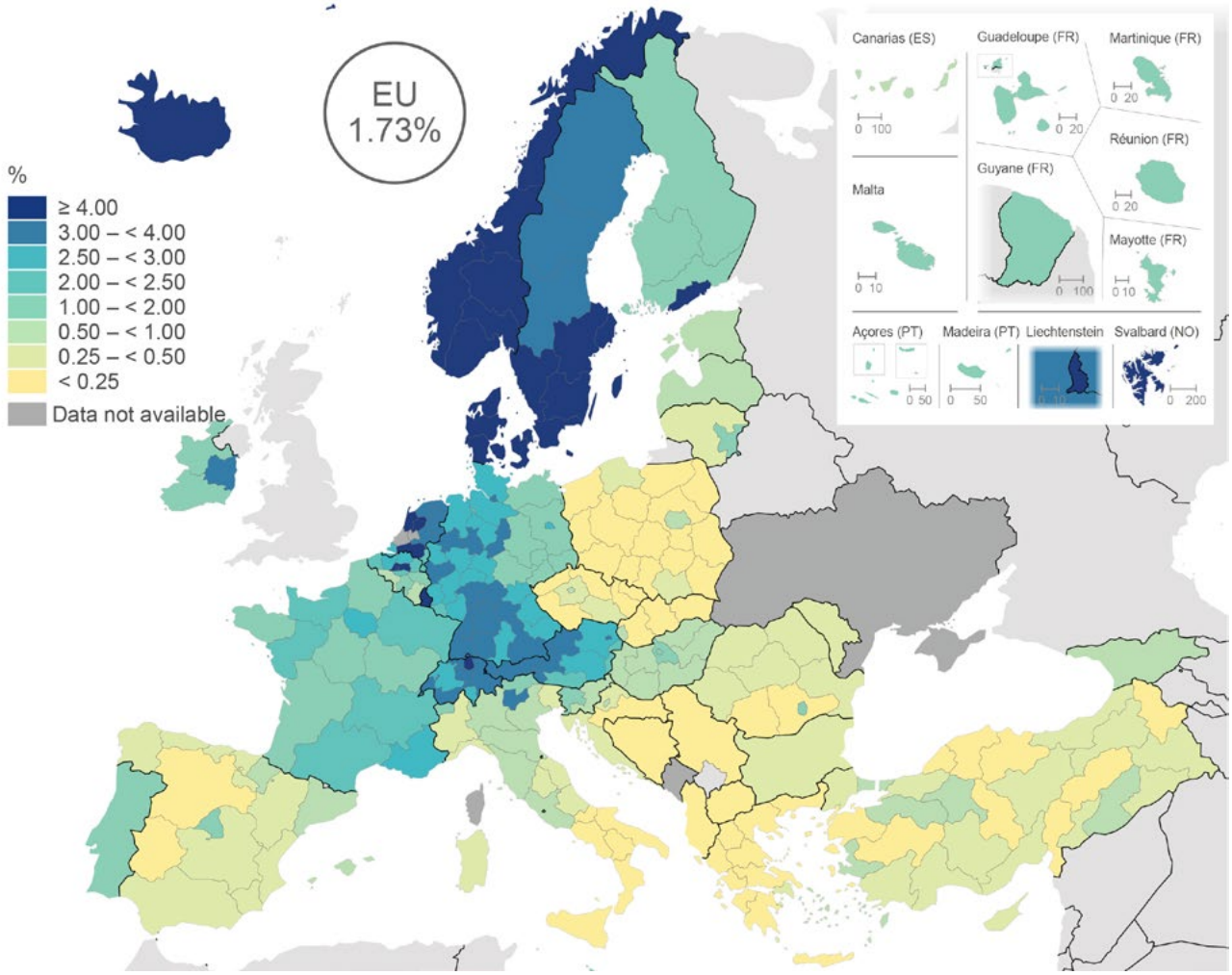
A total of 17 regions reported that electric cars made up at least 4.00% of all passenger cars (as shown by the darkest shade of blue in Map 11.1):

- the largest number were located in Denmark (all 5 regions) and Sweden (5 out of 8 regions), including the capital regions of Hovedstaden and Stockholm
- there were 3 regions in the Netherlands, among them the capital region of Noord-Holland
- there were 2 regions in Belgium, including the capital region of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest
- this group also included the Finnish capital region of Helsinki-Uusimaa
- and Luxembourg.

At the top end of the distribution, the central Dutch region of Flevoland recorded by far the highest share of electric cars in 2023, at 17.07%. This unusually high figure may reflect the presence of vehicle leasing companies based in the region, which register large fleets of electric vehicles and thereby inflate the number of registrations relative to the size of the regional population. The Swedish capital region of Stockholm (10.74%) was the only other region in the EU to record a double-digit share, followed by Hovedstaden in Denmark (8.64%) and Prov. Vlaams-Brabant in Belgium (7.60%).

At the lower end of the distribution, 46 regions reported that electric cars accounted for fewer than 0.25% of all passenger cars in 2023; these are shown by the lightest shade of yellow in Map 11.1. This group was largely concentrated within Czechia (5 out of 8 regions), Greece (11 of 13), Poland (14 of 17) and Slovakia (3 of 4). There was also a cluster in southern Italy (6 regions), while the remainder of the group consisted of 4 regions from Spain, 2 regions from Romania, as well as a single region from Croatia.

Map 11.1: Electric passenger cars
(% of all passenger cars, by NUTS 2 regions, 2023)



Note: France, NUTS level 1. Bulgaria, Portugal, Albania and Serbia: national data. North Macedonia and Albania: 2022.

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

ELECTRIC RECHARGING POINTS

Regulation (EU) 2023/1804 on the deployment of alternative fuels infrastructure aims to support the EU's climate goals by ensuring the coordinated roll-out of alternative fuels infrastructure and a smooth transition to renewable ('zero-carbon') fuels. The regulation emphasises the need to increase the capacity of public recharging points for electric cars across the EU, alongside stimulating the deployment of fast charging stations and dedicated infrastructure for heavy-duty vehicles. It sets binding targets for EU countries, including minimum fast-charging densities on some of the EU's principal routes by 2025 and a total of 3.5 million semi-public or public charging units by 2030.

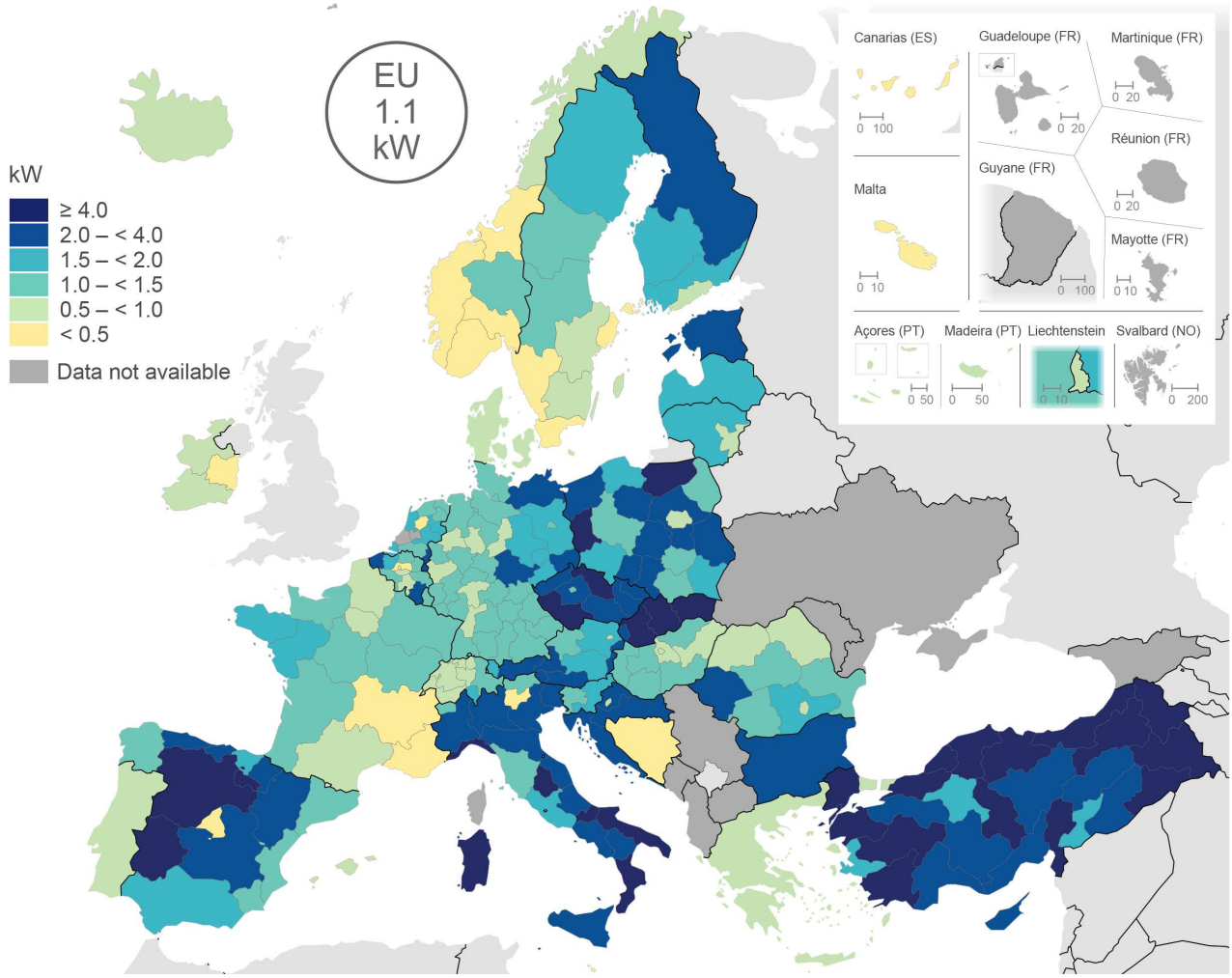
The majority of recharging points in the EU are concentrated in predominantly urban regions, leaving rural areas and inter-city routes less well-served. Cross-border travel by electric car may be hindered by fragmented payment systems and varying standards, although ongoing efforts aim to improve the interoperability of the EU's charging network.

In 2023, there were 145 600 semi-public and public electric recharging points across the EU, with a combined capacity of 5.4 million kilowatts (kW). Relative to the fleet of electric vehicles, each charging point provided an average capacity of 1.1 kW per vehicle. It is important to note that across the EU the predominant modes of recharging are private charging at home, followed by workplace charging, while semi-public and public recharging points are used less frequently. When people recharge their electric vehicles at home or work, the charging outlets typically have lower power output, resulting in longer charging durations but lower costs compared with faster, more expensive public charging points.

Semi-public and public electric charging infrastructure is unevenly distributed across the EU. In urban parts of some western EU countries – such as across Germany, France, the Netherlands and Austria – the network of charging points is relatively dense, reflecting the large stock of electric vehicles in relatively small areas; this was also the case in several regions across northern Belgium and northern Italy. By contrast, eastern EU countries generally have fewer charging points, although these often provide higher recharging capacity.

In 2023, there were 42 700 semi-public or public recharging points in the Netherlands, equivalent to 29.3% of the EU total. More than 1 in 5 points were located in Germany (21.8%), while France (12.2%) and Italy (10.0%) were the only other countries with double-digit shares. In terms of capacity, Germany's semi-public or public recharging infrastructure delivered 1.6 million kW of power to their network (equivalent to 30.3% of the EU total); France (15.5%) and the Netherlands (13.0%) were the only other countries with double-digit shares.

Map 11.2: Electric recharging points
(kW capacity per electric vehicle, by NUTS 2 regions, 2023)



Note: semi-public and publicly available recharging points. France: NUTS level 1. Bulgaria, Denmark, Greece and Portugal: national data.

Source: Eco-Movement, Eurostat (GISCO) and Eurostat (online data code: tran_r_elvehst, road_eqs_carpda, road_eqs_busmot and road_eqs_lormot)

Map 11.2 shows the average charging capacity per electric vehicle (denoted in kW). In 2023, approximately 2 out of 3 EU regions for which data are available – 133 out of 198 (67.2%) – recorded a rate above the EU average of 1.1 kW per electric vehicle. This group included:

- every region in Czechia, Slovenia and Slovakia
- all but 2 regions in Italy (with Provincia Autonoma di Trento and Valle d'Aosta/Vallée d'Aoste being the exceptions)
- all but 1 region in Austria (with the capital region of Wien being the exception)
- Bulgaria (only national data available), Estonia, Cyprus and Latvia.

Note that some regions with high rates of charging capacity per electric vehicle may have relatively few electric vehicles, with charging points installed primarily to ensure minimum coverage across large, sparsely populated areas.

By contrast, in 2023, the average recharging capacity per electric vehicle was below the EU average in every region of Ireland, as well as in Denmark, Greece, Portugal (for all of which only national data are available), Luxembourg and Malta.

The Slovak regions of Stredné Slovensko (6.4 kW per electric vehicle), Západné Slovensko (6.2 kW) and Východné Slovensko (5.3 kW) recorded the highest average recharging capacities per electric vehicle across the EU in 2023. The next highest value was observed in the western Polish region of Lubuskie (5.1 kW). There were 12 other EU regions where the average capacity was at least 4.0 kW per electric vehicle: half of these were in Italy, while the remainder included 3 Spanish regions, 2 regions in Czechia and an additional Polish region.

At the other end of the range, 3 EU regions recorded an average capacity of less than 0.05 kW per electric vehicle. These included 2 southern French regions – Auvergne-Rhône-Alpes and Provence-Alpes-Côte d'Azur – as well as the Finnish archipelago of Åland.

ROAD FREIGHT TRANSPORT

The road freight transport sector is a key part of modern economies, offering vital services that link producers, traders and consumers. It supports supply chains, enables regional trade and adapts to evolving demands such as digital logistics, green mobility and just-in-time delivery systems.

More about the data: road freight statistics

Road freight transport statistics relate to transport by heavy goods vehicles registered in any of the EU countries. Transport by light goods vehicles is excluded. The threshold for inclusion as a heavy goods vehicle may be based on the load capacity (maximum permissible weight of goods) or the legally permissible maximum weight (the vehicle, the load, the driver and other persons carried). Some countries have a somewhat broader coverage as they apply lower inclusion thresholds.

A tonne-kilometre is a unit of measure of freight transport which represents the transport of 1 tonne of goods (including packaging and tare weights of intermodal transport units) by a given transport mode (road, rail, air, sea, inland waterways, pipeline and so on) over a distance of 1 kilometre.

Regional statistics for road freight transport should be interpreted with care as the data presented may reflect, to some extent, the size of each region, as those regions characterised by a large area normally transport more freight. In a similar vein, those regions that are characterised by transporting bulk products that tend to weigh a lot (such as raw materials) are also likely to report higher values. The information presented in this section refers to those regions where goods were unloaded.

In 2023, the total weight of goods transported by heavy goods vehicles registered in the EU was 13.1 billion tonnes. When taking account of the distance travelled for each transport operation, the transport performance of the EU's road freight transport sector was 1 857 billion tonne-kilometres (tkm).

In 2023, some of the most populous regions of the EU had the highest volumes of road freight unloaded by EU-registered vehicles. A peak was recorded in the eastern Spanish region of Cataluña (42.8 billion tkm of road freight unloaded). Lombardia in northern Italy and Andalucía in southern Spain also had high levels, at 39.7 billion tkm and 34.1 billion tkm, respectively. There were 8 regions with road freight performance within the range of 22.1 billion tkm to 30.0 billion tkm:

- the Spanish regions of Comunitat Valenciana and Comunidad de Madrid
- the Italian regions of Veneto and Emilia-Romagna
- the Polish regions of Wielkopolskie and Śląskie
- the French regions of Rhône-Alpes and Ile-de-France.

In 2023, the north-eastern Spanish region of Aragón had the highest level of road freight transport per inhabitant

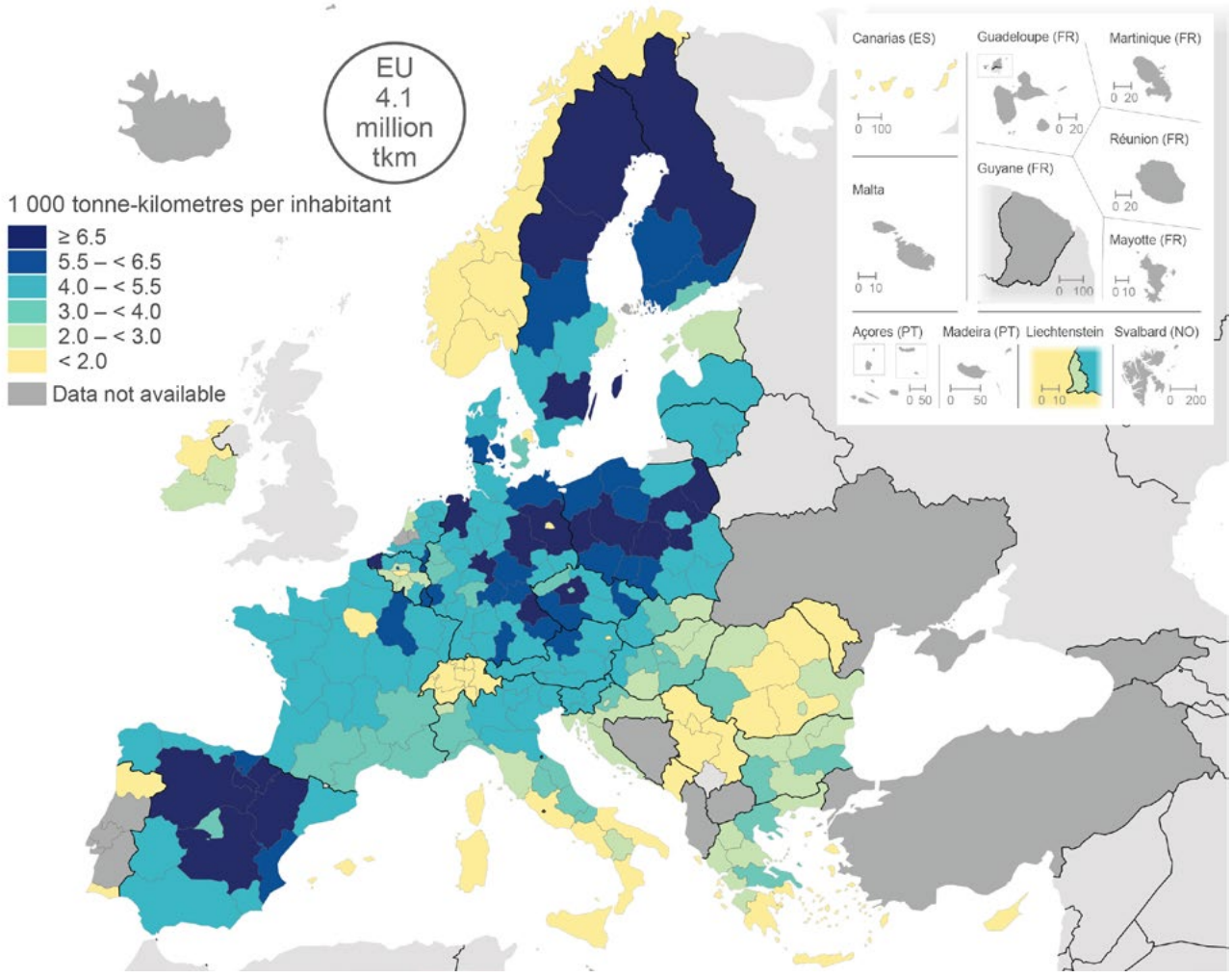
When expressed in relation to the number of inhabitants in each region, Aragón in north-east Spain recorded the highest level of road freight unloaded per inhabitant in 2023, at 10 300 tkm. Despite its relatively small population, Aragón serves as a logistics hub for freight traffic along key east–west and north–south corridors that link, among other places, Spain's 2 largest cities, as well as northern Spain with France and the rest of Europe.

The next highest levels of road freight transport – ranging from 8 000 tkm to 8 500 tkm per inhabitant in 2023 – were observed in 2 more Spanish regions, Castilla-La Mancha and Comunidad Foral de Navarra, the German regions of Kassel and Bremen, and the Swedish region of Övre Norrland

An additional 16 regions across the EU recorded an average of at least 6 500 tkm of road freight unloaded per inhabitant (as shown by the darkest shade of blue in Map 11.3):

- the Belgian region of Prov. West-Vlaanderen
- the Czech region of Střední Čechy
- the German regions of Sachsen-Anhalt, Brandenburg, Oberpfalz and Weser-Ems
- the Spanish regions of Castilla y León and La Rioja
- the Polish regions of Wielkopolskie, Lubuskie, Łódzkie, Podlaskie and Mazowiecki regionalny
- the Finnish region of Pohjois- ja Itä-Suomi
- the Swedish regions of Småland med öarna and Mellersta Norrland.

Map 11.3: Road freight transport
(1 000 tonne-kilometres per inhabitant, by NUTS 2 region of unloading, 2023)



Note: EU estimate made for the purpose of this publication (based on available data, excluding Malta).

Source: Eurostat (Transport statistics) and Eurostat (online data code: demo_r_d2jan)

ROAD FATALITIES

As noted above, while transport mobility brings many benefits, it also comes with environmental and societal costs – including greenhouse gas emissions, pollution, congestion and accidents – all of which impact our health and well-being.

In a statistical context, the number of road fatalities refers to people who died immediately in a road traffic accident or within 30 days as a result of injuries sustained in a road traffic accident. In 2023, there were 20 617 road fatalities across the EU's territory, equivalent to 46 deaths per million inhabitants.

The EU's roads are among the safest in the world. In October 2021, the European Parliament adopted a resolution on the *EU Road Safety Policy Framework 2021–2030 – Recommendations on next steps towards 'Vision Zero'* (2021/2014), reaffirming the EU's commitment to reduce the number of road deaths to near zero by 2050. The strategy set an intermediate target of halving the number of road fatalities and serious injuries between 2019 and 2030.

Lombardia (northern Italy) had the highest number of road fatalities – 377 deaths in 2023 …

In 2023, the northern Italian region of Lombardia recorded the highest number of road fatalities among NUTS level 2 regions, with 377 deaths – 25 fewer than in 2022. The only other regions in the EU where the number of road fatalities reached at least 300 were:

- Lazio, the Italian capital region (346 deaths)
- Andalucía in southern Spain (310)
- Veneto in northern Italy (309)
- Rhône-Alpes in southern France (308).

At the other end of the range, 6 NUTS level 2 regions recorded fewer than 10 road fatalities in 2023. The sparsely populated Åland archipelago in Finland and the small Spanish autonomous region of Ciudad de Melilla were the only regions in the EU to report no road fatalities – the 2nd consecutive year without any such fatalities for Åland. The other regions with fewer than 10 deaths were:

- Ciudad de Ceuta in Spain (1 death)
- Valle d'Aosta/Vallée d'Aoste in northern Italy (5)
- the Belgian capital region of Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (6)
- the French outermost region of Mayotte (7).

… while Severozapaden (Bulgaria) had the highest incidence rate – 166 road fatalities per million inhabitants

In 2023, the EU recorded 46 road fatalities per million inhabitants. These fatalities were relatively evenly distributed: 123 out of 234 NUTS level 2 regions (or 52.6% of all regions) reported a rate above the EU average, 104 had a value that was below, while there were 7 regions that had the same number of road fatalities per million inhabitants as the EU average.

Map 11.4 highlights that several rural/peripheral regions of the EU reported some of the highest incidence rates for road fatalities. In 2023, 7 NUTS level 2 regions recorded at least 100 fatalities per million inhabitants (as shown by the darkest shade of blue in the map). These regions were mostly clustered in the south-east corner of the EU. The highest rates were observed in:

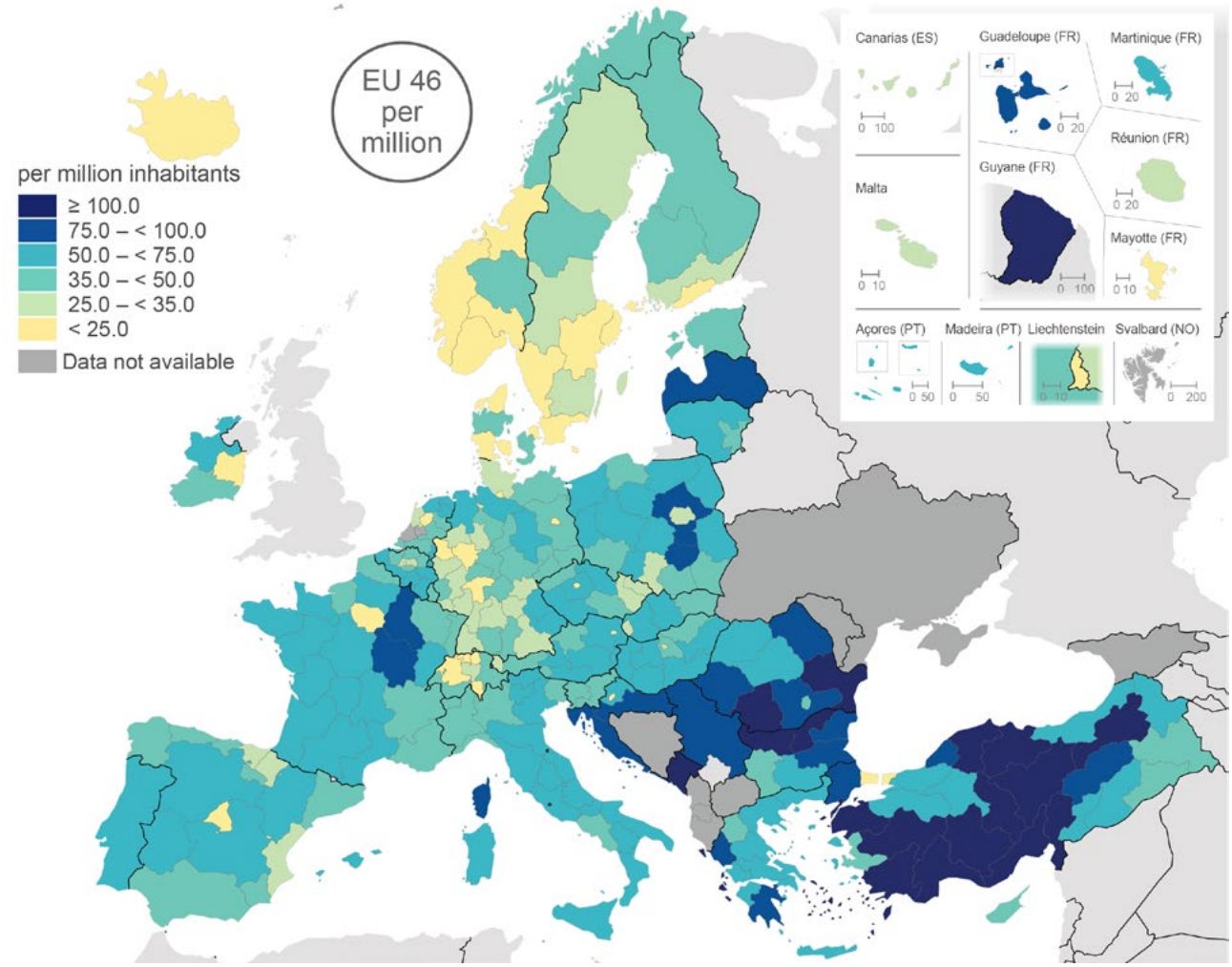
- Bulgaria – Severozapaden recorded the highest rate in the EU, with 166 road fatalities per 100 000 inhabitants; the neighbouring region of Severen tsentralen also reported a high rate (107 fatalities per 100 000 inhabitants)
- Greece – the island regions of Ionia Nisia (120 fatalities per 100 000 inhabitants) and Notio Aigaio (119 fatalities per 100 000 inhabitants)
- France – the outermost region of Guyane (117 fatalities per 100 000 inhabitants)
- Romania – Sud-Vest Oltenia (107 fatalities per 100 000 inhabitants) and Sud-Est (102 fatalities per 100 000 inhabitants).

By contrast, urban and capital regions tended to report much lower incidences of road fatalities. This may reflect factors such as more extensive public transport networks, lower motorisation rates and lower average speeds – for example, due to stricter speed limits in built-up areas or frequent congestion on urban motorway networks.

In 2023, 26 NUTS level 2 regions recorded fewer than 25 deaths per million inhabitants (they are presented in the lightest yellow shade in Map 11.4). As noted above, 2 regions reported no road fatalities at all: Åland (Finland) and Ciudad de Melilla (Spain). Leaving these atypical cases aside, most of these 26 regions were urban areas, with 11 of them being capital regions. Among those with the lowest incidence rates were:

- Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest in Belgium (5 road fatalities per million inhabitants)
- Wien in Austria (6 fatalities per 100 000 inhabitants)
- Berlin in Germany (NUTS level 1; 9 fatalities per 100 000 inhabitants).

Map 11.4: Road fatalities
(per million inhabitants, by NUTS 2 regions, 2023)



Note: Portugal and Serbia, national data.

Source: Eurostat (online data codes: tran_r_acci and tran_sf_roadus)

ROAD ACCIDENTS

In 2023, there were 868 800 accidents on the EU's roads that resulted in a death or injury; this total excludes information for Ireland, Greece, Cyprus, Latvia, Malta and Sweden. Some of the highest numbers of road accidents were, unsurprisingly, recorded in relatively large and densely populated regions:

- Lombardia recorded the most accidents in Italy (29 200 accidents)
- Cataluña had the highest number in Spain (23 600)
- Ile-de-France recorded the most accidents in France (15 900); note that for France, data are only available for NUTS level 1 regions
- Nordrhein-Westfalen had the highest count in Germany (63 300); note that for Germany, data are only available for NUTS level 1 regions.

More about the data: road accident statistics

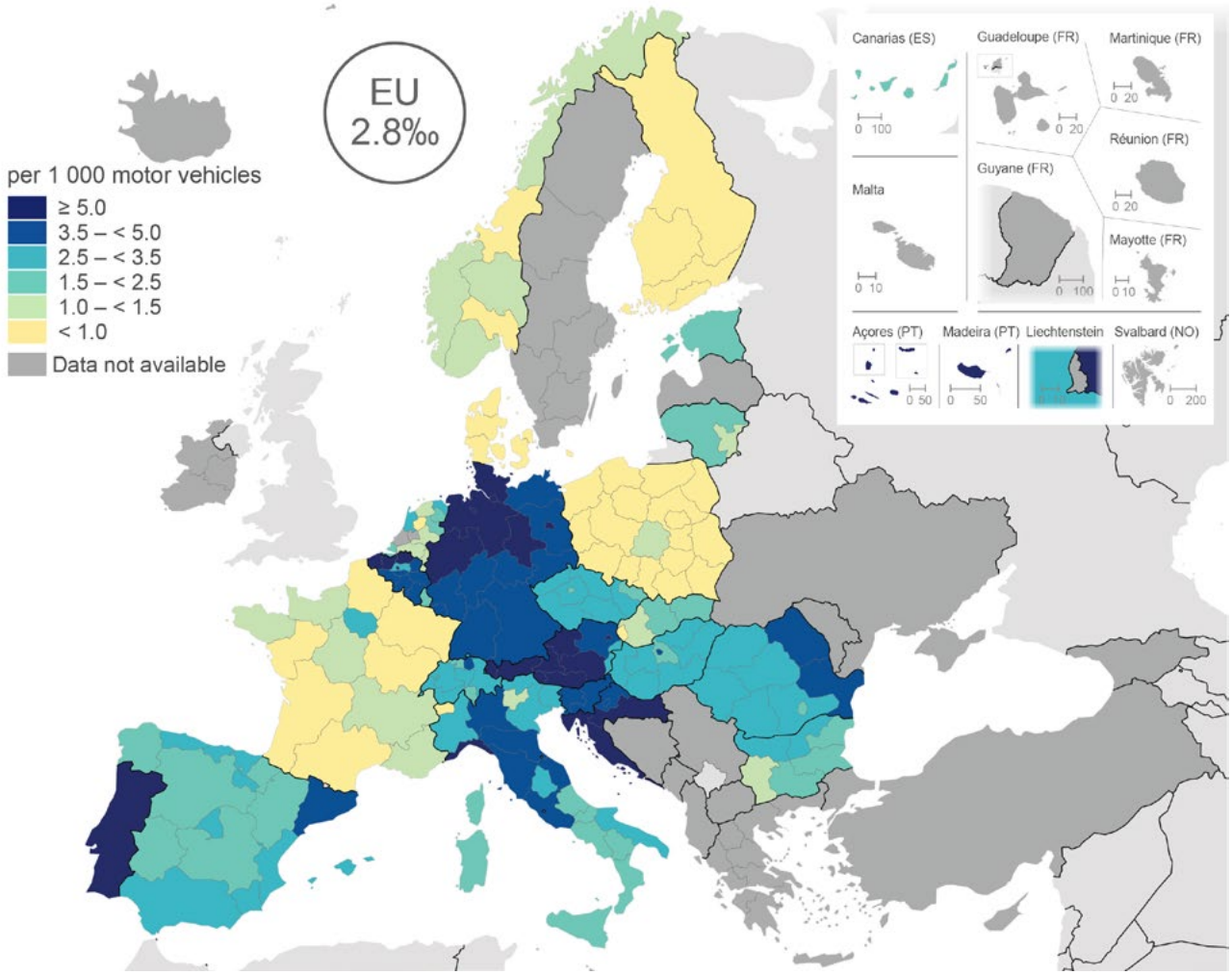
The information presented in this section on transport accidents comes from the Community database on road accidents (CARE), which is managed by the European Commission's Directorate-General for Mobility and Transport.

CARE contains information on road crashes that lead to death or injury; as such, it does not contain information on damage-only crashes, where there are no fatalities or injuries. Its main purpose is to provide evidence to identify and quantify road safety problems throughout the EU, evaluate the efficiency of road safety measures, determine the relevance of EU actions and facilitate the exchange of experiences in this field.

Road accident statistics also include fatalities and injuries in vehicles which are in transit through a region as well as fatalities and injuries of non-residents staying in a region on holiday, for business or another reason. As such, and other things being equal, regions that have transit corridors or regions with high numbers of visitors may well experience a higher incidence of fatalities and injuries.

The regional statistics presented in this section for Germany and France concern NUTS level 1 regions, while the latest information for Portugal concerns national data.

Map 11.5: Road accidents
(per 1 000 motor vehicles, by NUTS 2 regions, 2023)



Note: Germany and France, NUTS level 1. Portugal: national data. EU: estimate based on available data.

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

Map 11.5 shows the incidence of road accidents in 2023. When expressed in relation to the number of motor vehicles, there were, on average, 2.8 accidents per 1 000 motor vehicles across the EU. The regional distribution of road accidents was asymmetrical, with approximately 40% of regions (68 out of the 171 for which data are available) recording an accident rate above the EU average, while 98 regions had a lower-than-average incidence; 5 regions recorded a rate equal to the EU average.

In 2023, the highest road accident rates – at least 5.0 accidents per 1 000 motor vehicles (as shown by the darkest shade of blue in Map 11.5) – were mainly concentrated in western EU countries, with relatively high values in several regions across Belgium, Germany (NUTS level 1 regions) and Austria. Rates above this threshold were also recorded in 2 Croatian regions, 2 Spanish regions and 1 Italian region; this was also the case for Portugal (national data).

The German capital region of Berlin (NUTS level 1) had the highest accident rate among EU regions in 2023, with an average of 9.2 accidents per 1 000 motor vehicles; this was 3.3 times as high as the EU average. Berlin was followed by the 2 other German city states (also NUTS level 1): Bremen (8.4) and Hamburg (8.2). The next highest rates were observed in 2 of Austria's Alpine regions, namely, Vorarlberg (7.3) and Tirol (7.1).

Across all EU regions, the number of road accidents per 1 000 motor vehicles ranged from a high of 9.2 in Berlin, down to lows of 0.4 in the Polish regions of Podlaskie and Warszawski stołeczny (the capital region). As such, relative to the number of motor vehicles, the likelihood of having a road crash that resulted in a fatality or injury was 23 times as high in Berlin as it was in either of these 2 Polish regions.

Air traffic

In recent decades, liberalisation measures have contributed to the (rapid) growth of low-cost airlines and the expansion of smaller regional airports; the latter are typically less congested and charge lower landing fees than major international hubs.

The regional statistics presented in this section generally refer to airports handling more than 150 000 passenger units per year. It is also worth noting that some EU regions – for example, the capital region of France – host multiple airports within their boundaries, while others have none. Based on this specific subset of airports, there were 1.4 billion air passengers carried in the EU during 2023.

The French capital region of Ile-de-France – home to Paris-Charles de Gaulle and Paris-Orly airports – had 99.7 million air passengers in 2023

In 2023, 37 NUTS level 2 regions (out of 168 for which data are available) recorded at least 10.0 million air passengers carried. These regions were often located in capital regions and other major economic centres across some of the EU's largest countries, as well as in regions with popular holiday destinations.

The left-hand side of Figure 11.1 highlights the 20 regions in the EU that had the highest counts of air passengers in 2023. The French capital region of Ile-de-France had the largest number, at 99.7 million air passengers carried. The Dutch capital region of Noord-Holland – home to Amsterdam Schiphol airport – had the 2nd highest number (61.9 million), followed by the Spanish capital region of Comunidad de Madrid, where Adolfo Suárez Madrid–Barajas Airport is located (60.1 million).

This group of 20 regions included:

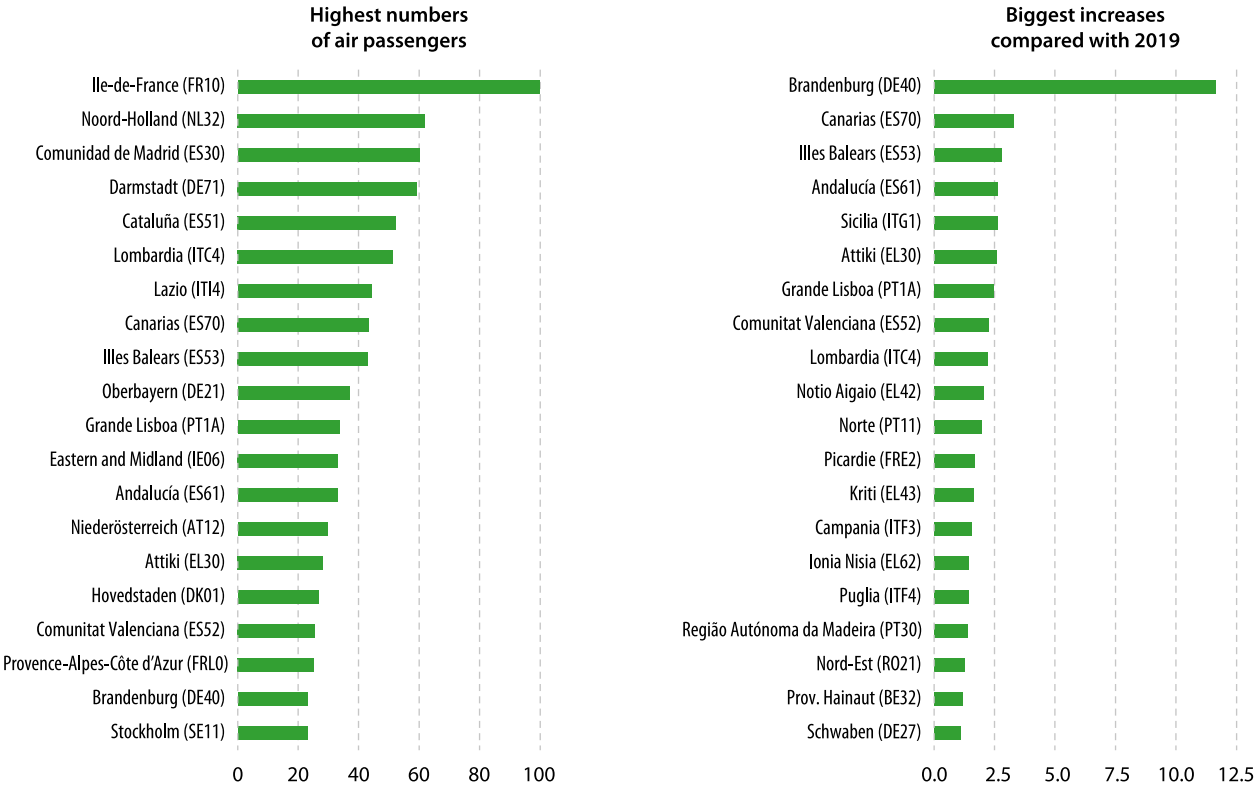
- 9 capital regions, namely, those of France, the Netherlands, Spain, Italy, Portugal, Ireland, Greece, Denmark and Sweden
- 5 more regions located in Spain – Cataluña (which has a high number of tourists, but is also an economic hub), as well as the major tourist destinations of Canarias, Illes Balears, Andalucía and Comunitat Valenciana
- 3 regions in Germany – Darmstadt (home to Frankfurt Main airport), Oberbayern (home to Munich's Franz Josef Strauss International airport) and Brandenburg (home to Berlin Brandenburg Airport Willy Brandt)
- 1 more region in Italy – Lombardia (that includes the city of Milano)
- 1 region in Austria – Niederösterreich (home to Wien–Schwechat airport)
- 1 more region in France – Provence-Alpes-Côte d'Azur (with many tourist destinations).

Figure 11.1 also provides information on the 20 NUTS level 2 regions in the EU with the highest increases in passenger numbers between 2019 and 2023 – in other words, comparing the situation before the COVID-19 pandemic with the latest available data. The number of air passengers carried increased by 11.7 million during this period in the eastern German region of Brandeburg. This rapid increase largely reflects the consolidation of air traffic at Berlin Brandenburg airport after 2020, following the closure of Berlin-Tegel airport in November 2020.

Air passenger numbers also increased at a relatively fast pace between 2019 and 2023 in several popular tourist destinations, with gains of between 2.0 and 3.3 million passengers in:

- the Spanish regions of Canarias, Illes Balears, Andalucía and Comunitat Valenciana
- the Italian regions of Sicilia and Lombardia
- the Greek regions of Attiki and Notio Aigaio
- the Portuguese regions of Grande Lisboa and Norte (that includes the city of Porto).

Figure 11.1: Air passengers carried
(million passengers, by NUTS 2 regions, 2023)



Note: the 1st part of the figure shows the EU regions with the highest number of air passengers carried, while the 2nd part shows the regions with the biggest increases compared with 2019.

Source: Eurostat (online data code: tran_r_avpa_nm)

There were 4 regions across the EU that handled more than a million tonnes of air freight and mail in 2023 – Ile-de-France (France), Darmstadt, Leipzig (both Germany) and Noord-Holland (the Netherlands)

The regional statistics presented in this section generally refer to airports handling more than 100 tonnes of freight and mail per year. Based on this subset of airports, the quantity of air freight and mail loaded and unloaded in the EU was 14.7 million tonnes during 2023. This marked a decrease of 3.1% compared with the pre-pandemic situation in 2019.

The information presented in Figure 11.2 shows data for the 20 NUTS level 2 regions in the EU with the highest quantities of freight and mail in 2023. The vast majority of air cargo handled in EU airports is extra-EU international traffic to/from non-EU countries, where speed of delivery provides a competitive advantage. While some airports that handle freight also serve as major hubs for passenger traffic, others have developed a more specialised focus on cargo operations. This often reflects factors such as a strategic location near large population centres or key transport corridors, combined with operational advantages like the absence of night-time curfews.

In 2023, the French capital region of Ile-de-France recorded the highest quantity of air freight and mail, at 2.0 million tonnes. There were 3 other regions in the EU that reported at least 1.0 million tonnes:

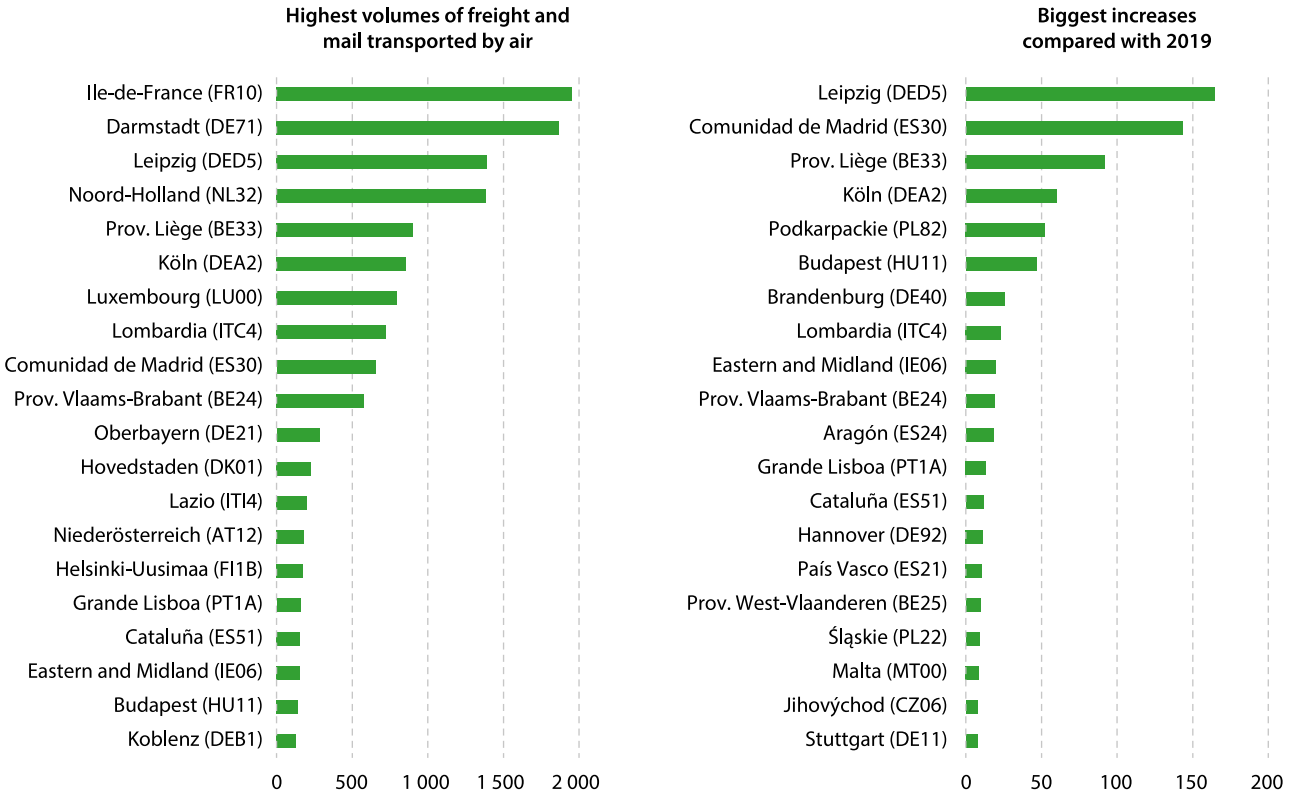
- Darmstadt in Germany (home to Frankfurt am Main airport) – 1.9 million tonnes
- Leipzig in Germany (home to Leipzig/Halle airport, a major express courier hub) – 1.4 million tonnes
- Noord-Holland in the Netherlands (home to Amsterdam/Schiphol airport) – also 1.4 million tonnes.

Figure 11.2 also shows the main changes – between 2019 and 2023 – in the quantity of air freight and mail loaded and unloaded. The quantity of goods carried increased most rapidly in Leipzig (up 164 000 tonnes) and in the Spanish capital region of Comunidad de Madrid (up 143 000 tonnes).

In 4 other regions across the EU, there were relatively large gains in the quantity of goods carried, ranging from 47 000 to 92 000 tonnes:

- Prov. Liège (Liège airport serves as an express logistics hub)
- Köln (Cologne Bonn airport is a hub for express parcel operations)
- Podkarpackie (Rzeszów–Jasionka airport, in south-east Poland, has become a key node for cargo operations since the onset of Russian military aggression against Ukraine, acting as a staging post for humanitarian aid and military supplies)
- Budapest (the Hungarian capital region).

Figure 11.2: Air freight and mail
(1 000 tonnes, by NUTS 2 regions, 2023)



Note: the 1st part of the figure shows the EU regions with the highest volumes of air freight and mail, while the 2nd part shows the regions with the biggest increases compared with 2019. Freight loaded and unloaded.

Source: Eurostat (online data code: tran_r_avgo_nm)

Inland waterways

In 2023, 917.8 million tonnes of freight were handled by inland waterways across the EU (goods loaded and unloaded). Figure 11.3 presents the volume of freight handled across NUTS level 2 regions; note that many regions in the EU do not have any inland waterways that are used for transporting goods.

In 2023, Zuid-Holland (the Netherlands) accounted for more than 15% of the EU's freight handled (in other words, loaded and unloaded) by inland waterways

Inland waterway freight transport in the EU is highly concentrated in a relatively small number of regions – primarily in the Netherlands, Germany and Belgium – that are linked to major river systems. Zuid-Holland in the Netherlands recorded the highest freight volume handled in 2023, with 159.8 million tonnes of goods loaded or unloaded in this region. Its principal city, Rotterdam, plays a central role as Europe's largest seaport and a gateway to the Rhine-Meuse-Scheldt river system. It facilitates efficient cargo transfer between ocean shipping and inland waterways through its extensive port and canal infrastructure.

There were several other regions from the Netherlands that also featured prominently at the top of the list of the EU's principal regions for handling inland waterways freight transport in 2023: Noord-Holland (67.9 million tonnes), Zeeland (44.3 million tonnes), Noord-Brabant (31.0 million tonnes), Limburg (23.7 million tonnes) and Gelderland (20.8 million tonnes) all reported more than 20 million tonnes of freight loaded and unloaded, reflecting the Netherlands dense and extensive inland waterway network. Some 65.0% of all inland waterway freight handled in the EU in 2023 was concentrated in just 11 NUTS level 2 regions, each handling more than 20 million tonnes. Outside of the Netherlands (see above), there were 5 other regions that surpassed this threshold:

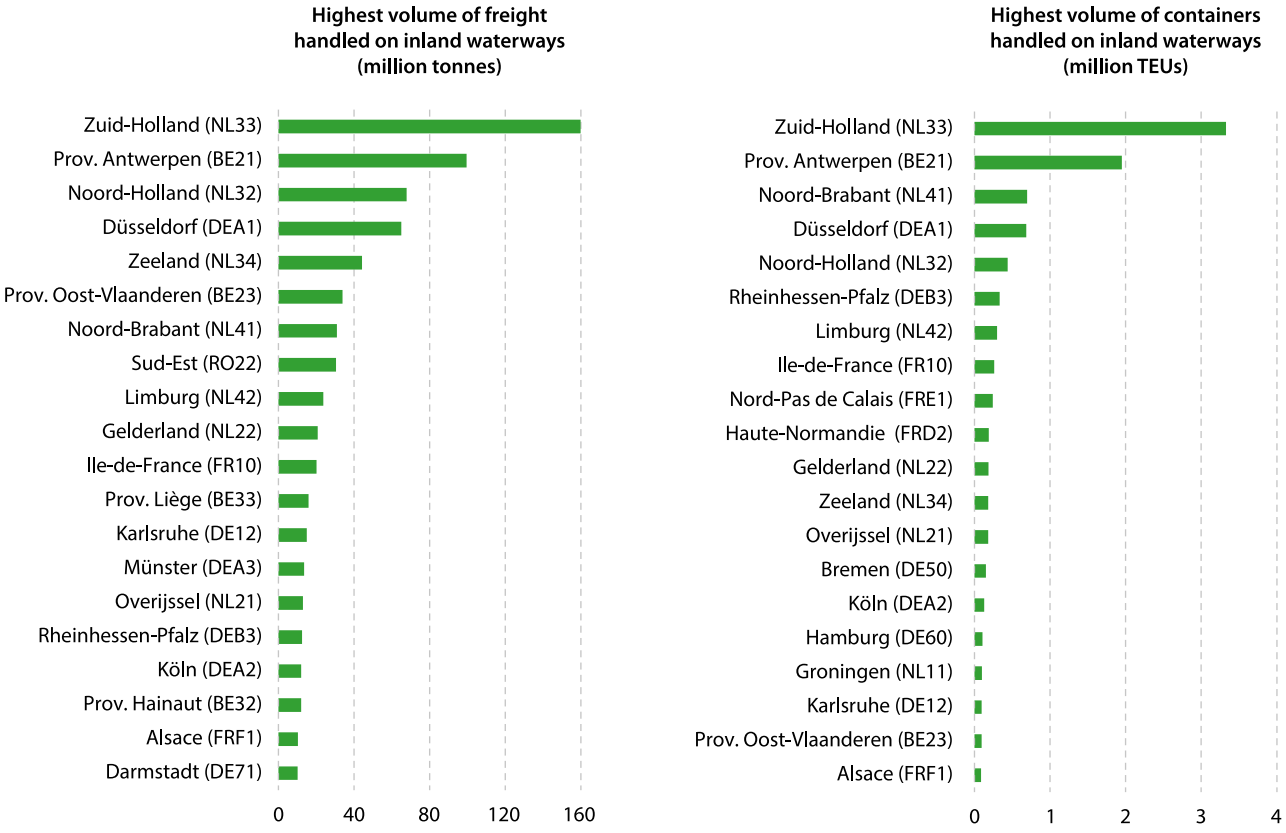
- the Belgian region of Prov. Antwerpen (99.5 million tonnes), with the port of Antwerp lying on the tidal section of the Scheldt river
- Düsseldorf (65.0 million tonnes), situated on the Rhine, is a key hub for inland waterway freight transport within Germany and further afield
- Prov. Oost-Vlaanderen (33.9 million tonnes) in Belgium, which contains the port of Ghent
- the Sud-Est region of Romania (30.6 million tonnes), crossed by the Danube – Europe's 2nd-longest river
- Ile-de-France (20.2 million tonnes), primarily served by the river Seine, a major inland waterway that facilitates freight transport to and from the French capital region.

Figure 11.3 also presents data on the top EU regions where freight containers were loaded or unloaded on inland waterways, presenting the volume of goods handled in different EU regions. These containers – which measure at least 20 feet in length – are specially designed to facilitate the carriage of goods across 1 or more transport modes without intermediate reloading.

In 2023, Zuid-Holland (the Netherlands) recorded 3.3 million twenty-foot equivalent units (TEUs) of inland waterway container freight handled, followed by Prov. Antwerpen (Belgium) with 1.9 million TEUs. Together, these 2 regions accounted for nearly half (48.4%) of the EU's inland waterway container freight handling. Other regions with relatively high volumes included Noord-Brabant (the Netherlands) and Düsseldorf (Germany), both handling 0.7 million TEUs, followed by Noord-Holland (0.4 million TEUs), Rheinhessen-Pfalz (Germany), Limburg (the Netherlands) and Ile-de-France (France) – each with 0.3 million TEUs.

Container transport on inland waterways is therefore heavily concentrated in a limited number of EU regions, primarily in the Netherlands, Belgium and Germany. These countries benefit from extensive inland waterway networks that are integral to their transport systems, linking major ports such as Rotterdam, Antwerp-Bruges, Tilburg, Düsseldorf, Amsterdam, Ludwigshafen and Venlo – all vital hubs for container shipping.

Figure 11.3: Inland waterway freight transport
(by NUTS 2 regions, 2023)



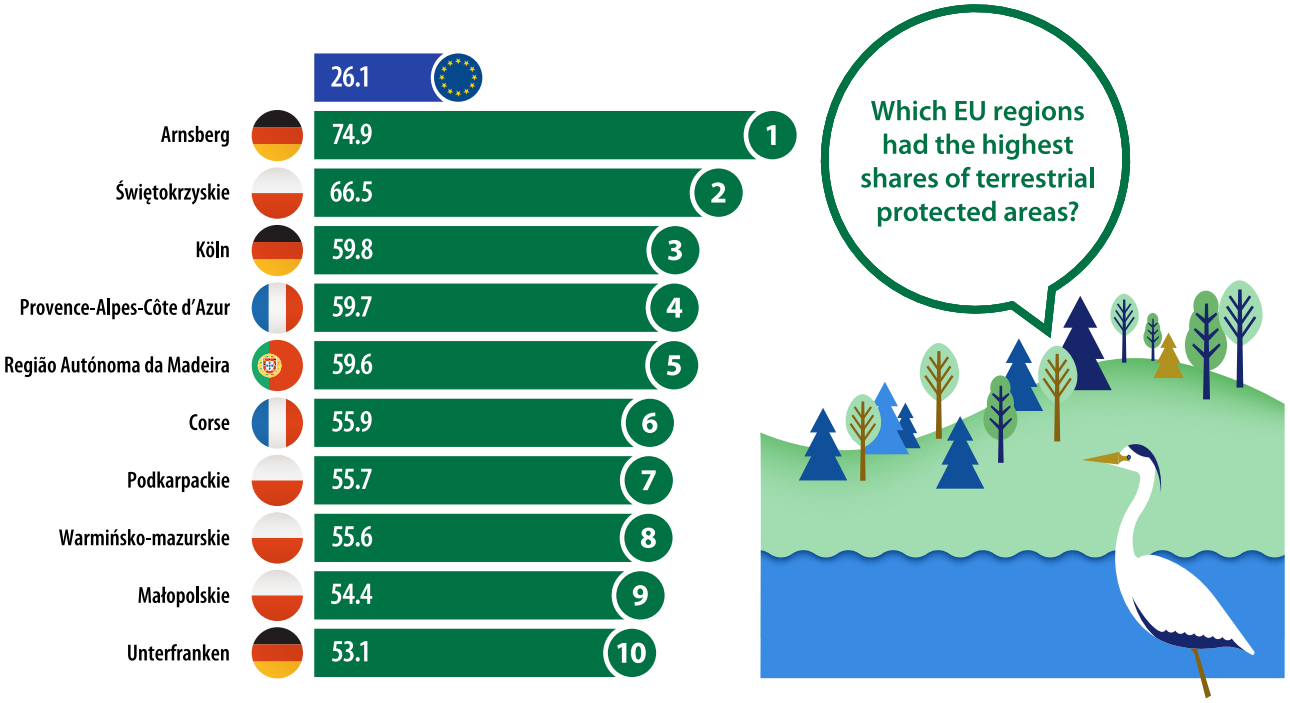
Note: the 1st part of the figure shows the EU regions with the highest volumes of freight handled (loaded and unloaded) on inland waterways, while the 2nd part shows the regions with the highest volumes of containers handled (loaded and unloaded) on inland waterways. The scales on the numeric axes are different.

Source: Eurostat (online data codes: iww_go_atygofl and iww_go_actygofl)

12. Environment

Climate change and environmental degradation are 2 of the most serious threats with far-reaching consequences for ecosystems, human health and the global economy. These threats are interrelated: climate change affects biodiversity, while healthy ecosystems provide services that are critical for climate change mitigation (carbon sinks and stocks) and adaptation (water retention, protection against floods and desertification, urban heat reduction, protection against air pollution, and so on).

The United Nations (UN's) 2030 Agenda for Sustainable Development is a long-term strategy that aims to achieve a range of social, economic, environmental and institutional targets. The targets are divided into a set of 17 Sustainable Development Goals (SDGs). For the EU, specific indicators are in place that are used to measure progress towards achieving the SDGs in a national and European context. For example, SDG 15 'life on land' aims to protect, restore and promote the sustainable use of terrestrial ecosystems. The infographic below highlights that, in 2022, terrestrial protected areas covered almost 75% of the total land area of Arnsberg, a western German region characterised by its forests, hills and reservoirs.



(% of land area, by NUTS 2 regions, 2022)

Note: comprises nationally designated protected areas and Natura 2000 sites (protected areas designated under the EU Habitats and Birds Directives with the goal to maintain or restore a favourable conservation status for habitat types and species of EU interest).

Source: European Environment Agency (EEA) and Eurostat (online data code: sdg_15_20)

Climate change mitigation

SDG 13 'take urgent action to combat climate change and its impacts' is designed to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters, integrating climate change measures into national policies, while improving education and raising awareness and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

EU countries are legally committed to fighting climate change by shifting to a climate-neutral economy with net-zero greenhouse gas emissions by 2050. Regulation (EU) 2021/1119 establishing the framework for achieving climate neutrality – hereafter referred to as the European Climate Law – seeks to create a cleaner and healthier EU by transforming the way enterprises and people behave, both in terms of production and consumption patterns. This legal act provides the EU's contribution to the Paris Agreement, which set an ambitious global goal 'to limit the temperature increase to 1.5°C above pre-industrial levels'. The European Climate Law, together with a package of policy initiatives, enshrines the European Green Deal's goal of climate neutrality by 2050. It sets an interim target of reducing EU greenhouse gas emissions by at least 55% by 2030 (compared with 1990 levels) and has been reinforced by a proposal to add a 2040 target to cut emissions by 90%. Such reductions will require profound and transformative changes, for example, to energy and transport systems, industrial processes and agriculture, as well as increased carbon removal by ecosystems. Map 12.1 shows the movement made towards these targets, with greenhouse gas emissions across the EU falling 33.9% between 1990 and 2023. Note: data exclude international shipping and aviation – although both form part of the overall targets – as these items are excluded from the regional datasets.

Greenhouse gas emissions fell in 83.6% of EU regions between 1990 and 2023

There were 204 NUTS level 2 regions across the EU that recorded a fall in greenhouse gas emissions between 1990 and 2023, while 40 regions experienced an increase. Every region of Belgium, Bulgaria, Czechia, Denmark, Germany, Lithuania, Hungary, Romania, Slovenia, Slovakia, Finland and Sweden recorded a fall in greenhouse gas emissions during the period under consideration; this was the case in Estonia, Latvia, Luxembourg and Malta too.

- Emissions generally declined most strongly in eastern and Baltic EU countries. By contrast, within these countries the Croatian capital region and 3 Polish regions stood out for recording marked increases in emissions.
- Most regions in western and Nordic EU countries experienced modest reductions in greenhouse gas emissions between 1990 and 2023. Nevertheless, some regions in Ireland, the Netherlands and Austria saw emissions rise, as was the case for the French outermost regions.
- Developments in southern EU countries were more varied, with several regions recording sharp increases, while others registered sizeable reductions in emissions; this mixed pattern was observed in all of the southern EU countries with more than 1 region.

Between 1990 and 2023, 25 out of 244 regions for which data are available reported their greenhouse gas emissions decreasing by more than 55.0% – the target set for the EU by 2030. These 25 regions were geographically diverse – as shown by the darkest shade of teal in Map 12.1 – including:

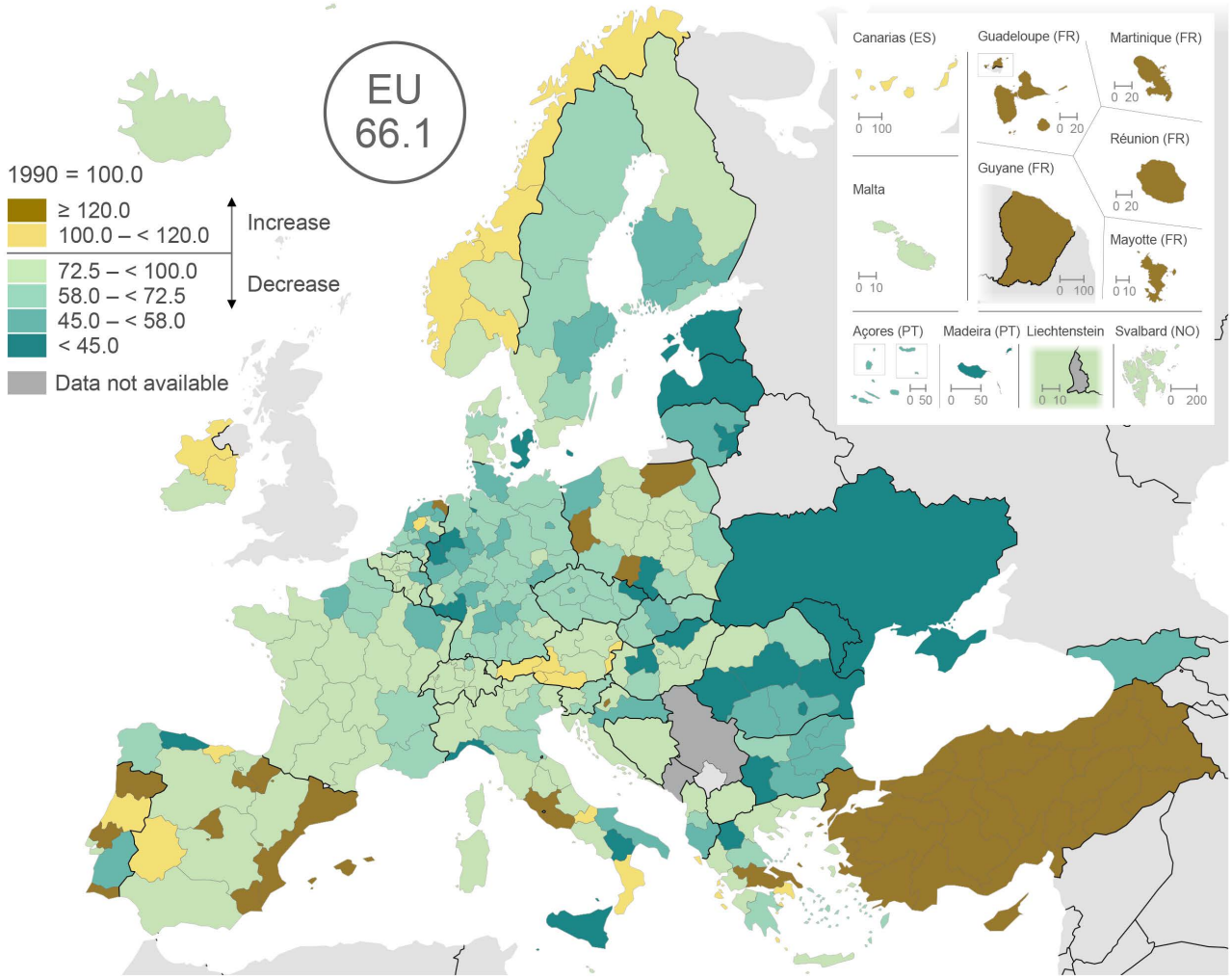
- 5 predominantly urban regions in Germany
- 4 regions in Romania (including the capital region)
- 3 regions in Italy
- 2 regions in Denmark (including the capital region)
- 2 regions in Hungary
- the capital regions of Bulgaria and Lithuania
- single regions in Czechia, Greece, Spain, Poland and Portugal
- the neighbouring Baltic countries of Estonia and Latvia.

Greenhouse gas emissions declined in most EU regions between 1990 and 2023. While the average reduction across the EU was 33.9%, some regions recorded considerably larger decreases. Among NUTS level 2 regions, the largest decline in emissions was in Dytiki Makedonia, Greece (down 76.8%), where lignite-based electricity generation was phased out. Sostinės regionas in Lithuania (down 74.6%) and Região Autónoma da Madeira in Portugal (down 73.7%) also registered significant reductions in their emissions.

Between 1990 and 2023, greenhouse gas emission increased in a majority of the NUTS level 2 regions in Ireland and Spain, as well as in Cyprus. At the upper end of the distribution, the largest increases were recorded in Ciudad de Ceuta (Spain), where emissions rose by 305.0%, and in Mayotte (France), with an increase of 238.9%. Excluding the autonomous Spanish cities and the French outermost regions:

- the most substantial increases occurred in Región de Murcia (southern Spain) and in Cyprus, where emissions almost doubled over the period under review (up 91.8% and 90.4%, respectively)
- the next largest increase was observed in La Rioja (Spain), where emissions rose 73.2%
- 2 other regions saw their emissions grow by more than 50.0% – Opolskie in Poland (up 53.4%) and the Croatian capital region of Grad Zagreb (up 52.0%).

Map 12.1: Change in greenhouse gas emissions
(index relative to 1990 = 100.0, by NUTS 2 regions, 2023)



Note: index calculated as change in tonnes of CO2-equivalents based on global warming potential values from the IPCC AR5. International shipping and aviation are excluded from the calculation. Ukraine: national data.

Source: EDGAR_GHG_NUTS2_v3.0. GHG emissions at subnational level, European Commission (JRC), see https://edgar.jrc.ec.europa.eu/dataset_ghg2024_nuts2

Climate change impacts

DROUGHT IMPACT

SDG 15 'life on land' aims to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.

Most regions in the EU have sufficient water resources: however, water scarcity and drought are becoming increasingly frequent and widespread phenomena. Severe and frequent droughts may, among other impacts, lead to a reduction in water resources, reduce agricultural output, accelerate the process of soil erosion and release carbon stored in soils. Droughts can also impact biodiversity, the restoration of nature through habitat loss, the migration of species and the spread of invasive alien species, as identified in the EU's Nature Restoration Regulation (EU) 2022/869 – a key element of the EU's biodiversity strategy for 2030.

Information on the severity of drought conditions – which arise when soil moisture availability to plants drops to such a level that it adversely affects crop yield (and hence, agricultural production) – can be used as a measure for drought impacts. Map 12.2 shows the average share of land area exposed to a severe soil moisture deficit during the period between 2013 and 2023; note, a lengthier time series is available on the EEA website covering the period from 2000 onwards.

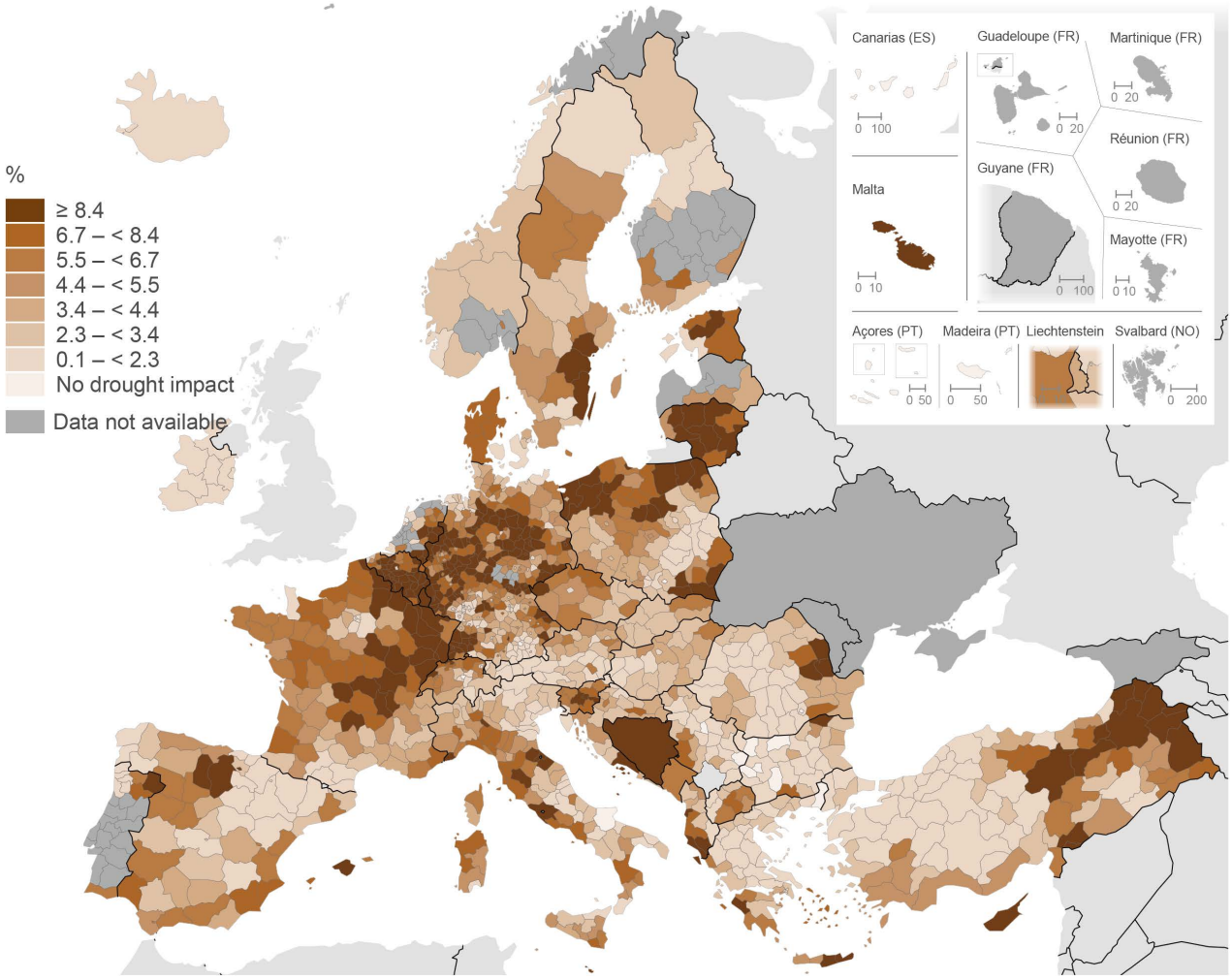
Between 2013 and 2023, the average annual area affected by drought in terms of reduced vegetation productivity in areas with severe soil moisture deficit during the growing season was approximately 186 000 km^2. Above average areas of land were impacted in 4 of the last 6 years, with 2021 and 2023 being the exceptions.

In 2022, the EU experienced its hottest summer to date and its 2nd warmest year on record; nearly 650 000 km^2 of land were affected by drought. By contrast, pressure on European ecosystems eased in 2023, with approximately 144 000 km^2 affected – less than 25% of the area impacted a year before. In 2023, the largest share of land impacted by drought was cropland (46.3% of the total), followed by forest and woodland (36.1%) and grassland (7.8%). While detailed information on drought impact is not yet available for 2024, the fact that it was Europe's warmest year on record suggests continued pressure on ecosystems.

The impact of drought was particularly prevalent across German and Belgian regions in 2023

In 2023, drought impacts were relatively evenly distributed across regions: 50.1% of all EU regions recorded a drought-affected area above the EU average of 4.6%. At the top end of the distribution, 225 NUTS level 3 regions were impacted by drought. On average, at least 8.4% of these region's land area was affected during the period 2013 to 2023 (corresponding to the darkest shade of brown in Map 12.2). They were primarily concentrated in a band of regions running from central France, into the Benelux countries, Germany, Poland and the Baltic countries. Germany (115 regions), Belgium (29 regions), France (19 regions) and Poland (16 regions) together accounted for approximately 80% of all regions with a relatively high share of land impacted by drought.

Map 12.2: Average area with reduced vegetation productivity during the growing season
(% of land area, by NUTS 3 regions, 2013–23)



Source: European Environment Agency (EEA), Copernicus Land Monitoring Service, Copernicus Emergency Management Service and Eurostat (online data code: sdg_15_42)

Between 2013 and 2023, the highest average area impacted by drought was recorded in the southern Belgian region of Arr. Namur, where 22.3% of the land was affected. There were 2 German regions that also had shares that exceeded 20.0%: Dessau-Roßlau, Kreisfreie Stadt in the east (20.6%) and Borken in the west (20.5%). In addition, 11 other regions reported their average area impacted by drought within the range of 15.0–18.0%:

- the Dutch regions of Twente and Achterhoek
- the German regions of Fulda, Wesel and Coburg, Kreisfreie Stadt
- the Belgian regions of Arr. Nivelles, Arr. Bastogne, Arr. Huy, Arr. Dinant and Arr. Soignies
- Luxembourg.

By contrast, there were 258 NUTS level 3 regions where the average area impacted by drought between 2013 and 2023 was less than 2.3% of the total land area (they are shown with the 2 lightest shades of brown in Map 12.2). They were widely distributed across the EU, with the exception of northern areas. Notably, there were 2 main clusters: 1 group concentrated in southern Germany and eastern Austria, and the other concentrated in south-eastern parts of the EU. The highest counts of regions with relatively low shares of their area impacted by drought were found in:

- Germany (68 regions)
- Italy (24 regions)
- Greece and Spain (each 23 regions)
- Romania (21 regions)
- Bulgaria (18 regions)
- Austria (14 regions)
- Poland (12 regions)
- France (11 regions).

During the period 2013 to 2023 there were 24 regions which reported no drought impact. This group included several outermost regions in the Atlantic, comprising the 7 regions that form Canarias (Spain) and the Regiões Autónomas dos Açores e da Madeira (Portugal). In addition, 5 regions in western Bulgaria also recorded no drought-impact.

Among the 1 112 NUTS level 3 regions for which data are available, 408 experienced some impact from drought during 2023, while 704 recorded no drought impact. Figure 12.1 highlights the regions with the largest areas of land affected by drought in 2023. The information is presented in absolute figures (in km^2) and therefore reflects – at least to some degree – the overall size of each region, alongside the meteorological conditions experienced throughout the year. The central Swedish region of Jämtlands län had the largest drought-impacted area, at 4 100 km^2. The next highest value was in the south-western Spanish region of Badajoz, with 4 000 km^2 impacted.

All 20 EU regions with the largest drought-impacted areas in 2023 – each with at least 1 990 km^2 affected – were concentrated either in the north-eastern parts of the EU (the Baltic and Nordic EU countries or Poland) or in Spain. As noted above, these figures reflect absolute areas impacted, meaning that larger regions experiencing moderate drought may still rank relatively high in terms of their total affected area.

Although north-eastern parts of the EU typically experience a temperate climate with relatively high rainfall, 2023 was marked by extended periods of low precipitation and above-average temperatures. By contrast, much of Spain has a semi-arid climate with hot summers, making its regions particularly vulnerable to drought on a regular basis.

Alongside the 2 regions with the largest areas of drought-impacted land – Jämtlands län and Badajoz – the remaining 18 EU regions with at least 1 990 km^2 of drought-affected land were located in:

- Spain (6 additional regions)
- Lithuania, Poland (4 regions each)
- Estonia (2 regions)
- Lativa and Finland (1 region each).

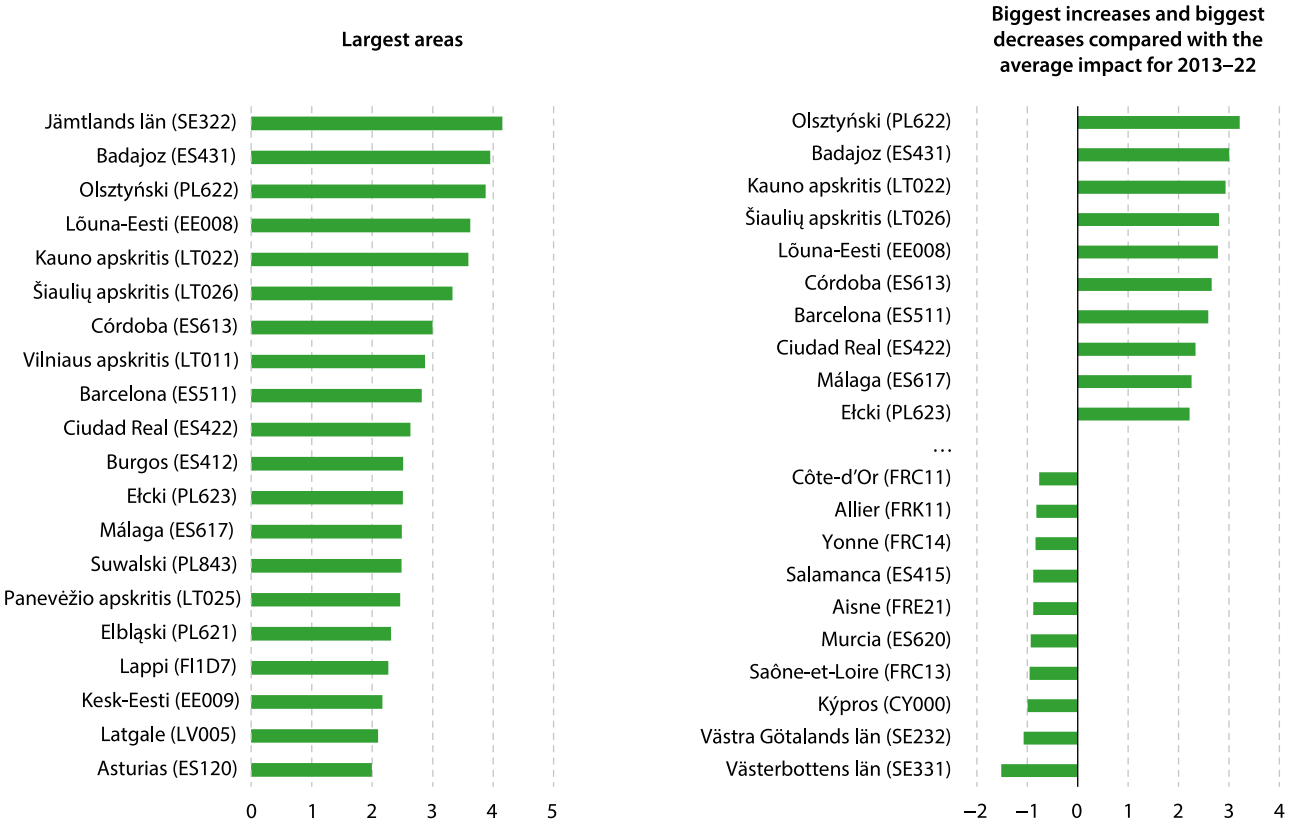
The 2nd part of Figure 12.1 shows the NUTS level 3 regions with the biggest changes in the area of land affected by drought, comparing 2023 – the latest year for which data are available – with the average for 2013 to 2022. Across the EU, an average of 190 000 km^2 of land was affected by drought annually between 2013 and 2022, which was 46 500 km^2 more than the area impacted in 2023.

Among the 1 112 regions for which data are available, 973 recorded a smaller area of land impacted by drought in 2023 compared with the average for 2013 to 2022. In 15 regions, the affected area was unchanged, while 124 regions recorded a larger area impacted.

In 2023, the most pronounced increase in drought-impacted area – compared with the average for the period 2013 to 2022 – was recorded in the north-eastern Polish region of Olsztyński, where an additional 3 200 km^2 of land was impacted. The next largest increases were observed in Badajoz in Spain (an additional 3.0 thousand km^2) and Kauno apskritis in Lithuania (up 2 900 km^2). The next largest developments, with increases of 2 600 km^2 to 2 800 km^2, were reported in Šiaulių apskritis (Lithuania), Lõuna-Eesti (Estonia), as well as Córdoba and Barcelona (both Spain).

The largest reduction in drought-impacted areas in 2023 – compared with the average area affected during the period 2013 to 2022 – was recorded in the northern Swedish region of Västerbottens län, where the impacted area was 1 500 km^2 smaller than the previous decade's average. The 2nd-largest decrease also occurred in Sweden, as Västra Götalands län recorded a fall of 1 100 km^2. There were notable decreases – between 800 km^2 and 1 100 km^2 – in Cyprus, several French regions (Saône-et-Loire, Aisne, Yonne, Allier and Côte-d'Or) and 2 Spanish regions (Murcia and Salamanca).

Figure 12.1: Average area with reduced vegetation productivity during the growing season
(1 000 km^2 of land area, by NUTS 3 regions, 2023)



Note: the 1st part of the figure shows the EU regions with the largest areas impacted by drought, while the 2nd part shows those regions with the biggest increases and biggest decreases compared with the average impact for 2013–22. Germany, France, Latvia, the Netherlands, Portugal and Finland: several regions for which data are not available (too many to document). The scales on the numeric axes are different.

Source: European Environment Agency (EEA), Copernicus Land Monitoring Service, Copernicus Emergency Management Service and Eurostat (online data code: sdg_15_42)

Protected land

SDG 15 'life on land' seeks to conserve and sustainably use terrestrial ecosystems. The *EU biodiversity strategy for 2030 – Bringing nature back into our lives* (COM(2020) 380 final) sets targets to protect a minimum of 30% of the EU's land and sea area, with specific commitments to protect nature and reverse the degradation of ecosystems.

The information presented in this section comprises Natura 2000 sites and other nationally designated protected areas. Natura 2000 – established in 1992 – is the world's largest network of protected areas that are designated under the EU Habitats and Birds Directives with the goal to maintain or restore a favourable conservation status for habitat types and species of EU interest. In 2022, the Natura 2000 network extended over 18.6% of the EU's land area and 9.0% of its marine territory. Alongside Natura 2000 sites, many EU regions have other nationally designated protected areas.

Map 12.3 shows the proportion of terrestrial protected areas relative to the total land area in each NUTS level 3 region. In 2022, the regional distribution of this indicator was relatively balanced around the EU average of 26.1%. Out of 1 160 regions for which data are available, 586 reported an above-average share, a single region had the same share, while 573 regions had lower-than-average shares.

Many of the regions with the highest shares of protected areas were broadly spread across Germany, while there were also several regions in Poland (particularly along its southern border). Other notable clusters were located in southern France, southern Bulgaria and northern Greece, as well as several coastal regions of Croatia, Alpine regions of Austria and the island regions of Corse (France) and Região Autónoma da Madeira (Portugal).

There were 116 regions across the EU which had at least 55.0% of their total area designated as protected in 2022 (as shown by the darkest shade of blue in Map 12.3). In 3 regions, protected areas covered almost the entire territory:

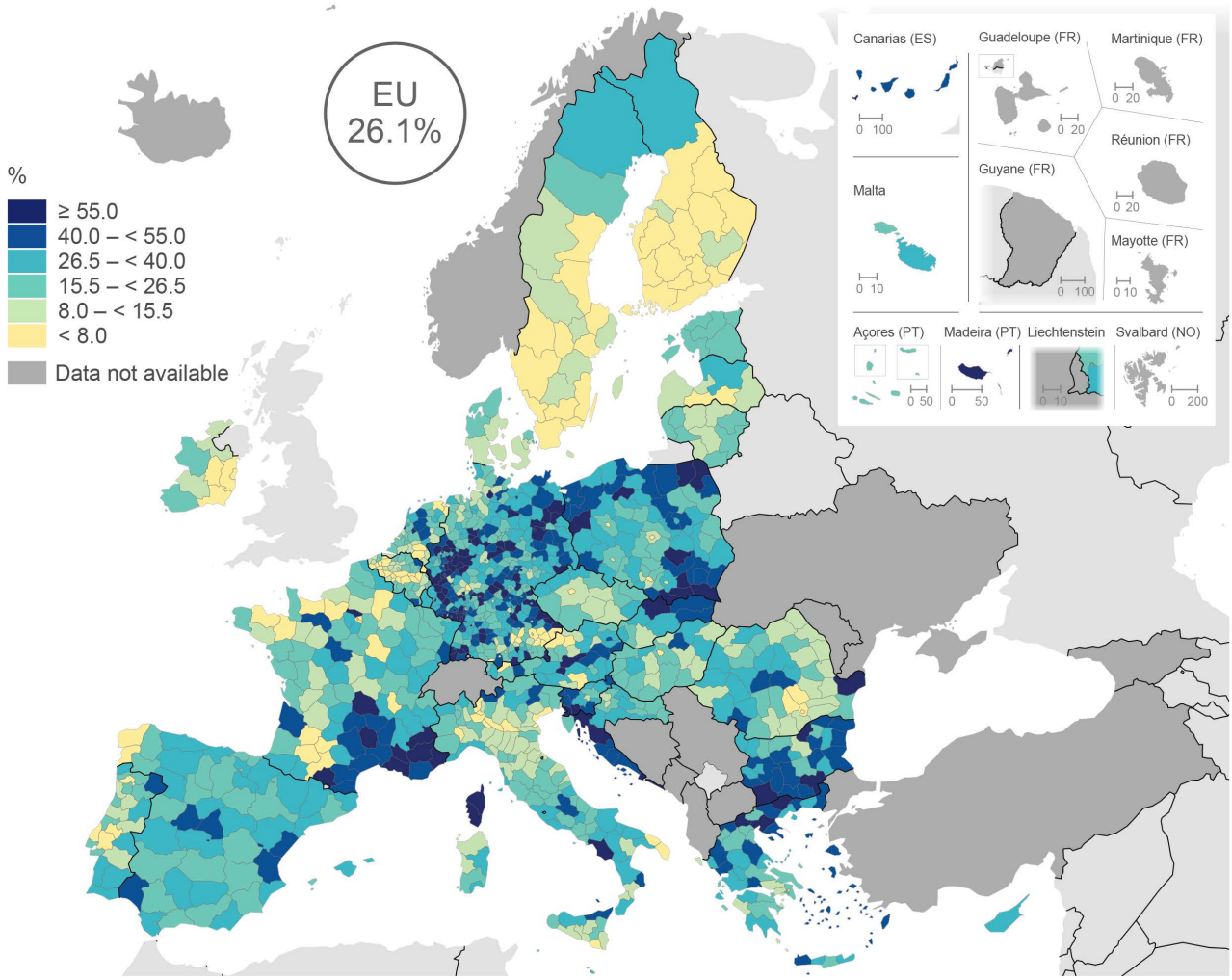
- Berchtesgadener Land in south-eastern Germany (99.9%)
- Lungau in central Austria (99.8%)
- Ahrweiler in western Germany (94.8%).

There were 20 additional regions across the EU where, in 2022, protected areas covered more than 75.0% of the land area:

- the majority of these – 15 regions – were located in Germany, most of them in North Rhine-Westphalia
- the remaining 5 included 3 regions in Poland and single regions from each of Croatia and Austria.

At the lower end of the distribution, 118 regions had less than 8.0% of their total area designated as protected in 2022 (they are shown in a light yellow shade in Map 12.3). Many of these relatively low shares were in Finland, Sweden, eastern Ireland, north-western Spain, central Portugal, northern France extending into Belgium and the Netherlands, northern Italy and a band of regions stretching from Bavaria (Germany) into northern Austria. A few countries had just 1 region with a relatively low share of their total area designated as protected; in Czechia and Hungary, this was the capital region.

Map 12.3: Terrestrial protected areas
(% of land area, by NUTS 3 regions, 2022)



Note: terrestrial protected areas comprise nationally designated protected areas and Natura 2000 sites.

Source: European Environment Agency (EEA) and Eurostat (online data code: sdg_15_20)

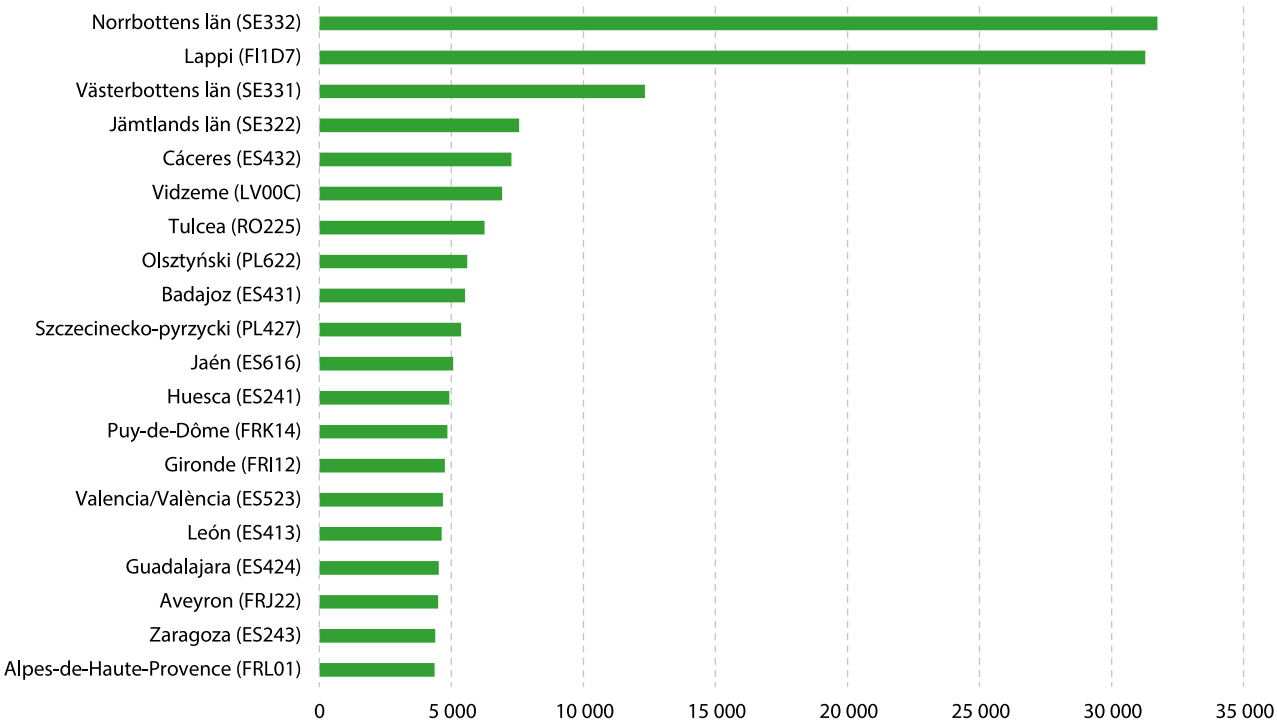
The data presented in Figure 12.2 reflects, to some degree, the size of various administrative units; some sparsely populated regions are particularly large when measured in terms of their area. In 2022, the 2 NUTS level 3 regions with, by far, the largest terrestrial protected areas – Natura 2000 sites and nationally designated areas – were:

- the Swedish region of Norrbottens län (31 700 km^2)
- the Finnish region of Lappi (31 300 km^2).

The protected areas in both of these Nordic regions were mainly forest and semi natural areas, but they also had quite large wetlands and water bodies. The next largest protected areas – with between 5 100 km^2 and 12 300 km^2 – were recorded in:

- Västerbottens län and Jämtlands län (Sweden)
- Cáceres, Badajoz and Jaén (Spain)
- Vidzeme (Latvia)
- Tulcea (Romania)
- Olsztyński and Szczecinecko-pyrzycki (Poland).

Figure 12.2: Terrestrial protected areas
(km^2, by NUTS 3 regions, 2022)



Note: the figure shows the 20 largest areas across NUTS level 3 regions. Comprises nationally designated protected areas and Natura 2000 sites.

Source: European Environment Agency (EEA) and Eurostat (online data code: sdg_15_20)

Air quality

SDG 11 'sustainable cities and communities' aims to make cities and human settlements inclusive, safe, resilient and sustainable. A key aspect of this goal is to reduce the environmental impact of urban areas, particularly by improving air quality and enhancing the management of municipal and other forms of waste.

Air quality can deteriorate considerably due to human activities such as industrial processes, the burning of solid fuels, housing, transport, agriculture and the generation or treatment of waste. In addition, natural sources of air pollution include volcanic eruptions, desert dust and forest fires.

Air pollution remains a major cause of premature death and disease across the EU, with fine particulate matter (PM2.5) identified as having the most serious human health impacts. Some of the most common causes of both illness and premature death attributed to air pollution include heart disease, stroke, lung disease, lung cancer and asthma; these illnesses also have an associated economic cost through lost working days and healthcare expenditure.

To address this, the EU's zero pollution action plan has set a target to reduce premature deaths caused by fine particulate matter by at least 55% by 2030 (relative to 2005 levels). More broadly, the plan aims to bring air, water and soil pollution down to levels no longer considered harmful to human health and natural ecosystems by 2050. The final section in this chapter provides statistics on the magnitude of the health impacts of air pollution resulting from exposure to fine particulate matter.

More about the data: air quality guidelines, commitments and targets

Fine particulate matter refers to particles with a diameter of 2.5 micrometres or less (otherwise referred to as PM2.5). In September 2021, the World Health Organization (WHO) issued new global air quality guidelines, emphasising the need to safeguard public health: the long-term guideline level was set as an annual average of 5 µg/m^3 for PM2.5. These guidelines reflect growing scientific evidence that even low concentrations of air pollution may pose significant risks to human health.

As part of its goal to eliminate pollution by 2050, the European Commission has outlined key targets and initiatives. Among these, an intermediate goal to reduce premature deaths resulting from exposure to air pollution by at least 55% between 2005 and 2030.

In December 2024, a revised Directive on ambient air quality and cleaner air for Europe (Directive (EU) 2024/2881) came into force. Under this directive, the European Commission will review the latest scientific evidence on air pollution and its health impacts by the end of 2030 and every 5 years thereafter – or more often if new findings warrant it – to ensure the standards continue to be appropriate. The directive sets a new annual limit value for the EU of 10 µg/m^3 for PM2.5, to be met by 1 January 2030.

The revised directive also aims to strengthen air quality plans and roadmaps for territorial units where pollution exceeds EU standards. It updates air quality limits for 12 pollutants, including fine particulate matter. In addition, it also provides an opportunity for individuals to seek compensation if their health is harmed due to violations of EU air quality rules.

In 2022, there were 4 486 premature deaths attributed to fine particulate matter in the northern Italian region of Milano

The European Environment Agency (EEA) estimates that fine particulate matter resulted in 239 100 premature deaths across the EU in 2022, which equated to 78 premature deaths per 100 000 inhabitants aged 30 years or more. Note all of the information in this section on premature deaths attributable to fine particulate matter concerns a cohort of people aged 30 years or more – sometimes referred to as the 'affected population' – since this is the population age range generally considered within epidemiological studies.

The regional distribution of premature deaths attributed to fine particulate matter was skewed: in 724 out of 1 061 NUTS level 3 regions for which data are available in 2022 – or approximately 2 out of every 3 regions in the EU (68.2%) – the number of premature deaths per 100 000 inhabitants was below the EU average.

Unsurprisingly, the highest absolute numbers of premature deaths associated with fine particulate matter occurred in some of the most populous and polluted NUTS level 3 regions, primarily in southern and eastern EU countries, particularly in predominantly urban regions. The northern Italian region of Milano (4 486) recorded the highest number of premature deaths attributed to fine particulate matter in 2022. High counts were also observed in Barcelona in Spain (3 357) and the Italian capital region of Roma (2 862).

At the other end of the distribution, there were 10 NUTS level 3 regions in the EU with no premature deaths associated with fine particulate matter in 2022. All of them were located in Sweden, the majority being in the northern part of the country. Note that, as only partial data are currently available for Finland based on the NUTS 2024 classification, national data have been published for this country. Information from an earlier version of the NUTS classification suggests that several regions – particularly in northern Finland – also recorded no premature deaths associated with fine particulate matter.

In 2022, the Bulgarian capital region of Sofia (stolitsa) had the highest number of premature deaths attributed to fine particulate matter per 100 000 inhabitants

While the absolute number of premature deaths attributed to exposure to fine particulate matter was generally high in some of the most populous NUTS level 3 regions of the EU, the most significant impacts of air pollution when normalised by population (among those people aged 30 years or more) were often observed in industrialised and urbanised regions across eastern EU countries. These regions are typically characterised by high concentrations of industrial activity in traditional sectors such as coal mining, steel plants, cement manufacture and chemical industries. In addition, some of them also have a relatively high share of households burning coal or wood for heating, and/or suffer from traffic congestion – other factors which may exacerbate air pollution.

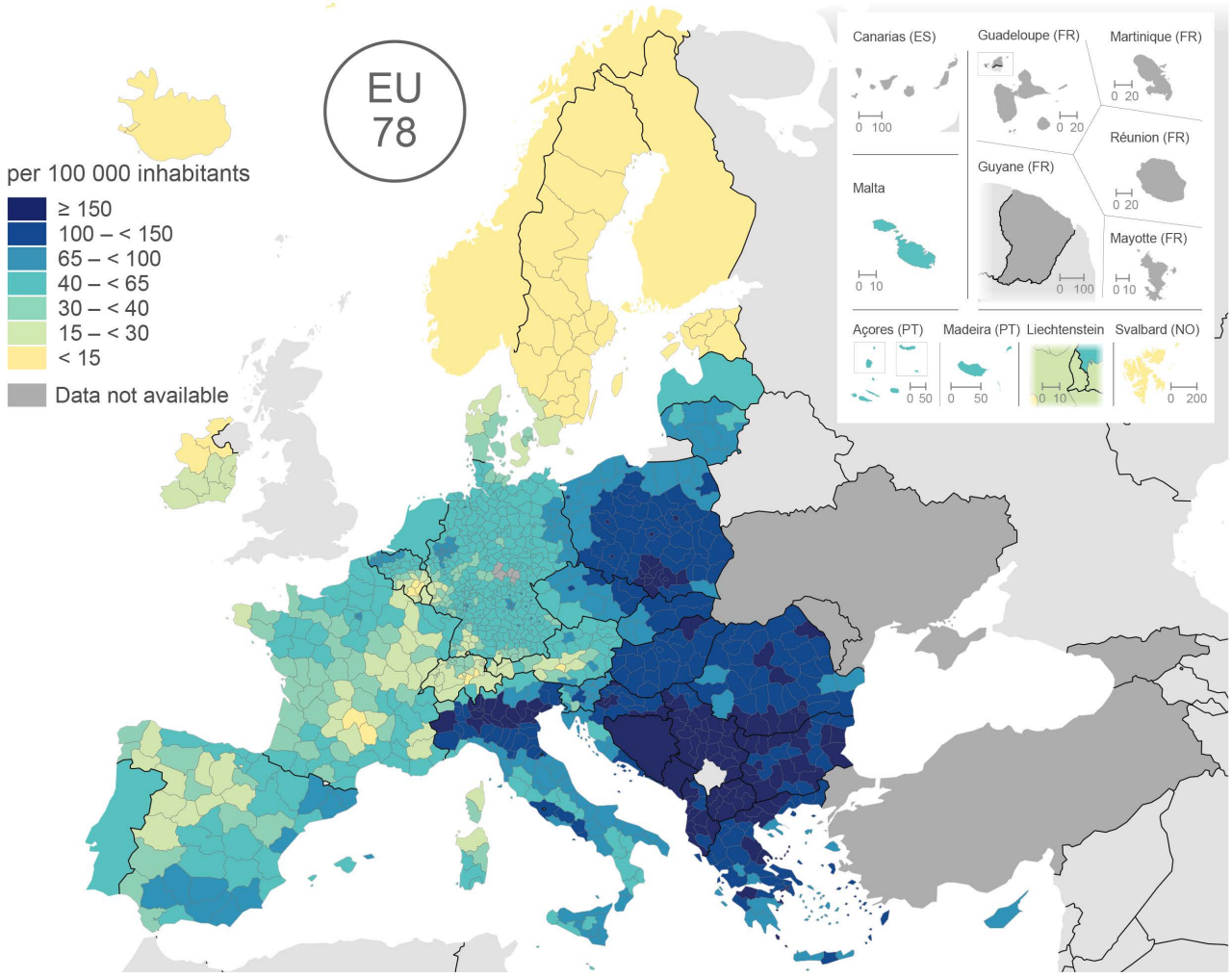
In 2022, there were 253 NUTS level 3 regions in the EU where the number of premature deaths attributable to air pollution was at least 100 per 100 000 inhabitants (these regions are shown in the 2 darkest shades of blue in Map 12.4). Broadly speaking, the highest rates of premature deaths attributable to air pollution were observed across eastern EU countries, Greece and northern Italy. The largest clusters were in Bulgaria and Hungary, where all regions recorded rates above 100 per 100 000 inhabitants.

Sofia (stolitsa), Vidin and Plovdiv (all Bulgaria), Miasto Kraków and Katowicki (both Poland) and Brodsko-posavska županija (Croatia) were the only regions in the EU to record more than 200 premature deaths per 100 000 inhabitants attributable to air pollution in 2022. There were 73 other regions with a rate of at least 150 premature deaths per 100 000 inhabitants. This group included 17 regions in Italy, 14 (additional) regions in each of Bulgaria and Poland, 13 regions in Greece, 10 regions in Romania, 4 (additional) regions in Croatia, as well as a single region in Hungary.

In Italy, the highest rates were concentrated in the densely populated plains of the Po valley, where geographic conditions hinder air circulation and trap pollutants from agriculture, industry and transport. Cremona, Milano and Monza e della Brianza recorded the highest rates of premature deaths per 100 000 inhabitants in 2022.

At the other end of the range, there were 33 NUTS level 3 regions where the number of premature deaths attributed to exposure to fine particulate matter was less than 15 per 100 000 inhabitants in 2022. This group – where the rate of fatalities linked to this type of air pollution was relatively low – included every region of Estonia, all but 2 regions from Sweden, as well as 3 regions from the Belgian Ardennes, 2 regions from each of Ireland and France, and a single region from Austria; Finland (national data only) had similarly low rates too.

Map 12.4: Premature deaths – exposure to fine particulate matter
(per 100 000 inhabitants aged 30 years or more, by NUTS 3 regions, 2022)



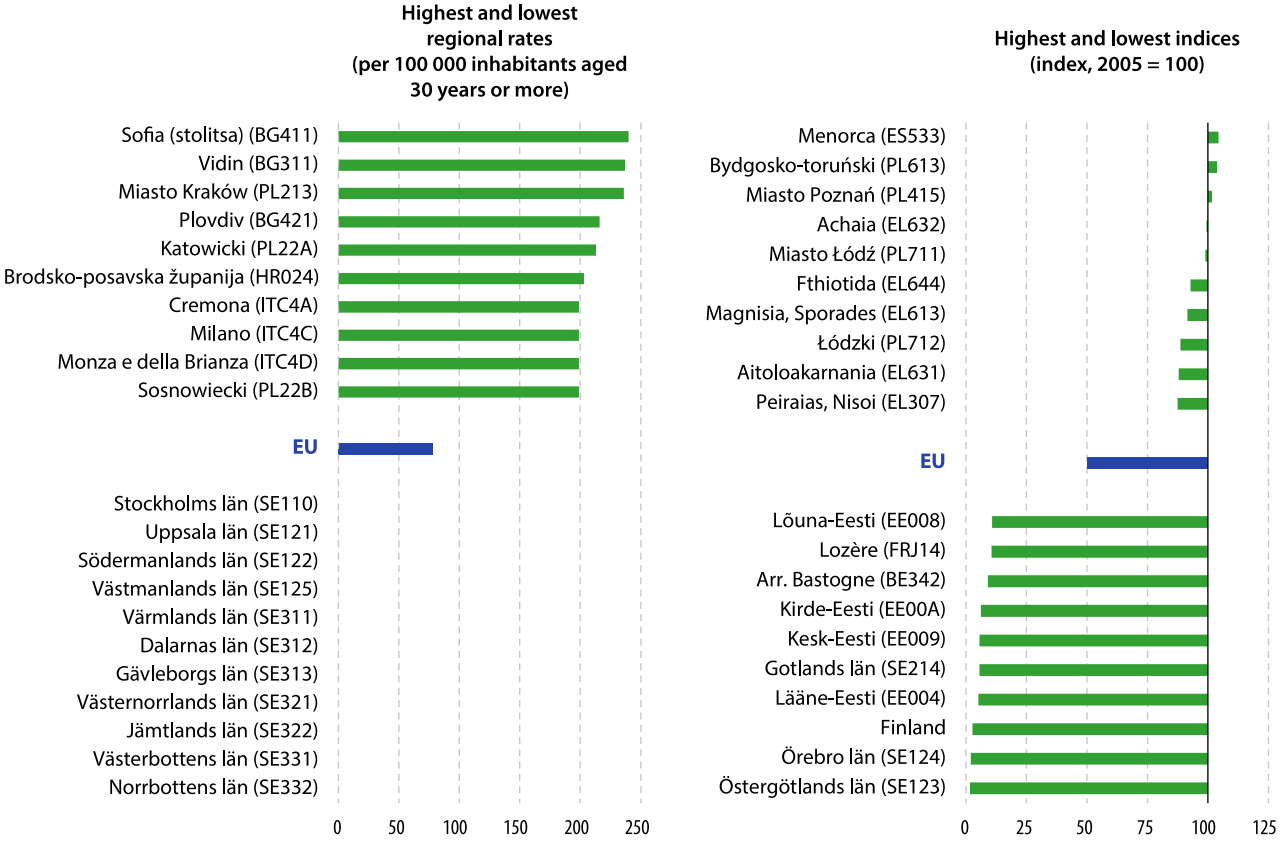
Note: fine particulate matter is airborne particles with a diameter of 2.5 micrometres or smaller. Latvia, the Netherlands, Portugal, Finland and Norway: national data.

Source: European Environment Agency (EEA)

The left-hand side of Figure 12.3 highlights the NUTS level 3 regions in the EU with the highest and lowest rates of premature deaths resulting from exposure to fine particulate matter in 2022. The right-hand side shows the regions with the highest and lowest indices relative to 2005 (2005 = 100); in other words, it shows the change between 2005 and 2022. Only 3 regions across the EU had indices above 100, indicating an increase in their rate of premature deaths per 100 000 inhabitants between 2005 and 2022. The highest increase was recorded in the Spanish island region of Menorca (up 4.4% between 2005 and 2022), while the other 2 regions were both located in Poland – Bydgosko-toruński (up 3.8%) and Miasto Poznań (up 1.7%).

Note that these indices only indicate the change in the rate of premature deaths attributed to fine particulate matter between 2005 and 2022; they do not reveal whether the initial or final rates were comparatively high or low, but rather show the direction and magnitude of change from the initial starting point. For example, the number of premature deaths due to exposure to fine particulate matter in Menorca was lower than the EU average in 2022, despite the 4.4% increase between 2005 and 2022.

Figure 12.3: Premature deaths – exposure to fine particulate matter
(by NUTS 3 regions, 2022)



Note: fine particulate matter is airborne particles with a diameter of 2.5 micrometres or smaller. The 1st part of the figure shows the EU regions with the highest and lowest rates in 2022, while the 2nd part shows the regions with the highest and lowest indices based on data per 100 000 inhabitants aged 30 years or more with a base year of 2005 = 100. The rankings include more than 10 regions if several regions have identical values. The scales on the numeric axes are different.

Source: European Environment Agency (EEA)

13. Agriculture

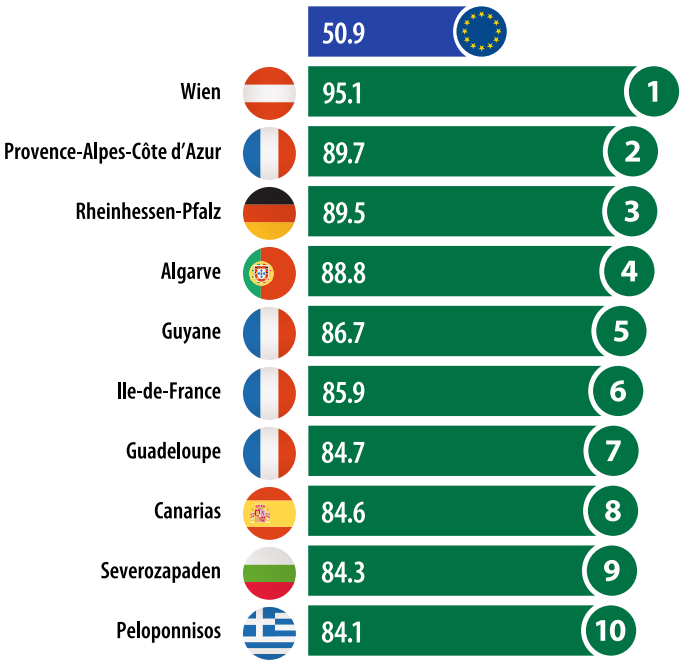
Farms are crucial to providing safe and affordable food across the European Union (EU). Furthermore, farmers are increasingly encouraged to balance food production with managing the countryside for the public good, contributing to rural landscapes, biodiversity and environmental sustainability.

Agricultural products, food and culinary traditions play a significant role in shaping regional and cultural identity, with climate, landscape and farming techniques contributing to the broad variety of different agricultural goods and services across the EU. In 2020, there were 9.1 million farm holdings in the EU, collectively managing 1.55 million km^2 of land – equivalent to 37.8% of the overall land area.

This final chapter of the *Eurostat regional yearbook* presents agricultural statistics, focusing on 3 principal datasets.

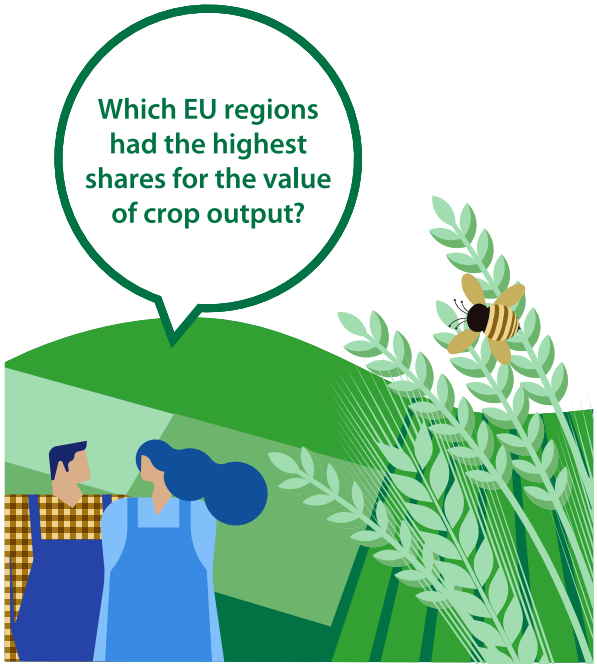
- Agricultural production statistics detailing the number of head of bovine animals and pigs for NUTS level 2 regions.
- Agricultural census data, providing regional information on the relative importance of young farm managers.
- Economic accounts for agriculture providing regional analyses of crop output, animal output, and the output of agricultural services and secondary activities.

In 2023, crop output accounted for about half (50.9%) of the total value of the EU's agricultural industry. Based on the latest regional information available across NUTS level 2 regions with at least €100 million of crop output, Wien (Austria) – that is specialised in viticulture and horticulture – had the highest relative share (95.1% in 2023; see the infographic below). The Austrian capital region was followed by Provence-Alpes-Côte d'Azur in France (89.7% in 2023) and Rheinhessen-Pfalz in Germany (89.5% in 2022).



(% of the output value of the agricultural industry, by NUTS 2 regions, 2023)

Note: EU crop output accounted for a 50.9% share of the output value of the agricultural industry. Ranking based on regions where the value of crop output was at least €100 million. Poland and Slovenia: national data. Rheinhessen-Pfalz (DEB3), Canarias (ES70), Severozapaden (BG31) and Peloponnisos (EL65): 2022. Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (BE10), Praha (CZ01), Ciudad de Ceuta (ES63) and Ciudad de Melilla (ES64): not available.



Source: Eurostat (online data codes: agr_r_accts and aact_eaa01)

Animal production

Animal production plays a crucial role in the EU's agricultural sector. The livestock population at any given moment describes the production system through the stock of animals being farmed; the data presented in this section refer to the situation as of December 2024.

The duration of a production cycle indicates the time required for animals to reach their slaughter weight. However, other animals may be kept for milk or to act as breeding stock. The typical lifespan of an animal varies: for example, veal calves will typically be slaughtered within 8 months, beef cattle within the first 2.5 years and dairy cows within 5 years.

More about the data: agricultural production

Livestock statistics provide essential insights into the populations of different farm animal species, detailing the number of head at various stages of rearing. These figures typically distinguish between animals raised for:

- fattening and slaughter, contributing to meat production
- herd renewal, which includes breeding and milking livestock to sustain future production cycles.

The EU initially aimed to ensure a stable and sufficient food supply within the EU through the common agricultural policy (CAP). Over time, this focus evolved to emphasise market transparency, helping policymakers and stakeholders monitor supply and demand fluctuations. Reliable livestock statistics play a key role in this process by providing feedback on production trends, price signals and sustainability.

Regional livestock data are generally shown for NUTS level 2 regions. However, data for Germany are presented at NUTS level 1, while only national data are available for Albania.

Cattle farming is primarily concentrated in western EU countries that are characterised by a temperate climate and relatively high levels of rainfall. These conditions encourage pasture-based farming, specialising in both dairy and beef production.

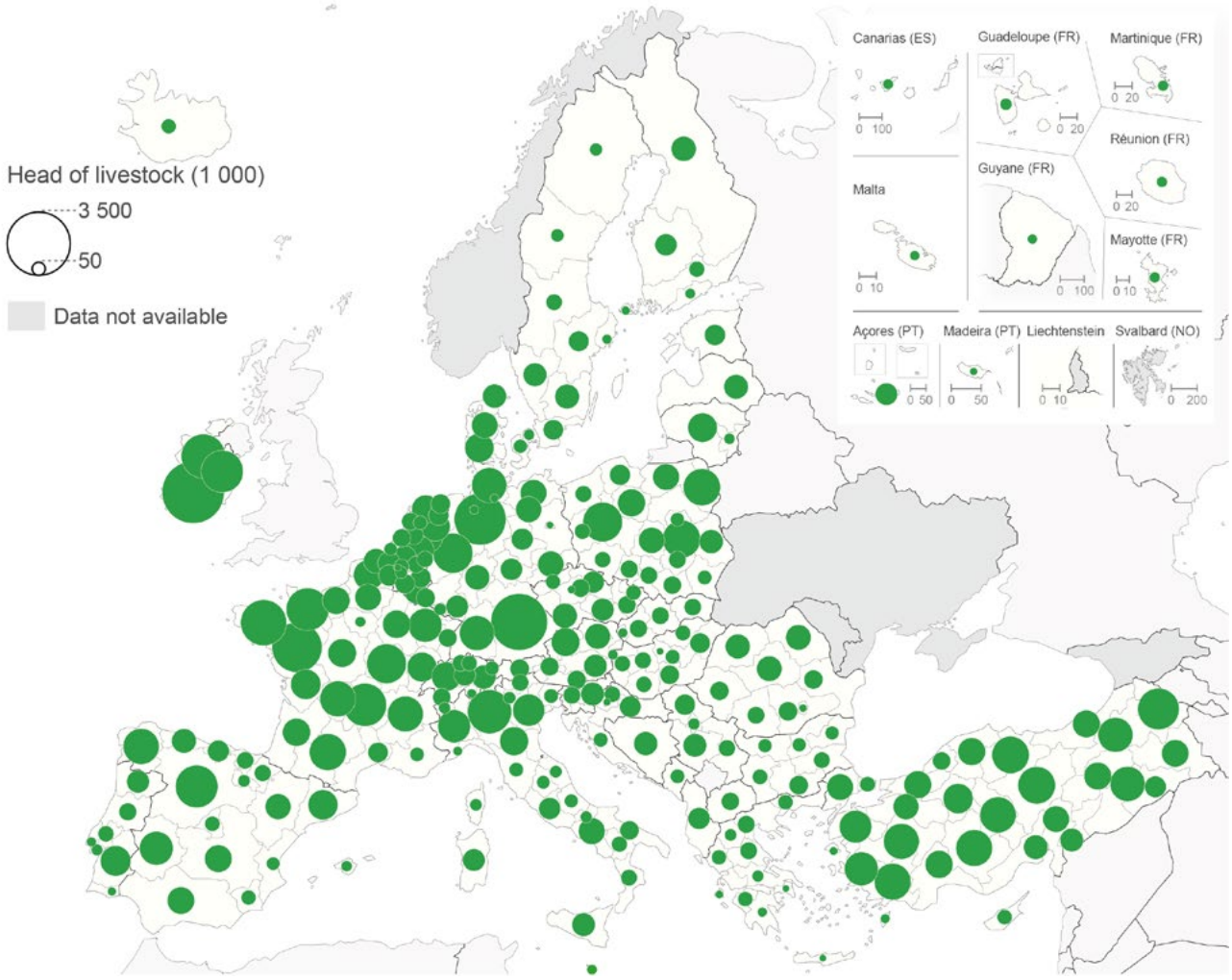
Across EU regions, Southern in Ireland had the largest bovine population: 3.4 million head as of December 2024

As of December 2024, the EU's bovine herd totalled 71.9 million head. Map 13.1 shows the share of each NUTS level 2 region in the EU's overall population of bovine animals. There were 15 regions that accounted for at least 1.5% of the total (as shown by the darkest shade of green). Together this group of 15 regions accounted for more than 1 in 3 (35.6%) of the EU's bovine population. The highest concentrations of bovine animals were in Ireland and the north-west of France, while high shares were also recorded in a band of regions running from north-west Spain, through central France and into the Alpine regions of southern Germany and northern Italy. There were also clusters of intensive cattle farming in northern Germany and selected regions of Poland.

Map 13.1 also presents regional information on the total number of bovine animals (as denoted by the size of each circle).

- The Southern region of Ireland had the highest bovine population among the EU's NUTS level 2 regions, at 3.4 million head. This region is particularly specialised in dairy production, reflecting its abundant pastures. The Northern and Western region of Ireland also featured among the 7 EU regions that had at least 1.5 million bovine animals.
- In Germany, Bayern (located in the south-east) had the 2nd highest bovine population in the EU, with 2.7 million head. Niedersachsen (located in north-west Germany) had 2.2 million head. Note the data for Germany are reported at NUTS level 1, which can result in absolute values being misleading when compared with NUTS level 2 data for other countries.
- In France, the leading regions for cattle farming were in the north-west of the country, where the temperate climate and prevailing weather patterns shaped by the Atlantic give rise to specialisation within the dairy sector: Pays de la Loire had 2.1 million head of bovine animals, while Bretagne had 1.7 million head.
- Outside of these 3 countries, Lombardia in northern Italy was the only other region in the EU to have at least 1.5 million bovine animals.

Map 13.1: Bovine animals
(by NUTS 2 regions, as of December 2024)



Note: EU = 71.9 million head of bovine animals. Germany: NUTS level 1. Albania: national data. Spain, Iceland, Bosnia and Herzegovina, Montenegro, North Macedonia, Albania and Türkiye: as of December 2023.

Source: Eurostat (online data codes: agr_r_animal and apro_mt_lscatl)

Within the EU, pig farming primarily occurs in regions characterised by intensive livestock production, often tied to large-scale commercial farming operations. As of December 2024, the EU's pig population stood at 132.1 million head.

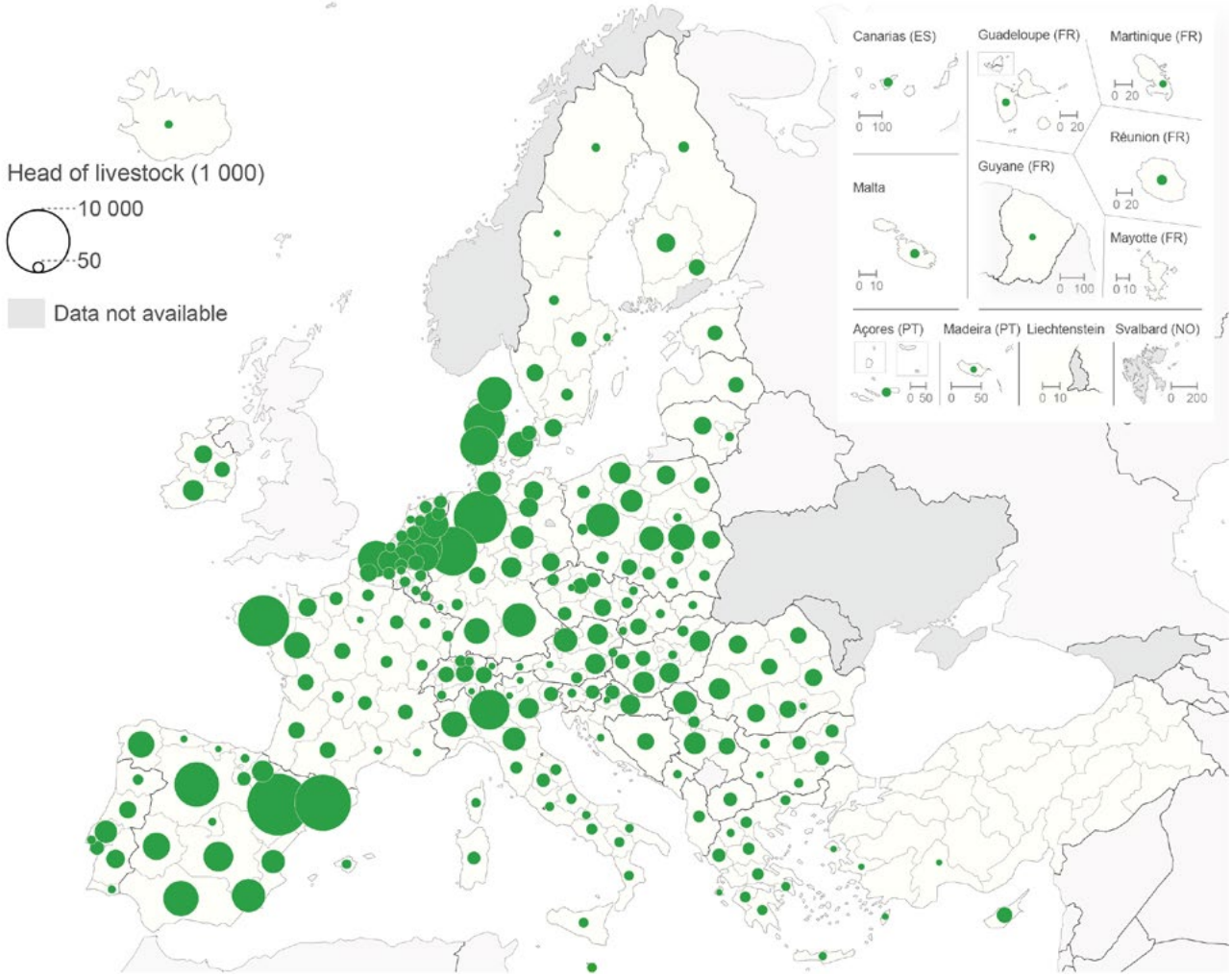
Across EU regions, Aragón in Spain had the largest pig population: 9.9 million head as of December 2024

Map 13.2 illustrates the share of each NUTS level 2 region in the EU's overall pig population. In December 2024, 10 regions accounted for at least 2.5% of all pigs in the EU (as shown by the darkest shade of green in the map). Together, this group of 10 regions accounted for almost half (43.9%) of all pigs in the EU. The highest numbers and shares were found in the northern half of Spain and in a band of regions stretching from Denmark through northern Germany and into the Netherlands. There were also regional pockets with high numbers of pigs in north-west France and northern Italy.

Map 13.2 also shows the total number of pigs found in each region as of December 2024 (as indicated by the size of each circle).

- The north-eastern Spanish region of Aragón had the largest pig population among NUTS level 2 regions, at 9.9 million head (or 7.5% of the EU total). The neighbouring region of Cataluña had the 2nd highest count, with 8.0 million head (or 6.1% of the EU total), while Castilla y León also ranked among the 10 EU regions with more than 2.5 million head of pigs.
- In Germany, Niedersachsen had the 3rd largest pig population in the EU, with 7.0 million head (5.3% of the EU total). North Rhine-Westphalia also ranked among the principal pig-farming regions, with 5.8 million head. As mentioned above, please note the data for Germany refer to NUTS level 1 regions.
- In Denmark, 2 regions from Jutland – Midtjylland (4.1 million head) and Syddanmark (3.4 million head) – are characterised by high-numbers of pigs.
- Outside of Spain, Germany and Denmark, there were also relatively large pig-farming activities in Bretagne (north-west France), Noord-Brabant (the Netherlands) and Lombardia (northern Italy).

Map 13.2: Pigs
(by NUTS 2 regions, as of December 2024)



Note: EU = 132.0 million head of pigs. Germany: NUTS level 1. Albania: national data. Estonia, Iceland, Bosnia and Herzegovina, Montenegro, North Macedonia, Albania and Türkiye: as of December 2023.

Source: Eurostat (online data codes: agr_r_animal and apro_mt_lspig)

Young farm managers

Across the EU, agricultural holdings vary considerably, from small, semi-subsistence farms to large, intensive operations. These structural differences are often reflected in the way that farms are owned and managed: smaller farms tend to be family-run, while larger farms are typically overseen by professional managers employed by agricultural enterprises.

Farm managers are the people responsible for the normal daily financial and production routines of running a farm, such as what and how much to plant or rear and what labour, materials and equipment to employ. Often the farm manager is also the owner (otherwise referred to as the 'holder') of the farm but this need not be the case, especially when the farm has a separate legal identity.

Many farm managers in the EU work well beyond what would be a typical retirement age in other sectors of the economy. This slow pace of generational renewal may pose risks for the long-term sustainability of EU agriculture, potentially limiting innovation and productivity due to the lack of a more dynamic and diverse farm workforce.

In 2020, slightly more than 1 in 10 farm managers in the EU were under the age of 40

In 2020, there were 1.1 million farm managers in the EU that were younger than 40. By contrast, there were 3.0 million older farmers aged 65 or over. Younger farmers are more likely to manage medium-sized or large farms, which may reflect their higher levels of agricultural education and training, including exposure to modern and innovative practices. Conversely, older farm managers predominantly work on small or subsistence farms, which often yield low agricultural income.

The structural differences in agricultural holdings across EU regions are reflected in the distribution of young farm managers. The highest regional count was in the Romanian region of Nord-Est (64 000 young farm managers) with 3 other Romanian regions – Sud-Muntenia, Nord-Vest and Sud-Vest Oltenia – each reporting between 40 000 and 50 000 young farm managers. Outside of Romania, the highest numbers of young farm managers were found in the Polish regions of Mazowiecki regionalny (39 100) and Lubelskie (35 300).

In 2020, young farm managers accounted for 11.9% of all farm managers across the EU. Their share was noticeably higher in a broad area extending from France, through the Alps into Czechia, Slovakia and Poland. This pattern may reflect targeted policy support aimed at encouraging more young people into agriculture, including initiatives such as start-up grants, low interest loans, reduced land prices, support with land access, income support, training programmes, and opportunities to foster innovation and diversification. Notably, young farm managers were over-represented in organic farming: they accounted for 20.7% of organic farm managers across the EU (compared with 11.9% of all farm managers).

By contrast, the lowest shares of young farm managers were concentrated in southern EU countries. This may be linked to challenges in generational transition, such as financial barriers, limited access to land, capital and knowledge, declining rural fertility rates and the appeal of alternative career prospects. The share of young farm managers was also relatively low in several regions of Denmark and the Netherlands, where consolidation of farming may have created significant barriers to young people wishing to enter the industry.

Map 13.3 highlights the regional distribution of young farm managers in 2020. There were 31 NUTS level 2 regions where the share of young farm managers was at least 20.0% (as shown by the darkest shade of blue in Map 13.3). This group included:

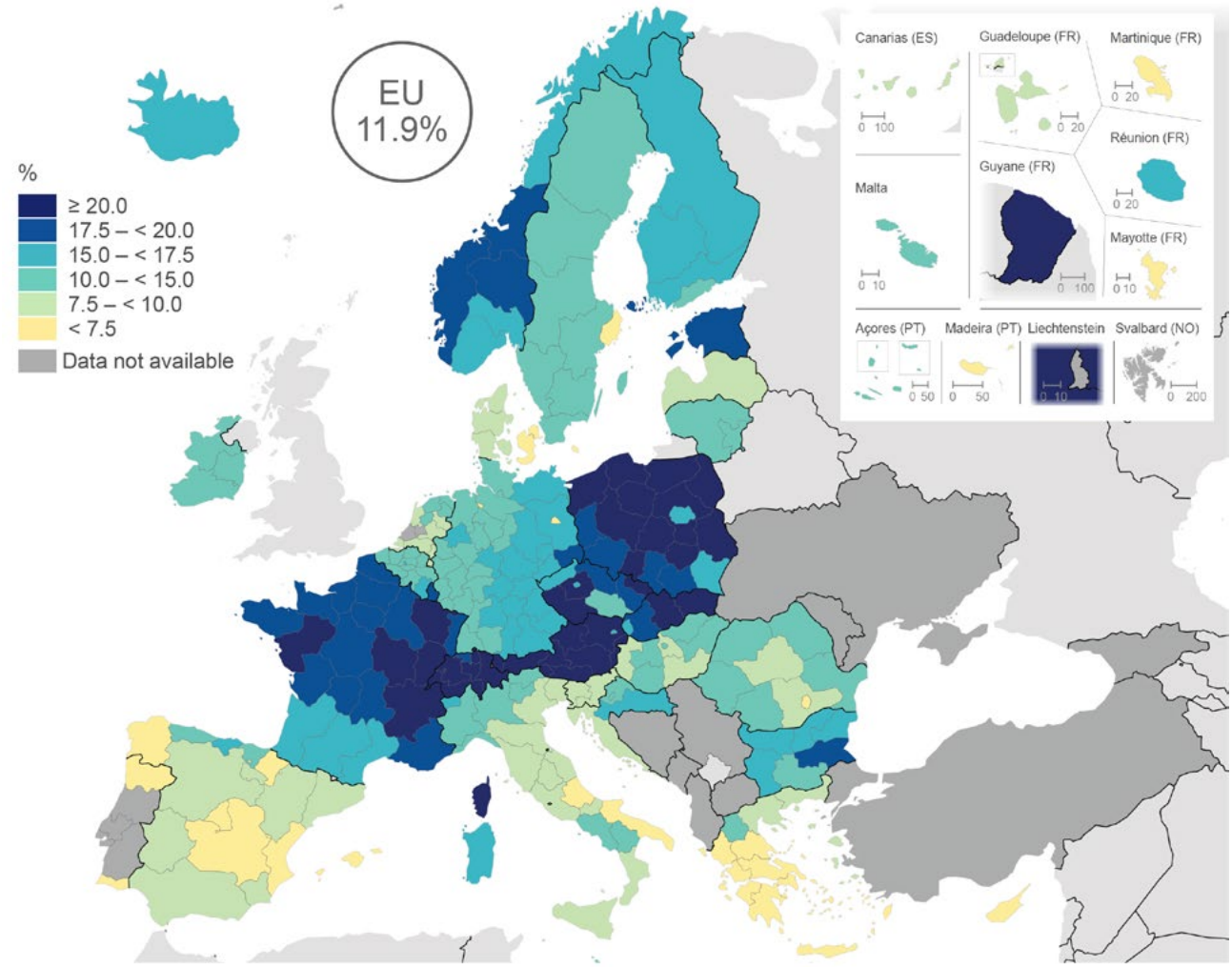
- 8 out of 9 regions in Austria, with the capital region of Wien being the only exception
- 11 out of 17 regions in Poland
- 7 regions in France
- 3 regions in Czechia
- 2 regions in Slovakia.

In 2020, Oberösterreich in northern Austria (25.6%) and Franche-Comté in eastern France (25.5%) were the only regions in the EU where more than 1 in 4 farm managers were aged under 40. The next highest shares were close to this level and were recorded in the central Polish regions of Kujawsko-pomorskie (24.9%) and Wielkopolskie (24.5%), followed by the Austrian regions of Salzburg (24.3%) and Kärnten (23.8%).

Young farm managers were particularly scarce in southern EU countries. There were 29 regions across the EU where young farm managers accounted for fewer than 7.5% of all farm managers (as shown by the lightest shade of yellow in Map 13.3). This group was concentrated in Greece (9 regions) and Spain (6 regions), and also included 3 regions in Portugal and 2 in Italy; Cyprus likewise had a very low share of young farmers. Outside the southern EU regions, relatively low shares were also recorded in the capital regions of Denmark, Germany, Romania and Sweden, as well as in Sjælland (Denmark), Bremen (Germany), and the French outermost regions of Martinique and Mayotte.

By contrast, in the Portuguese regions of Algarve (60.8%) and Norte (50.4%), as well as the Spanish region of Comunitat Valenciana (50.1%), a majority of farm managers were aged 65 years or over. This top-heavy age structure underlines the policy relevance of farm succession.

Map 13.3: Young farm managers
(% of all farm managers, by NUTS 2 regions, 2020)



Note: young farm managers are defined as those younger than 40 years.

Source: Eurostat (online data code: ef_m_farmang)

Economic situation of farms

Farming serves as the cornerstone of many rural economies, supporting both 'upstream' sectors (such as animal healthcare providers and wholesalers of agricultural inputs) and 'downstream' sectors (such as food processing, packaging and transport businesses). The economic accounts for agriculture (EAA) provide an overall picture of the performance of the EU's agricultural industry.

In 2023, the EU's agricultural industry generated output that was valued at €537.0 billion:

- more than half of this total (50.9%) came from crop output (€273.6 billion), with cereals, vegetables and horticultural plants making the largest contributions
- some 39.9% of the total came from animals and animal products (€214.2 billion), with milk and pigs providing the largest shares
- the remaining 9.2% of output in the agricultural industry was relatively evenly split between agricultural services (€25.3 billion) and non-agricultural secondary activities (€23.9 billion).

More about the data: economic accounts for agriculture (EAA)

EAA provide detailed information about the agricultural industry, focusing on production processes and the income generated from them. As a satellite account to the European System of Accounts (ESA), the EAA adapts the general accounting concepts of the ESA to the specific characteristics of agriculture.

Primary production and secondary activities that contribute to a farm's economic performance are classified as:

- crop output – the value of sales from crop products, changes in stock levels and crop products used as animal feed, for processing or for the farm's own final use (for example, seed, storage)
- animal output – the value of sales from animals and animal products, changes in stock levels and animal products used for processing or for the farm's own consumption (for example, animal feed, breeding stock)
- agricultural services output – the value of services directly linked to a farm's operations, such as renting machinery or providing custom services (for example, harvesting or irrigation)
- non-agricultural secondary activities – the value of non-separable economic activities related to the farm but not strictly agricultural (for example, cheese-making, agritourism or renewable energy production from farm waste).

The EAA are compiled for NUTS level 2 regions, based on values at current prices. In this section, no regional statistics are available for Poland or Slovenia (they plan to provide this data towards the end of 2025); national data are presented instead. In Belgium, Bulgaria, Czechia, Denmark, Germany, Greece, Spain, Croatia, Italy, Lithuania, Hungary, the Netherlands, Romania, Finland and Norway, the latest data refer to 2022 (instead of 2023).

The southern Spanish region of Andalucía had the highest value of crop output, at €13.1 billion in 2022

Map 13.4 illustrates both the overall level of crop output (depicted by the size of each circle) and the share of crop output within the agricultural industry (indicated by the colour of each circle) for NUTS level 2 regions. The patterns depicted in the map are shaped by a broad range of factors, including soil conditions, terrain, local economic structures, historical farming practices, climatic and environmental conditions. Regions with fertile soils, expansive plains and temperate climates tend to focus more on crop production. By contrast, regions characterised by less favourable growing conditions, poorer soil quality and/or hilly and mountainous terrain tend to focus more on livestock farming.

In 2023, the highest levels of crop output occurred in:

- Andalucía in southern Spain (€13.1 billion; 2022 data)
- Zuid-Holland in the west of the Netherlands (€5.8 billion; 2022 data)
- Champagne-Ardenne in north-east France (€5.3 billion)
- Veneto in north-east Italy (€5.2 billion; 2022 data).

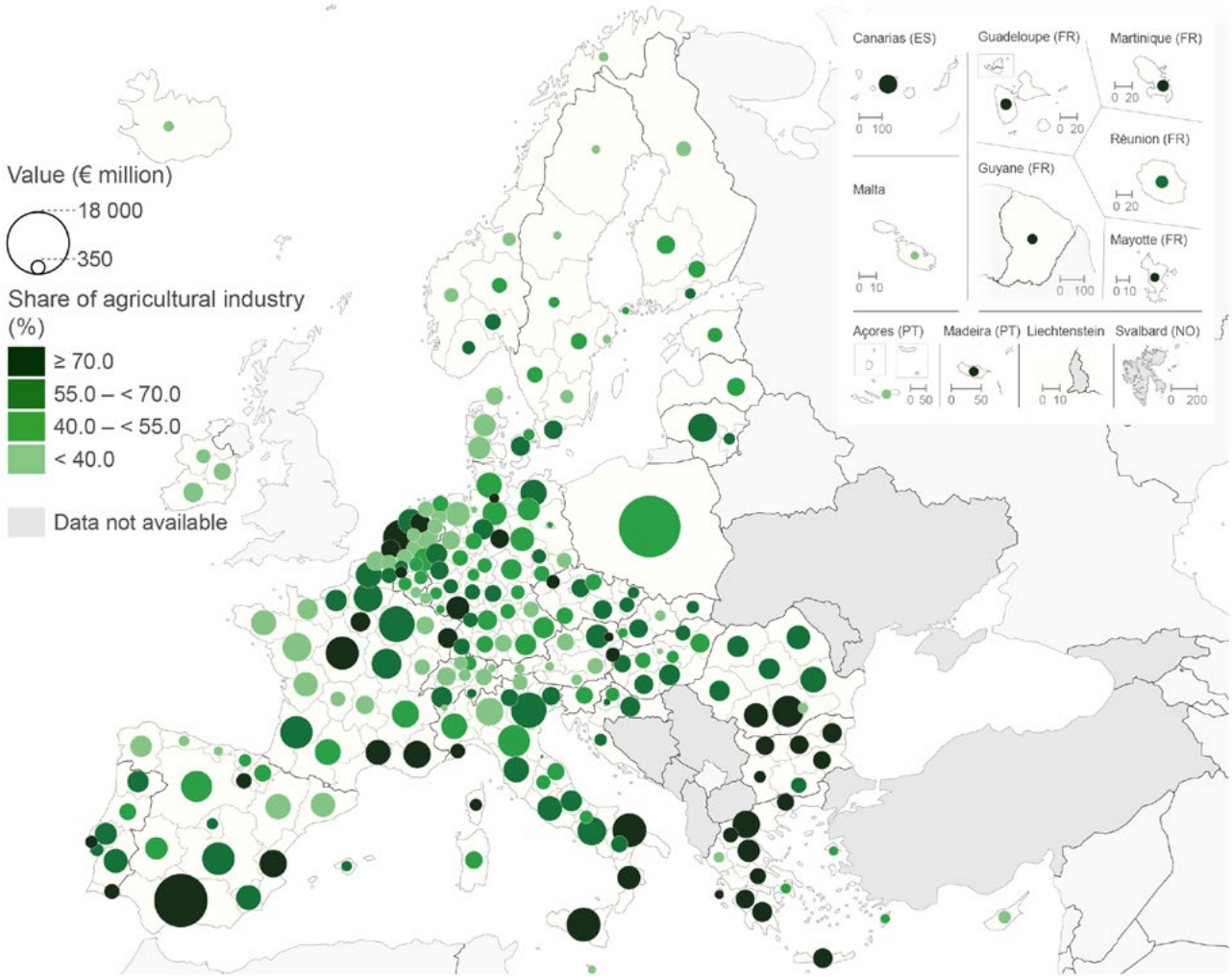
Crop output accounted for more than half (50.9%) of the total output of the EU's agricultural industry in 2023. The regional distribution of crop output was relatively even: in 126 out of 223 NUTS level 2 regions for which data are available (56.5% of all regions), the share of crop output exceeded the EU average.

Several eastern and Baltic EU countries reported relatively high shares of crop output within their respective agricultural industries. In 2022, every region in Bulgaria, Czechia and Lithuania, along with all but 1 region in Greece, Croatia, Romania and Slovakia (2023 data), recorded a crop output share above the EU average; this was also the case for Latvia and Slovenia (both national data; 2023 data).

Looking more closely at the relative importance of crop output, 6 regions reported that crops accounted for more than 85.0% of their agricultural industry output in 2023:

- the Austrian capital region of Wien (95.1%); specialised in the production of grapes, fruit, vegetables, herbs and flowers
- the southern French region of Provence-Alpes-Côte d'Azur (89.7%); specialised in the production of olives, grapes, fruit, vegetables and herbs
- the south-western German region of Rheinhessen-Pfalz (89.5%; 2022 data); specialised in the production of cereals, grapes, fruit and vegetables
- the southern Portuguese region of Algarve (88.8%); specialised in the production of citrus fruits, olives, grapes and vegetables
- the French outermost region of Guyane (86.7%); which had a relatively small agricultural industry, with output valued at €165 million
- the French capital region of Ile-de-France (85.9%); specialised in the production of cereals and vegetables/ market gardening.

Map 13.4: Crop output
(in value terms, by NUTS 2 regions, 2023)



Note: Poland and Slovenia, national data. Includes data for 2022 (too many regions to document).

Source: Eurostat (online data codes: agr_r_accts and aact_eaa01)

The north-western French region of Bretagne had the highest value of animal output, at €7.7 billion in 2023

Map 13.5 shows the overall level of animal output (represented by the size of each circle) and the share of animal output within the agricultural industry (indicated by the colour of each circle) for NUTS level 2 regions. The patterns shown in Map 13.5 tend to mirror those presented in Map 13.4; in other words, those regions that are specialised in either livestock farming or in crop farming tend to have a low degree of specialisation in the other type of farming.

In 2023, the highest levels of regional animal output occurred in:

- Bretagne (€7.7 billion) and Pays de la Loire (€5.1 billion) in north-west France
- Weser-Ems in north-west Germany (€6.8 billion; 2022 data)
- Lombardia in northern Italy (€5.5 billion; 2022 data).

Animal output accounted for 39.9% of the total output of the EU's agricultural industry in 2023. The regional distribution of animal output was relatively even: in 130 out of 223 NUTS level 2 regions for which data are available (58.3% of all regions), the share of animal output stood below the EU average.

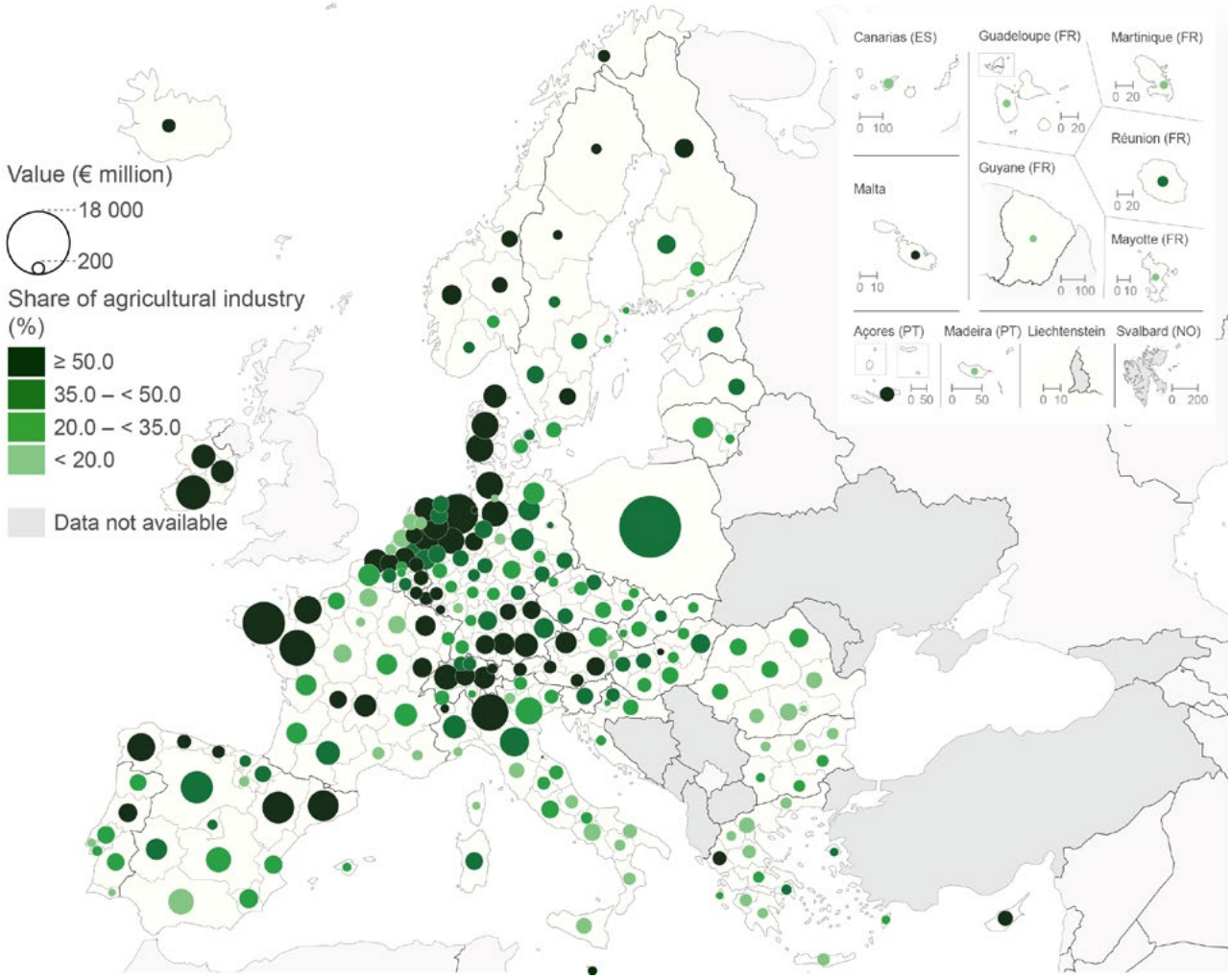
Several temperate regions – particularly those bordering the Atlantic coast, which experience higher levels of rainfall – reported a high degree of specialisation in livestock farming; this pattern was also apparent in several northern and several hilly/mountainous regions. For example, animal output accounted for a high share of output in the agricultural industries of every region in Ireland, as well as

in clusters of regions across north-west France, northern Spain (2022 data) and the Alps.

Looking more closely at the relative importance of animal output, 8 regions within the EU reported that animals accounted for more than 70.0% of the total output in their agricultural industries:

- the Portuguese island region of Região Autónoma dos Açores (76.4%), specialised in the production of dairy products
- the Irish regions of Northern and Western (76.3%) and Southern (75.2%), the former is specialised in cattle and sheep farming, while the latter is specialised in dairy farming
- the German region of Weser-Ems (74.0%; 2022 data), specialised in pig farming
- the Spanish regions of Cantabria and Principado de Asturias (72.6% and 70.6%, respectively; 2022 data), both specialised in cattle farming
- the Hungarian capital region of Budapest (72.5%; 2022 data), which had a relatively small agricultural industry, with output valued at €19.3 million
- the French region of Bretagne (70.1%), specialised in pig, poultry and dairy farming.

Map 13.5: Animal output
(in value terms, by NUTS 2 regions, 2023)



Note: Poland and Slovenia, national data. Includes data for 2022 (too many regions to document).

Source: Eurostat (online data codes: agr_r_accts and aact_eaa01)

The western French region of Poitou-Charentes had the highest value of output for agricultural services and non-agricultural secondary activities, at €2.3 billion in 2023

Map 13.6 shows the overall level of output for agricultural services and non-agricultural secondary activities (represented by the size of each circle) and their share in the agricultural industry (indicated by the colour of each circle) for NUTS level 2 regions.

In 2023, the highest levels of regional output for agricultural services and non-agricultural secondary activities occurred across:

- France, with the uppermost values in Poitou-Charentes (€2.3 billion), Champagne-Ardenne (€1.7 billion) and Bretagne (€1.0 billion)
- Italy (2022 data), with peaks recorded in Emilia-Romagna (€1.4 billion), Lombardia (€1.4 billion) and Veneto (€1.0 billion).

In 2023, agricultural services and non-agricultural secondary activities contributed 9.2% of the EU's output in the agricultural industry. The regional distribution was somewhat skewed: in 135 out of 223 NUTS level 2 regions for which data are available (60.5% of all regions), this share was below the EU average.

Several regions reported a relatively high contribution from agricultural services and non-agricultural secondary activities to the output of their agricultural industries. This pattern was most evident in Italy, Lithuania, the Netherlands and Finland (all 2022 data), where every region recorded shares above the EU average, while the same was true for all but 1 region in Romania (2022 data) and Slovakia.

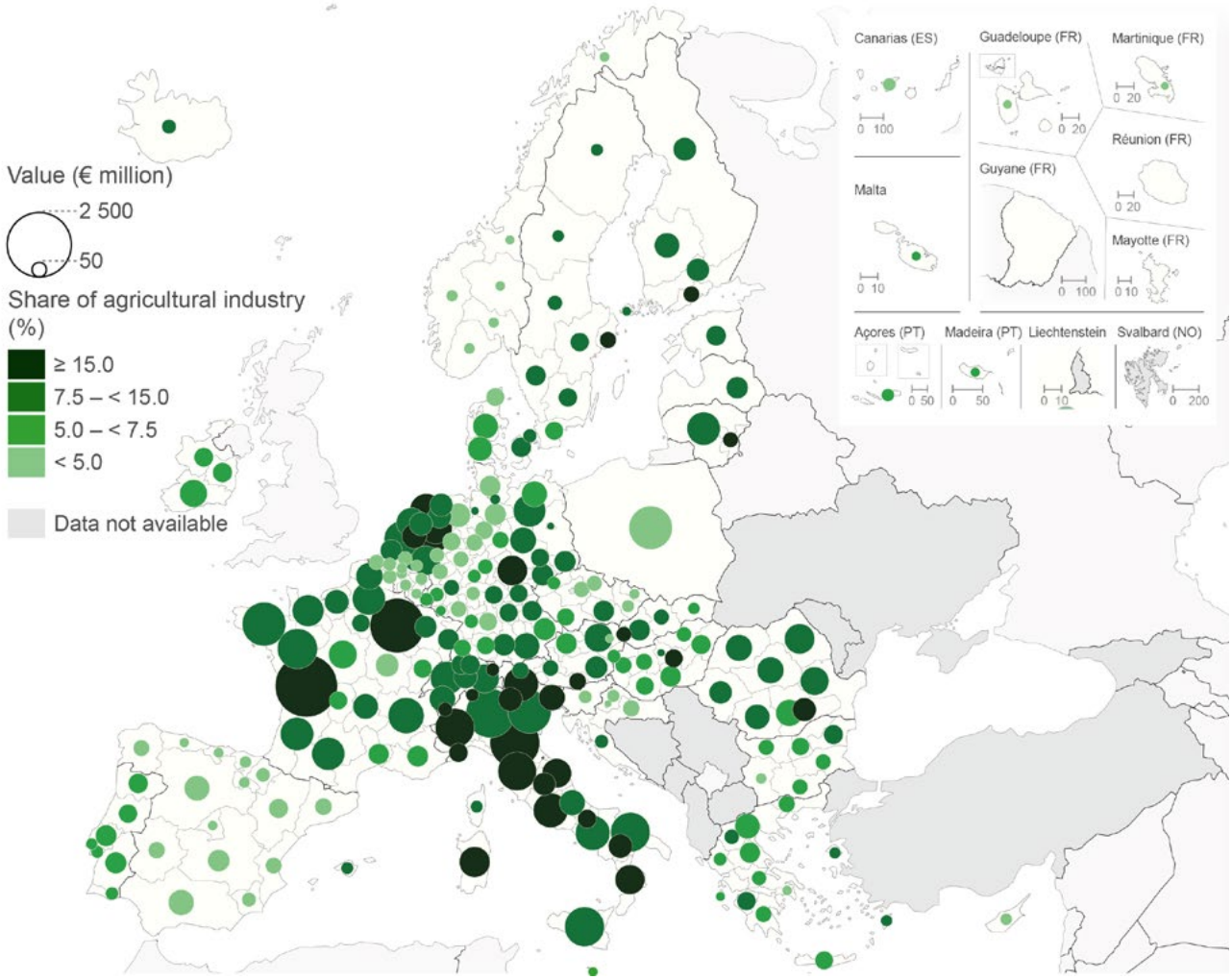
In 2023, 5 regions within the EU reported agricultural services and non-agricultural secondary activities accounting for more than 33.3% of all output in their agricultural industries:

- Bucureşti-Ilfov, the Romanian capital region (56.4%; 2022 data)
- Poitou-Charentes in France (40.2%)
- Stockholm, the Swedish capital region (39.7%)
- the Italian regions of Provincia Autonoma di Bolzano/ Bozen and Valle d'Aosta/Vallée d'Aoste (39.7% and 39.1%, respectively; both 2022 data).

In these 5 regions, non-agricultural secondary activities generally accounted for a higher level of output than agricultural services. For example:

- in Stockholm, the output of non-agricultural secondary activities was 18 times as high as that for agricultural services, while in Provincia Autonoma di Bolzano/ Bozen, output of non-agricultural secondary activities was 7 times as high
- the only exception was Bucureşti-Ilfov, where the value of output from agricultural services was 45 times as high as that of non-agricultural secondary activities.

Map 13.6: Agricultural services output and secondary activities
(in value terms, by NUTS 2 regions, 2023)



Note: Poland and Slovenia, national data. Includes data for 2022 (too many regions to document).

Source: Eurostat (online data codes: agr_r_accts and aact_eaa01)

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