Sustainable development in the European Union

Monitoring report on progress towards the SDGs in an EU context

2025 edition

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Foreword by Commissioner Dombrovskis

This Commission took office amid increasingly complex and interconnected global issues impacting the European Union. Economic and geopolitical tensions in transatlantic relations and Russia's war of aggression against Ukraine have presented significant challenges that have demanded immediate attention and action. Under these circumstances, it is crucial to maintain an unwavering commitment to sustainability.

The full implementation of the United Nations' 2030 Agenda is key to strengthening the EU's resilience against current and future shocks. The Sustainable Development Goals (SDGs) remain an integral part of President von der Leyen's political guidelines and are embedded in all Commission proposals, policies, and strategies.

This commitment is clearly bearing fruit. As this report demonstrates, over the last five years, the EU has made significant progress towards its objectives and targets related to reducing inequalities (SDG 10), as well as sustainable economic growth and labour market participation (SDG 8), and quality education (SDG 4). We have also progressed in most other SDGs, albeit at a slower pace. We can be proud of these achievements.

Yet, we should not become complacent. Furthering its efforts to achieve the SDGs, the Commission's newly presented Competitiveness Compass will help secure sustainable growth and prosperity. The Commission also recently adopted the Union of Skills initiative that will empower people across the EU with the skills they need to succeed, ensuring that Europe's social model remains viable. The Commission's freshly unveiled Vision for Agriculture and Food focuses on enhancing the competitiveness of the farming and fishing sectors, while also supporting the EU's climate objectives and aiding in the preservation and restoration of biodiversity.

Our environmental targets and goals set out in the European Green Deal will continue to demand ongoing focus during the 2024–2029 Commission mandate. We must persist in providing adequate responses to climate change and in addressing the increasing pressures on the environment from human activities while ensuring our industries and businesses remain competitive.

The SDG monitoring report published by Eurostat is instrumental in pinpointing urgent sustainability challenges, assessing our current status, and critically examining our progress. This report serves as a vital resource, showcasing the strides that we have made and illuminating the journey ahead to fully achieve the SDGs within this decade.

Valdis Dombrovskis

European Commissioner for Economy and Productivity, responsible for Eurostat

Foreword of Eurostat's Director-General

Welcome to the 2025 edition of Eurostat's monitoring report on the Sustainable Development Goals (SDGs) in the context of the European Union. This report presents a comprehensive picture of the EU's progress toward the SDGs, utilising the most recently available data together with the robust assessment methodologies established in previous reports. Most of the sustainable development indicators in the report are based on official statistics provided by EU Member States, while the remainder come from EU institutions and partner bodies, all adhering to strict quality standards.

As in previous editions, this report describes the progress achieved for all 17 SDGs, accompanied by relevant policy overviews. For the first time, the report includes a chapter that focuses on one of the core principles of the 2030 Agenda: leaving no one behind. This chapter introduces a regional perspective to the analysis of SDGs, examining disparities across European regions for six selected indicators of the economic, social, and environmental dimensions of sustainability. The report also retains the chapter on the EU in the world, recognising that sustainable development is a global imperative.

Readers interested in further details will find complete datasets, additional information and engaging visualisations on a dedicated page on the Eurostat website. There, the new SDG Progress Tracker also highlights the EU's advancements in recent years and identifies areas requiring further effort.

In a world inundated with information, I believe that this report — along with the accompanying communication package — will serve as a trustworthy and valuable resource for European citizens, policymakers, researchers, and businesses. It will also guide sustainable development initiatives needed to reach the EU's sustainability goals by 2030.

Mariana Kotzeva

Director-General, Eurostat

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Data coverage and direct links to Eurostat's database

The data presented in this publication were extracted at the end of April 2025.

An online data code available under each table/figure can be used to directly access to the most recent data on Eurostat's website, at:

https://ec.europa.eu/eurostat/data/database

For more information please consult

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Disclaimer

About this publication

This book marks the ninth edition in the series of Eurostat's annual monitoring reports on the European Union's progress towards the Sustainable Development Goals.

This 2025 edition begins with a synopsis of the EU's overall progress towards the SDGs. The ensuing report is introduced by a chapter describing the policy background at a global and EU level as well as explaining the monitoring process of the SDGs at EU level. The detailed monitoring results are presented in 17 chapters, one for each SDG. Subsequently, an analysis of regional disparities within countries on their journey towards achieving the SDGs is given. The report concludes by comparing the EU with other major economies for a set of selected SDG indicators and analysing the spillover effects of EU consumption on other parts of the world. The Annexes contain a list and brief analysis of the policy targets monitored in this report as well as notes on methods and sources.

The report is complemented by a communication package, available on a dedicated section of Eurostat's website. Interested readers will find the full datasets there, along with additional information and engaging visualisations. The package includes a brochure giving a visual and concise overview of the development of the EU SDG indicators, as well as the brand new SDG EU Progress Tracker. Additionally, readers can access the 'SDGs & me' tool, which offers an interactive view on the SDGs, and find more detailed information on the EU Member States in the SDG Country Overview. In the methodology section, explanatory notes provide descriptions of the methodology used in assessing different aspects of the EU's progress towards reaching the SDGs.

Synopsis

The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), adopted by the United Nations (UN) in September 2015, is the world's roadmap for achieving sustainable development in this decade. The European Union (EU) has fully committed itself to delivering on the 2030 Agenda, and the SDGs form an intrinsic part of the European Commission's work programme and its Political Guidelines for the period 2024 to 2029.

Monitoring and communicating about the progress made towards the 17 SDGs is essential in realising the 2030 Agenda's vision, both globally and in the EU. Since 2017, Eurostat monitors the EU's progress based on the EU SDG indicator set and presents the assessment of the past 5- and 15-year periods in annual reports. This is the ninth edition in the series, covering data up to 2023 or 2024.

How has the EU progressed towards the SDGs?

The overview arrow on page 11 shows the pace at which the EU has progressed towards each of the 17 goals over the most recent five-year period of available data.

Significant progress has been made towards the objectives and targets related to reduced inequalities (SDG 10), decent work and economic growth (SDG 8) and quality education (SDG 4). The EU has also made progress towards most of the other SDGs, but at a slower pace. Among the group of goals with moderate progress, the EU has performed best for gender equality (SDG 5), responsible consumption and production (SDG 12), industry, innovation and infrastructure (SDG 9) and zero hunger (SDG 2). By contrast, the assessment shows no significant progress for life below water (SDG 14), due to the slow expansion of marine protected areas as well as the worsening health of the ocean.

A movement away from the sustainable development objectives has been observed for clean water and sanitation (SDG 6) and life on land (SDG 15). Progress towards SDG 6 has been unfavourably affected by water stress, whereas development in SDG 15 has been negatively impacted by land degradation and loss of biodiversity.

Summary at goal level

This section provides an overview of the development of individual indicators for each of the goals over the most recent five-year period of available data (mostly 2018–2023 or 2019–2024). The method for assessing indicator progress and aggregating them at the goal-level is explained in Annex II on page 342.

The EU's situation regarding **SDG 1 'No poverty'** has generally improved. Developments of multidimensional poverty show that fewer people were affected by monetary poverty, suffered from severe material and social deprivation or lived in (quasi-)jobless households. The share of people overburdened by their housing costs or facing severe housing deprivation has fallen as well. Despite these improvements, more needs to be done to meet the EU's multidimensional target of lifting at least 15 million people out of poverty or social exclusion by 2030.

Monitoring **SDG 2 'Zero hunger'** in the EU context focuses mainly on the sustainability of agricultural production and its environmental impacts, but also on malnutrition. The economic viability and sustainability of agricultural production has developed favourably. Labour productivity of the EU's agricultural sector has improved and public investments in agricultural R&D have increased. In addition, organic farming has grown steadily, although stronger progress will be required to meet the target for it to cover 25 % of the EU's total farmland by 2030. The use and risk of chemical pesticides has decreased strongly, and the EU is on track to its respective 2030 target. Ammonia emissions from agriculture and nitrate concentrations in EU groundwater bodies have also fallen. However, agricultural production still has negative effects on nature in the EU, which are visible in the continued and dramatic decline of common farmland birds. No progress has been made on malnutrition, with the share of obese people in the EU stagnating.

SDG 3 'Good health and well-being' shows both positive and negative developments. While the EU's healthy life expectancy was on the rise until 2019, it fell below pre-pandemic levels in 2021. People's self-perceived health has also declined recently. The avoidable mortality rate had increased due to COVID-19 related deaths, but the situation improved in 2022. The share of smokers continued its downward trend in 2023. However, the share of obese people has stagnated. Trends in health care have been even more unfavourable. The share of people reporting unmet needs for medical care has risen strongly, mainly because of increasingly long waiting lists. Additionally, the consumption of antibiotics in the community and hospital sectors has fallen only slightly, meaning the EU is not on track to meet its 2030 target.

Significant progress was made for **SDG 4 'Quality education'**. The EU is well on track to meet its 2030 targets for participation in early childhood education, early leavers from education and training and tertiary educational attainment. Adult learning (referring to the four weeks before the data was collected) has also increased, showing particularly strong growth since 2020. However, trends have been unfavourable for educational outcomes. The proportion of low achieving pupils in reading, mathematics and science as measured in the OECD's PISA study increased strongly from 2018 to 2022, moving the EU further away from its target of reducing these shares to 15 % by 2030. In addition, the share of adults with at least basic digital skills stood just above 55 % in 2023 and thus remains far from the target of 80 % by 2030.

SDG 5 'Gender equality' is characterised by largely favourable developments. While the gender gap for early school leaving has narrowed, men continue to lag behind women in tertiary educational attainment. Women's hourly earnings are catching up with those of men. The gap between men and women who are outside the labour force due to caring responsibilities has

Overview of EU progress towards the SDGs over the past 5 years, 2025

(Data mainly refer to 2018–2023 or 2019–2024)

also narrowed. Similarly, the gender employment gap has decreased, even though stronger progress will be necessary for the EU to meet its target of halving this gap by 2030. More women obtained leadership positions, as shown by the growth in both the shares of women in national parliaments and in senior management positions of the largest listed companies. Despite these improvements, more efforts are needed to reach gender parity in the labour market and in leadership positions.

The EU has moved away from the desired direction on **SDG 6 'Clean water and sanitation'**. While the sanitation situation evolved favourably, the picture is mixed regarding water quality and unfavourable when it comes to water scarcity. On the positive side, the share of people without appropriate sanitation facilities in their households has steadily decreased, and connectivity to at least secondary wastewater treatment has improved slowly. Regarding water quality, the biochemical oxygen demand in rivers and the nitrate concentrations in EU groundwater bodies have decreased, but phosphate concentrations in EU rivers have risen strongly. Additionally, the share of inland bathing waters with excellent quality has declined in the EU. The water exploitation index shows that the pressure on the EU's freshwater resources increased strongly in 2022. EU ecosystems are also increasingly affected by water scarcity, with the ten-year moving average showing a strong increase in the EU area affected by drought.

Most of the indicators of **SDG 7 'Affordable and clean energy'** have improved compared with 2018, though further acceleration is required in certain areas to ensure the EU reaches its 2030 targets. The EU achieved reductions in both its primary and final energy consumption, but further progress is needed to meet the respective 2030 targets. Households managed to further decrease their final energy consumption, and energy productivity has improved strongly. The share of renewable energy has grown, but it needs to grow faster to meet the respective 2030 target. In 2023, the EU's energy import dependency fell back to the levels recorded in earlier years after the exceptional year of 2022 that was marked by the refilling of gas stocks. Access to affordable energy remained problematic, as the share of the population unable to keep the home adequately warm saw another strong rise in 2023 due to the continued high energy prices.

SDG 8 'Decent work and economic growth' shows improvements in almost all indicators monitored. GDP per capita has improved, but the investment share of GDP has fallen slightly. The EU's employment rate reached a new record high of 75.8 % in 2024. Additionally, both the EU's long-term unemployment rate and the share of young people neither in employment nor in education and training (NEET) fell to new record lows in 2024. In the area of decent work, both the incidence of fatal work accidents and the share of 'working poor' continued to decline.

Most of the indicators of **SDG 9 'Industry, innovation and infrastructure'** developed favourably, except in the area of sustainable transport. The air emissions intensity of the manufacturing sector declined further, and the gross value added (GVA) of the environmental goods and services sector has continued to grow strongly. The share of research and development (R&D) personnel in the labour force has increased considerably. Patent applications to the European Patent Office have grown slightly. By contrast, the EU's R&D expenditure has increased at a slower pace than GDP since 2020. Stronger efforts will thus be necessary for the EU to meet its 2030 target of dedicating 3 % of its GDP to R&D. Developments are mixed for sustainable infrastructure. The share of households enjoying high-speed internet connections has grown considerably. The use of public passenger transport modes (buses and

trains) increased strongly in 2022 compared with the COVID-19 related lows in 2020 and 2021, but overall remained below the levels seen before the pandemic. The share of rail and waterways in inland freight transport has further decreased.

The EU has continued to make significant progress towards **SDG 10 'Reduced inequalities'**. Income inequalities within countries have reduced, as the income gap between richer and poorer population groups has diminished. Similarly, the distance of incomes below the poverty threshold to the threshold, and the poverty gap between rural and urban areas, have narrowed in the EU. Data on economic disparities between EU countries also shows a continued convergence of Member States in terms of GDP per capita and household income. Furthermore, the gap between non-EU citizens and EU home country nationals has narrowed for all the indicators, indicating better integration of migrants. Due to all these positive developments SDG 10 is the goal with the strongest EU progress.

SDG 11 'Sustainable cities and communities' shows a mixed picture. While the quality of life in cities and communities has improved, sustainable mobility and impacts on the environment show a number of unfavourable trends. The severe housing deprivation rate has decreased considerably. Likewise, the number of premature deaths due to exposure to fine particulate matter has fallen significantly. The perceived exposure to noise, however, has stagnated. Moreover, road traffic deaths stagnated between 2021 and 2023 after a lockdown-induced low in 2020, and stronger efforts will be necessary for the EU to meet its 2030 target. Soil sealing with impervious materials has increased continuously. The growth in the EU's recycling rate of municipal waste has slowed in recent years, putting the EU at risk of not meeting its respective target by 2030. The rate of connecting households to wastewater treatment has slowed.

Developments in **SDG 12 'Responsible consumption and production'** have been largely positive. The material footprint, meaning the global extraction of materials induced by the consumption of goods and services in the EU, has fallen slightly. Moreover, the consumption of hazardous chemicals has decreased considerably. The environmental goods and services sector has continued to outperform other economic sectors. Total waste generation has risen slightly since its COVID-19 related low but has remained below 2018 levels. However, the EU's circular material use rate has stagnated below 12 %, indicating that the EU will not be able to achieve its 2030 target at the current pace.

Many of the indicators for **SDG 13 'Climate action'** have improved significantly, but stronger progress is needed to ensure the EU reaches its 2030 targets on mitigating climate change. The EU's greenhouse gas emissions decreased strongly in 2023, reaching a 36 % reduction relative to 1990. Stronger progress will be required though to meet the 55 % reduction target for 2030. The carbon removals achieved through land use, land use change and forestry (LULUCF), which partly offset the overall net greenhouse gas emissions, have declined slightly, and the EU remains far from its 2030 target. In support of the EU's climate-neutrality objective, the share of renewables in the EU's energy consumption has grown, and the average CO_2 emissions efficiency of EU car fleets has improved. Nevertheless, stronger progress will be required in both areas to meet the 2030 targets. Concerning climate change impacts and adaptation, the monetary losses from climate-related disasters rose sharply in recent years. On a positive note, more green bonds were issued to finance the transition towards climate-neutrality. Additionally, climate-related expenditure for developing countries has increased strongly.

The EU has made insignificant progress towards **SDG 14 'Life below water'**. Even though the extent of marine protected areas has grown, the designation of new areas would need to speed up significantly to meet the target of 30 % of protected marine waters by 2030. Trends on ocean health are mixed. Due to the absorption of CO_2 into the world's oceans, the mean surface seawater acidity reached another unprecedented high in 2024. Likewise, the share of EU marine waters affected by eutrophication has increased strongly. On a more positive note, the share of coastal bathing sites with excellent water quality has increased slightly in the EU. Additionally, model-based indicators on sustainable fisheries show improving developments of fish stock biomass and fishing pressure in EU marine waters.

The assessment of **SDG 15 'Life on land'** remains unfavourable and shows a further worsening of the situation compared with previous years. This is mainly due to continued land degradation and the decline in biodiversity. Progress is only visible with regard to the slow growth in forest area and an improvement in the biological oxygen demand in EU rivers. By contrast, phosphate pollution of EU rivers continues to be on the rise. Land degradation as described by soil sealing with impervious materials and the EU area affected by drought has steadily grown. Moreover, the EU continues to face dramatic long-term declines in common bird and grassland butterfly populations. The designation of new terrestrial protected areas has stagnated, meaning that, at the current pace, the EU will not achieve the target of protecting at least 30 % of its land area by 2030.

The EU's progress towards **SDG 16 'Peace, justice and strong institutions'** has slowed in recent years and shows a mixed picture in the different areas. The perceived occurrence of crime, violence and vandalism in EU neighbourhoods has fallen continuously, and the number of deaths due to homicide or assault has fallen slightly. At the same time, the number of detected victims of trafficking in the EU — mostly for sexual or labour exploitation — has grown strongly. Government expenditure on law courts has increased, but the perceived independence of justice systems in Member States has slightly deteriorated in recent years. Additionally, the EU's rating in the Corruption Perceptions Index worsened in 2024, but perceived corruption levels in EU countries are still lower than in most other parts of the world.

SDG 17 'Partnerships for the goals' shows both favourable and unfavourable developments. Regarding global partnership, EU financing to developing countries has increased, and the EU moved closer to the target of raising its official development assistance (ODA) to 0.7 % of gross national income (GNI) by 2030. EU trade with the world's least developed countries has grown, even though these countries still account for only about 2 % of total extra-EU imports. Regarding access to technology, the share of EU households enjoying high-speed internet connection has grown considerably. Even though the EU's overall debt-to-GDP ratio has fallen since 2020, it remained above pre-pandemic levels in 2024. Moreover, the already low share of environmental taxes in total tax revenues declined even further and reached a new low in 2023.

Sustainable development: policy and monitoring

The global 2030 Agenda for Sustainable Development

Sustainable development is commonly defined as 'development which meets the needs of the current generations without compromising the ability of future generations to meet their own needs' ([1]). Achieving sustainable development at a global level requires coordinated action. Since the early 1990s, the UN has served as the forum to agree on respective international commitments.

From 2000 to 2015, the Millennium Development Goals (MDGs) were the blueprint for meeting the needs of the world's poorest.

In 2015, the UN action plan 'Transforming our world: the 2030 Agenda for Sustainable Development' extended the social endeavour of the MDGs with economic, environmental and institutional objectives. The 2030 Agenda sets 17 Sustainable Development Goals (SDGs) (see Figure I.1) and 169 related targets to end poverty, protect the planet and ensure prosperity and peace.

FIGURE I.1

The UN Sustainable Development Goals

The SDGs are unprecedented in terms of significance and scope by setting a broad range of economic, social and environmental objectives and calling for action by all countries, regardless of their level of economic development. Although the SDGs are not legally binding, governments are expected to take ownership and establish national frameworks for achieving the 17 goals. The UN High-Level Political Forum (HLPF) is the UN's central platform to follow up and review the 2030 Agenda and the SDGs at the global level.

With a view to monitoring progress, the General Assembly of the United Nations adopted a global SDG indicator list, including 232 indicators in July 2017. It was designed by an Inter-Agency and Expert Group under the supervision of the UN Statistical Commission ([2]). In 2020 and 2025, comprehensive reviews resulted in a revised global SDG indicator framework consisting of 234 unique indicators.

The SDGs are monitored at various levels: global, regional, national, local and thematic. Besides the EU regional monitoring as done in this report, the European Commission contributed to the UN's global SDG monitoring in 2023 through the first EU voluntary review, reflecting on the collective effort of the EU and its Member States towards implementing the SDGs.

Sustainable development in the European Union

Sustainable development is at the heart of European policymaking. It is firmly anchored in the European Treaties ([3]) and is integrated in key projects, sectorial policies and initiatives. Several major policy documents bear witness to the EU's evolving approach to implementing the SDGs. In its communication 'Next steps for a sustainable European future: European action for sustainability', the European Commission announced the integration of the SDGs into the European policy framework as early as 2016. In 2019, a reflection paper 'Towards a Sustainable Europe by 2030' highlighted the challenges the EU faces and identified the competitive advantages that implementing the SDGs offers the EU. The EU's approach for implementing the 2030 Agenda is described in detail in the Commission staff working document 'Delivering on the UN's Sustainable Development Goals — A comprehensive approach'. For a complete overview of the European Commission's activities related to SDG implementation, see the Commission's website on the EU's holistic approach to sustainable development.

Commission President von der Leyen's Political Guidelines for 2024–2029 reaffirmed the EU's commitment to the goals set in the European Green Deal, which aims to transform the Union into a climate-neutral society while leaving no one behind. The new Commission will build on the achievements of the previous Commission, which introduced a variety of targeted and transformative policies for enhancing sustainability in the EU and beyond.

As such, sustainable development is fully embedded in the Commissions' priorities for 2024–2029 (see Figure I.2). One key priority, 'A new plan for Europe's sustainable prosperity and competitiveness' aims to make business easier and faster, reach a Clean Industrial Deal, put research and innovation at the heart of the economy, and shift to a more circular and resilient economy. Another priority, 'A new era for European defence and security' aims to ensure safety and security in Europe, which are essential pre-conditions for sustainable development. Under the priority 'Supporting people, strengthen our societies and our social model' the Commission will pursue the objectives of social fairness, equality and a reunited society. The priority 'Sustaining our quality of life: Food security, water and nature' addresses competitiveness and sustainability of the farming and fishing sector, while preserving our biodiversity and natural ecosystems as well as Europe's water security. This will boost climate resilience and preparedness. The institutional dimension of sustainability is covered through 'Protecting our democracy, upholding our values' and 'A global Europe: Leveraging our power and partnerships'.

FIGURE I.2

Alignment of the SDGs with the European Commission priorities

The Commission has already taken the first steps to deliver on these priorities. In January 2025, it presented the Competitiveness Compass, a roadmap to restore Europe's dynamism and secure sustainable prosperity. Building on the analysis in Mario Draghi's report on the future of European competitiveness, the Compass provides a strategic framework to guide the Commission's work during this mandate. It specifies the three key imperatives for enhancing EU competitiveness — closing the innovation gap, developing a joint strategy for decarbonisation and competitiveness, and increasing security while reducing excessive dependencies. It includes a timeline for key actions, featuring many initiatives which will contribute to the SDGs such as a Clean Industrial Deal, an Action Plan on Affordable Energy, a Vision for Agriculture and Food, Union of Skills, a Water Resilience Strategy, a Sustainable Transport Investment Plan and an Industrial Decarbonisation Accelerator Act.

Each chapter in this report provides an overview of EU policies and targets related to the respective SDGs.

Monitoring sustainable development in the EU

Regular monitoring and reporting on progress towards the SDGs in an EU context is an essential part of the Commission's continued dedication to sustainable development. It helps to coordinate SDG-related policies at both EU and Member State level and highlights their cross-cutting nature. Eurostat is responsible for monitoring the implementation of the SDGs in the EU and has published annual SDG monitoring reports to this end since 2017.

The monitoring exercise is based on the EU SDG indicator set. It is structured along the 17 SDGs and covers the social, economic, environmental and institutional dimensions of sustainability as represented by the 2030 Agenda. Progress towards each SDG is measured by six main indicators. These indicators have been selected for their policy relevance from an EU perspective, availability, country coverage, data freshness and quality, reflecting the SDGs' broad objectives and ambitions. Preference is given to indicators which are part of a high-level scoreboard of EU policies such as the Social Scoreboard for the European Pillar of Social Rights Action Plan or the Monitoring Framework for the 8th Environment Action Programme due to their relevance. Out of the 102 indicators, 33 are 'multi-purpose', meaning they are used to monitor more than one goal. This allows the link between different goals to be highlighted and enhances this report's narrative. Around two-thirds of the current EU SDG indicators are aligned with the UN SDG indicators.

The EU SDG indicator set is not static but evolves over time to reflect new policy objectives and indicator development. For this purpose, the indicator set is reviewed annually in close cooperation with the Commission services, the European Environment Agency and Member State institutes in the European Statistical System, and in consultation with the Council Committees and Working Parties as well as the civil society.

This SDG monitoring report provides an assessment of observed progress towards SDG-related EU objectives and targets. The assessment considers whether an indicator has moved towards or away from the sustainable development objective, as well as the speed of this movement. If an explicit quantified and measurable target exists for the EU, it is used to assess progress of the indicator. Otherwise, a different method is used based on a general objective, meaning the desired direction in which an indicator should develop. The two methods are explained in Annex II (see page 310).

The indicators are assessed for the most recent 5- and 15-year periods of available data, to establish whether a development was persistent or showed a turnaround at a certain point in time. Table I.1 shows the symbols used for the progress assessment and explains their meaning for the two approaches (indicators with and without quantitative targets).

TABLE I.1

Explanation of symbols for indicating progress towards SD objectives and targets

Symbol	With quantitative target	Without quantitative target
	Indicators marked with this 'target' symbol are assessed against an official and quantified EU policy target. In this case the arrow symbols should be interpreted according to the left-hand column below. All other indicator assessments should be interpreted according to the right-hand column below.	
	On track to reach the EU target	Significant progress towards SD objectives
	Moderate progress towards the EU target	Moderate progress towards SD objectives
	[Category not applicable]	No progress towards nor movement away from SD objectives
	Insufficient progress towards the EU target	Moderate movement away from SD objectives
	Movement away from the EU target	Significant movement away from SD objectives
	Assessment not possible (for example, time series too short or break in time series)	

The European Commission and the European Environmental Agency issue other reports on sustainability. The assessments of those reports may differ due to a different scope and methodology, in particular when these assessments also take into account planned measures or projections rather than observed developments only.

Notes

(1) The definition was introduced in 1987 through the Brundtland report.

(2) The United Nations Statistical Commission, established in 1947, is the highest body of the global statistical system. It brings together the Chief Statisticians from member states from around the world. It is the highest decision-making body for international statistical activities, especially the setting of statistical standards, the development of concepts and methods and their implementation at the national and international level.

(3) Articles 3 (5) and 21 (2) of the Treaty on European Union.

End poverty in all its forms everywhere

SDG 1 calls for the eradication of poverty in all its manifestations. It envisions shared prosperity, a basic standard of living and social protection benefits for people everywhere, including the poorest and most vulnerable.

Poverty harms people's lives and hampers social cohesion and economic growth. Monitoring SDG 1 in an EU context involves tracking aspects related to multidimensional poverty and access to housing and health care. Over the assessed five-year period, the EU has made progress towards reducing the different aspects of poverty monitored here, but the overall pace of improvement has slowed compared with previous years. The number of people at risk of poverty or social exclusion has remained broadly stable since 2019. The individual components included in the EU's multidimensional poverty measure — monetary poverty, social- and material deprivation, and very low work intensity — improved between 2018 and 2023. However, significant further efforts will be required to meet the target set for multidimensional poverty to reduce the number of people at risk of poverty or social exclusion by at least 15 million by 2030, compared with the 2019 baseline level, including at least 5 million children. Regarding access to housing and health care, fewer people are now overburdened by housing costs or living in an overcrowded household. However, more people reported an unmet need for medical care in 2023 than they did five years earlier.

Indicators measuring progress towards SDG 1, EU

Indicator	Period	Annual growth rate	Assessment	More info
Multidimensional poverty				
Persons at risk of poverty or social exclusion ◎	Time series too short for long-term assessment		✕	page 29
	2018–2023	Observed: – 0.1 % Required: – 1.4 %	↘	
Persons at risk of monetary poverty after social transfers	2010–2023	0.0 %	→	page 32
	2018–2023	– 0.6 %	↗	
Severe material and social deprivation rate	Time series too short for long-term assessment		✕	page 33
	2018–2023	– 0.6 %	↗	
Persons living in households with very low work intensity	Time series too short for long-term assessment		✕	page 34
	2018–2023	– 1.0 %	↑	
In work at-risk-of-poverty rate	2010–2023	– 0.2 %	↗	page 35
	2018–2023	– 2.2 %	↑	
Relative median at-risk-of-poverty gap (*)	2010–2023	0.0 %	→	SDG 10, page 187
	2018–2023	– 1.3 %	↑	
Access to housing and health care				
Housing cost overburden rate	2010–2023	– 1.0 %	↑	page 36
	2018–2023	– 1.7 %	↑	
Self-reported unmet need for medical care (*)	2010–2023	– 2.9 %	↑	SDG 3, page 70
	2018–2023	5.9 %	↓	
Severe housing deprivation rate (*)	2010–2023	– 3.2 %	↑	SDG 11, page 204
	2018–2023	– 1.4 %	↑	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.
(*) Multi-purpose indicator.

Policy context

Multidimensional poverty

The European Pillar of Social Rights (EPSR) promotes upward convergence towards better living and working conditions in Europe. The EPSR Action Plan sets a target to reduce the number of people at risk of poverty or social exclusion by at least 15 million by 2030, compared with 2019 levels, of which at least 5 million should be children.

The reinforced Youth Guarantee supports young people from vulnerable groups and will help to reduce their rates of poverty or social exclusion.

The European Child Guarantee helps to ensure that in Europe every child in need has effective and free access to quality early childhood education and care; education and school-based activities; at least one healthy meal each school day; healthcare; and effective access to adequate housing and healthy nutrition.

The Directive on adequate minimum wages in the European Union from 2022 aims to establish a framework to improve the adequacy of minimum wages and to enhance the access of workers to minimum wage protection. It thus contributes to improving living and working conditions and decreasing in-work poverty.

The Council Recommendation on minimum income ensuring active inclusion from 2023 aims to combat poverty and social exclusion and to pursue high levels of employment by promoting adequate income support, effective access to enabling and essential services, and by fostering labour market integration of those who can work.

The Council Recommendation on ensuring a fair transition towards climate neutrality from 2022 provides policy guidance for addressing relevant employment and social aspects in the context of the green transition.

The Commission Communication from 2022 on better assessing the distributional impact of Member States' policies calls for Member States to make the impact of planned measures and investments on the income of various groups more transparent.

The Strategy for the Rights of Persons with Disabilities 2021–2030 aims to reduce the risk of poverty for people with disabilities through measures, for example in the field of employment, health, accessibility or education.

The European Social Fund Plus (ESF+) is a key financial instrument for implementing the European Pillar of Social Rights. It supports, among other groups, the most deprived people and marginalised communities, addresses child poverty and supports the social integration of people at risk of poverty.

Access to housing and health care

The affordable housing initiative has contributed to ensuring that social and affordable housing facilities also benefit from renovation. In the new mandate for 2024 to 2029, the Commission will prepare the first-ever European Affordable Housing Plan to address the housing crisis across the EU.

Overview and key trends

Multidimensional poverty

SDG 1 not only calls for the eradication of extreme poverty but also for poverty in all its dimensions to be halved by 2030. This global goal encourages a universal approach to reducing poverty. The EU also employs a multidimensional measure of poverty and in its European Pillar of Social Rights Action Plan has set a target to reduce the number of people at risk of poverty or social exclusion by at least 15 million by 2030 compared with the 2019 level. A complementary ambition states that of these 15 million people, at least 5 million should be children.

The EU's at-risk-of-poverty-or-social-exclusion (AROPE) indicator is based on three components: monetary poverty (at-risk-of-poverty rate, AROP), severe material and social deprivation, and very low work intensity. Through this multidimensional approach, the indicator shows which share of the population is at risk of exclusion and marginalisation from economic and social activities ([1]).

Significant further efforts will be needed to meet the 2030 target to reduce the number of people at risk of poverty or social exclusion

94.6
million people in the EU were at risk of poverty or social exclusion in 2023

In 2023, 94.6 million people, equalling 21.3 % of the EU population, were at risk of poverty or social exclusion. The number has remained broadly stable since 2018, when 95.1 million people (or 21.7 % of the population) were at risk. As a consequence, despite cushioning the negative social impacts of the COVID-19 and inflation crises, significant further efforts will be needed to meet the EU target of lifting at least 15 million people out of poverty or social exclusion by 2030 compared with the situation in 2019. It is worth noting that the trends related to monetary poverty — and thus in the overall risk of poverty or social exclusion indicator — might be affected by methodological changes in data collection from 2020 onwards in a few Member States ([2]).

The number of children (persons aged less than 18 years) who are at risk of poverty or social exclusion amounted to 19.9 million in 2023, corresponding to 24.8 % of this age group. This is an increase compared with five years earlier, when 19.3 million children (23.9 %) were at risk of poverty or social exclusion across the EU. Thus, the EU is currently not on track to meet the complementary ambition of reducing the number of children at risk of poverty or social exclusion by at least 5 million by 2030 compared with 2019.

Monetary poverty is the main form of poverty or social exclusion in the EU

71.7
million people in the EU were at risk of monetary poverty in 2023

Monetary poverty was the most prevalent component of poverty or social exclusion in the EU in 2023, affecting 71.7 million people or 16.2 % of the population ([3]). This means that after social transfers these people had an equivalised disposable income of less than 60 % of the national median equivalised disposable income. The equivalised disposable income is a household's total income — after tax and other deductions — that is available for spending or saving, divided by a specific scale which takes into account the household's composition and size (all household members have the same equivalised disposable income). Some 29.3 million people (6.8 % of the EU population) were affected by severe material and social deprivation in 2023, which meant they were unable to afford seven or more items out of a list of 13 elements of material goods, services or social activities considered by most people to be desirable or necessary for an adequate life (see page 33 for the full list). Very low work intensity,

referring to people living in (quasi-)jobless households where the adults worked equal to or less than 20 % of their total work-time potential during the past year, affected 26.5 million people aged less than 65 years (equalling 8.0 % of this age group).

29.3
million people in the EU were affected by severe material and social deprivation in 2023

The three components of the at-risk-of-poverty-or-social-exclusion indicator — monetary poverty, very low work intensity, and severe material and social deprivation — are distinct concepts that can, however, overlap. This means that some people might be affected by two or even all three dimensions at the same time. According to its definition, monetary poverty is a relative measure and strongly depends on a country's median income level. This means that even during times of increasing median income, the relative poverty rate may remain stable or even increase, depending on changes in income distribution across the population. Rates of people living in households with very low work intensity (jobless or quasi-jobless households) and severe material and social deprivation (indicating a lack of resources to cover certain material and social needs) are likely to decrease during economic recoveries when people are generally better off financially and the labour market situation has improved. Of all the 94.6 million people at risk of poverty or social exclusion in the EU in 2023, 27.5 million were affected by more than one dimension of poverty, and 5.5 million were affected by all three forms.

26.5
million people in the EU were living in (quasi-)jobless households in 2023

To reduce poverty, governments provide a wide range of measures, such as income support though various benefits (for example, unemployment benefits, sickness and invalidity benefits, and minimum income benefits), tax policies and provision of enabling, social and employment services. The impact of the transfers on poverty reduction can be assessed by comparing the at-risk-of-poverty rate before and after social transfers, excluding pensions. In the EU, social transfers (other than pensions) reduced the share of people at risk of poverty in 2023 from 24.8 % ([4]) to 16.2 %, which corresponds to a reduction of 34.7 % ([5]).

Considerable differences in poverty rates exist within the EU

The multidimensional risk-of-poverty-or-social-exclusion rate differs considerably between Member States. In 2023, national rates for this indicator ranged from 12.0 % in Czechia to 32.0 % in Romania. While Czechia ranked among the best performing countries for all three components, other countries showed striking differences in terms of monetary poverty, severe material and social deprivation, and very low work intensity. This illustrates that good performance on one indicator does not necessarily go hand in hand with a similar performance on another one. Romania, for example, had the third highest share of monetary poverty after social transfers and the highest share of severely materially and socially deprived people in 2023, while at the same time its share of (quasi-)jobless households was rather low (ninth lowest) across the EU. Denmark is another example with striking differences between the three components. It had the second lowest share of monetary poverty after social transfers, was in the midfield with regard to the rate of people affected by severe material and social deprivation, and it had the third highest share of (quasi-)jobless households. These examples show that the drivers behind Member States' at-risk-of-poverty-or-social-exclusion rates can vary, depending on the national context.

Children and young people are particularly affected by poverty and social exclusion

Children and young people are generally more affected by the risk of poverty or social exclusion than other age groups. As described previously, with a rate of 24.8 %, children aged less than 18 were more affected than the overall EU population

(21.3 %). However, people aged 15 to 24 were the most likely to be at risk in 2023, with 26.4 % of this age group living in households that were at risk of poverty or social exclusion ([6]).

Children aged less than 18 show a similar pattern for the three poverty dimensions as the total population, with monetary poverty being the most prevalent form, followed by material and social deprivation and quasi-joblessness. In 2023, 19.4 % of children aged less than 18 were living in households affected by monetary poverty after social transfers, 8.4 % were living in households affected by severe material and social deprivation, and 7.5 % were living in (quasi-)jobless households ([7]).

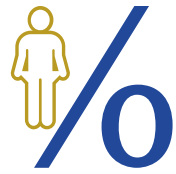
Children's risk of poverty or social exclusion is largely determined by their parents' situation. Two major factors are education and household composition; parents with a lower level of education usually earn less. In 2023, 61.8 % of children aged 0 to 17 whose parents had at most lower secondary education were at risk of poverty or social exclusion. Very young children aged 0 to 5 were the most affected, with a rate of 64.3 %. Children with more highly educated parents fared significantly better. 29.5 % of children aged 0 to 17 and 30.7 % of children aged 0 to 5 whose parents had a mid-level education were at risk of poverty or social exclusion. The rates were 10.7 % for children aged 0 to 17 and 10.5 % for children aged 0 to 5 with highly educated parents ([8]). Similarly, households of (mostly female) single parents with one or more dependent children had a much higher at-risk rate (43.1 % in 2023) than any other household type ([9]).

People who are unemployed, come from a migrant background, or have a low level of education or a disability are more prone to poverty

Identifying situations that can make people more vulnerable to being at risk of poverty and social exclusion is important for designing sound policies that prevent and fight poverty. Figure 1.4 shows which subgroups of people were most at risk of poverty or social exclusion in 2023. In addition to the case of children and young people discussed previously, other characteristics — such as unemployment, a migrant background, low education levels or disabilities — were also key risk factors. The group with the highest at-risk-of-poverty-or-social-exclusion rate were unemployed people aged 18 years and over, of which two-thirds (66.3 %) were in this situation. Almost half (45.5 %) of non-EU citizens living in the EU were at risk of poverty and social exclusion, far more than EU home-country nationals (18.9 %). The situation was similar when looking at country of birth, with 39.2 % of adults born in non-EU countries being at risk, compared with only 18.3 % of those born in the reporting EU countries. Moreover, more than one-third of people with severe disabilities (35.6 %) or low education levels (34.5 %) were at risk of poverty or social exclusion. Women (22.3 %) were more affected than men (20.3 %). People living in urban areas (21.6 %) were slightly more affected than those in rural areas (21.4 %) ([10]).

Thanks to recent improvements, the poverty gap has returned to its 2010 level

The poverty gap measures how far below the poverty line a person's income falls. It is calculated as the difference between the median income of those at risk of poverty and the poverty threshold, which is set at 60 % of the national median equivalised disposable income after accounting for social benefits. In 2023, the median income of those below the poverty threshold was 23.0 % lower than the threshold itself. This represents a 1.5 percentage point improvement compared with 2018 ([11]). However, the long-term trend is characterised by stagnation, because the poverty gap in 2023 was practically the same as it was in 2010 (23.1 %). Rates varied considerably across the EU in 2023. Belgium had the lowest poverty gap with 14.0 % and Romania the highest with 37.4 %, followed by Slovakia with 29.9 %.



The median distance from the poverty threshold for those at risk of poverty in 2023 was

23.0 %

In-work poverty has fallen considerably during the past few years, reaching the lowest level recorded

8.3%
of employed people in the EU were at risk of monetary poverty in 2023

Having a paid job does not necessarily prevent people from being at risk of poverty. In 2023, the share of people at risk of monetary poverty among the employed — the so-called working poor (in-work poverty) — stood at 8.3 %, which is slightly lower than the rate of 8.5 % measured in 2010. The 2023 figure represents a 1.0 percentage point improvement in the in-work poverty rate compared with 2018, when 9.3 % of employed people were affected. Rates varied considerably across the EU in 2023, with the lowest share of in-work-poverty recorded in Finland (2.8 %) and the highest in Romania (15.3 %).

The likelihood of a person becoming 'working poor' varies according to their type of employment contract, education level and nationality. Low-skilled workers, people who work part-time or on temporary contracts, as well as people born outside the EU or who do not have EU citizenship, are generally the most affected. While social protection benefits play an important role in reducing poverty risks, coverage of such benefits varies widely across Member States and for different categories of workers, as well as by employment status ([12]).

Access to housing and health care

Being at risk of poverty can have a severe impact on a person's ability to meet their basic needs such as being able to afford adequate housing or receive necessary medical treatment.

Fewer people are overburdened by their housing costs or face severe housing deprivation

The European Pillar of Social Rights, in principle 19, stipulates that access to social housing or housing assistance of good quality shall be provided for those in need. Meeting basic human needs is central to social sustainability and housing is a key dimension. The costs of housing often account for the largest component of many households' expenditure and determine what is left of a household's budget for satisfying other essential needs and expenses, such as food, energy, medical treatment or education. People suffering from poverty are far more often restricted to sub-optimal housing than the overall population.

Housing affordability can be analysed through the housing cost overburden rate, which is defined as the share of the population living in households where the total housing costs (net of housing allowances) represent more than 40 % of the total disposable household income. The EU's housing cost overburden rate has been on a downward path since 2010, when 10.0 % of the population were affected, falling to 8.8 % in 2023. Nevertheless, the rate has increased since 2020 when it was at 7.8 %. Moreover, the rate varies considerably between Member States. In 2023, 28.5 % of the population in Greece and 15.4 % in Denmark were affected, while this was only the case for 2.6 % of the population in Cyprus and for 3.7 % in Slovenia. Low-income households are particularly prone to being overburdened by their housing costs. In 2023, 33.5 % of people with an income below the poverty threshold spent 40 % or more of their household disposable income on housing, compared with only 4.1 % of the not at-risk-of-poverty population (referring to people with an income above the poverty threshold).

8.8%
of the EU population were overburdened by their housing costs in 2023

The standardised house price-to-income ratio provides further insights into the affordability

of housing, by tracking changes in house prices compared with changes in income. A value of 100 means that the current price-to-income ratio equals the long-term average (calculated over the period from 2000 to the most recent data available), while a ratio above 100 means prices for houses increased more than income. In 2023, the EU house price-to-income ratio stood at 100.9 and was thus only marginally above its long-term average. Since 2018, the ratio has increased by 2.4 index points, showing that house prices have risen somewhat faster than incomes in recent years. However, the EU-level values mask considerable differences across Member States. In 2023, Bulgaria and Romania had ratios below 60, while Luxembourg, Portugal and Austria reported ratios above 125. Between 2018 and 2023, the ratio increased the strongest in Portugal, by 27 index points, followed by Luxembourg and Estonia with increases of 17 index points each. In contrast, Romania and Cyprus reported the strongest decreases of the ratio over this period, by 23 and 21 index points, respectively ([13]).

The severe housing deprivation rate is an indicator of inadequate housing, referring to people living in overcrowded households ([14]) that also face housing deprivation, defined by poor amenities such as a leaking roof, lacking sanitation facilities (bath, shower, indoor flushing toilet) or a dwelling considered to be too dark. In 2023, 4.0 % of the EU population faced severe housing deprivation, a 0.3 percentage point improvement compared with 2018. Among people living in monetary poverty, 9.9 % were affected by this situation in 2023, compared with only 2.9 % of the richer population ([15]).

4.0 %
of the EU population faced severe housing deprivation in 2023

An analysis by degree of urbanisation reveals that city dwellers in particular are more likely to be overburdened by their housing costs or to face severe housing deprivation. In 2023, 10.6 % of people living in cities spent 40 % or more of their household disposable income on housing, compared with only 8.3 % for towns and suburbs and 7.0 % for rural areas. Similarly, the severe housing deprivation rate was higher in cities (4.9 % in 2023) than in rural areas (3.5 %) and in towns and suburbs (3.3 %) ([16]).

People most commonly report long waiting lists and costs as the reasons for unmet needs for medical care

Access to health care services is important for ensuring a high quality of life. In turn, this may contribute to increased productivity and reduced costs associated with social protection systems. Barriers to accessing health services include costs, distance and waiting time. In 2023, 2.4 % of the EU population aged 16 and above reported unmet needs for medical care. While this is an improvement of 1.1 percentage points compared with 2010, it also represents a 0.6 percentage point deterioration compared with 2018, when only 1.8 % of people had reported unmet needs for medical care. Thus, the short-term trend is negative. Long waiting lists and financial constraints were the main reasons given for limited access to health care services, indicated by 1.2 % and 1.0 % of the EU population in 2023, respectively.

2.4 %
of the EU population reported unmet needs for medical care in 2023

People with lower incomes face a much higher share of unmet needs for medical care. While only 0.2 % of the richest 20 % of the population reported unmet care needs due to financial constraints, 2.2 % of people in the poorest quintile reported that this was the case. Regarding differences between age groups, the prevalence of unmet needs for medical care was lowest among people aged 16 to 29 years, at 1.3 %, and it was highest for people aged 75 years or over, at 3.7 % ([17]).

Main indicators

Persons at risk of poverty or social exclusion

While a household's income is a key determinant of its standard of living, other aspects can prevent people from fully participating in society such as an impeded access to labour markets or material and social deprivation. To reflect these different dimensions of poverty or social exclusion, the indicator 'at risk of poverty or social exclusion' measures the number of people affected by at least one of the following three forms of poverty or social exclusion: monetary poverty (at-risk-of-poverty rate), severe material and social deprivation and very low work intensity (see pages 32–35 for a detailed description of these components). Data on the three components are derived from the EU Statistics on Income and Living Conditions (EU-SILC).

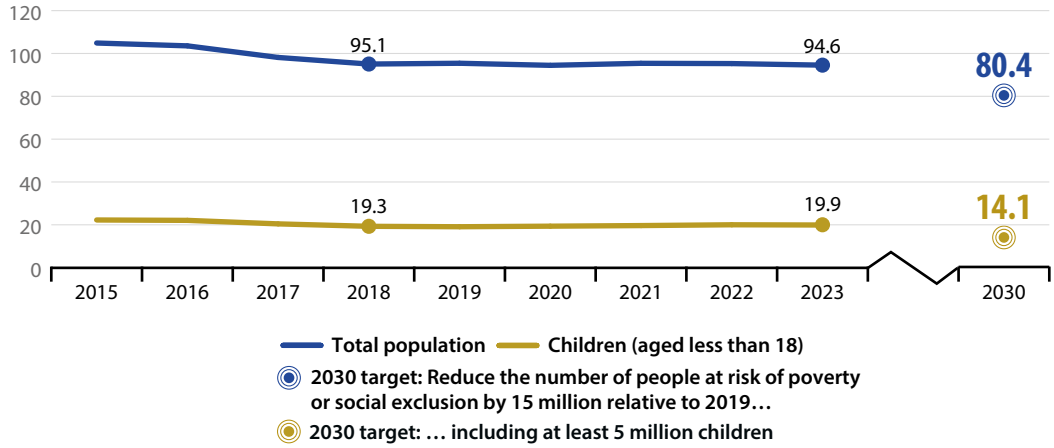
LONG TERM Time series too short

SHORT TERM 2018–2023

FIGURE 1.1

Persons at risk of poverty or social exclusion, EU, 2015–2023

(million persons)

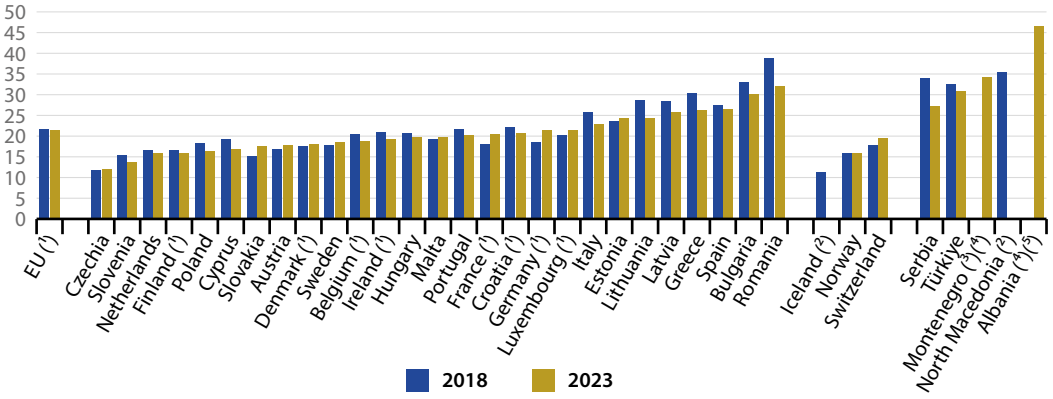


Note: Break in time series in 2019 and 2020; 2019 data are estimated.
Source: Eurostat (online data code: sdg_01_10)

FIGURE 1.2

Persons at risk of poverty or social exclusion, by country, 2018 and 2023

(% of population)



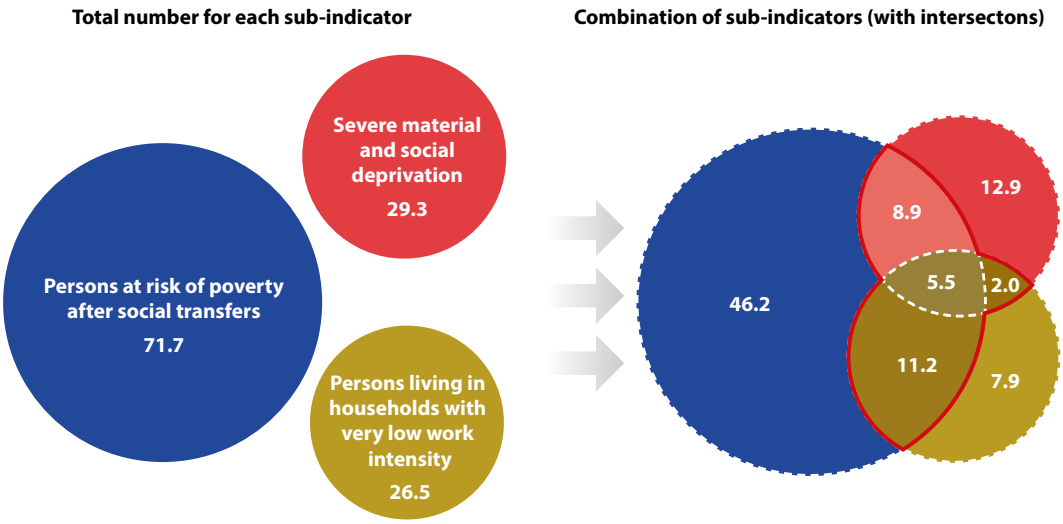
(1) Break(s) in time series between the two years shown.
(2) No data for 2023.
(3) 2022 data (instead of 2023).
(4) No data for 2018.
(5) 2021 data (instead of 2023).

Source: Eurostat (online data code: sdg_01_10)

FIGURE 1.3

Aggregation of components of 'Persons at risk of poverty or social exclusion', EU, 2023

(million persons)

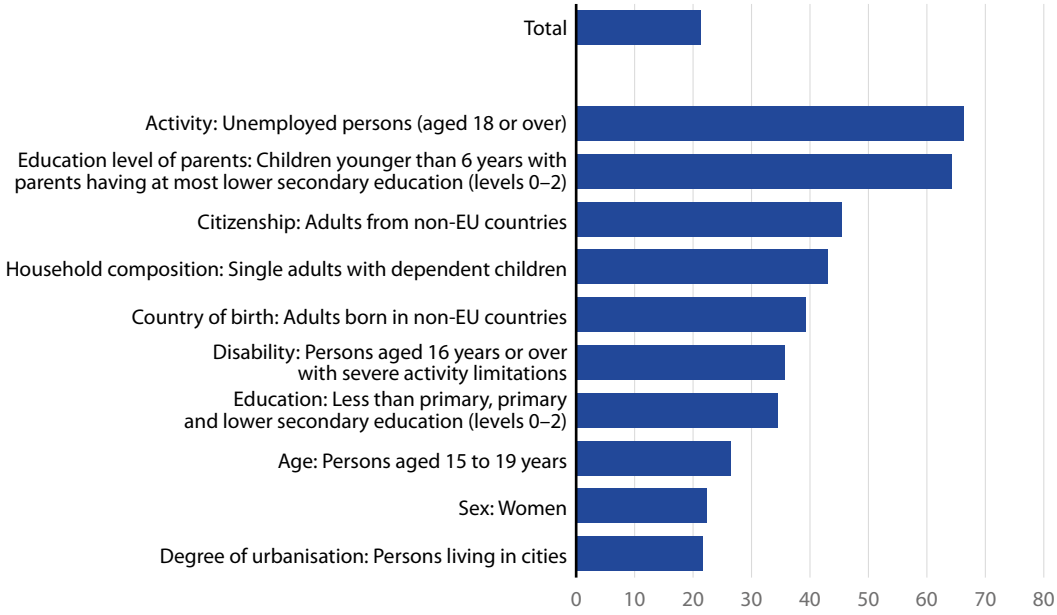


Source: Eurostat (online data code: ilc_pees01n)

FIGURE 1.4

Persons most at risk of poverty or social exclusion, by sub-group, EU, 2023

(% of population)



Source: Eurostat (online data codes: ilc_peps01n, ilc_peps02n, ilc_peps03n, ilc_peps04n, ilc_peps05n, ilc_peps06n, ilc_peps13n, ilc_peps60n and hlth_dpe010)

Persons at risk of monetary poverty after social transfers

LONG TERM 2010–2023

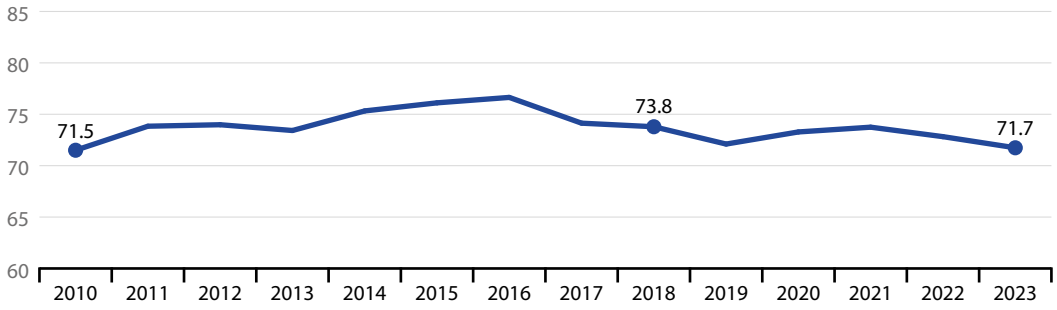
SHORT TERM 2018–2023

This indicator measures the number of people with an equivalised disposable income below the at-risk-of-poverty threshold. This is set at 60 % of the national median equivalised disposable income after social transfers ([18]). The data stem from the EU Statistics on Income and Living Conditions (EU-SILC).

FIGURE 1.5

Persons at risk of monetary poverty after social transfers, EU, 2010–2023

(million persons)



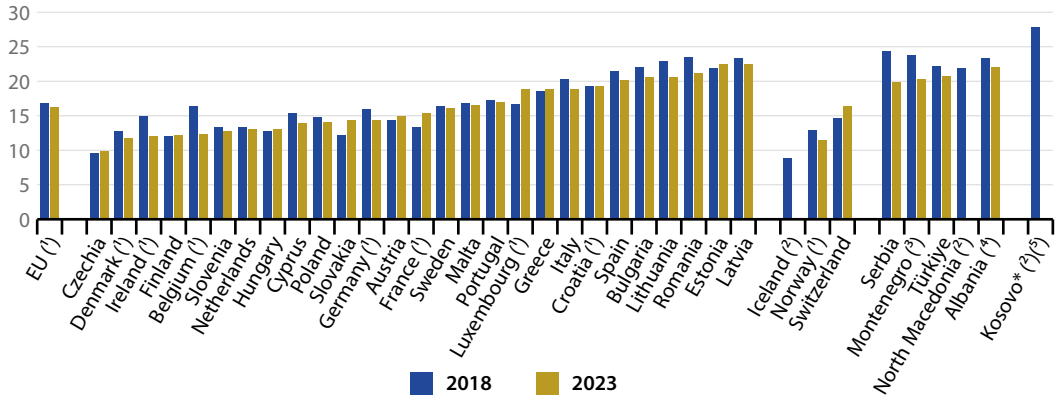
Note: 2010–2012 data are estimated; break in time series in 2020. The data are presented according to the year of the data collection but refer to the income of the previous year (for example, the data for 2023 refer to the income in 2022).

Source: Eurostat (online data code: sdg_01_20)

FIGURE 1.6

Persons at risk of monetary poverty after social transfers, by country, 2018 and 2023

(% of population)



Note: The data are presented according to the year of the data collection but refer to the income of the previous year (meaning that the data for 2023 refer to the income in the year 2022).

(1) Break(s) in time series between the two years shown. (3) 2022 data (instead of 2023).

(2) No data for 2023. (4) 2021 data (instead of 2023).

(*) 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.

Source: Eurostat (online data code: sdg_01_20)

Severe material and social deprivation rate

LONG TERM Time series too short

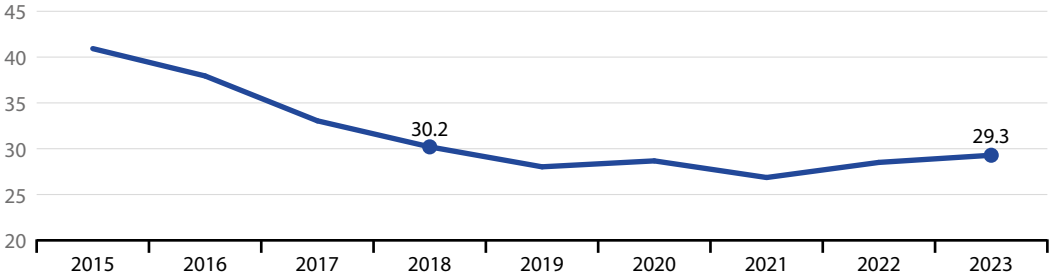
SHORT TERM 2018–2023

The indicator shows an involuntary lack of necessary and desirable items to lead an adequate life. It is defined as the proportion of the population experiencing an enforced lack of at least 7 out of the following 13 deprivation items: (1) pay rent, utility bills, hire purchase instalments or other loan payments, (2) keep their home adequately warm, (3) face unexpected expenses, (4) eat meat, chicken, fish or vegetarian equivalent every second day, (5) a week of holiday away from home, (6) have access to a car/van for personal use, (7) replace worn-out furniture, (8) replace worn-out clothes with some new ones, (9) have two pairs of properly fitting shoes, (10) spend a small amount of money each week on themselves ('pocket money'), (11) have regular leisure activities, (12) get together with friends/family for a drink/meal at least once a month, and (13) have an internet connection. Items 1 to 7 relate to the household level, while the remaining items 8 to 13 relate to the level of the individual. Data for this indicator stem from the EU Statistics on Income and Living Conditions (EU-SILC).

FIGURE 1.7

Severe material and social deprivation, EU, 2015–2023

(million persons)

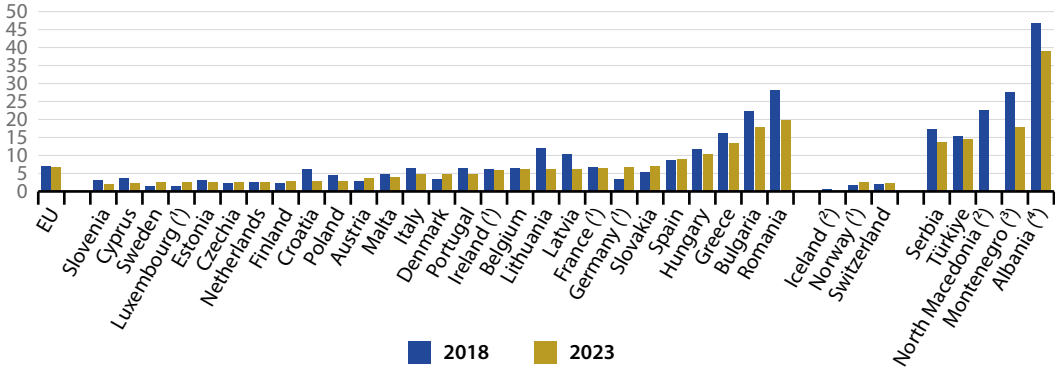


Source: Eurostat (online data code: sdg_01_31)

FIGURE 1.8

Severe material and social deprivation rate, by country, 2018 and 2023

(% of population)



(1) Break(s) in time series between the two years shown. (3) 2022 data (instead of 2023).
(2) No data for 2023. (4) 2021 data (instead of 2023).

Source: Eurostat (online data code: sdg_01_31)

Persons living in households with very low work intensity

LONG TERM Time series too short

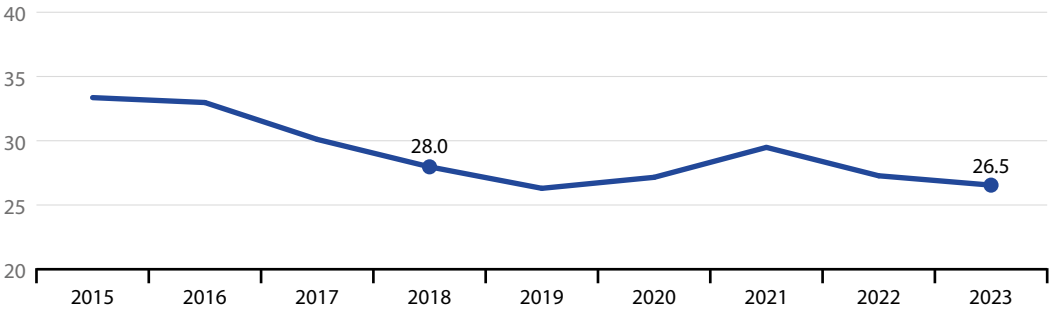
SHORT TERM 2018–2023

This indicator describes the share of people aged less than 65 living in households where the working age adults, aged 18 to 64 years, worked equal to or less than 20 % of their total combined potential work-time during the previous year. It excludes students aged 18 to 24 and people who are retired according to their self-defined current economic status or who receive any pension (except survivors pension), as well as people aged 60 to 64 who are inactive and live in a household where the main income comes from pensions (except survivors' pension). The EU Statistics on Income and Living Conditions (EU-SILC) is the data source for this indicator.

FIGURE 1.9

Persons living in households with very low work intensity, EU, 2015–2023

(million persons aged less than 65)

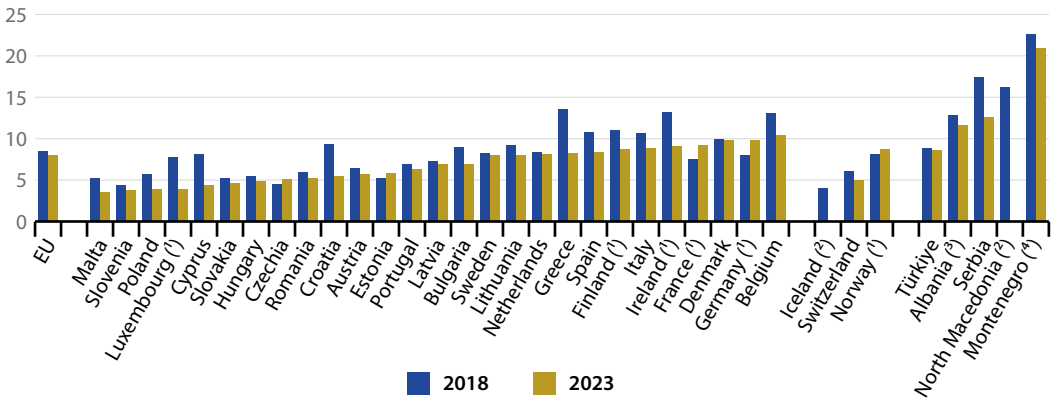


Source: Eurostat (online data code: sdg_01_40)

FIGURE 1.10

Persons living in households with very low work intensity, by country, 2018 and 2023

(% of population aged less than 65)



(1) Break(s) in time series between the two years shown.
(2) No data for 2023.
(3) 2021 data (instead of 2023).
(4) 2022 data (instead of 2023).

Source: Eurostat (online data code: sdg_01_40)

In work at-risk-of-poverty rate

This indicator refers to the share of people aged 18 years or over who declare to be at work (employed or self-employed) and who are at risk of monetary poverty (see definition on page 32). People are considered 'employed' if they held a job for more than half of the reference year. Data for this indicator are taken from the EU Statistics on Income and Living Conditions (EU-SILC).

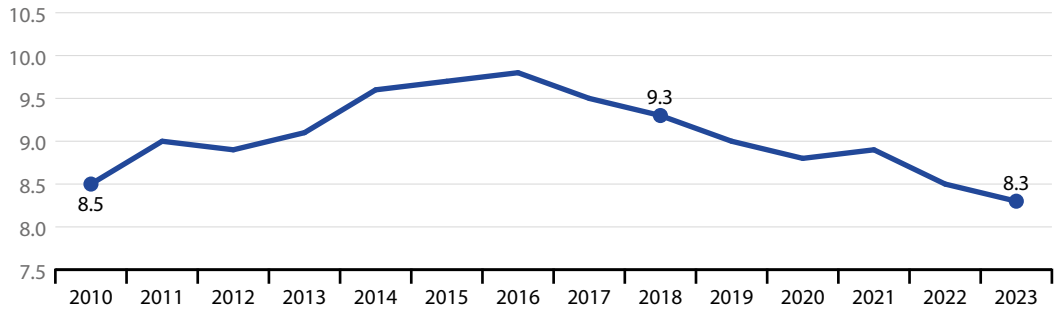
LONG TERM 2010–2023

SHORT TERM 2018–2023

FIGURE 1.11

In work at-risk-of-poverty rate, EU, 2010–2023

(% of employed persons aged 18 or over)



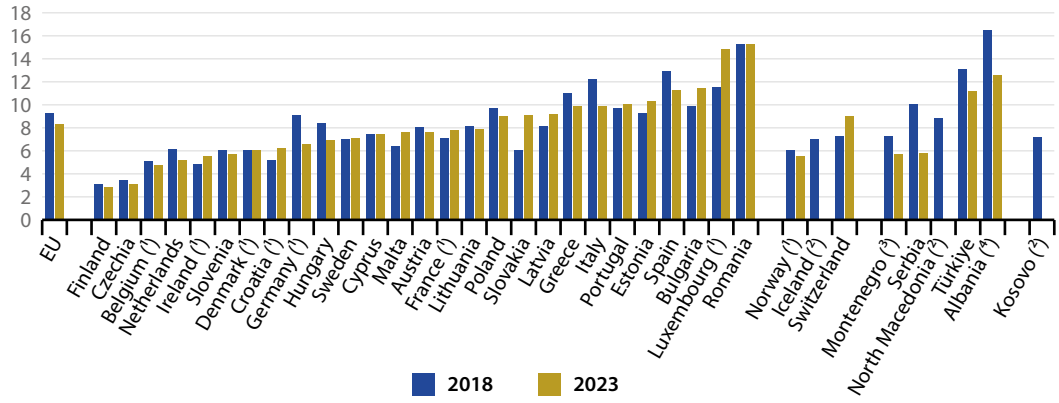
Note: 2010–2019 data are estimated.

Source: Eurostat (online data code: sdg_01_41)

FIGURE 1.12

In work at-risk-of-poverty rate, by country, 2018 and 2023

(% of employed persons aged 18 or over)



(1) Break(s) in time series between the two years shown.
(2) No data for 2023.
(3) 2022 data (instead of 2023).
(4) 2021 data (instead of 2023).

Source: Eurostat (online data code: sdg_01_41)

Housing cost overburden rate

LONG TERM 2010–2023

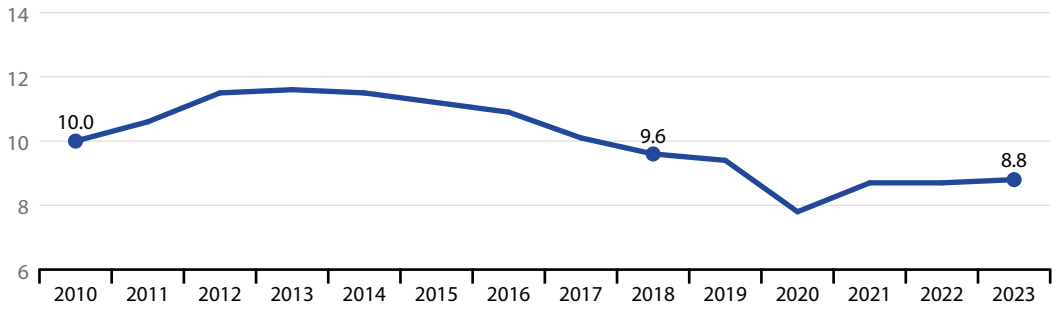
SHORT TERM 2018–2023

The indicator reflects the share of the population living in households where the total housing costs ('net' of housing allowances) represent more than 40 % of the disposable income. This indicator is derived from the EU Statistics on Income and Living Conditions (EU-SILC).

FIGURE 1.13

Housing cost overburden rate, EU, 2010–2023

(% of population)



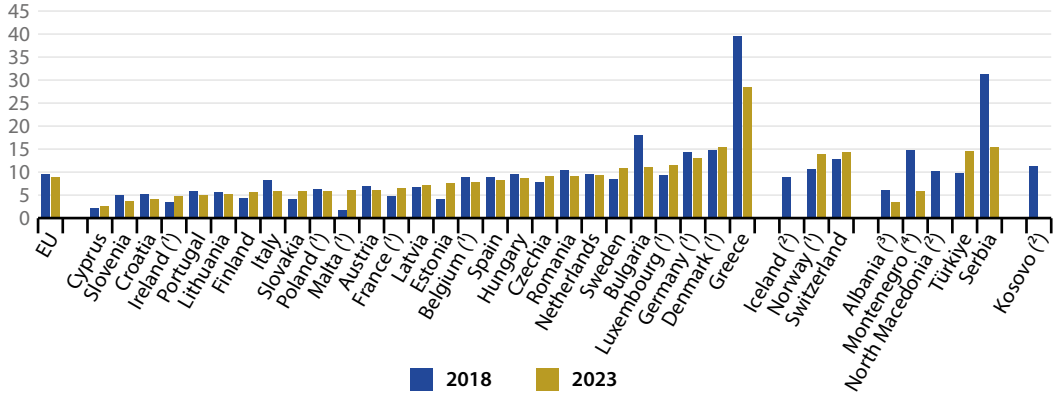
Note: 2014–2019 data are estimated.

Source: Eurostat (online data code: sdg_01_50)

FIGURE 1.14

Housing cost overburden rate, by country, 2018 and 2023

(% of population)



(1) Break(s) in time series between the two years shown.
(2) No data for 2023.
(3) 2021 data (instead of 2023).
(4) 2022 data (instead of 2023).

Source: Eurostat (online data code: sdg_01_50)

Notes

(1) In 2021, the AROPE indicator was modified and the new EU 2030 target was based on the revised definition. The 'severe material deprivation' indicator was replaced with the 'severe material and social deprivation' indicator also considering social aspects such as leisure activities and social relationships in addition to the material aspects of deprivation. In addition, the definition of 'very low work intensity' — referring to people living in (quasi-)jobless households — was adjusted, including extending the monitored age group from 0–59 to 0–64 years. As a consequence, the two components and thus the whole AROPE indicator presented in this report have indicator values from 2015 only and are not comparable with the data in reports before 2022.

(2) In 2020, the German EU-SILC survey, on which the AROPE indicator is based, was integrated into the newly designed German microcensus, leading to a substantial break in the time series between 2019 and 2020, with income variables being the most affected by the break. For more information see the related information note. In addition to the ilc_peps01n table used for AROPE and its intersections, the break-free estimates of AROPE from 2019 (available in the dataset ilc_pecs01) can be used for the purpose of assessing the overall progress towards the 2030 poverty and social exclusion target. In addition to Germany, further countries such as France also reported methodological changes in 2020 and in 2022, which also affected the EU total.

(3) Variables related to income (only) in the indicators at-risk-of-poverty rate and the people living in households with very low work intensity indicator, refer to the income reference period (N-1), which in EU-SILC corresponds to the previous year of the survey. Please note that both indicators involve other variables not related to the survey year (N). The indicator 'severe materially or socially deprived' does not involve any income-related variables. The EU-SILC indicators provide insights on the economic well-being and other living conditions on EU residents based on data collected during a specific year, denoted as N. This data encompasses both the characteristics of households for that year (N) and the income from the preceding year, N-1. The income for year N-1 is an estimate for income of year N within EU-SILC.

(4) *Source*: Eurostat (online data code: ilc_li10).

(5) *Source*: Eurostat (online data code: tespm050).

(6) *Source*: Eurostat (online data code: ilc_peps01n).

(7) *Source*: Eurostat (online data codes: tepsr_spi110, tepsr_spi120 and tepsr_spi130).

(8) *Source*: Eurostat (online data code: ilc_peps60n).

(9) *Source*: Eurostat (online data code: ilc_peps03n).

(10) *Source*: Eurostat (online data codes: online data codes: ilc_peps02n, ilc_peps05n, ilc_peps06n, hlth_dpe010, ilc_peps04n, ilc_peps01n and ilc_peps13n). Further information on vulnerable groups particularly at risk of poverty or social exclusion can be found on Eurostat's Statistics Explained pages related to 'Poverty and social exclusion'.

(11) *Source*: Eurostat (online data code: sdg_10_30).

(12) European Commission (2024), Joint Employment Report 2024, Directorate-General for Employment, Social Affairs and Inclusion, Brussels.

(13) *Source*: Eurostat (online data code: tipsho60).

(14) A household is considered overcrowded if it does not have at least one room for the entire household as well as a room for a couple, for each single person above 18, for a pair of teenagers (12 to 17 years of age) of the same sex, for each teenager of different sex and for a pair of children (under 12 years of age).

(15) *Source*: Eurostat (online data code: ilc_mdho06a).

(16) *Source*: Eurostat (online data codes: ilc_lvho07d and ilc_mdho06d).

(17) *Source*: Eurostat (online data code: hlth_silc_08).

(18) The equivalised disposable income is the total income of a household, after tax and other deductions, that is available for spending or saving, divided by the number of household members converted into equalised adults; household members are equalised or made equivalent by weighting each according to their age, using the so-called modified OECD equivalence scale.

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

SDG 2 seeks to end hunger and malnutrition, and ensure access to safe, nutritious and sufficient food. Realising this goal will largely depend on promoting sustainable production systems and increasing investment in rural infrastructure and agricultural research and development.

Achieving healthy diets and ensuring agricultural systems remain productive and sustainable are essential for achieving a healthy food system that is good for people and the planet. Monitoring SDG 2 in an EU context includes tracking developments in obesity, the sustainability of agricultural production and the environmental impacts of agricultural activities on land, water and the atmosphere. Over the past five years good progress has been made towards SDG 2, with some exceptions. There have been strong improvements in sustainable agricultural production practices monitored in this report, including labour productivity, public investment in farming, and reductions in the use and risk of pesticides. The area under organic farming has also grown in the EU, but stronger progress will be required to meet the respective target by 2030. No progress has been made on malnutrition, with the share of obese people in the EU stagnating. Progress on reducing some environmental impacts has been mixed, showing both positive and negative trends. Intensive agriculture remains a major driver of biodiversity decline in the EU.

Indicators measuring progress towards SDG 2, EU

Indicator	Period	Annual growth rate	Assessment	More info
Malnutrition				
Obesity rate	Time series too short for long-term assessment		✕	page 47
	2017–2022	– 0.1 %	→	
Sustainable agricultural production				
Agricultural real factor income per annual work unit	2009–2024	4.4 %	↑	page 48
	2019–2024	3.0 %	↑	
Government support to agricultural R&D	2008–2023	1.5 %	↑	page 49
	2018–2023	4.9 %	↑	
Area under organic farming ◎	2012–2022	Observed: 6.0 % Required: 8.4 %	↗	page 50
	2017–2022	Observed: 7.0 % Required: 9.7 %	↗	
Use and risk of chemical pesticides ◎	2011–2022	Observed: – 6.7 % Required: – 4.3 %	↑	page 51
	2017–2022	Observed: – 10.1 % Required: – 4.6 %	↑	
Environmental impacts of agricultural production				
Ammonia emissions from agriculture	2007–2022	– 1.2 %	↑	page 52
	2017–2022	– 2.5 %	↑	
Nitrate in groundwater (*)	2007–2022	– 0.2 % (1)	↗	SDG 6, page 120
	2017–2022	– 0.4 % (1)	↗	
Area at risk of severe soil erosion by water (*)	2000–2016	– 0.9 %	↗	SDG 15, page 271
	2010–2016	– 0.1 %	→	
Common farmland bird index (*)	2008–2023	– 1.7 % (2)	↓	SDG 15, page 274
	2018–2023	– 2.0 % (2)	↓	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

(*) Multi-purpose indicator. (1) Data refer to an EU aggregate based on 18 Member States. (2) Data refer to an EU aggregate whose composition changes over time depending on when countries joined the Pan-European Common Birds Monitoring Scheme.

Policy context

Malnutrition

The EU undertakes a number of public health initiatives related to nutrition (see this overview of EU policy initiatives in the areas of nutrition and physical activity).

Europe's Beating Cancer Plan also highlights the importance of addressing obesity and diabetes from an early age.

Sustainable agricultural production

A sustainable, well-functioning and robust food system is essential for ensuring food security. The EU undertakes measures to safeguard food security and to respond effectively to crises that affect or could affect food security.

The Vision for Agriculture and Food provides a roadmap for the future of farming and food in Europe. It aims to foster a thriving EU farming and agri-food sector for current and future generations of farmers and agri-food operators.

The Biodiversity Strategy for 2030 aims to bring back at least 10 % of agricultural area under high-diversity landscape features to provide space for wild animals, plants, pollinators and natural pest regulators. The strategy also calls for at least 25 % of agricultural land to be under organic farming management by 2030.

The Zero Pollution Action Plan provides a compass to embed pollution prevention into all relevant EU policies, to step up implementation of the relevant EU legislation and to identify possible gaps. It aims to improve soil quality by reducing nutrient losses and chemical pesticides' use and risk by 50 % by 2030. The Zero pollution monitoring and outlook 2025 shows that while EU policies have contributed to reducing pesticide risk, the levels of certain pollution, such as nutrient pollution, are still too high.

The EU's Common Agricultural Policy (CAP) provides income support, market measures and rural development measures to safeguard farmers' income and increase agricultural productivity while protecting rural landscapes, tackling climate change and fostering sustainable management of natural resources.

Environmental impacts of agricultural production

The National Emission-reduction Commitments Directive (NEC Directive) sets national emission-reduction commitments for Member States and the EU for five important air pollutants, including ammonia.

The Nitrates Directive protects water quality by preventing agricultural nitrates from polluting ground and surface waters and by promoting good farming practices.

The new EU soil strategy for 2030 sets out a framework and concrete measures to protect and restore soils and ensure their sustainable use. To ensure soil in the EU is protected in the same way as water, air and the marine environment, the Commission put forward a proposal for a Directive on Soil Monitoring and Resilience.

The EU has funded research and improved soil monitoring through projects such as LUCAS, which is a survey on land cover, land use and agri-environmental indicators run by Eurostat, and Copernicus, the EU's Earth Observation and Monitoring Programme.

Overview and key trends

Malnutrition

A healthy diet means an adequate, well-balanced diet that meets the body's dietary needs. Combined with regular physical activity and the avoidance of excessive alcohol consumption and tobacco use, a healthy diet is a cornerstone of good health. While ending hunger and all forms of malnutrition are key objectives of the 2030 Agenda, in Europe obesity is a more widespread nutrition-related health issue.

More than half of the adult EU population is overweight and every seventh person is obese

14.8 %
of the EU's adult population were obese in 2022

Obesity and pre-obesity are malnutrition problems related to changing consumption and activity habits, and contexts that favour such unhealthy habits. Combining a balanced nutritional diet with an adequately active lifestyle is a challenge for many people. While the causes of obesity vary from person to person, the problem is generally attributed to unhealthy diets that are high in energy, fat, trans fat and saturated fat, salt and sugar, along with being low in fruit and vegetables, whole grains, legumes and nuts, and too high in red and processed meat. Low physical activity and sociological and hereditary factors are also important causes. The circumstances in which lifestyle choices are made, such as the food environment, are important determinants of healthy behaviours and obesity.

Obesity is a significant health issue in the EU. It affected almost 15 % of the adult population in 2022. It is also a contributing factor in other diet-related non-communicable diseases, such as cancer, cardiovascular diseases and diabetes. Obesity also disproportionately affects people with lower levels of education and tends to increase with age until late in life ([1]). Childhood obesity also remains an important public health problem in Europe, despite childhood obesity rates levelling off in some European countries ([2]).

When considered together with pre-obesity, the situation looks even more severe, with more than half of the EU's adult population being overweight in 2022. Patterns in the pre-obesity rate follow patterns in the obesity rate, though pre-obesity affected more than twice as many Europeans as obesity (36.5 % of the adult population) in 2022.

Between 2017 and 2022, the share of overweight (obese and pre-obese) people fell slightly, from 51.8 % to 51.3 %. This is largely due to a reduction in the share of pre-obese people, from 36.9 % in 2017 to 36.5 % in 2022, while the share of obese people remained stable at just below 15 %, affecting 14.8 % of EU adults in 2022.

At the Member State level, the obesity rate rose in 19 countries between 2017 and 2022. The rate in 2022 was highest in Malta, with 26.1 %, and lowest in Italy and Romania, with 7.1 % and 10.3 %, respectively.

The obesity rate generally increases with age, peaking in the age group 65 to 74 years (19.7 % obese in 2022) and decreasing again for people aged 75 and older. Obesity and pre-obesity rates also appear to decrease with higher educational levels, with obesity rates ranging from 10.5 % in 2022 for adults with tertiary education to 17.9 % for adults with lower secondary education or lower ([3]).

Sustainable agricultural production

Sustainable agricultural production is a key element in making food systems fair, healthy and environmentally friendly. A concerted effort is needed to foster a food-production system that is based on sustainable agricultural practices and produces an adequate food supply. Four indicators

are used to monitor the strong interlinkages between agricultural production and the social, economic and environmental dimensions of sustainability. These are: agricultural income and labour productivity; investment in agricultural research and innovation; organic farming; and pesticide use.

Labour productivity in EU agriculture has increased, as has investment in the future of farming

To ensure its long-term viability, Europe's agricultural sector needs to achieve economic sustainability. Labour productivity is an important component of this and can be partially measured using the indicator 'agricultural real factor income per annual work unit (AWU)'.

36.1 %
growth in EU agricultural factor income per annual work unit between 2015 and 2024

Following a dip during the economic crisis from 2007 to 2009, agricultural real factor income per AWU has been rising in the EU. By 2024 it was 36.1 % higher than it had been in 2015. This is mainly due to strong growth between 2016 and 2017 and again between 2020 and 2022, driven partly by increased output values (prices and/or yields) and partly by a reduced labour input ([4]). After significantly above-average growth from 2021 to 2022, the indicator in 2024 remained 6.3 % below its 2022 peak.

3.6
billion EUR in government support was spent on agricultural R&D in 2023

Agricultural real factor income per AWU varies considerably between Member States and farm types. It tends to be higher in countries with more mechanised, input-intensive production systems than in countries using more traditional, labour-intensive methods ([5]).

Investment in agricultural research and innovation is crucial for decoupling agricultural productivity from environmental impacts. Such investments in sustainable productivity growth in agriculture also help to keep EU farmers competitive and adaptable to challenges such as climate change and feeding a rising population. Overall in the EU, national government support to agricultural research and development has risen in the short term, growing by 27.0 % since 2018 to reach EUR 3.6 billion in 2023.

Organic farming is on the rise across the EU, but the pace needs to quicken to reach the 2030 target

Organic farming is one example of a sustainable agricultural management system. It seeks to limit environmental impacts by using agricultural practices that encourage the responsible use of energy and natural resources, maintain or enhance biodiversity, preserve regional ecological balances, increase soil fertility and water quality, encourage high animal welfare standards, and enhance the capacity to adapt to climate change.

10.5 %
of the EU's utilised agricultural area was estimated to be farmed organically in 2022

In the EU, the share of organic farming in total agricultural area grew by 3.0 percentage points between 2017 and 2022, to an estimated 10.5 %. Despite this, the take-up of organic farming will need to accelerate significantly to achieve the 25 % target by 2030. Across the EU, Austria leads with more than 25 % (2020 data) of its agricultural area farmed organically, followed by Estonia with just over 23 %, and Sweden, Portugal, Italy, Greece, Czechia, Latvia and Finland, each with levels between 15 % and 20 % (2022 data). In all other Member States, organic farming was practised on less than 15 % of agricultural land in 2022.

The EU is on track to meet its reduction target for the use and risk of chemical pesticides

The Zero Pollution Action Plan aims to reduce the EU food system's dependency on pesticides and antimicrobials and sets the target to reduce chemical pesticides' use and risk by 50 % by 2030. According to a trend analysis by the European Commission, the use and risk of chemical pesticides decreased by 46 % between the baseline period of 2015–2017 and 2022 and the use of more hazardous pesticides fell by 25 % over the same time span. Over both the long- and short-term periods assessed in this report (2011 to 2022 and 2017 to 2022, respectively), the use and risk of chemical pesticides fell at a rate that suggests the EU is on track to meet its 50 % reduction target by 2030. Nevertheless, the presence of pesticides in soil and water continues to be a concern. In its 2023 briefing on the issue, the European Environment Agency concluded that despite progress in some EU Member States, pesticide pollution still poses significant risks to human health and the environment.

Between 2017 and 2022, the use and risk of chemical pesticides fell by

41.3 %

To protect human and animal health, the EU aims to reduce its overall sales of antimicrobials for farmed animals and aquaculture by 50 % by 2030. The use and misuse of antimicrobials in agriculture contributes to the problem of microbes such as bacteria and fungi becoming resistant to antimicrobials, which reduces the effectiveness of such treatments. According to a 2025 report from the European Medicines Agency, the EU achieved a 25.2 % reduction in sales of antimicrobials for farmed animals and in aquaculture by 2023 compared with the 2018 baseline. This is the result of declining sales in almost all Member States. While the EU is thus about halfway to the 2030 target, further declines in EU sales of antimicrobials are needed. In 2023, antimicrobial sales for farmed animals and in aquaculture varied strongly across Member States. It was highest in Cyprus and Italy and lowest in Sweden and Finland.

Environmental impacts of agricultural production

Agriculture can provide environmental benefits such as maintaining specific farmland ecosystems and diverse landscapes. In addition, agricultural land can also act as a carbon sink. However, increases in agricultural productivity and a move towards intensive agriculture practices have contributed to the degradation of environmental conditions and climate change ([6]). The environmental impacts of agriculture include nutrient-related pollution, soil erosion and loss of biodiversity.

Ammonia emissions from agriculture and nitrate concentrations in groundwater bodies have fallen in recent years

Ammonia emissions and nitrates in groundwater are linked to excessive inputs of nitrogen from agricultural sources such as mineral fertiliser and livestock manure. Manure from livestock is rich in nutrients such as phosphorus and nitrogen (ammonia and nitrates), and is used as a fertiliser alongside chemical fertilisers. If properly treated, its application improves soil structure and enhances soil organic matter content, which increases carbon sequestration. But when mineral fertilisers or manure are not properly handled and spread, excess nutrients that are not taken up by plants are released into the environment (as ammonia in air and as nitrates and phosphorus in water). When released into the atmosphere, ammonia pollutes the air and can land on soil and water, where it can harm sensitive vegetation systems, biodiversity and water quality through eutrophication and acidification.

Between 2017 and 2022, ammonia emissions from agriculture in the EU fell by

11.7 %

Since the 1990s, Europe has seen a significant decrease in ammonia emissions from agriculture due to reductions in livestock density and nitrogen fertiliser use as well as changes in agricultural practices. In recent years, however, developments have been less clear, with ammonia emissions increasing between 2013 and 2016, before falling to a new low of 2.9 million tonnes in 2022. It must be noted that the national and EU totals may mask considerable variations in fertiliser application and livestock densities at regional and local levels. Overall, however, ammonia emissions from agriculture remain the main nutrient pollutants of concern for biodiversity ([7]).

The concentration of nitrate (NO_3) in EU groundwater has shown a long-term stagnation at around 21 milligrams per litre (mg/L). However, there has been a recent downward trend since 2017, with concentrations reaching 20.7 mg/L in 2022. This is 2.9 % lower than in 2007 and 1.9 % lower than in 2017. Nevertheless, hot spots exist where nitrate concentrations are above 50 mg/L, which is the limit set for drinkable water. Several of the countries struggling the most with high nitrate levels in groundwater are also among those with the highest ammonia emissions per hectare of utilised agricultural area in Europe, such as Malta, Belgium and Germany (see Figures 2.12 and 6.8).

An average of

20.7

milligrams of nitrates were in each litre of groundwater in the EU in 2022

The agricultural sector is also responsible for significant quantities of greenhouse gas (GHG) emissions ([8]), accounting for 11 % of total GHG emissions in the EU in 2023 ([9]). Agricultural emissions are generally linked to the management of agricultural soils, livestock, rice production and biomass burning. While the EU's total GHG emissions have decreased by 18 % since 2018 (see the chapter on SDG 13 'Climate action' on page 227), emissions from the agricultural sector have fallen much more slowly, by 7 % over the same period. By 2023 they had reached 358 million tonnes of CO_2 equivalent, which is 26 % lower than the 1990 level of 483 million tonnes ([10]).

Soil erosion remains a major threat, but signs of improvement exist across the EU

Healthy soils are essential for sustainable and productive agricultural systems. Because soils take years to form, they can be considered a non-renewable resource for food production. One of the biggest threats to soil health in Europe is soil erosion, which can be caused by both wind and water. Though erosion is a natural process, inappropriate land management and other human activities can cause it to accelerate to such an extent that soil can be irreversibly lost. The area at risk of severe soil erosion by water (leading to the loss of more than 10 tonnes of soil per hectare per year) is a model-based indicator based on spatial data of rainfall erosivity, soil erodibility, topography, land cover and management practices.

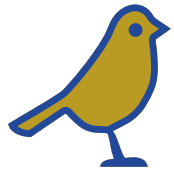
5.3 %

of EU land was estimated to be at risk of severe soil erosion by water in 2016

In the EU, 196 853 square kilometres (km^2) of land were at risk of severe soil loss from water erosion in 2016 — an area equal to about 1.5 times Greece's total land area. However, the risk of severe soil erosion has been decreasing in the EU, in part due to mandatory measures in the EU Common Agricultural Policy (CAP). The share of non-artificial erodible area ([11]) estimated to be at risk of severe soil erosion by water decreased from 6.1 % to 5.3 % between 2000 and 2016.

The EU's farmland bird populations continue to decline sharply

Some agricultural landscapes provide valuable and unique habitats for a host of species, both common and threatened. However, biodiversity has suffered under growing pressure from the race to increase productivity and where ecosystem services, which are provided by features that support biodiversity, have not been given economic value or adequate regulatory protection. Species related to agroecosystems are likely to have fared worse without the agri-environmental measures contained in EU policies — primarily the Common Agriculture Policy — but measures have not yet been effective enough to halt overall biodiversity loss in agricultural habitats ([12]).



Between 2008 and 2023, common farmland bird populations in the EU declined by

23.2%

Farmland bird species depend on agricultural habitats. Because they are relatively visible, they are a good indicator species for monitoring biodiversity. The common farmland bird index measures the relative abundance and diversity of 39 farmland bird species compared with the 2000 base year. Between 2008 and 2023, the EU saw dramatic declines of 23.2 % for common farmland birds, continuing a trend visible since 1990. Between 1990 and 2023, common farmland birds declined by 42.1 %. Intensive agricultural practices and the use of pesticides have contributed to the loss of wildlife habitats as well as falling populations of insects. Insects are an important food source for many farmland birds and provide important ecosystem services such as pollination ([13]).

Main indicators

Obesity rate

This indicator is derived from the body mass index (BMI), which is defined as the weight in kilograms divided by the square of the height in metres. People aged 18 years or over are considered obese if their BMI is equal to or greater than 30. The category 'pre-obese' refers to people with a BMI between 25 and less than 30. The category 'overweight' (BMI equal or greater than 25) combines the two categories pre-obese and obese. The data presented in this section stem from the European Health Interview Survey (EHIS) and the EU Statistics on Income and Living Conditions (EU-SILC).

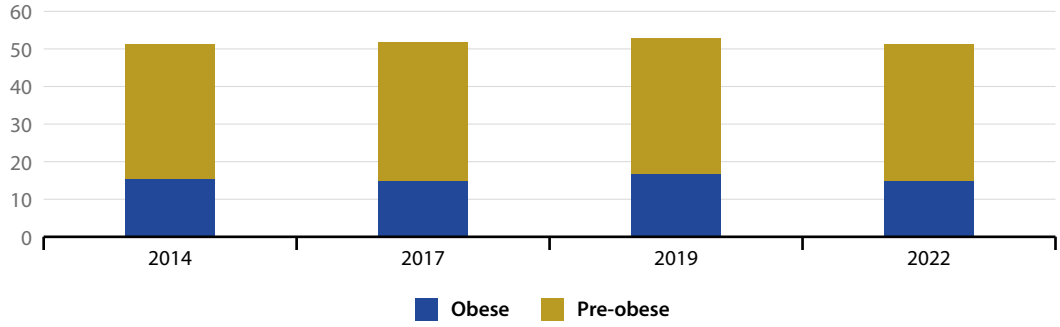
LONG TERM Time series too short

SHORT TERM 2017–2022

FIGURE 2.1

Obesity rate, by body mass index (BMI), EU, 2014–2022

(% of population aged 18 or over)



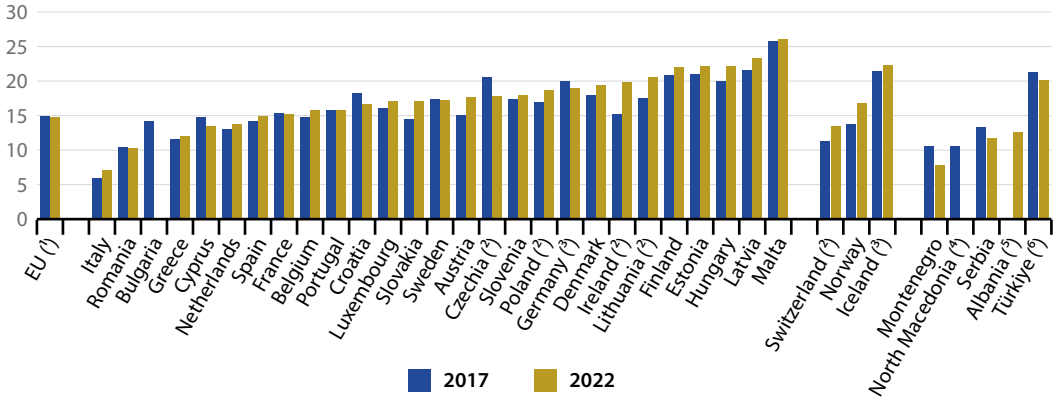
Note: 2022 data are estimated.

Source: Eurostat (online data codes: sdg_02_10)

FIGURE 2.2

Obesity rate, by country, 2017 and 2022

(% of population aged 18 or over)



(1) 2022 data are estimated.
(2) 2017 and/or 2022 data have low reliability.
(3) 2019 data (instead of 2022).
(4) No data for 2022.
(5) No data for 2017.
(6) 2014 data (instead of 2017).

Source: Eurostat (online data code: sdg_02_10)

Agricultural real factor income per annual work unit

LONG TERM 2009–2024

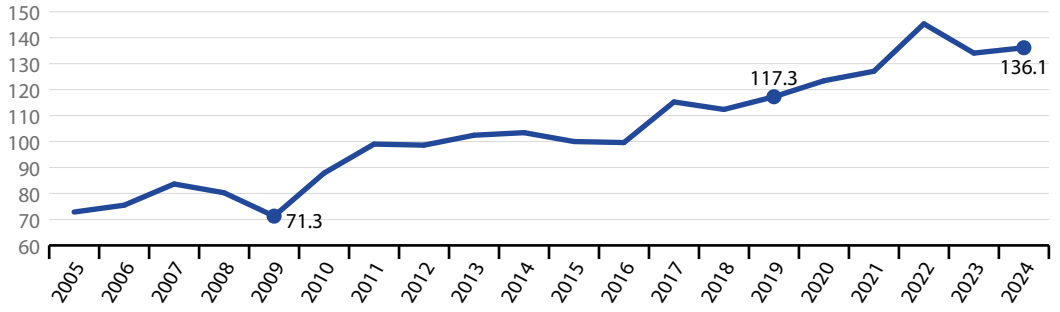
SHORT TERM 2019–2024

Agricultural real factor income measures the income generated by farming, which is used to remunerate borrowed or rented factors of production (capital, wages and land rents) as well as own production factors (own labour, capital and land). Annual work units (AWUs) are defined as full-time equivalent employment (corresponding to the number of full-time equivalent jobs), which is calculated by dividing total hours worked by the average annual number of hours worked in full-time jobs within the economic territory. This can be interpreted as a measure of labour productivity in agriculture. The data stem from the Economic Accounts for Agriculture (EAA), which provide detailed information on agricultural sector income.

FIGURE 2.3

Agricultural real factor income per annual work unit (AWU), EU, 2005–2024

(chain-linked volumes, index 2015=100)

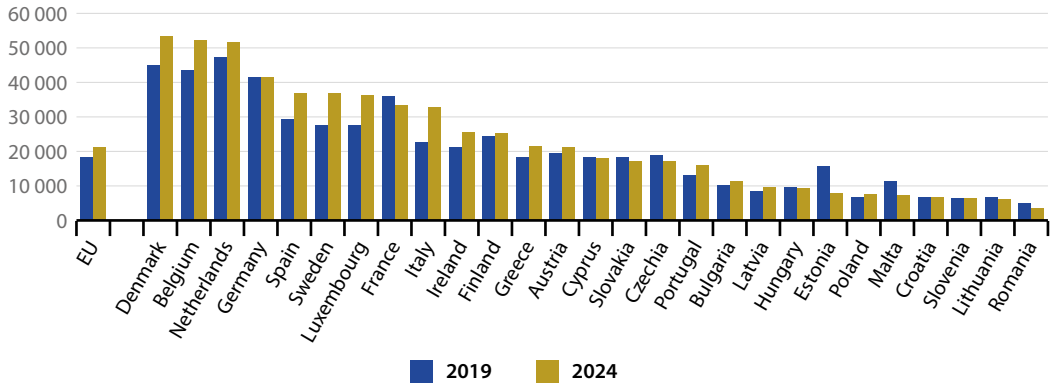


Source: Eurostat (online data code: sdg_02_20)

FIGURE 2.4

Agricultural real factor income per annual work unit (AWU), by country, 2019 and 2024

(EUR, chain linked volumes (2015))



Note: Caution should be exercised when comparing absolute levels of agricultural factor income per annual work unit (AWU) because they are influenced by different national rules related to the full-time working hours comprising an AWU.

Source: Eurostat (online data code: sdg_02_20)

Government support to agricultural R&D

This indicator refers to government budget allocations for R&D (GBARD). GBARD data measure government support to research and development (R&D) activities or, in other words, the level of priority that governments place on the public funding of R&D. GBARD data are built up using the guidelines laid out in the standard practice for surveys of research and experimental development, the OECD's Frascati Manual from 2015 and the European Business Statistics Methodological Manual for R&D statistics of 2023.

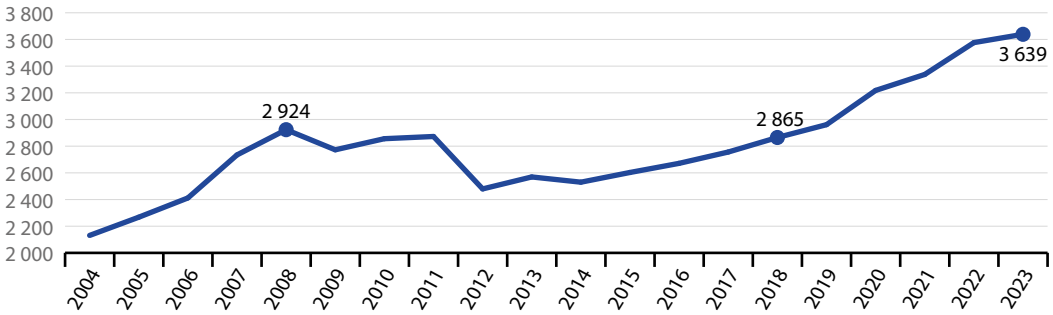
LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 2.5

Government support to agricultural research and development, EU, 2004–2023

(million EUR)

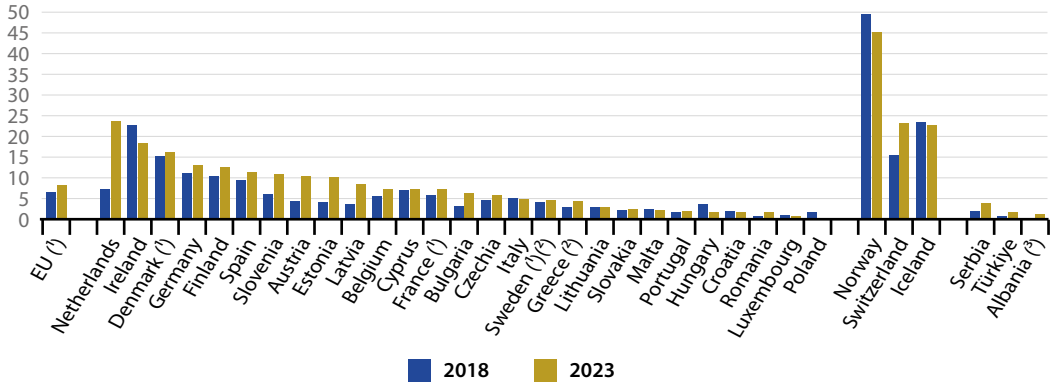


Note: Data for 2004 to 2022 are estimated.
Source: Eurostat (online data code: sdg_02_30)

FIGURE 2.6

Government support to agricultural research and development, by country, 2018 and 2023

(EUR per capita)



(1) 2018 data are estimated or provisional.
(2) Break(s) in time series between the two years shown.
(3) 2019 data (instead of 2018).
Source: Eurostat (online data code: sdg_02_30)

Area under organic farming

LONG TERM 2012–2022

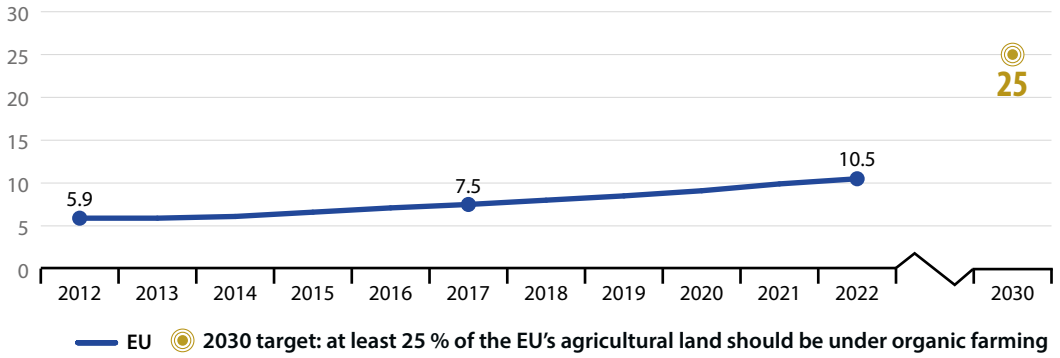
SHORT TERM 2017–2022

This indicator is defined as the share of total utilised agricultural area (UAA) occupied by organic farming (existing organically farmed areas and areas undergoing conversion). Organic farming is a production method that puts the highest emphasis on environmental and wildlife protection and, with regard to livestock production, on animal welfare considerations. It avoids or largely reduces the use of synthetic chemical inputs such as fertilisers, pesticides, additives and medical products.

FIGURE 2.7

Area under organic farming, EU, 2012–2022

(% of utilised agricultural area)

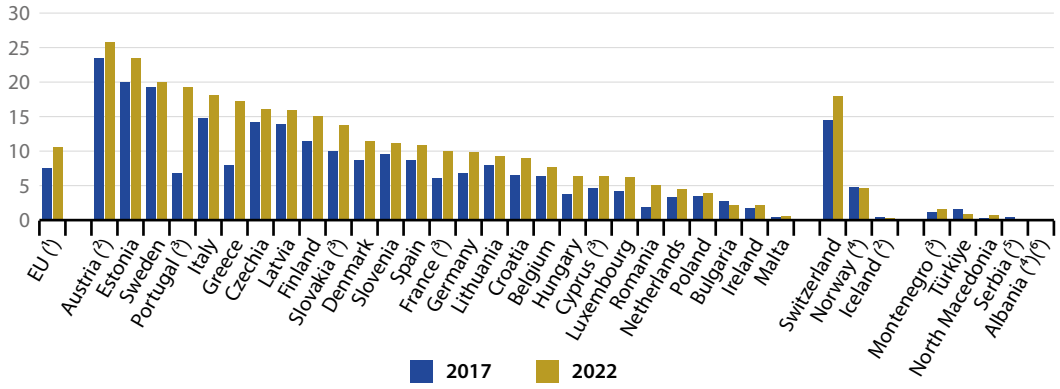


Note: 2018–2022 data are estimated, 2021 and 2022 estimates made for the purpose of this publication.
Source: Eurostat (online data code: sdg_02_40)

FIGURE 2.8

Area under organic farming, by country, 2017 and 2022

(% of utilised agricultural area)



(1) 2022 data: estimate made for the purpose of this publication.
(2) 2020 data (instead of 2022).
(3) 2022 data are provisional or estimated.
(4) 2021 data (instead of 2022).
(5) No data for 2022.
(6) No data for 2017.

Source: Eurostat (online data code: sdg_02_40)

Use and risk of chemical pesticides

The indicator monitors the trends in the use and risk of chemical pesticides in the EU and its Member States. The use of pesticides entails risks and impacts on human health and the environment. The indicator is based on the quantities of active chemical substances contained in the pesticides which are placed on the market (sold), and therefore used, in each Member State, and the hazard properties of these active substances. The data are presented as an index relative to the average results for the period 2015 to 2017.

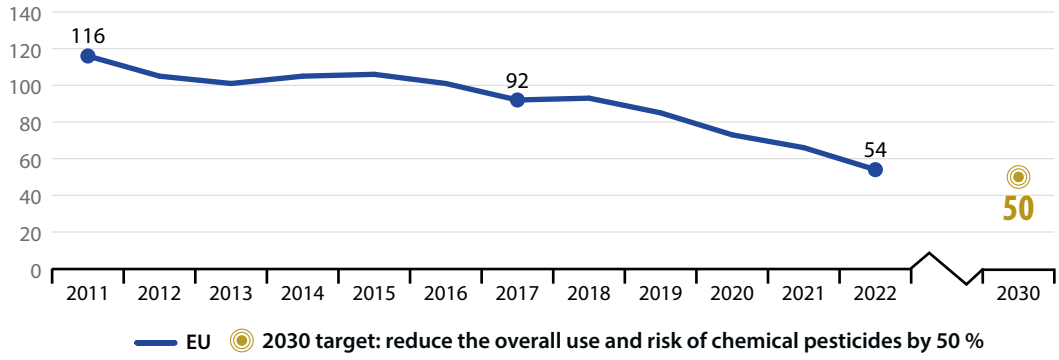
LONG TERM 2011–2022

SHORT TERM 2017–2022

FIGURE 2.9

Use and risk of chemical pesticides, EU, 2011–2022

(index 2015–2017 = 100)

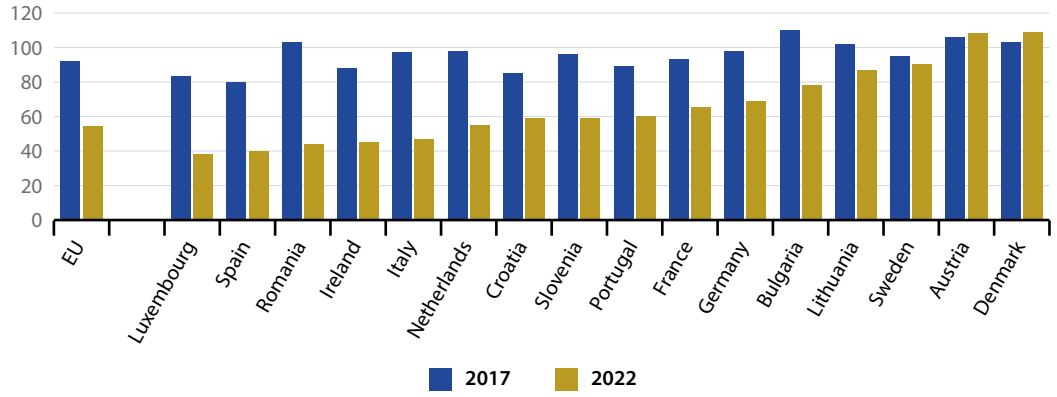


Source: DG Health and Food Safety (Eurostat online data code: sdg_02_53)

FIGURE 2.10

Use and risk of chemical pesticides, by country, 2017 and 2022

(index 2015–2017 = 100)



Note: Data for all 27 Member States are included in the EU aggregate, but only 16 Member States have agreed to disclose country level data.

Source: DG Health and Food Safety (Eurostat online data code: sdg_02_53)

Ammonia emissions from agriculture

LONG TERM 2007–2022

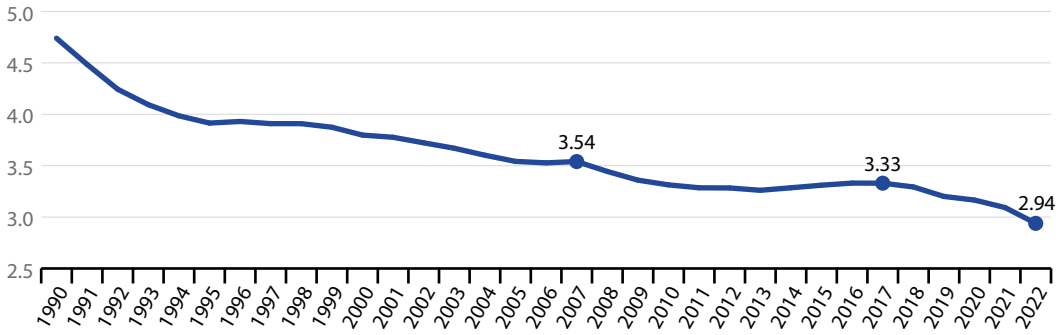
SHORT TERM 2017–2022

This indicator measures ammonia (NH_3) emissions as a result of agricultural production. These emissions result from manure management, applications of inorganic nitrogen fertilisers and animal manure applied to soil, as well as urine and dung deposited by grazing animals. Data for this indicator come from the EU inventory on air pollution compiled by the European Environment Agency (EEA) under the Convention on Long-range Transboundary Air Pollution (LRTAP) and are fully consistent with national air pollution inventories compiled by EU Member States. Data on the utilised agricultural area (UAA) stem from Eurostat's annual crop statistics. The definition of this indicator is based on the CAP indicator C45 Emissions from agriculture.

FIGURE 2.11

Ammonia emissions from agriculture, EU, 1990–2022

(million tonnes)

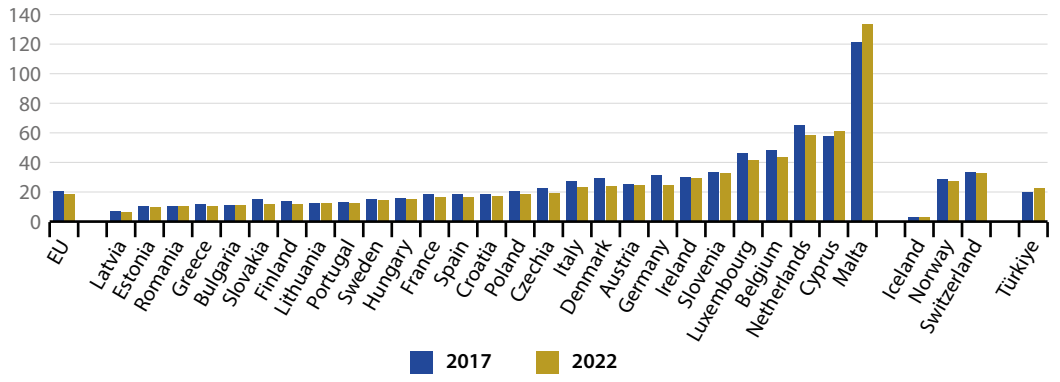


Source: EEA (Eurostat online data code: sdg_02_60)

FIGURE 2.12

Ammonia emissions from agriculture, by country, 2017 and 2022

(kg per ha of utilised agricultural area)



Source: EEA, Eurostat (online data code: sdg_02_60)

Notes

(1) *Source*: Eurostat (online data code: hlth_ehis_bm1e).

(2) World Health Organisation (2021), *WHO European Childhood Obesity Surveillance Initiative (COSI) Report on the fourth round of data collection 2015–2017*, WHO Regional Office for Europe, Copenhagen.

(3) *Source*: Eurostat (online data code: ilc_hch10).

(4) *Source*: Eurostat (online data codes: aact_eaa05 and aact_ali02).

(5) Input-intensive agriculture increases agricultural productivity through consumable inputs, such as chemical fertilisers and pesticides, and capital inputs, such as highly mechanised approaches. Mechanised inputs frequently substitute labour inputs as factors of production.

(6) European Environment Agency (2024), *Solutions for restoring Europe's agricultural ecosystems*.

(7) See section 3.2 in the report: European Commission (2022), *First 'zero pollution' monitoring and outlook*, COM(2022) 674 final.

(8) The main GHG emissions from agricultural practices are carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O).

(9) 2023 data for GHG emissions presented in this report have been calculated based on the approximated estimates for greenhouse gas emissions published by the European Environment Agency: EEA (2024), *Approximated estimates for Greenhouse Gas emissions*.

(10) *Source*: Eurostat (online data code: env_air_gge).

(11) Generally, artificial, sandy, rocky and icy surfaces as well as wetlands and water bodies are not included in the land area used in calculating the soil-erosion indicator (see online metadata: sdg_15_50).

(12) European Commission (2016), *Fitness Check of the EU Nature Legislation (Birds and Habitats Directives)*, SWD(2016) 472 final.

(13) European Environment Agency (2024), *Common bird index in Europe*.

Ensure healthy lives and promote well-being for all at all ages

SDG 3 aims to ensure health and promote well-being for all at all ages by improving reproductive, maternal and child health; ending epidemics of major communicable diseases; and reducing non-communicable and mental diseases. It also calls for reducing behavioural and environmental health risk factors.

Health can be defined as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' ([1]). Good health is not only of value to the individual as a major determinant of quality of life, well-being and social participation, it is also a basic precondition for general economic growth. Monitoring SDG 3 in an EU context focuses on the topics of healthy lives, determinants of health, causes of death and health care. Over the most recent five-year period assessed, developments regarding healthy lives and health care have largely been unfavourable, showing a stagnation in healthy life expectancy and a decline in self-perceived health combined with an increase in unmet need for medical care. Additionally, the consumption of antibiotics is not falling strongly enough for the EU to be on track to meet its respective 2030 target. Clear improvements have only been seen in the share of smokers, the rate of fatal work accidents and premature deaths due to air pollution. Other indicators on health determinants and causes of death have been stagnating or deteriorating over the most recent five-year period of available data.

Indicators measuring progress towards SDG 3, EU

Indicator	Period	Annual growth rate	Assessment	More info
Healthy lives				
Healthy life years at birth	Long-term assessment not possible due to several breaks in time series		✕	page 66
	2016–2021 (1)	– 0.1 %	→	
People with good or very good self-perceived health	2010–2023	0.1 %	→	page 67
	2018–2023	– 0.2 %	↘	
Health determinants				
Smoking prevalence	2009–2023	– 1.3 %	↑	page 68
	2017–2023	– 1.9 %	↑	
Obesity rate (*)	Time series too short for long-term assessment		✕	SDG 2, page 47
	2017–2022	– 0.1 %	→	
Population living in households suffering from noise (*)	2010–2023	– 0.9 %	↗	SDG 11, page 205
	2018–2023	0.0 %	→	
Causes of death				
Standardised avoidable mortality	2011–2022	– 0.8 %	↗	page 69
	2017–2022	0.5 %	↘	
Fatal accidents at work (*)	2010–2022	– 2.7 %	↑	SDG 8, page 154
	2017–2022	– 1.5 %	↑	
Road traffic deaths (*) ◎	2008–2023	Observed: – 3.9 % Required: – 5.2 %	↗	SDG 11, page 207
	2018–2023	Observed: – 2.7 % Required: – 5.8 %	↘	
Premature deaths due to exposure to fine particulate matter ($PM_{2.5}$) (*) ◎	2007–2022	Observed: – 2.5 % Required: – 2.5 %	↑	SDG 11, page 206
	2017–2022	Observed: – 4.7 % Required: – 3.4 %	↑	

Indicator	Period	Annual growth rate	Assessment	More info
Health care				
Self-reported unmet need for medical care	2010–2023	– 2.9 %	↑	page 70
	2018–2023	5.9 %	↓	
Consumption of antibiotics in the community and hospital sectors ◎	2013–2023	Observed: – 0.8 %	↘	page 71
		Required: – 1.8 %		
	2018–2023	Observed: – 0.2 %	↘	
		Required: – 2.0 %		

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

(*) Multi-purpose indicator.

([1]) Due to a break in time series in 2022, the assessment remains to be based on the period 2016 to 2021.

Policy context

Healthy lives

The EU4Health programme is the main financial instrument for funding the Union's health initiatives. Part of the European Health Union aims to reduce health inequality, improve public health and boost the EU's capacity to respond to future health crises. It works in complementarity with the Horizon Europe Programme.

The HealthyLifestyle4All campaign aims to link sport and active lifestyles with health, food and other policies. The new Commission's Vision for Agriculture and Food strengthens food safety in the EU and promotes sustainable food production.

Health determinants and causes of death

The 'Healthier Together' EU non-communicable diseases initiative supports countries in reducing the burden of non-communicable diseases. It helps to address environmental, commercial and lifestyle-related risk factors in a more effective and efficient way.

The European Commission supports Member States in combatting communicable and other diseases through the EU4Health programme and Horizon Europe.

Europe's Beating Cancer Plan addresses cancer through prevention, early detection, diagnosis and treatment, and improving the quality of life of cancer patients and survivors.

Several EU Directives aim to protect citizens from the hazardous effects of smoking, including the Tobacco Products Directive, the Tobacco Advertising Directive and the Tobacco Taxation Directive.

The Zero Pollution Action Plan sets a target to reduce premature deaths from air pollution by 55 % by 2030 compared with 2005. It also includes a target to reduce the share of people chronically disturbed by transport noise by 30 % by 2030.

The EU road safety policy framework 2021–2030 and Sustainable and Smart Mobility Strategy aim to reduce deaths and serious injuries on the road by 50 % by 2030.

Health care

Access to health care is one of the 20 principles of the European Pillar of Social Rights and its Action Plan. Directive 2011/24/EU on patient rights in cross-border health care gives EU citizens the right to access care in the EU and to be reimbursed.

The European Care Strategy and accompanying Council Recommendation on access to high-quality affordable long-term care set out an EU agenda for ensuring quality, affordable and accessible care services across the EU.

The Pharmaceutical Strategy for Europe (2020) seeks to ensure access to affordable medicines for patients and to counteract the negative effects of pharmaceuticals on the environment and address possible environmental risks.

The Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach (2023) sets several targets, including the target of reducing the consumption of antibiotics in humans by 20 % by 2030. The Zero Pollution Action Plan sets a target to reduce the sales of antimicrobials for farmed animals and in aquaculture by 50 % by 2030 compared with 2018.

Overview and key trends

Healthy lives

The worldwide surge in life expectancy over the past century is the result of various factors, including reduced infant mortality, rising living standards, improved lifestyles and better education, as well as advances in health care and medicine.

Life expectancy has increased in EU countries over the past few decades, even though the pace of progress temporarily slowed during the COVID-19 pandemic ([2]). While life expectancy gives an objective assessment of how long people can expect to live, it does not show whether people live their lives in good health. Thus, two indicators are included in the analysis. The first one, healthy life years at birth, shows the number of years a person can expect to live in a healthy state. The second one measures the share of people with good or very good perceived health, capturing an individual's subjective view of their well-being.

Healthy life expectancy and self-perceived health of the EU population declined during the COVID-19 pandemic

In 2022, a child born in the EU could on average expect to live 62.6 years free from any severe or moderate disability. Women had a slightly higher healthy life expectancy, with 62.8 years, compared with 62.4 years for men. The overall EU figure masks considerable differences between Member States, with healthy life expectancy varying by 16.0 years between countries in 2022. Malta reported the highest number of healthy life years, with 70.2, followed by Italy with 67.4 and Greece with 67.0 years. In contrast, the lowest values were reported by Latvia and Denmark, with 54.2 and 55.9 years, respectively. Due to methodological changes in several Member States, the 2022 data are not comparable with data for earlier years. At EU level, a consistent time series is available for the period 2016 to 2021, which shows an overall slight decline in healthy life expectancy from 64.0 to 63.6 years. While there was an improvement between 2016 and 2019, healthy life expectancy fell by 1.0 years from 2019 and 2021 during the COVID-19 pandemic.

A child born in 2022 could on average expect to live

62.6

years in a healthy condition

The decrease in overall life expectancy across the EU caused by the COVID-19 pandemic appears to have halted in 2022. While life expectancy at birth fell in 2020 and 2021 compared with the previous year, it increased by 0.5 years in 2022 and by a further 0.8 years in 2023. With 81.4 years in 2023, it slightly surpassed the pre-pandemic value of 81.3 years reported in 2019 ([3]).

The impact of the pandemic is also reflected in the data for self-perceived health. While the proportion of EU citizens rating their own health as good or very good increased between 2017 and 2020, it fell in 2021 and 2022. It increased again in 2023, reaching 67.9 %. However, this is still 0.7 percentage points lower than in 2018. Similar to healthy life expectancy, this share varied strongly across Member States, ranging from 47.6 % in Lithuania to 79.5 % in Ireland and Malta. Furthermore, differences also exist between rural and urban areas. In 2023, the percentage of people who perceived their health to be good or very good was highest in cities (69.3 %), slightly below the average in towns and suburbs (68.1 %) and lowest in rural areas (65.4 %) ([4]). Moreover, the share of people with a disability — capturing a long-standing limitation to perform usual activities — who perceived their health as being good or very good was significantly lower than for the rest

67.9%

of the EU population perceived themselves to be in good or very good health in 2023

of the population. In 2023, 25.3 % of people with a moderate disability and just 7.3 % of people with severe disability perceived their health as being good or very good, compared with 85.0 % of people without a disability ([5]).

Despite their higher healthy life expectancy at birth, women were less likely than men to rate their health as good or very good: 65.4 % of women and 70.5 % of men perceived their health as being good or very good in 2023 — a gap of 5.1 percentage points.

Health determinants

Many factors affect the health of individuals and populations. These include socio-economic factors, the state of the environment, city design, access to and use of health services, and individual characteristics and behaviour ([6]). Lifestyle-related risk factors, such as an unhealthy diet, physical inactivity, smoking and excessive alcohol consumption, directly affect citizens' quality of life and life expectancy. These factors also have a negative impact on the health and social systems of EU Member States, government budgets, and economic productivity and growth. The health determinants discussed in the following sections are obesity rate, smoking prevalence and noise pollution. In addition, further factors such as mobility and consumption patterns may also influence the health determinants described on the following pages.

More than half of the adult EU population is overweight

Obesity is a serious public health problem because it significantly increases the risk of chronic diseases, such as cardiovascular disease, type-2 diabetes, hypertension and certain types of cancer. For some individuals, obesity may also be linked to a wide range of psychological problems. From a societal perspective, obesity has substantial direct and indirect costs that put a considerable strain on health and social security systems. Furthermore, being obese or overweight from an early age can lead to more health problems in the long term ([7]).

14.8 %
of the adult population in the EU were obese in 2022

In 2022, 14.8 % of the EU population aged 18 or above were obese (with a body mass index equal to or greater than 30) and another 36.5 % were pre-obese (with a body mass index between 25 and 30) ([8]). In total, more than half of the EU population aged 18 or above were obese or pre-obese (and therefore overweight). Between 2017 and 2022, the share of both obese and pre-obese people decreased slightly by 0.1 and 0.4 percentage points, respectively. The total share of overweight people thus decreased slightly over this period, from 51.8 % in 2017 to 51.3 % in 2022.

The obesity rate generally increases with age, peaking at 65 to 74 years (19.7 % obese in 2022) and decreasing again for people aged 75 and older. Young people aged 25 to 34 showed a lower obesity rate, at 9.7 % in 2022. Moreover, obesity and pre-obesity rates decrease with higher educational levels, with 2022 obesity rates ranging from 10.5 % for people with tertiary education to 17.9 % for people with lower secondary education or lower ([9]). In 2022, there was furthermore a considerable difference between Member States, with values ranging from 7.1 % in Italy to 26.1 % in Malta for obese people aged 18 and over.

Smoking prevalence among people aged 15 and over has decreased since 2009

Tobacco consumption is considered the single most preventable cause of illness and death worldwide. The World Health Organisation's (WHO) European Region — that also includes some non-European countries such as Israel and some in Central Asia ([10]) — has one of the highest mortality rates attributable to tobacco use ([11]). Tobacco use is the leading cause of 16 % of all deaths among adults aged 30 years and over in Europe, which is above the global average of 12 %. Many of these premature deaths result from multiple types of cancer and cardiovascular and respiratory diseases linked to tobacco use ([12]).

Smoking prevalence among the population aged 15 or over fell between 2009 and 2023, from 29 % to 24 %. In 2023, more men (28 %) than women (21 %) reported that they smoke. The age group with the highest prevalence of smokers were those aged 25 to 39 (32 %) followed by those aged 44 to 55 (28 %), younger people aged 15 to 24 years (22 %) and older people aged 55 or over (19 %). Lastly, the share of smokers who indicated they have trouble paying bills most of the time was higher than the share of smokers who said they (almost) never have trouble paying bills ([13]).

24%
of the EU population aged 15 and over were smokers in 2023

The number of people affected by noise from neighbours or the street is stagnating in the EU

Noise exposure reduces life satisfaction and perceived well-being. In addition, transport noise has been identified as the second most significant environmental cause of ill health in western Europe after air pollution ([14]). The most harmful health problems — such as those affecting the cardiometabolic system — arise because of interrelated issues including decreased sleep quality and stress reactions in the human body. These issues can also lead to premature death ([15]). In Europe, environmental noise is estimated to contribute to 12 000 premature deaths per year ([16]). Road traffic is the dominant source of environmental noise, but railways, airports and industry also remain important sources of localised noise pollution ([17]). The WHO Environmental Noise Guidelines for the European Region provide recommendations for protecting human health from exposure to environmental noise that originates from various sources.

In this publication, the perception of noise pollution is measured by the share of the population living in households who report they suffer from noise from neighbours or the street ([18]). Since this measure is derived from subjective questions, a fall in the value of this indicator does not necessarily indicate a similar reduction in actual noise-pollution health effects that are instead calculated based on large-scale assessments and precise formulas derived by the WHO ([19]). Since 2010, the share of the EU population feeling affected by noise from neighbours or the street has fallen slightly, from 20.6 % in 2010 to 18.2 % in 2023. However, since 2018 the share has stagnated. The perception of noise pollution is also unevenly distributed between Member States. In 2023, the proportion of people reporting noise disturbance from neighbours or the street ranged from 6.7 % in Croatia to 31.3 % in Malta.

18.2%
of the EU population were affected by noise from neighbours or the street in 2023

Causes of death

Causes of death are among the oldest medical statistics available and play a key role in the general assessment of health in the EU. The data can be used to determine which preventive and medical curative measures or investment in research might increase a population's life expectancy. The indicators selected for this sub-theme look at avoidable mortality, air pollution and fatal accidents on roads and at work.

Avoidable mortality fell again in 2022 after the COVID-19 related peak

Avoidable mortality refers to preventable and treatable causes of death, including injuries and drug-related diseases, as well as respiratory and infectious diseases, and some types of cancer. While avoidable mortality had been decreasing until 2019, the COVID-19 pandemic temporarily reversed the trend, resulting in strong increases in preventable deaths in 2020 and 2021. In 2022, avoidable mortality fell strongly after the 2021 peak, reaching 257.8 deaths per 100 000 persons in the age group below 75 years. Nevertheless, this value was 2.3 % higher than five years earlier, with a rate of 252.1 in 2017, showing that avoidable mortality remained above pre-pandemic levels

in 2022. This was mainly due to the developments in preventable mortality, which includes deaths by COVID-19 and which in 2022 was still 5.1 % above the 2017 levels. In contrast, developments in treatable mortality were to a much lesser extent affected by the pandemic, and in 2022 deaths due to treatable causes were already 2.6 % below the 2017 level. In 2022, COVID-19 remained among the top four causes of premature avoidable mortality, with a rate of 16.6 deaths per 100 000 persons, after ischaemic heart diseases (35.7 deaths per 100 000 persons), respiratory tract cancers (31.2) and stroke and other brain vessel diseases (18.4) ([20]). Across Member States, the avoidable mortality rate in 2022 was lowest in Sweden, with 169.3 deaths per 100 000 persons aged less than 75 years, followed by Italy with a rate of 176.7 and Luxembourg with a rate of 180.2. In contrast, Latvia, Romania and Hungary reported the highest figures, with rates of 543.3, 519.3 and 511.8, respectively.

257.8
per 100 000 people died prematurely in the EU due to avoidable causes of death in 2022

The number of premature deaths due to exposure to air pollution by fine particulate matter in the EU has decreased

According to the WHO, air pollution is the number one environmental cause of death in Europe ([21]). It can lead to or aggravate many chronic and acute respiratory and cardiovascular diseases. Air pollution has been one of the EU's main environmental policy concerns since the late 1970s. Air pollutants are emitted both naturally and as a result of human activities, with important sources being solid fuel combustion for domestic heating, industrial activities, road transport and agriculture. Urban populations are particularly exposed because of the daily flow of commuters, and the high concentration of industry and human activities causing the emission of fine particulate matter in EU cities. In addition, the most vulnerable citizens remain disproportionately affected by air pollution ([22]). For example, groups with lower socio-economic status tend to be disproportionately affected by air pollution because they often live closest to its source. Children are another disproportionally affected group because they have higher respiratory rates than adults, which increases their exposure to air pollution. Their developing immune systems and organs also make children more vulnerable to air pollution ([23]). Air pollution also has a significant negative impact on the economy, by reducing both productivity and life expectancy, and by increasing health costs ([24]).

Fine particulate matter ($PM_{2.5}$) is one of the most harmful components of air pollution for human health, causing an estimated 239 000 premature deaths in Europe in 2022. Between 2005 and 2022, premature deaths due to exposure to $PM_{2.5}$ decreased by 44.6 % ([25]). This development suggests the EU is on track to meeting its target of reducing the negative impact of air pollution on health by 55 % by 2030 compared with 2005, as set out in the Zero Pollution Action Plan (also see the Zero pollution monitoring and outlook 2025). According to an analysis by the European Environment Agency (EEA), if the trend seen in the past 17 years were to continue, the decline in the premature mortality attributable to $PM_{2.5}$ would reach 63 % by 2030 relative to 2005 levels.

239 000
people died prematurely in the EU in 2022 due to exposure to $PM_{2.5}$

Fatal work and road accidents have decreased, but further progress is necessary to meet the 2030 target of halving deaths from road crashes

Accidents were one of the most common causes of death within the EU in 2022, leading to almost 175 000 deaths or 3.4 % of all deaths ([26]). These accidents may happen at different places such as

at home, leisure venues or work, as well as while travelling. Improving the working environment to protect employee health and safety is an important objective set out by the EU and its Member States in the Treaty on the Functioning of the European Union. Halving the number of deaths from road-traffic crashes is not only a global target, but also a goal of EU policies. The EU road safety policy framework 2021–2030 sets a target of reducing deaths and serious injuries by 50 % by 2030 compared with 2019.

In 2023, 20 380 people were killed in road traffic crashes, equalling 4.5 deaths per 100 000 people. This represents a 12.6 % reduction compared with 2018 and a 10.4 % reduction compared with the reference year 2019, meaning the EU is still far from its 2030 target of halving the total death toll on EU roads relative to 2019. Nevertheless, the EU rate of 4.5 fatalities per 100 000 people compares favourably with the global average of around 15 per 100 000 ([27]).

4.5 per 100 000 persons were killed in road crashes in the EU in 2023

Preliminary figures show that EU road fatalities fell to 19 800 deaths in 2024, a 3 % improvement compared with 2023. Despite this positive step, the overall pace of improvement remains too slow. For further details see the chapter on SDG 11 'Sustainable cities and communities' on page 195.

Fatal accidents, leading to a person's death within one year, may also occur at work. The EU made progress on this indicator between 2017 and 2022, reducing the number of fatal accidents at work per 100 000 employed persons from 1.79 to 1.66. There is a considerable difference between the sexes: the incidence rate for women (0.25) was negligible compared with the rate for men (2.9). This difference can be explained by the higher share of men working in occupations associated with a higher risk of work accidents. Non-fatal work accidents can also cause considerable harm, for example by leading to a permanent disability that may force people to leave the labour market or change their job. Nonfatal accidents happened considerably more often than fatal accidents, with an incidence rate of 1 507 per 100 000 employed persons in 2022 ([28]).

1.66 per 100 000 persons employed had fatal accidents at work in the EU in 2022

Health care

Access to health care — the timely access to affordable, preventive and curative health care — is high on the political agenda of EU countries. It is defined as a right in the Charter of Fundamental Rights and is one of the 20 principles of the European Pillar of Social Rights. Limited access to health care for some population groups, especially vulnerable populations, may result in poorer health outcomes and greater health inequalities. Reducing health inequalities is not only important for equity reasons, but also because it contributes to higher economic and social cohesion ([29]).

Unmet needs for medical care have increased since 2018

In 2023, 2.4 % of the EU population aged 16 years or over reported an unmet need for medical care because of financial reasons, long waiting lists or travel distance. This represents a 0.6 percentage point increase since 2018, when the share was 1.8 %. Differences in unmet needs for medical care remained substantial between Member States in 2023, ranging from 0.1 % of the population in Malta and Cyprus to 12.9 % in Estonia.

2.4% of the EU population reported unmet need for medical care in 2023

On average, 1.2 % of the total EU population aged 16 years or over cited 'waiting list' as the most prominent reason for reporting an unmet need for medical examination in 2023. Furthermore, long waiting lists was the most common self-reported reason for unmet needs in cities and

rural areas (1.3 % each), which was slightly more than for people in towns or suburbs (1.0 %). A further 1.0 % of the total EU population reported financial constraints ('too expensive') as a reason for unmet needs for medical examination. This reason for unmet medical needs was more often declared in rural areas (1.3 %) than in cities and towns and suburbs (1.0 % each). However, not all Member States listed waiting lists as the main reason for unmet needs — in many countries costs were cited by most people ([30]).

Moreover, people with disabilities find it more difficult to access health care. In 2023, 6.2 % of people with severe activity limitations and 4.5 % of people with some activity limitations reported unmet needs for medical care due to the monitored reasons (financial, waiting list or distance), compared with only 1.4 % of people without disabilities ([31]). This discrepancy indicates that access to health care remains a challenge not only in certain parts of the EU but also for certain population groups.

Most European countries have achieved universal coverage for a core set of services, which usually include consultations with doctors, tests, examinations and hospital care. Yet in some countries, coverage of these services may not be universal or patients may have to bear the costs of accessing them. Furthermore, across the EU, around a seventh of all health spending was borne directly by households in 2022. Out-of-pocket payments as a share of total current health expenditure decreased slightly from 16.0 % in 2014 to 14.3 % in 2022. However, a considerable gap of 26.4 percentage points between countries remained in 2022. Moreover, households had to finance directly more than 30 % of all spending in Malta, Lithuania, Latvia, Bulgaria and Greece. Meanwhile in Croatia, France and Luxembourg, the share of out-of-pocket spending was below 10 % ([32]). Poor households and those who have to pay for long-term treatment such as medicines for chronic illness are at high risk of experiencing financial hardship as a result of having to pay out of their own pockets.

Out-of-pocket payments can pose a serious problem for low-income households, because they prevent people from spending on other essential items such as food, housing and utilities (gas, electricity and water). The problem is particularly acute if it is combined with a reduction in financial resources for health care systems caused, for example, by an economic crisis. Private spending through voluntary health insurance (VHI) and out-of-pocket payments (OOPs) is sometimes seen as a way to make up for public shortfalls. However, private spending on health is far from a perfect substitute for public spending. Both OOPs and VHI can undermine equity of access by skewing the distribution of health spending in favour of richer people, sometimes at the expense of poorer, sicker and older people ([33]).

The total consumption of antibiotics in the EU has fallen, although there are substantial differences between Member States

Antimicrobial resistance (AMR) is a serious cross-border threat to health in the EU ([34]). From 2016 to 2020, AMR led to more than 35 000 deaths in the EU/EEA each year ([35]). Policies that tackle AMR with a 'One-Health' approach can save lives and healthcare costs. Antimicrobial consumption (AMC) is one of the main drivers of the development of AMR. This is aggravated by the inappropriate use of antimicrobials in humans, animals and plants. Reduction of AMC by using antimicrobials prudently and only where needed reduces selective pressures on the pathogens that contribute to the development of multi-drug resistance.

In humans, AMC is expressed as the number of defined daily doses (DDD) per 1 000 inhabitants per day, which provides an estimate of the proportion of the population treated daily with antimicrobials. In 2023, the EU population-weighted mean total AMC of antibacterials for systemic use (ATC group J01) in the community and hospital sectors was 20.0 DDD

Between 2018 and 2023, consumption of antimicrobials in the EU fell by

1.1 %

per 1 000 inhabitants per day, which is 7.6 % lower than in 2013. In the short term, since 2018, the EU population-weighted mean total consumption of antibacterials for systemic use has decreased by 1.1 %, indicating only slow progress towards the EU target to reduce the total consumption of antibiotics in humans by 20 % by 2030 relative to 2019 ([36]). Additionally, significant differences between Member States can be observed. In 2023, country-specific means ranged from 9.6 DDD per 1 000 inhabitants per day in the Netherlands to 28.5 in Greece.

Antimicrobial-resistant bacteria derived from food-producing animals can spread to humans by ingestion of or from handling food contaminated with zoonotic bacteria. Over time, this makes the antimicrobials less effective, resulting in treatment failure ([37]). Thus, in addition to reducing human consumption of antimicrobials in the community and hospital sectors, the EU has set a target to reduce overall EU sales of antimicrobials for farmed animals and in aquaculture by 50 % by 2030 relative to 2018. According to a 2025 report from the European Medicines Agency, the EU achieved a 25.2 % reduction in sales of antimicrobials for farmed animals and in aquaculture by 2023 compared with the 2018 baseline. This is the result of declining sales in almost all Member States. While the EU is thus about halfway to the 2030 target, further declines in EU sales of antimicrobials are needed.

Main indicators

Healthy life years at birth

LONG TERM
Assessment not possible due to several breaks in time series

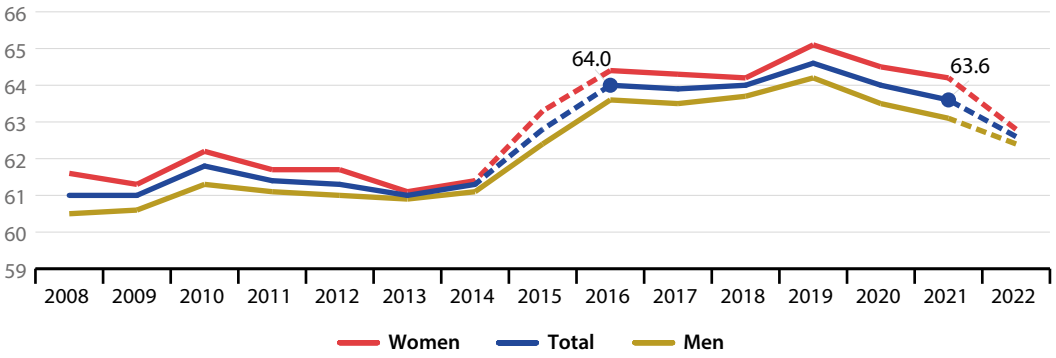
SHORT TERM
2016–2021

This indicator measures the number of years at birth that a person can expect to live in a healthy condition. Healthy life years is a health expectancy indicator which combines information on mortality and morbidity (prevalence of the population suffering from a disease or medical condition).

FIGURE 3.1

Healthy life years at birth, by sex, EU, 2008–2022

(years)



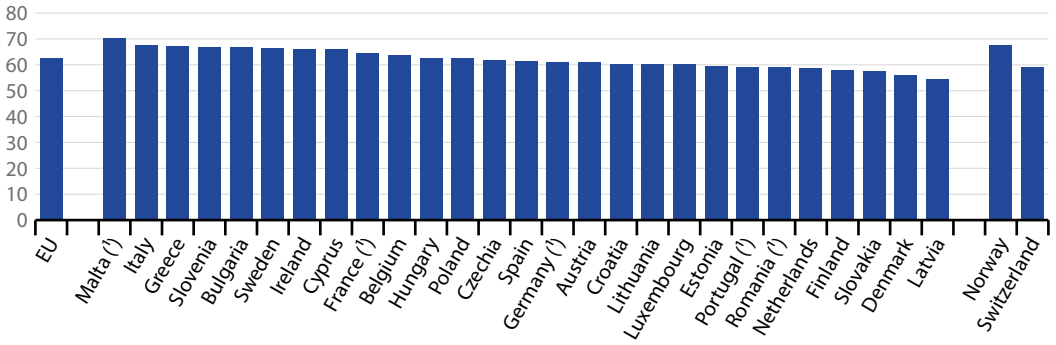
Note: Breaks in time series in 2015, 2016 and 2022. Due to these breaks, only the period 2016 to 2021 is considered for the assessment.

Source: Eurostat (online data code: sdg_03_11)

FIGURE 3.2

Healthy life years at birth, by country, 2022

(years)



(1) Data are provisional, estimated or have low reliability.

Source: Eurostat (online data code: sdg_03_11)

People with good or very good self-perceived health

This indicator is a subjective measure of how people judge their health in general on a scale from 'very good' to 'very bad'. The data stem from the EU Statistics on Income and Living Conditions (EU-SILC). Indicators of perceived general health have been found to be a good predictor of people's future health care use and mortality.

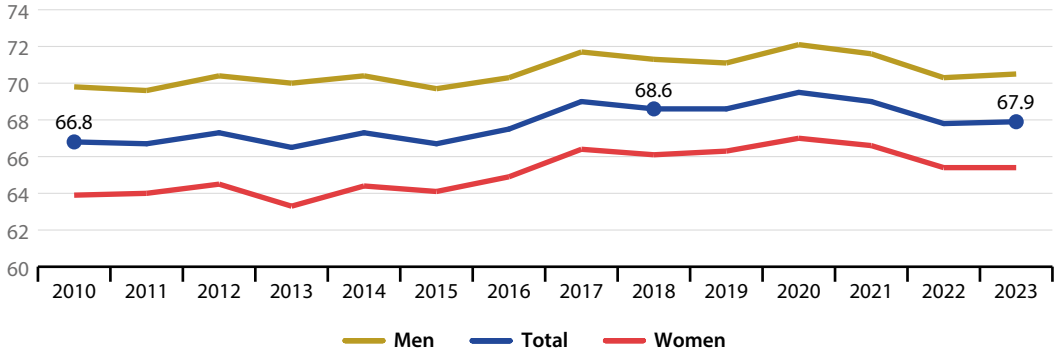
LONG TERM 2010–2023

SHORT TERM 2018–2023

FIGURE 3.3

Share of people with good or very good perceived health, by sex, EU, 2010–2023

(% of population aged 16 or over)



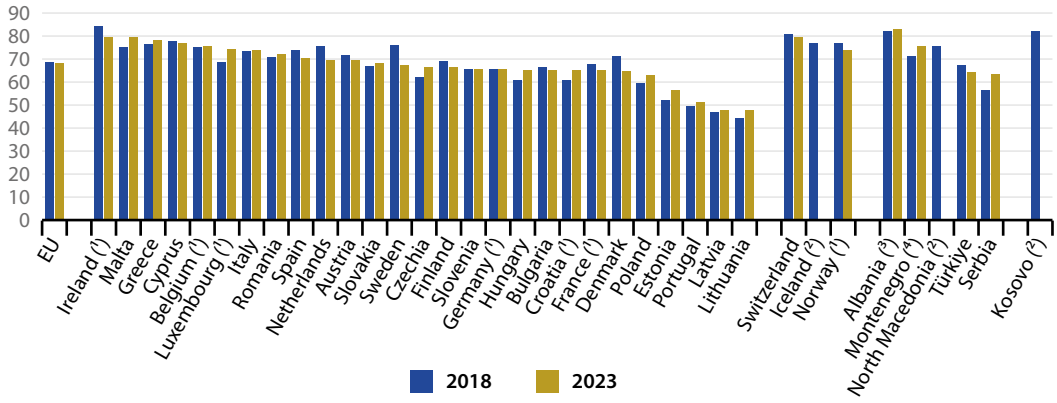
Note: Data for 2010–2016 and 2020 are estimated.

Source: Eurostat (online data code: sdg_03_20)

FIGURE 3.4

Share of people with good or very good perceived health, by country, 2018 and 2023

(% of population aged 16 or over)



(1) Break(s) in time series between the two years shown.
(2) No data for 2023.
(3) 2021 data (instead of 2023).
(4) 2022 data (instead of 2023).

Source: Eurostat (online data code: sdg_03_20)

Smoking prevalence

LONG TERM 2009–2023

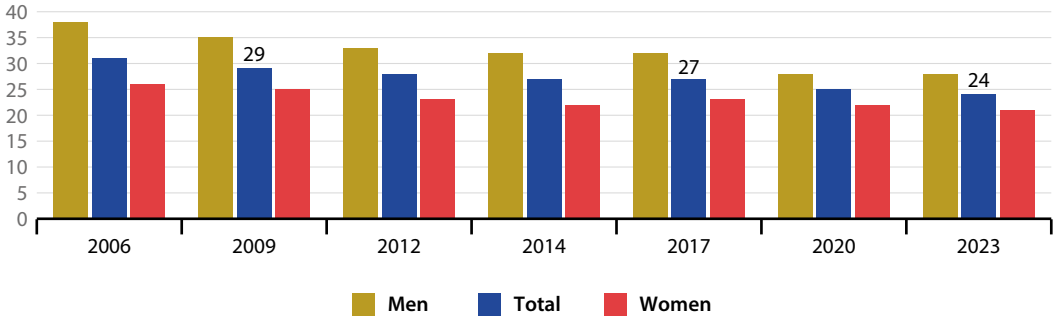
SHORT TERM 2017–2023

This indicator measures the percentage of the population aged 15 years and over who report they currently smoke boxed cigarettes, cigars, cigarillos or a pipe. It does not include the use of other tobacco and related products such as electronic cigarettes and snuff. The data are collected through a Eurobarometer survey and are based on self-reported use during face-to-face interviews in people's homes.

FIGURE 3.5

Smoking prevalence, by sex, EU, 2006–2023

(% of population aged 15 or over)



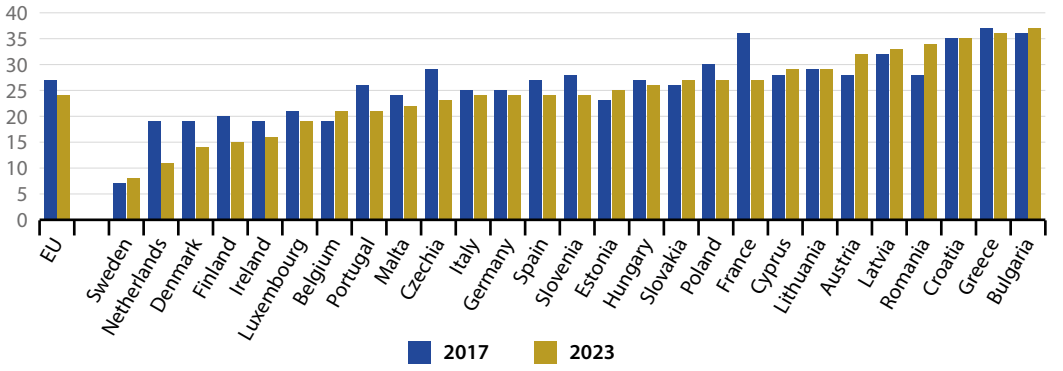
Note: Estimated data; 2012 data excluding Croatia.

Source: European Commission services (Eurostat online data code: sdg_03_30)

FIGURE 3.6

Smoking prevalence, by country, 2017 and 2023

(% of population aged 15 or over)



Source: European Commission services (Eurostat online data code: sdg_03_30)

Standardised avoidable mortality

LONG TERM 2011–2022

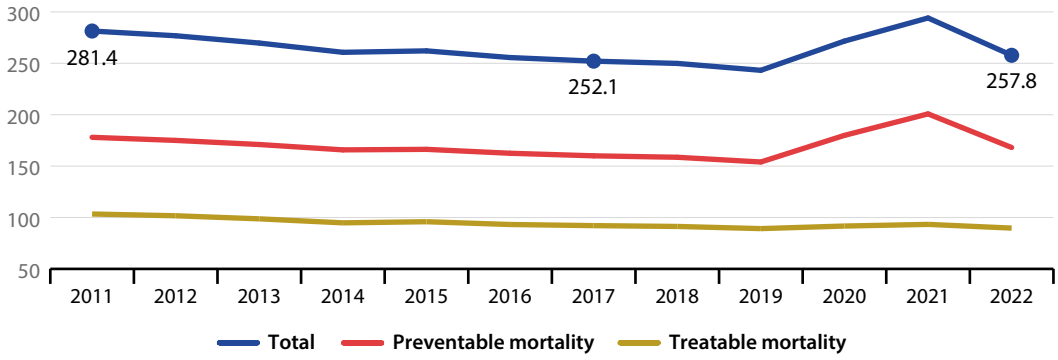
SHORT TERM 2017–2022

Avoidable mortality covers both preventable and treatable causes of mortality. Preventable mortality refers to mortality that can mainly be avoided through effective public health and primary prevention interventions (carried out before the onset of diseases/injuries to reduce incidence). Treatable mortality can mainly be avoided through timely and effective health care interventions, including secondary prevention and treatment (after the onset of diseases to reduce case-fatality). The total avoidable mortality rate includes a number of infectious diseases, several types of cancers, endocrine and metabolic diseases, as well as some diseases of the nervous, circulatory, respiratory, digestive and genitourinary systems, some diseases related to pregnancy, childbirth and the perinatal period, a number of congenital malformations, adverse effects of medical and surgical care, a list of injuries and alcohol and drug-related disorders.

FIGURE 3.7

Standardised avoidable mortality, EU, 2011–2022

(number per 100 000 persons aged less than 75 years)

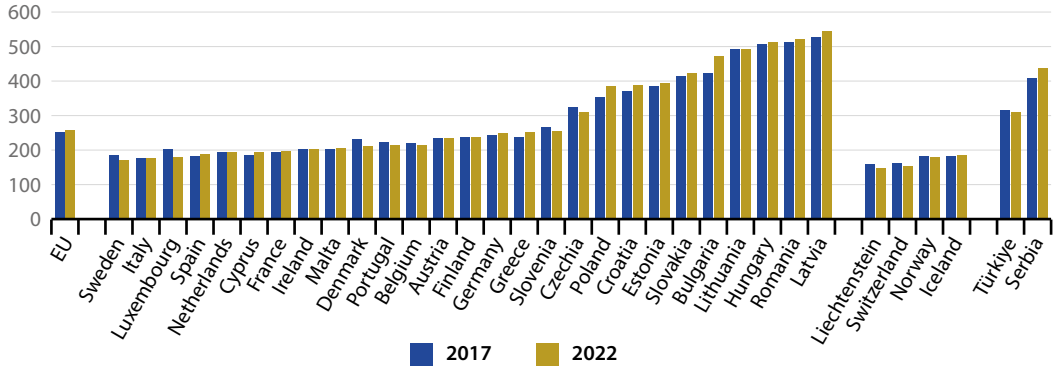


Source: Eurostat (online data code: sdg_03_42)

FIGURE 3.8

Standardised avoidable mortality, by country, 2017 and 2022

(number per 100 000 persons aged less than 75 years)



Source: Eurostat (online data code: sdg_03_42)

Self-reported unmet need for medical care

LONG TERM 2010–2023

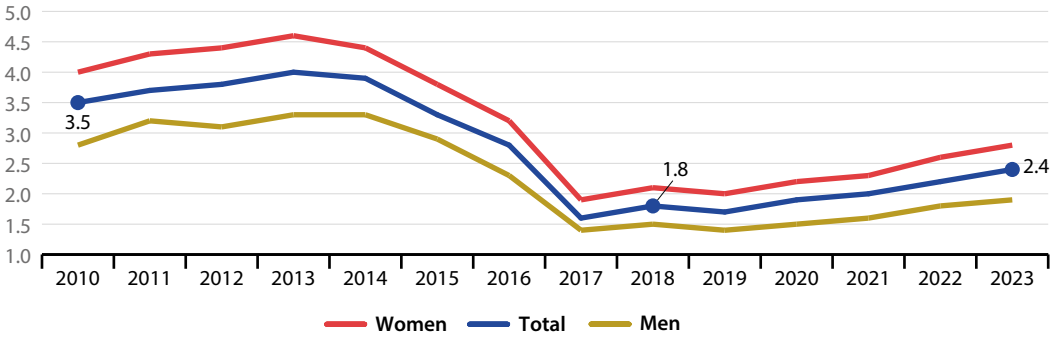
SHORT TERM 2018–2023

In the context of SDG monitoring, this indicator measures the share of the population aged 16 and over reporting unmet needs for medical care due to one of the following reasons: 'financial reasons', 'waiting list' and 'too far to travel'. Self-reported unmet needs concern a person's own assessment of whether they needed medical examination or treatment (dental care excluded) but did not have it or did not seek it. The data stem from the EU Statistics on Income and Living Conditions (EU-SILC). Since social norms and expectations may affect responses to questions about unmet care needs, caution is required when comparing differences in the reporting of unmet medical examination across countries. In addition, the different organisation of health care services is another factor to consider when analysing the data. Finally, there are also some variations in the survey questions across countries and across time ([38]).

FIGURE 3.9

Self-reported unmet need for medical care, by sex, EU, 2010–2023

(% of population aged 16 and over)

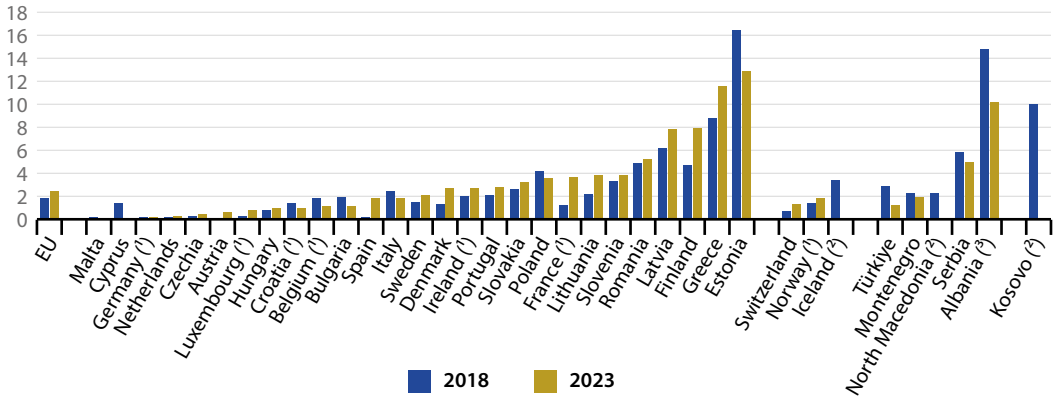


Source: Eurostat (online data code: sdg_03_60)

FIGURE 3.10

Self-reported unmet need for medical care, by country, 2018 and 2023

(% of population aged 16 and over)



(1) Break(s) in time series between the two years shown. (2) No data for 2023. (3) 2022 data (instead of 2023).

Source: Eurostat (online data code: sdg_03_60)

Consumption of antibiotics in the community and hospital sectors

This indicator measures the total antimicrobial consumption (AMC) in the community and hospital sectors. AMC is expressed as the number of defined daily doses (DDD) per 1 000 inhabitants per day. The data refer to the Anatomical Therapeutic Chemical (ATC) classification code J01 'Antibacterials for systemic use'. The data for the EU aggregate are presented as population-weighted mean and include imputations and adjustments ([39]).

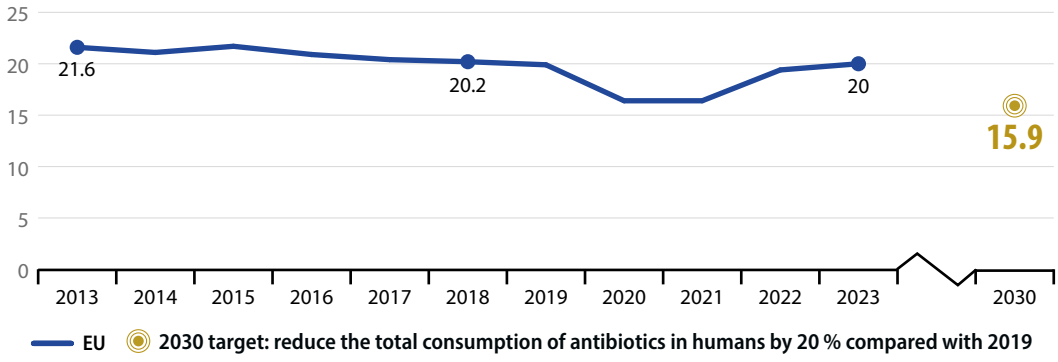
LONG TERM 2013–2023

SHORT TERM 2018–2023

FIGURE 3.11

Consumption of antibiotics in the community and hospital sectors, EU, 2013–2023

(DDD per 1 000 inhabitants per day)

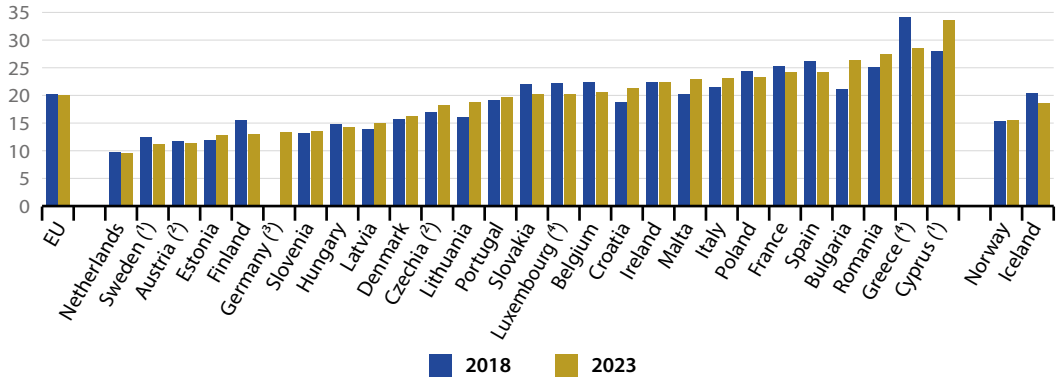


Source: ESAC-Net, ECDC (Eurostat online data code: sdg_03_70)

FIGURE 3.12

Consumption of antibiotics in the community and hospital sectors, by country, 2018 and 2023

(DDD per 1 000 inhabitants per day)



(1) 2022 data (instead of 2023).
(2) 2019 data (instead of 2018).
(3) No data for 2018.
(4) Break(s) in time series between the two years shown.

Source: ESAC-Net, ECDC (Eurostat online data code: sdg_03_70)

Notes

(1) World Health Organization (1946), *Constitution of the World Health Organization*.

(2) *Source*: Eurostat (online data code: demo_mlexpec).

(3) *Source*: Eurostat (online data code: demo_mlexpec).

(4) *Source*: Eurostat (online data code: hlth_silc_18).

(5) *Source*: Eurostat (online data code: hlth_dh010).

(6) World Health Organization (2024), *Social determinants of health*.

(7) World Health Organization (2021), *New analysis from WHO/Europe identifies surprising trends in rates of overweight and obesity across the Region*.

(8) The indicator measures the share of obese people based on their body mass index (BMI). BMI is defined as the weight in kilograms divided by the square of the height in metres. People aged 18 years or over are considered obese with a BMI equal to or greater than 30. Other categories are: underweight (BMI less than 18.5), normal weight (BMI between 18.5 and less than 25), and pre-obese (BMI between 25 and less than 30). The category overweight (BMI equal or greater than 25) combines the two categories pre-obese and obese.

(9) *Source*: Eurostat (online data code: ilc_hch10).

(10) The WHO European Region also includes some non-European countries such as Israel, Uzbekistan, Turkmenistan or Tajikistan; see https://www.who.int/countries for the full list of countries.

(11) World Health Organization (2012), *WHO global report: mortality attributable to tobacco*, p. 14.

(12) World Health Organization (2024), *WHO report on the global tobacco epidemic, 2023: Protect people from tobacco smoke*.

(13) European Commission (2024), *Attitudes of Europeans towards tobacco and electronic cigarettes*, Special Eurobarometer 539.

(14) European Environment Agency (2018), *Environmental noise.*

(15) European Environment Agency (2021), *Managing exposure to noise in Europe*.

(16) European Environment Agency (2020), *Healthy environment, healthy lives: how the environment influences health and well-being in Europe*, Publications Office of the European Union, Luxembourg.

(17) European Environment Agency (2021), *Managing exposure to noise in Europe*.

(18) It needs to be noted that the figures on noise disturbance presented here include noise from neighbours and therefore go beyond the scope of the Environmental Noise Directive.

(19) Also see: European Environment Agency (2019), *Environmental noise.*

(20) *Source*: Eurostat (online data code: hlth_cd_apr).

(21) European Environment Agency (2024), *Europe's air quality status 2024.*

(22) European Environment Agency (2018), *Unequal exposure and unequal impacts: social vulnerability to air pollution, noise and extreme temperatures in Europe*, Publications Office of the European Union, Luxembourg.

(23) Ibid.

(24) European Environment Agency (2022), *Air quality in Europe 2022*.

(25) European Environment Agency (2024), *Harm to human health from air pollution in Europe: burden of disease status, 2024 | European Environment Agency's home page*.

(26) *Source*: Eurostat (online data code: hlth_cd_aro).

(27) WHO (2023), *Global status report on road safety 2023*, Geneva.

(28) *Source*: Eurostat (online data code: hsw_mi08).

(29) European Council (2014), *Council conclusions on the economic crisis and healthcare*, 2014/C 217/02.

(30) *Source*: Eurostat (online data code: hlth_silc_21).

(31) *Source*: Eurostat (online data code: hlth_dh030).

(32) *Source*: Eurostat (online data code: hlth_sha11_hf).

(33) Expert Panel on effective ways of investing in health (EXPH) (2016), *Access to health services in the European Union, final opinion approved at the 14th plenary meeting of 3 May 2016 after public consultation*, p. 18.

(34) European Parliament and the Council of the European Union (2022), *Regulation 2022/2371 on serious cross-border threats to health and repealing Decision No 1082/2013/EU*.

(35) European Centre for Disease Prevention and Control (ECDC) (2022), *Assessing the health burden of infections with antibiotic-resistant bacteria in the EU/EEA, 2016–2020*, ECDC, Stockholm, pp. 4–7.

(36) Council of the European Union (2023), *Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach*, 2023/C 220/01.

(37) European Food Safety Authority (EFSA) and European Centre for Disease Prevention and Control (ECDC) (2023), *The European Union Summary Report on Antimicrobial Resistance inzoonotic and indicator bacteria from humans, animals and food in 2020/2021*, EFSA Journal 2023;21(3):7867.

(38) OECD/EU (2018), *Health at a Glance: Europe 2018 — State of Health in the EU Cycle, OECD Publishing, Paris*, p. 170.

(39) European Centre for Disease Prevention and Control (2023), *Antimicrobial consumption in the EU/EEA (ESAC-Net) — Annual Epidemiological Report 2022*, ECDC, Stockholm.

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

SDG 4 seeks to ensure access for all to quality education through all stages of life, as well as to increase the number of young people and adults who have the relevant skills for employment, decent jobs and entrepreneurship.

Education and training are key drivers for sustainable growth and democratic societies because they help to improve employability, productivity, innovation, competitiveness, health, equality, safety and civil involvement. In the broader sense, education is a pre-condition for achieving many SDGs. Monitoring SDG 4 in an EU context focuses on basic education, tertiary education, adult learning and digital skills. Over the assessed five-year period, the EU has made significant progress on increasing participation in early childhood education, basic and tertiary education, and adult learning. In contrast, trends in educational outcomes have been less favourable. The percentage of underachievers in the PISA test has further deteriorated, and the share of adults with at least basic digital skills remains far from its target.

Indicators measuring progress towards SDG 4, EU

Indicator	Period	Annual growth rate	Assessment	More info
Basic education				
Low achieving 15-year-olds in reading, mathematics or science ◎	2009–2022	Observed: 2.0 % (1) Required: – 2.0 % (1)	↓	page 83
	2018–2022	Observed: 6.5 % (1) Required: – 3.5 % (1)	↓	
Participation in early childhood education ◎	2013–2023	Observed: 0.3 % Required: 0.3 %	↑	page 84
	2018–2023	Observed: 0.5 % Required: 0.3 %	↑	
Early leavers from education and training ◎	2009–2024	Observed: – 2.7 % Required: – 2.1 %	↑	page 85
	2019–2024	Observed: – 1.6 % Required: – 1.0 %	↑	
Tertiary education				
Tertiary educational attainment ◎	2009–2024	Observed: 2.3 % Required: 1.8 %	↑	page 86
	2019–2024	Observed: 2.2 % Required: 1.2 %	↑	
Adult learning				
Adult participation in learning in the past four weeks	2009–2024	3.5 %	↑	page 87
	2019–2024	4.3 %	↑	
Digital skills				
Share of adults having at least basic digital skills	Time series too short for assessment		✕	page 88

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

(1) Trend refers to worst performance among the three subjects (Mathematics).

Policy context

The Union of Skills, adopted in 2025, is a comprehensive strategy that covers all skills, at all levels of education, training and learning, acquired in all settings, across borders also beyond the EU. The European Education Area (EEA) promotes collaboration among EU countries for more resilient and inclusive national education and training systems. The European Social Fund Plus (ESF+) fosters education through funds allocation, and the Erasmus+ programme focuses on quality and inclusive education with a commitment of over EUR 26 billion for 2021 to 2027.

Basic education and tertiary education

Four out of the seven EEA strategic framework targets for 2030 are used to monitor progress in basic and tertiary education in the EU: at least 96 % of children between the age of three and the starting age for compulsory primary education should participate in early childhood education and care; less than 9 % of pupils should leave education and training early; less than 15 % of 15-year-olds should be low-achievers in reading, mathematics and science; and at least 45 % of 25–34-year-olds should have a tertiary education qualification ([1]).

The Council recommendation on high-quality early childhood education and care systems emphasises the multiple benefits of early childhood education both for individuals and for society. The European Child Guarantee aims to ensure that every child at risk of poverty or social exclusion has effective and free access to education from pre-school level, while the Council Recommendation on pathways to school success intends to lift performance in basic skills and reduce early school leaving. Additionally, the reinforced Youth Guarantee aims to ensure all young people under the age of 30 receive a good quality offer of employment, continued education, an apprenticeship or a traineeship. The concept of learning mobility is strengthened through the Council Recommendation 'Europe on the Move' from 2024.

Adult learning and digital skills

The European Skills Agenda aims to help individuals and businesses develop more and better skills and to put them to use. The Council Resolution on a new European agenda for adult learning 2021–2030 highlights the need to significantly increase adult participation in learning. Adult learning is also the primary concern of the Council Recommendation on individual learning accounts. The EEA requires that by 2025 at least 47 % of adults aged 25 to 64 will have participated in learning during the past 12 months, while the European Pillar of Social Rights Action Plan sets a target for at least 60 % of adults to be participating in training every year by 2030.

The EEA also sets a target for there to be less than 15 % of low achievers in computer and information literacy among eighth-graders by 2030. The Digital Education Action Plan (2021–2027) supports the sustainable and effective adaptation of the education and training systems of Member States to the digital age. The plan contributes to achieving the goals of the European Pillar of Social Rights Action Plan and the '2030 Digital Compass: the European way for the Digital Decade', which both have a goal for at least 80 % of people aged 16–74 to have basic or above-basic digital skills.

The Digital Europe Programme (DIGITAL) is an EU financial instrument designed to bring digital technology to businesses, citizens and public administrations. In addition, the Recovery and Resilience Facility, under its 'Policies for next generation' pillar, supports reforms and investments in education and digital skills.

Overview and key trends

Basic education

Basic education covers the earliest stages in a child's educational pathway, ranging from early childhood education and care to primary and secondary education. An inclusive and quality education for all, which eliminates school segregation, is an essential element of sustainable development. SDG 4 thus aims to ensure that by 2030 all girls and boys will have access to quality early childhood development, care and pre-primary education in order to be ready for primary education. In addition, SDG 4 intends to ensure that all boys and girls complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes. Furthermore, SDG 4 focuses on ensuring all young people have the literacy, numeracy and relevant skills needed for employment, decent jobs and entrepreneurship.

Participation in early childhood education and care has increased strongly in recent years and is on track to meet the 2030 target

Early childhood education and care is usually the first formal step on a child's educational pathway. The 2019 Council Recommendation on high-quality early childhood education and care underlines that access to quality early childhood education and care for all children contributes to their development and educational success, ultimately enhancing their future employment prospects. Also, as highlighted in the 2022 Council Recommendation on early childhood education and care, insufficient provision of early childhood education and care is a significant constraint on female labour market participation.

The 2021 Council Recommendation on a European child guarantee also emphasises the importance of equal access to quality and inclusive early childhood education and care for breaking the transmission of social exclusion and securing equal opportunities for children in a disadvantaged situation. Tackling disadvantage from early years is a cost-effective investment as it contributes to the inclusion of children, their school success and integration into the labour market and social life when they are adults. These positive effects are on average stronger among children from socio-economically disadvantaged backgrounds, suggesting that early childhood education and care is a key factor in reducing inequality of opportunity. At the same time, children from these backgrounds are less likely to participate in early childhood education and care, particularly children under three years of age who are at risk of poverty or social exclusion, whose parents do not hold tertiary qualifications, and who live in large families ([2]).

94.6%
of young children in the EU participated in early childhood education and care in 2023

Participation in early childhood education is defined as the share of the population aged between three years and the starting age of compulsory primary education who take part in early education. In the EU, participation in early childhood education improved from 91.8% in 2013 to 94.6% in 2023, albeit the trend experienced ups and downs over this period. The 2023 rate is the highest ever recorded, reflecting a clear positive trend since 2021. With a gap of 1.4 percentage points remaining, the EU will reach the target level of 96% by 2030 if the trend observed in recent years is maintained.

Fewer young people in the EU drop out from education and training

According to the Council Recommendation on pathways to school success, school education can play a crucial role in promoting inclusive, fairer and more prosperous societies and economies. It thus aims to ensure better educational outcomes for all

learners, by lifting performance in basic skills and reducing early school leaving. Consequently, the EEA strategic framework has set a target to reduce the share of early leavers from education and training (ELET) to below 9 % by 2030.

Since 2002, the ELET rate has fallen continuously in the EU, albeit more slowly in recent years. In 2024 the share had reached 9.3 %, putting the EU well on track to meet the 2030 target. The reasons for early school leaving are complex and include both individual and socio-economic factors, as well as factors related to the education system itself ([3]). An analysis by degree of urbanisation reveals that young people living in towns and suburbs as well as in rural areas (both 10.2 %) were more likely to leave school early than young people living in cities (8.2 %) in 2024 ([4]). For further analyses of ELET trends by sex and citizenship, see the chapters on SDG 5 'Gender equality' on page 91 and on SDG 10 'Reduced inequalities' on page 175.

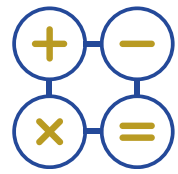
9.3 %
of people aged 18 to 24 had left education and training early in the EU in 2024

Monitoring of the 9 % target is complemented by a supplementary indicator on the completion of at least upper secondary education, which is generally considered the minimum requirement for gaining satisfactory employment in today's economy and is important for full participation in society. The indicator, which measures the share of people aged 20 to 24 with at least an upper secondary qualification, shows that 84.3 % had completed this level of education in 2024 ([5]).

Educational outcomes have continued to deteriorate, most significantly in maths

Besides educational attainment in general, achieving a certain level of proficiency in basic skills is a key objective of all educational systems. Basic skills, such as reading a simple text or performing simple calculations, provide the foundations for more complex tasks and are crucial for personal, academic and professional success. Low achievers in the OECD's Programme for International Student Assessment (PISA) are those pupils who fail to reach the minimum proficiency level. These pupils face having fewer opportunities in the future, both at the personal and the professional level ([6]). The personal socio-economic background is one of the key drivers behind educational underachievement and points to serious problems in terms of equality: the risk of underachievement for young people with a disadvantaged socio-economic background is almost six times higher than for those with an advantaged socio-economic background ([7]).

In 2022, more than one in every four 15-year-old pupils showed insufficient abilities in one or more of these basic skills. Test results in that year showed 29.5 % of pupils were low achievers in mathematics, followed by 26.2 % in reading and 24.2 % in science. Compared with 2018, these results are a significant step backward in all three domains, but most significantly in mathematics, with a decline of 6.6 percentage points. The results indicate that the EU is lagging seriously behind in all three domains when it comes to reaching the 2030 EU-level target of reducing the share of low-achieving 15-year-olds in basic skills to less than 15 %.



29.5 %
of 15-year-old pupils in the EU showed insufficient maths skills in 2022

Tertiary education

Continuing education after the basic level is important in a knowledge-based economy: employment rates are generally higher for highly educated people, who also enjoy better wages and working conditions. Conversely, low levels of tertiary educational attainment can hinder competitiveness, innovation and productivity and undermine growth potential. Therefore, investing efficiently and effectively in education and training systems that deliver high-quality and up-to-date services lays the foundation for a country's prosperity.

The share of people with tertiary education has increased significantly since 2002

The EEA strategic framework aims to raise the share of the population aged 25 to 34 that has completed a higher education qualification (levels 5–8 in the 2011 International standard classification of education, ISCED) to at least 45 % by 2030. As a result of a 21.1 percentage point increase since 2002, the EU reached a tertiary education attainment rate of 44.2 % in 2024 and is well on track to meeting its 2030 target. Tertiary attainment levels seem to be related to the degree of urbanisation. While in 2024 more than half (54.6 %) of the population aged 25 to 34 living in cities had attained tertiary education, the rate was significantly lower for towns and suburbs (37.4 %) and rural areas (32.2 %) ([8]).

44.2 %
of the EU population aged 25 to 34 had attained tertiary education in 2024

The share of 25- to 34-year-olds with tertiary education has improved compared with 2002 in all Member States. This partly reflects their investment in higher education to meet the demand for a more skilled labour force. Moreover, some countries shifted to shorter degree programmes following the implementation of the Bologna process reforms. For further analyses of the trends in tertiary education by sex, see the chapters on SDG 5 'Gender equality' on page 91 and on SDG 9 'Industry, Innovation and Infrastructure' on page 157.

Adult learning

Keeping skills up to date to support the ongoing quest for a high-quality labour force is one of the goals of adult learning. Adult learning covers the longest period in a person's learning lifetime. It includes improving and developing skills and adapting to technological developments, which helps to advance a person's career or aid their return to the labour market (upskilling and reskilling). Moreover, it is crucial for maintaining good health, remaining active in the community and being fully included in all aspects of society.

Adult participation in learning is growing

The indicator 'adult participation in learning' measures the share of people aged 25 to 64 who stated they received formal or non-formal education and training in the four weeks preceding the survey carried out to monitor it. This share has grown almost steadily since 2002, when it stood at 5.3 %, reaching 13.3 % in 2024. A temporary drop was observed in 2020, which might be related to the COVID-19 pandemic and the adjustments to the related contingency measures, such as lay-offs and teleworking. Similarly, for adults not in employment, participation in learning activities reduced temporarily during the beginning of the pandemic due to extended lockdown periods. Since 2020, however, the share of adults participating in learning has grown strongly, gaining 4.2 percentage points by 2024.

13.3 %
of 25- to 64-year-old adults participated in learning in the EU in 2024

Women are more likely to participate in adult learning than men. In 2024, the share of 25- to 64-year-olds in education was 2.4 percentage points higher for women than for men (14.5 % compared with 12.1 %, respectively). The rate for women was not only higher, it had also improved faster, gaining 9.0 percentage points between 2002 and 2024, compared with 7.1 percentage points for men. The participation rate in adult learning also differs in terms of degree of urbanisation. In 2024, adults living in cities were more likely to participate in learning (16.5 %) than those living in towns and suburbs (11.8 %) or rural areas (10.1 %) ([9]).

While the above-mentioned indicator is based on the question of whether adults participated in learning during the four weeks preceding the survey, the target defined in the EEA strategic framework and the European Pillar of

Social Rights Action Plan refers to the share of adults participating in learning during the past 12 months. Data for this target definition are currently collected every six years through the Adult Education Survey (AES). The most recent data are from 2022 and show that the share of adults participating in learning during the past 12 months stood at 39.5 %, which is 7.5 percentage points below the EU target of 47 % for 2025 and 20.5 percentage points below the 2030 target of 60 %. Participation rates were particularly low for low-educated adults (ISCED 2011 levels 0–2), at 18.4 %. In contrast to this group, 58.9 % of adults with tertiary education (ISCED 2011 levels 5–8) participated in learning in 2022 ([10]).

Digital skills

Digitalisation is having a massive impact on the labour market and the type of skills needed in the economy and society. Thus, digital skills are of critical value for working, learning and social interaction. During the COVID-19 pandemic, the digital skills gap became more pronounced while new inequalities emerged: many people still do not possess a basic level of digital skills, are in workplaces or schools that are lagging behind in digitalisation or have limited access to digital tools and infrastructures.

The share of people with at least basic digital skills remains far from the 2030 target

The European Pillar of Social Rights Action Plan has set a complementary target for the EU to raise the share of people aged 16 to 74 who have at least basic digital skills to 80 % in 2030. This target is monitored using the composite indicator for digital skills, based on selected activities performed by individuals on the internet in specific areas: information and data literacy, communication and collaboration, digital content creation, safety and problem solving. The level of 'at least basic digital skills' refers to the two highest out of six levels derived from the survey on the use of information and communication technologies (ICT) in households and by individuals**.** It is assumed that individuals who have performed certain activities have the desired digital skills, therefore the indicator can be considered as a proxy for the digital competences and skills of individuals.

In 2023, the share of people aged 16 to 74 with at least basic digital skills stood at 55.6 %. While this share is 1.7 percentage points higher than in 2021, when it was 53.9 %, it remained at a level considerably below the 80 % target for 2030. In contrast to most other education indicators presented in this chapter, overall fewer women (54.5 % in 2023) had at least basic digital skills than men (56.7 %). However, the gap between women and men varies strongly across different age groups. In the age group under 45 years, more women than men had at least basic digital skills. The situation starts to reverse in the age group above 54 years, where men are more likely to have at least basic digital skills than women.

55.6 %
of 16- to 74-year-old people in the EU had at least basic digital skills in 2023

In general, age and formal education also affect a person's level of digital skills. While 70.0 % of 16- to 24-year-olds had basic or above-basic digital skills in 2023, this was only the case for 64.0 % of 25- to 54-year-olds. In particular, older people struggle with the use of digital media, with only 37.1 % of people aged 55 to 74 having at least basic digital skills in 2023. Additionally, 79.8 % of people with high formal education had such digital skills in 2023, while this was only the case for 33.6 % of people with no or low formal education ([11]).

Digital competences constitute an essential skill for participating in a technology-driven world. In the EEA strategic framework, the EU sets a target for the share of low-achieving eighth-graders in computer and information literacy to be less than 15 % by 2030. This target is based on data collected through the International Computer and Information Literacy Study (ICILS) measuring

the share of eighth-graders performing below the level 2 threshold on the computer and information literacy scale. Across the 22 European Union Member States participating in the 2023 study, 43 % of students did not reach level 2, showing clearly that the EU faces a considerable challenge in reaching the target of less than 15 %. Disparities can be observed between and within countries, between gender groups, and between socio-economic and migrant backgrounds ([12]).

Main indicators

Low achieving 15-year-olds in reading, mathematics or science

This indicator measures the share of 15-year-old students failing to reach level 2 ('basic skills level') on the Programme for International Student Assessment (PISA) scale for the three core school subjects of reading, mathematics and science. The data stem from the PISA study, a regularly conducted international survey that aims to evaluate education systems by testing the skills and knowledge of 15-year-old students.

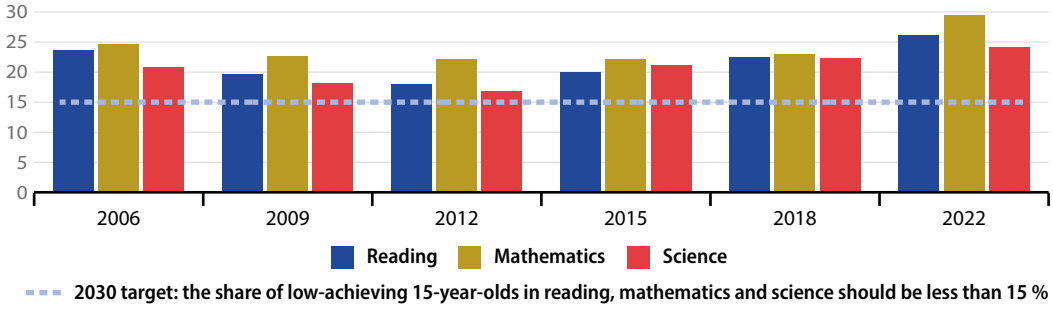
LONG TERM 2009–2022

SHORT TERM 2018–2022

FIGURE 4.1

Low achieving 15-year-olds in reading, mathematics or science, EU, 2006–2022

(% of 15-year-old students)

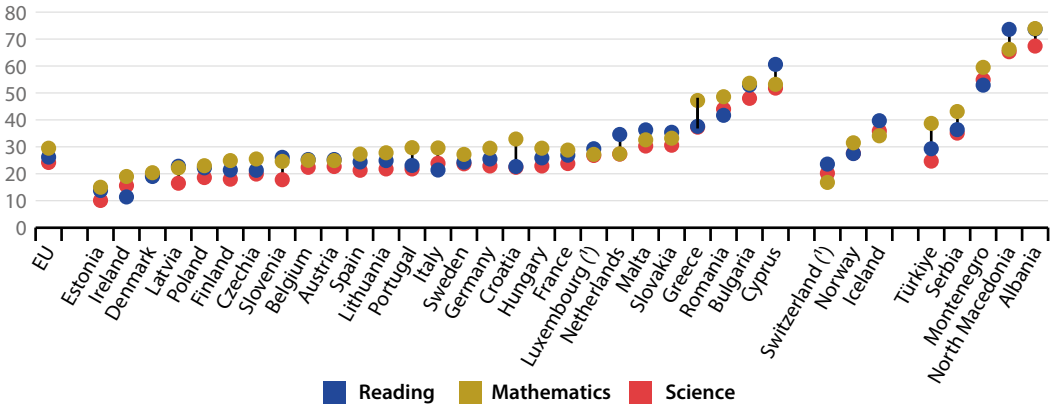


Note: Breaks in time series in 2009 and 2018 for reading. *Source:* OECD (Eurostat online data code: sdg_04_40)

FIGURE 4.2

Low achieving 15-year-olds in reading, mathematics or science, by country, 2022

(% of 15-year-old students)



(1) 2018 data. *Source*: OECD (Eurostat online data code: sdg_04_40)

Participation in early childhood education

LONG TERM 2013–2023

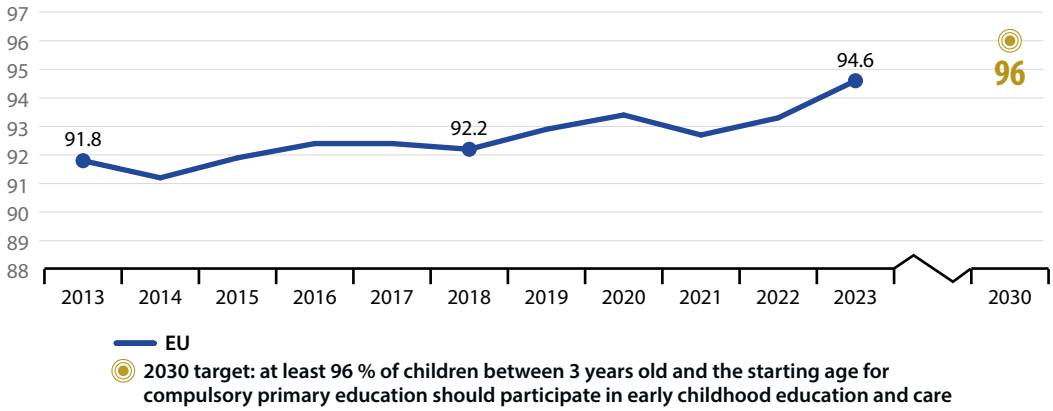
SHORT TERM 2018–2023

This indicator measures the share of children between the age of three and the starting age of compulsory primary education who participated in early childhood education. Data presented here stem from the joint UIS (UNESCO Institute of Statistics)/OECD/Eurostat (UOE) questionnaires on education statistics, which constitute the core database on education.

FIGURE 4.3

Participation in early childhood education, EU, 2013–2023

(% of children aged 3 and over)

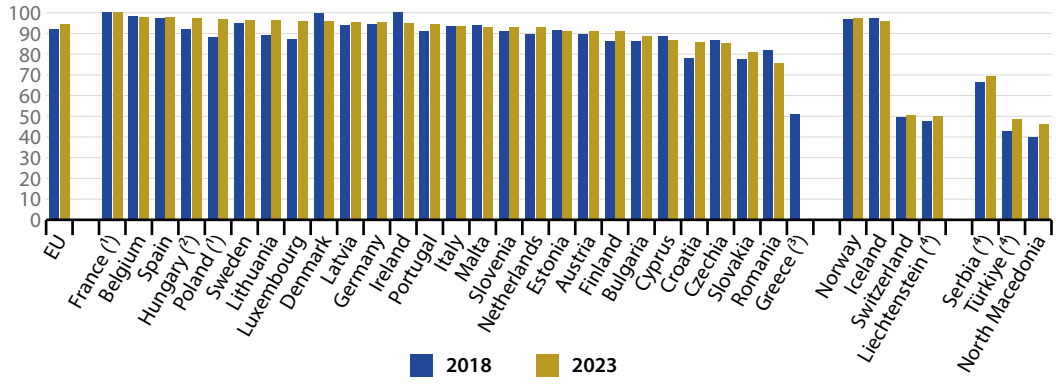


Source: Eurostat (online data code: sdg_04_31)

FIGURE 4.4

Participation in early childhood education, by country, 2018 and 2023

(% of children aged 3 and over)



(1) Provisional or estimated data.
(2) Break(s) in time series between the two years shown.
(3) No data for 2023.
(4) 2022 data (instead of 2023).

Source: Eurostat (online data code: sdg_04_31)

Early leavers from education and training

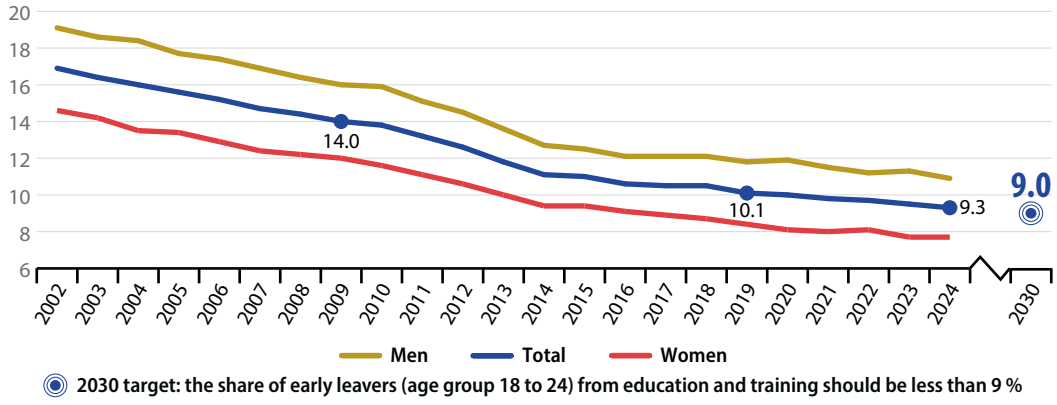
The indicator measures the share of the population aged 18 to 24 with at most lower secondary education who were not involved in any education or training during the four weeks preceding the survey carried out to monitor it. The data stem from the EU Labour Force Survey (EU-LFS).

LONG TERM 2009–2024 (* **)
SHORT TERM 2019–2024 (* **)
* Total ** Gender gap

FIGURE 4.5

Early leavers from education and training, by sex, EU, 2002–2024

(% of population aged 18 to 24)

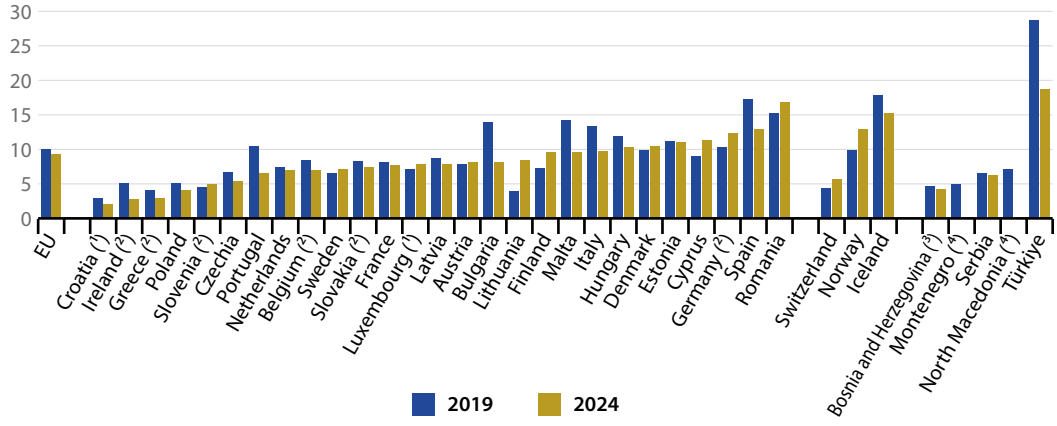


Note: Breaks in time series in 2003, 2006, 2014 and 2021.
Source: Eurostat (online data code: sdg_04_10)

FIGURE 4.6

Early leavers from education and training, by country, 2019 and 2024

(% of population aged 18 to 24)



Note: Break in time series in 2021 for all countries.
(1) 2024 data have low reliability.
(2) Further break(s) in time series after 2021.
(3) 2021 and 2023 data.
(4) No data for 2024.
Source: Eurostat (online data code: sdg_04_10)

LONG TERM 2009–2024

SHORT TERM 2019–2024

* Total ** Gender gap

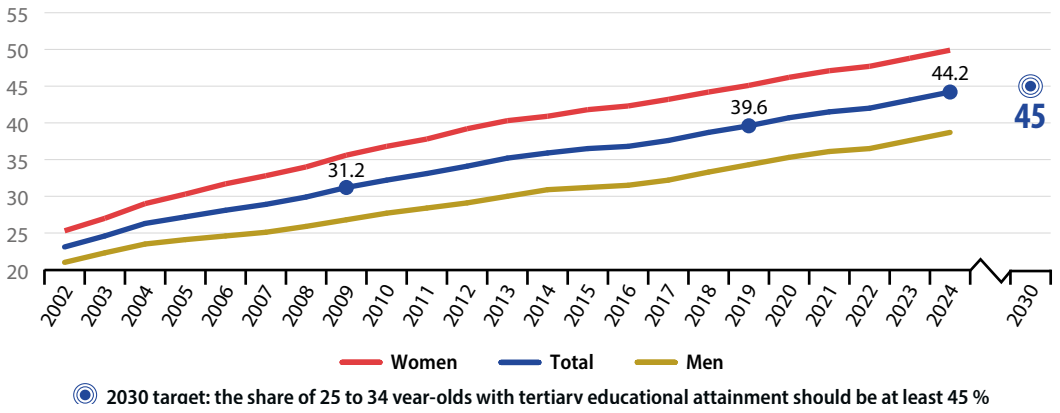
Tertiary educational attainment

This indicator measures the share of the population aged 25 to 34 who have successfully completed tertiary studies (for example, at university or a higher technical institution). Tertiary educational attainment refers to ISCED (International Standard Classification of Education) 2011 levels 5–8 for data from 2014 onwards and to ISCED 1997 levels 5–6 for data up to 2013. The indicator is based on the EU Labour Force Survey (EU-LFS).

FIGURE 4.7

Tertiary educational attainment, by sex, EU, 2002–2024

(% of population aged 25 to 34)

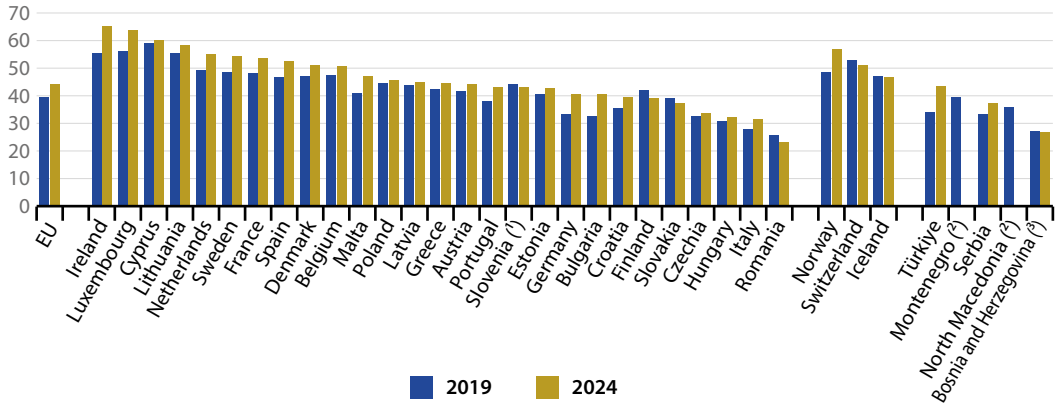


Note: Breaks in time series in 2014 and 2021.
Source: Eurostat (online data code: sdg_04_20)

FIGURE 4.8

Tertiary educational attainment, by country, 2019 and 2024

(% of population aged 25 to 34)



Note: Break in time series in 2021 for all countries.
(1) Further break(s) in time series after 2021. (2) No data for 2024. (3) 2021 and 2023 data.
Source: Eurostat (online data code: sdg_04_20)

Adult participation in learning in the past four weeks

Adult participation in learning measures the share of people aged 25 to 64 who stated they received formal or non-formal education and training in the four weeks preceding the survey (numerator) carried out to monitor this indicator. The denominator consists of the total population of the same age group, excluding those who did not answer the question 'participation in education and training'. Adult learning covers job-related and non-job-related formal and non-formal learning activities ([13]). It usually refers to learning activities after the end of initial education. Data stem from the EU Labour Force Survey (EU-LFS).

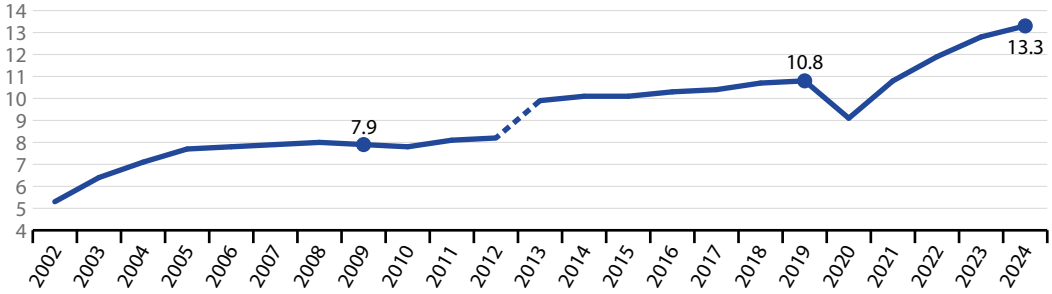
LONG TERM 2009–2024

SHORT TERM 2019–2024

FIGURE 4.9

Adult participation in learning in the past four weeks, EU, 2002–2024

(% of population aged 25 to 64)



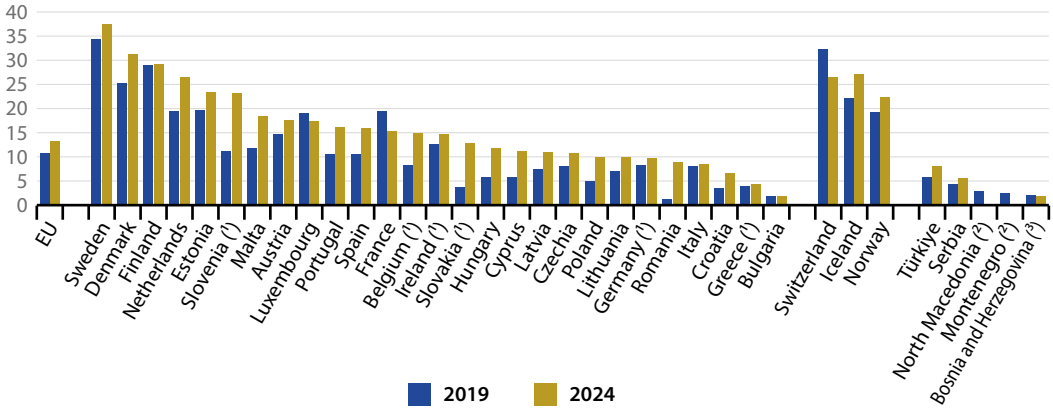
Note: Breaks in time series in 2003, 2006, 2013 and 2021. An extensive revision of the questionnaire of the French LFS (in use from 1 January 2013 onwards) explains the level shift break for France, which had an impact on the EU aggregate.

Source: Eurostat (online data code: sdg_04_60)

FIGURE 4.10

Adult participation in learning in the past four weeks, by country, 2019 and 2024

(% of population aged 25 to 64)



Note: Break in time series in 2021 for all countries.

(1) Further break(s) in time series after 2021. (2) No data for 2024. (3) 2021 and 2023 data.

Source: Eurostat (online data code: sdg_04_60)

Share of adults having at least basic digital skills

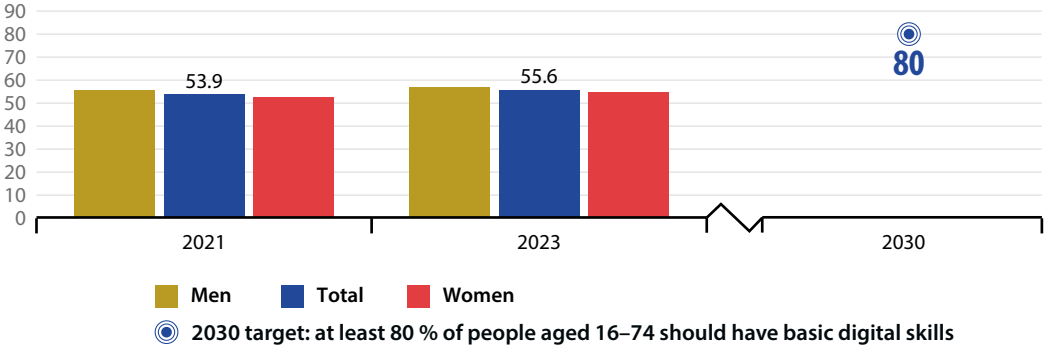
Time series too short for assessment

This indicator measures the share of people aged 16 to 74 who have at least basic digital skills. It is a composite indicator based on selected activities performed by individuals on the internet in specific areas: information and data literacy, communication and collaboration, digital content creation, safety and problem solving. The indicator assesses digital skills classified into six levels, of which the two highest constitute the basic or above basic level of digital skills. The indicator is based on data from the EU survey on the use of ICT in households and by individuals.

FIGURE 4.11

Share of adults having at least basic digital skills, by sex, EU, 2021–2023

(% of individuals aged 16 to 74)

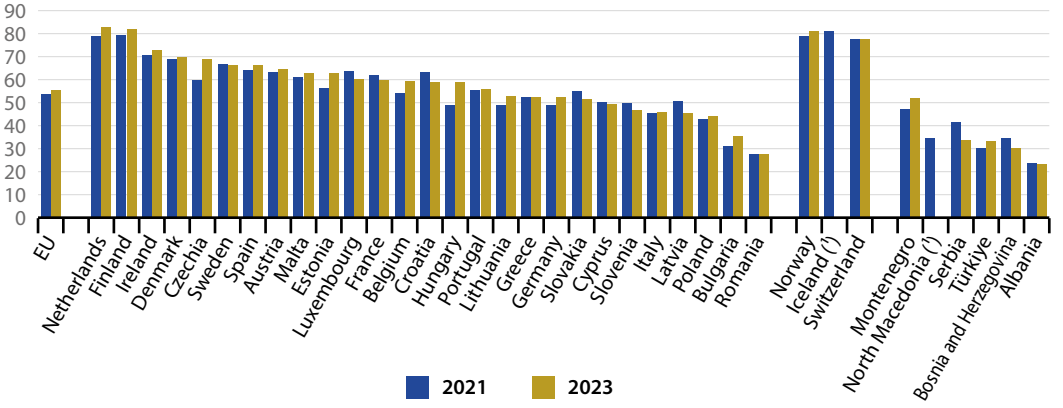


Source: Eurostat (online data code: sdg_04_70)

FIGURE 4.12

Share of adults having at least basic digital skills, by country, 2021 and 2023

(% of individuals aged 16 to 74)



(1) No data for 2023.

Source: Eurostat (online data code: sdg_04_70)

Notes

(1) The progress towards achieving the EU-level targets agreed under the EEA strategic framework Resolution is presented annually in the Education and Training Monitor. See also the Monitor Toolbox for further information.

(2) For more information see: European Commission (2022), *Employment and Social Developments in Europe*, Publications Office of the European Union, Luxembourg, p. 20.

(3) There are many reasons why some young people give up education and training prematurely: personal or family problems, learning difficulties, or a fragile socio-economic situation. The way the education system is set up, school climate and teacher–pupil relations are also important factors. Since there are often complex, interconnected reasons for children not completing secondary schooling, policies to reduce early school leaving must address a range of issues and combine education and social policy, youth work and health-related aspects. For more information, see: European Commission, European Education Area, Early school leaving.

(4) *Source*: Eurostat (online data code: edat_lfse_30).

(5) *Source*: Eurostat (online data code: yth_educ_030).

(6) European Commission (2024), *The twin challenge of equity and excellence in basic skills in the EU. An EU comparative analysis of the PISA 2022 results*, Publications Office of the European Union, Luxembourg.

(7) Data confirm that one of the key drivers behind educational underachievement is a person's socio-economic background. For more information, especially on the new EU-level indicator for equity in education, see: European Commission (2022), *Progress towards the achievement of the European Education Area*, Publications Office of the European Union, Luxembourg, pp. 24–25.

(8) *Source*: Eurostat (online data code: edat_lfs_9913).

(9) *Source*: Eurostat (online data code: trng_lfs_14).

(10) *Source*: Eurostat (Adult Education Survey, in order to reflect the definition of the target indicator: special calculation excluding guided on-the-job training as available in the public excel file).

(11) *Source*: Eurostat (online data code: isoc_sk_dskl_i21).

(12) For more information see: European Commission (2024), International Computer and Information Literacy Study (ICILS) in Europe — 2023, Publications Office of the European Union, Luxembourg.

(13) The general definition of adult learning covers formal, non-formal and informal training but the indicator adult participation in learning only covers formal and non-formal education and training. EU-LFS data on non-formal education exclude guided on-the-job training. For more information, see: Eurostat, Participation in education and training.

Achieve gender equality and empower all women and girls

SDG 5 aims to achieve gender equality by ending all forms of discrimination, violence and any harmful practices against women and girls. It also calls for the full participation of women and equal opportunities for leadership at all levels of decision-making.

Ending all forms of discrimination against women and girls and empowering women are crucial to accelerating sustainable development in the EU. Thus, monitoring SDG 5 in an EU context focuses on the topics of gender-based violence, access to quality education, participation in employment, equal payment and a balanced representation in leadership positions. Over the assessed five-year period, the EU has made strong progress in most of these areas. The gender gaps for certain labour market-related indicators have narrowed, even though stronger progress will be needed to reach the 2030 target of halving the gender employment gap. Moreover, the share of women occupying leadership positions has increased in the EU, though a clear gap between women and men remains. The situation regarding participation in education is mixed, with the gender gap for early school leaving narrowing as men continue to fall further behind women in terms of tertiary educational attainment levels.

Indicators measuring progress towards SDG 5, EU

Indicator	Period	Annual growth rate	Assessment	More info
Gender-based violence				
Gender-based violence against women	Assessment not possible due to lack of EU-level time series		✕	page 99
Education				
Gender gap for early leavers from education and training (*)	2009–2024	– 1.5 %	↑	SDG 4, page 85
	2019–2024	– 1.2 %	↑	
Gender gap for tertiary educational attainment (*)	2009–2024	1.6 % (1)	↓	SDG 4, page 86
	2019–2024	0.7 % (1)	↘	
Employment				
Gender employment gap ◎	2009–2024	Observed: – 1.9 %	↘	page 100
		Required: – 4.0 %		
	2019–2024	Observed: – 2.4 %	↘	
		Required: – 6.1 %		
Gender pay gap in unadjusted form	2010–2023	– 2.1 %	↑	page 101
	2018–2023	– 3.6 %	↑	
Gender gap for being outside the labour force due to caring responsibilities	2009–2024	– 2.7 %	↑	page 102
	2019–2024	– 6.2 %	↑	
Leadership positions				
Seats held by women in national parliaments	2009–2024	2.2 %	↑	page 104
	2019–2024	0.8 %	↗	
Positions held by women in senior management ◎	2012–2024	Observed: 6.9 % (2)	↑	page 105
		Required: 5.9 % (2)		
	2019–2024	Observed: 4.1 % (2)	↑	
		Required: 3.1 % (2)		

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

(*) Multi-purpose indicator.

(1) Gender gap is widening to the disadvantage of men.

(2) Assessment based on the 33 % target for all director positions (executive and non-executive) in listed companies.

Policy context

The EU Gender Equality Strategy 2020–2025 sets out objectives and actions to make significant progress towards a gender-equal Europe. The goal is for women and men, as well as girls and boys, in all their diversity to be free to pursue their path in life, have equal opportunities to thrive and to equally participate in and lead European society.

Under the EU Cohesion Policy, Member States must ensure that equality between men and women, gender mainstreaming, and the integration of a gender perspective are taken into account and promoted throughout the preparation, implementation, monitoring, reporting and evaluation of programmes.

Under the European Social Fund Plus (ESF+), Member States have the obligation to promote gender equality, equal opportunities and non-discrimination.

Gender-based violence

The EU's accession to the Council of Europe Convention on preventing and combating violence against women and domestic violence (the Istanbul Convention) in 2023 is a milestone in the EU's commitment to stepping up actions against gender-based violence. Furthermore, in 2024, a political agreement was reached on the Directive on combating violence against women and domestic violence. The EU Strategy on victims' rights (2020–2025) guarantees that all victims of crime can fully rely on their rights, no matter where in the EU the crime took place.

Education

The Strategic framework for European cooperation in education and training (2021–2030) prioritises improving quality, equity, inclusion and success for all in education, and sets a monitoring framework via policy targets to be achieved by 2030.

Employment

The European Pillar of Social Rights Action Plan sets the headline target of raising the overall employment rate to at least 78 % by 2030. This includes the complementary target of halving the gender employment gap by 2030 compared with 2019 levels.

The Pay Transparency Directive aims to ensure women and men in the EU get equal pay for the same work or work of equal value. The 2022 Directive on adequate minimum wages in the European Union addresses the adequacy of minimum wages and workers' access to minimum wage protection, and aims to reduce the gender pay gap.

The Work-life Balance Directive aims to help women and men reconcile work and caring responsibilities. The European Care Strategy aims to enhance women's labour market participation. The strategy is accompanied by two recommendations for Member States on the revision of the Barcelona targets on early childhood education and care and on access to affordable high-quality long-term care.

Leadership positions

Achieving gender balance in decision-making and in politics is a priority area for the European Commission and another key objective of the EU Strategy of Gender Equality 2020–2025. The Directive on gender balance in corporate boards seeks to improve the gender balance in corporate decision-making positions in the EU's largest listed companies. The Directive sets a target for the under-represented sex to make up 40 % of non-executive directors or 33 % of all directors by June 2026.

Overview and key trends

Gender-based violence

Gender-based violence is a brutal form of discrimination and a violation of fundamental human rights. It is both a cause and a consequence of inequalities between women and men. Physical and sexual violence against women affects their health and well-being. Moreover, it can hamper women's access to employment and harm their financial independence and the economy overall.

Every third woman in the EU has experienced gender-based violence during adulthood

The 2021 EU survey on gender-based violence against women ([1]) shows that every third woman (30.7 %) in the EU experienced physical or sexual violence in adulthood. Gender-based violence was reported most frequently by women aged 18 to 29, with 34.9 % having had such experiences. In comparison, 31.2 % of women aged 45 to 64 and 24.2 % of those aged 65 to 74 reported similar experiences. The prevalence of gender-based violence as reported in the survey varies from one country to another. The percentage of women who said they had experienced physical or sexual violence in adulthood was highest in Finland, Sweden and Hungary, at 57.1 %, 52.5 % and 49.1 %, respectively. Furthermore, a higher share of women living in cities reported they have been affected by gender-based violence (34.0 %) than women living in towns and suburbs (28.6 %) or rural areas (27.3 %) ([2]). Women with disabilities are even more likely to experience physical and/or sexual violence, depending on the level of disability; the higher the level of disability, the higher the reported rate of physical and/or sexual violence ([3]). It is important to note that the willingness of women to disclose their experiences of violence in the survey may be influenced by how such violence is perceived and tolerated within their communities.

30.7 %

of women in the EU have experienced gender-based violence in adulthood (according to data collected in 2021)

Data from official crime statistics on intentional homicide and sexual offences show that women are much more likely to be a victim of such crimes than men. In 2022, 64 out of 100 000 women were victims of sexual assault, and 38 out of 100 000 women were victims of rape. The rates were significantly lower for men, with 11 per 100 000 men for sexual assault and 4 out of 100 000 men for rape ([4]). Moreover, women are about twice as likely as men to be a victim of intentional homicide by family and relatives or their intimate partner. In 2022, 0.4 out of 100 000 women were victims of such homicide, compared with only 0.2 per 100 000 men ([5]). In Western Europe this type of homicide notably increased during the pandemic ([6]).

The prevalence of violence varies greatly across the EU. However, caution is needed when comparing countries' official crime statistics. Their comparability can be affected, for example, by different legal and criminal justice systems or criminal law and legal definitions such as those concerning offenders, victims or prosecutable age. Also, aspects such as the organisation and efficiency of the police, prosecution and courts or recording and reporting systems contribute to cross-country differences ([7]). The limitations of comparability also include the stigma associated with disclosing cases of violence against women in certain settings and to certain people, including to interviewers. In addition, Member States that rank highest in terms of gender equality also tend to report a greater prevalence of violence against women. This may indicate a greater awareness and willingness of women in these countries to report violence to the police or to an interviewer ([8]).

Education

Education is a driving force for social change and a condition for achieving fundamental human rights. Equipping people with the right skills also allows them to find quality jobs and improve their chances in life and thus combat the risks of social exclusion. Economic independence also makes it easier to leave a difficult situation, such as a violent home. In education and training, it is important to eliminate gender stereotypes and promote gender balance in traditionally 'male' or 'female' fields. In general, equal access to quality education and training is thus an important foundation for gender equality and an essential element of sustainable development.

Young women outperform men in education

The rate of early leavers from education and training among men in the EU was

3.2

percentage points higher than among women in 2024

Women overall tend to stay longer in the education system than men do. In 2024, 10.9 % of men as compared with 7.7 % of women aged 18 to 24 had left education and training early in the EU, having only attained lower secondary education at most. This resulted in a gender gap of 3.2 percentage points in 2024, which is 0.2 percentage points smaller than in 2018. It needs to be noted that the short-term trend since 2018 has been characterised by fluctuations in the gap of between 3.1 and 3.8 percentage points. Nevertheless, the long-term trend shows a narrowing of this gap compared with 2008, when it had amounted to 4.2 percentage points.

A major expansion in higher education systems has taken place in the EU since the early 2000's, when the Bologna process put in motion a series of reforms to make higher education in Europe more compatible, comparable, competitive and attractive for students. As a result, the share of the population aged 25 to 34 who completed tertiary education increased steadily between 2002 and 2024. The increase was particularly strong for women, whose tertiary educational attainment rate rose from 25.3 % in 2002 to 49.9 % in 2024. For men, the increase was slower, from 21.0 % to 38.6 %. This caused the gender gap to surge almost continuously from 4.3 percentage points to 11.2 percentage points between 2002 and 2024. Nevertheless, since 2022 tertiary attainment rates have increased at the same pace for women and men, and the gender gap has consequently remained at 11.2 percentage points since then.

The tertiary educational attainment rate of women in the EU was

11.2

percentage points higher than for men in 2024

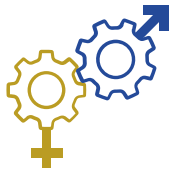
Employment

Ensuring high employment rates for both men and women is one of the EU's key targets. Reducing the wide gender employment gap, which measures the difference between the employment rates of men and women aged 20 to 64, is important for equality and a sustainable economy. The European Pillar of Social Rights Action Plan consequently includes the target of at least halving the gender employment gap by 2030 compared with 2019.

Women tend to be more highly educated than men in most EU countries. Despite this, women on average are still paid less, as evidenced by the persistent gender pay gap. One reason is that women in the EU are over-represented in low-paid sectors and under-represented in well-paid sectors. Moreover, women often adapt their working patterns to caring responsibilities, which results in lower earnings over the course of their lives and aggravates their risk of poverty and social exclusion, especially in old age, because employment and pay gaps largely influence the gender pension gap ([9]).

The employment rate for women continues to increase, but the EU is not on track to halving its gender employment gap by 2030

In the EU, the employment rate for women grew from 60.6 % in 2009 to 70.8 % in 2024. For men, the rate started from a higher value and increased more slowly, from 74.0 % in 2009 to 80.8 % in 2024 (see the chapter on SDG 8 'Decent work and economic growth' on page 195 for more detailed analyses on employment rates). As a result, the gender employment gap narrowed by 3.4 percentage points between 2009 and 2024. Most of this decrease took place in the period leading up to 2014, with the gap then remaining at just over 11 percentage points until 2020, before decreasing further during the next three years. Although the drop to 10.0 percentage points in 2024 represents a new record low, it also means the proportion of working-age men in employment still considerably exceeds that of women. Moreover, the gap is not narrowing quickly enough for the EU to meet its 2030 target of at least halving the gender employment gap compared with 2019. Meeting this target would require the difference in the employment rate between men and women to be reduced to 5.7 percentage points or lower.



The gender employment gap was

10.0

percentage points in the EU in 2024

An analysis by degree of urbanisation shows a variation in the gender employment gap between cities, towns and suburbs, and rural areas. In 2024, the gap was smallest in cities, at 8.4 percentage points, while it amounted to 10.9 percentage points in rural areas and 11.4 percentage points in towns and suburbs ([10]).

The gender employment gap is considerably higher for people with children, at 16.5 percentage points for those aged 25 to 54 years. Notably, in this age group, men with children have a higher employment rate (91.9 % in 2024) than men without children (83.9 %). For women, the trend is the opposite, with women with children more likely to have a lower employment rate (75.4 %) than women without children (80.1 %) ([11]).

There is also a clear difference between employed women and men aged 20 to 64 when looking at the rate of part-time working. In 2024, 27.9 % of employed women in this age group worked part-time, while the percentage for men was only 7.7 %. This difference resulted in a gender gap of 20.2 percentage points for part-time employment. Caring responsibilities for children or for adults with disabilities were a main reason for this gap. In 2024, 27.5 % of women working part-time reported caring responsibilities as the main reason for doing so, compared with only 7.1 % for men ([12]). The gender gap for employed persons with temporary contracts was much less pronounced, at 2.4 percentage points in 2024 (11.3 % of employed women and 8.9 % of employed men) ([13]).

During the confinement periods due to the COVID-19 pandemic, women experienced a steeper fall in working hours than men while facing an increased care burden. This further underlined the importance of enhancing access to early childhood education and care and to long-term care services to increase the labour market participation of women ([14]).

The gender pay gap in the EU continues to narrow but remains considerable

Women do not only have lower employment rates than men, they also tend to earn less. Between 2018 and 2023, the gender pay gap narrowed by 2.4 percentage points in the EU. However, in 2023, women's gross hourly earnings in the EU were still on average 12.0 % below those of men and differences between Member States vary strongly.

Men earned

12.0 %

more per hour than women in the EU in 2023

There are various reasons for the existence and size of the gender pay gap. A part of the difference in earnings between men and women may be explained by the 'sectoral gender segregation', meaning that women tend to be concentrated in the low-paying economic sectors such as

education and health, whereas men tend to work more in better paid sectors such as finance and IT sectors. Similarly, the 'occupational gender segregation' may also explain part of the difference in earnings between men and women because men are more likely to be promoted to supervisory and management positions than women, often due to discrimination or self-restraints. The term 'glass ceiling' is commonly used as a metaphor to describe an invisible barrier that keeps women from rising beyond a certain level in an enterprise's hierarchy ([15]). Moreover, the inequalities that women face in gaining access to work, career progression and rewards, along with the consequences of career breaks or part-time work due to caring responsibilities, labour market segregation, the parenthood penalty and stereotypes about the roles of men and women, are inevitably linked to the persistent gender pay gap.

More women than men are outside the labour force due to caring responsibilities

Women still tend to take on a larger share of caring responsibilities for children and other family members. In 2024, 0.9 % of women willing to work were outside the labour force due to caring responsibilities, which was nine times higher than the 0.1 % rate for men. This resulted in a gender gap of 0.8 percentage points. Overall, 0.5 % of the total population (aged 20 to 64) that wanted to work were outside the labour force due to caring responsibilities for adults with disability or children. This can be attributed to the lack of available, accessible and quality formal care services, especially for children.

The gender gap for persons outside the labour force due to caring responsibilities in the EU in 2024 was

0.8

percentage points

Between 2018 and 2024, the share of the total population outside the labour force due to caring responsibilities fell from 0.7 % to 0.5 %. For women, this share fell by 0.3 percentage points, while for men it has stagnated at 0.1 % over the past five years. As a result, the gender gap has narrowed by 0.3 percentage points since 2018.

Leadership positions

Traditional gender roles, a lack of support to allow women and men to balance care responsibilities with work, and political and corporate cultures are some of the reasons why women are underrepresented in decision-making processes. Promoting equality between women and men in this area is one of the EU's priorities for achieving gender equality.

The increase in the share of seats held by women in national parliaments has slowed in recent years

The share of seats in national parliaments in the EU held by women has increased almost steadily since 2003, reaching 33.4 % in 2024, which is the highest level recorded to date. However, the rate of increase over the past five years has slowed compared with previous years, with the share growing by only 1.3 percentage points since 2019. Differences between Member States vary greatly. In 2024, national parliaments (lower house and upper house, where relevant) in Sweden, Finland, Denmark, Spain, Belgium and the Netherlands all had at least 40 % of each gender. At the other end of the spectrum, women accounted for less than a fifth of the members of national parliaments in Romania, Cyprus and Hungary. Between 2019 and 2024, this share declined in almost a third of Member States, including the two best performing countries (Sweden and Finland). In 2024, there was consequently no single EU country where women held the most seats. Looking outside the EU, Iceland almost achieved parity in 2024, with women occupying 49.2 % of seats.

33.4%

of seats in national parliaments in the EU were held by women in 2024

The share of female members of government (senior and junior ministers) in the EU was still lower than for men, at 35.1 % in 2024, although this was a 12.5 percentage point increase from 22.6 % in 2003. However, striking differences exist between Member States. Governments were gender-balanced (meaning at least 40 % of each gender) in ten countries but remained predominantly male in five countries (Czechia, Croatia, Slovakia, Malta and Cyprus). Additionally, Hungary has had an all-male cabinet since 2023. The number of female heads of government in EU countries has also shown an increase, albeit at a low level. In 2024, the share of female heads of government stood at 14.8 %. Four Member States had a female prime minister: Denmark, Italy, Latvia and Lithuania. Over the period from 2003 to 2024, the highest share of female heads of government was observed in 2022 and 2023 with 22.2 %, meaning there were never more than six women holding this executive position at the same time ([16]). Contributing to this under-representation is the fact that women seldom become leaders of major political parties, which are instrumental in selecting party leaders and selecting the candidates for election. Another factor is that gender norms and expectations reduce the pool of female candidates for selection as electoral representatives.

The shares of female directors of the largest listed companies have increased further and the EU is on track to meet its 2026 targets

32.6 %
of all director positions in the largest listed companies in the EU were held by women in 2024

Women held 32.6 % of all director (executive and non-executive) positions and 37.2 % of non-executive director positions in the largest listed companies in 2024. This level of representation was achieved after a steady 17.9 percentage point increase for all director positions and a 20.4 percentage point increase for non-executive director positions since 2012. Both shares indicate that the EU is on track to meet both of its targets for at least 33 % of all director positions and 40 % of non-executive director positions in listed companies to be held by members of the underrepresented sex by 2026. However, the numbers also mean most director positions in the largest listed companies are still held by men. In 2024, the share of all director positions (executive and non-executive) varied strongly across the EU, from 47.0 % in France to 10.1 % in Hungary. Eleven countries already exceeded the 33 % target.

Main indicators

Gender-based violence against women

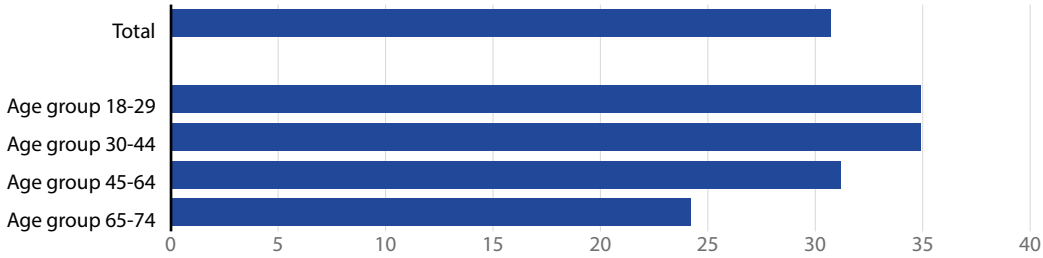
This indicator is based on the results of the 2021 EU survey on gender-based violence against women and other forms of inter-personal violence (EU-GBV). Gender-based violence against women is defined as 'violence that is directed against a woman because she is a woman or violence that affects women disproportionately' (Istanbul Convention, Article 3,d). This indicator covers physical (including threats) or sexual violence in adulthood.

Assessment of progress not possible due to lack of EU-level time series

FIGURE 5.1

Women who have experienced physical or sexual violence, by age group, EU, 2021

(% of women)



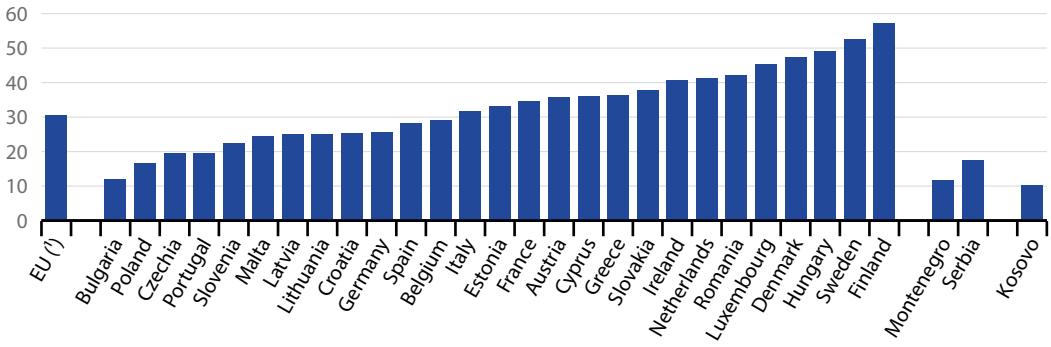
Note: Estimated data. The data were collected between September 2020 and March 2024. As most of the data were collected during 2021, it is referred as wave 2021.

Source: Eurostat (online data code: sdg_05_11)

FIGURE 5.2

Women who have experienced physical or sexual violence, by country, 2021

(% of women)



Note: The data were collected between September 2020 and March 2024. As most of the data were collected during 2021, it is referred as wave 2021.

(1) Estimated data.

Source: Eurostat (online data code: sdg_05_11)

Gender employment gap

LONG TERM 2009–2024

SHORT TERM 2019–2024

The gender employment gap is defined as the difference between the employment rates of men and women aged 20 to 64. The employment rate is calculated by dividing the number of people aged 20 to 64 in employment by the total population of the same age group. The indicator is based on the EU Labour Force Survey (EU-LFS).

FIGURE 5.3

Gender employment gap, EU, 2009–2024

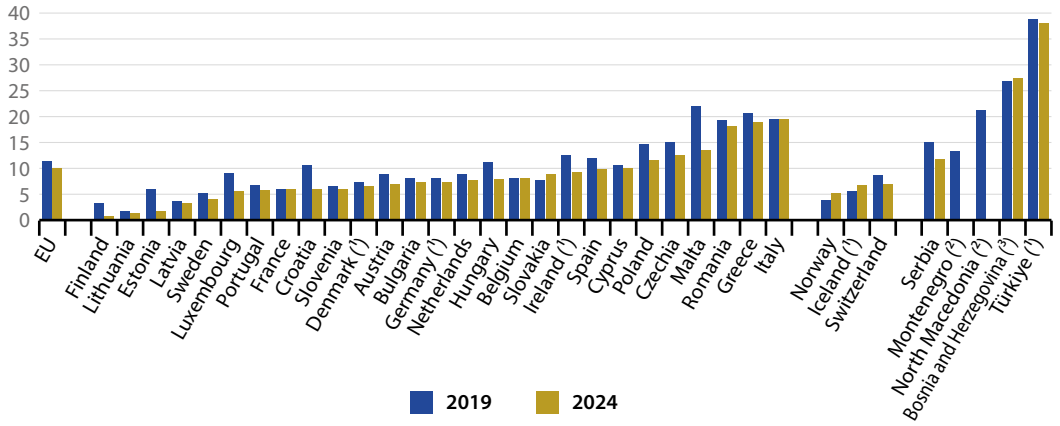
(percentage points)

Source: Eurostat (online data code: sdg_05_30)

FIGURE 5.4

Gender employment gap, by country, 2019 and 2024

(percentage points)



(1) Break(s) in time series between the two years shown.
(2) No data for 2024.
(3) 2021 and 2023 data.
Source: Eurostat (online data code: sdg_05_30)

Gender pay gap in unadjusted form

The gender pay gap in unadjusted form represents the difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees. The indicator has been defined as unadjusted because it gives an overall picture of gender inequalities in terms of pay and measures a concept which is broader than the concept of equal pay for equal work. The gender pay gap is based on the methodology of the structure of earnings survey (SES), which is carried out every four years.

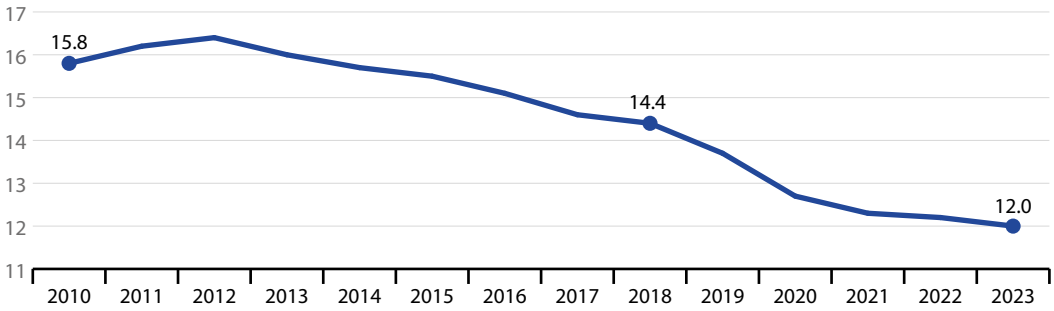
LONG TERM 2010–2023

SHORT TERM 2018–2023

FIGURE 5.5

Gender pay gap in unadjusted form, EU, 2010–2023

(% of average gross hourly earnings of men)

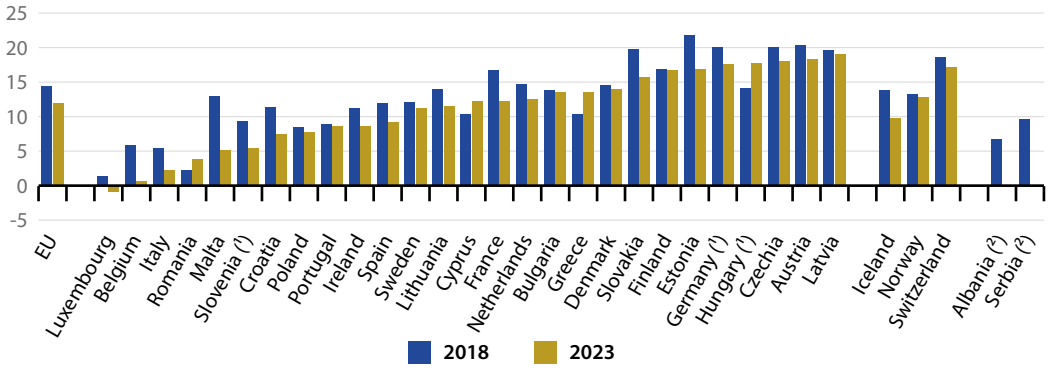


Note: 2023 data are provisional.
Source: Eurostat (online data code: sdg_05_20)

FIGURE 5.6

Gender pay gap in unadjusted form, by country, 2018 and 2023

(% of average gross hourly earnings of men)



Note: 2023 data are provisional for most countries.
(1) Break(s) in time series between the two years shown.
(2) No data for 2023.
Source: Eurostat (online data code: sdg_05_20)

Gender gap for being outside the labour force due to caring responsibilities

LONG TERM 2009–2024

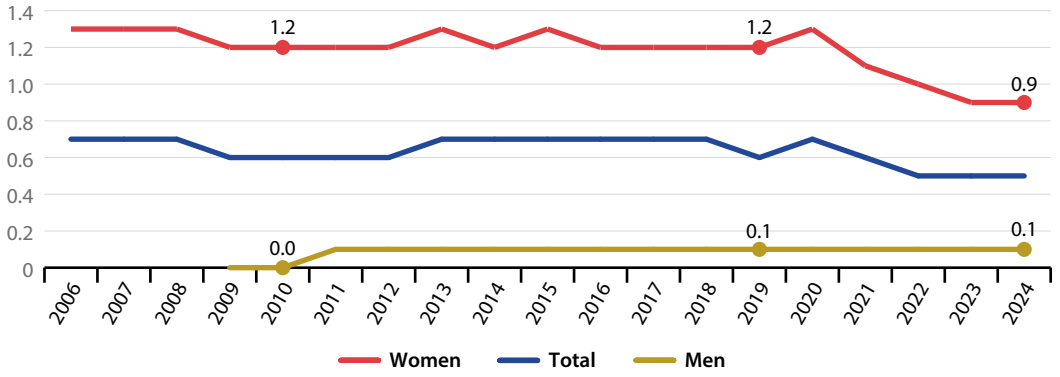
SHORT TERM 2019–2024

The population outside the labour force comprises individuals who are not employed and are either not actively seeking work or not available to work (even if they have found a job that will start in the future). Therefore, they are neither employed nor unemployed. This definition used in the EU Labour Force Survey (EU-LFS) is based on the resolutions of the International Conference of Labour Statisticians (ICLS) organised by the International Labour Organization. The reason for being outside the labour force covered by this indicator includes 'care of adults with disabilities or children'. Only people who express willingness to work, despite being outside the labour force, are considered.

FIGURE 5.7

Persons outside the labour force due to caring responsibilities, by sex, EU, 2006–2024

(% of population aged 20 to 64)

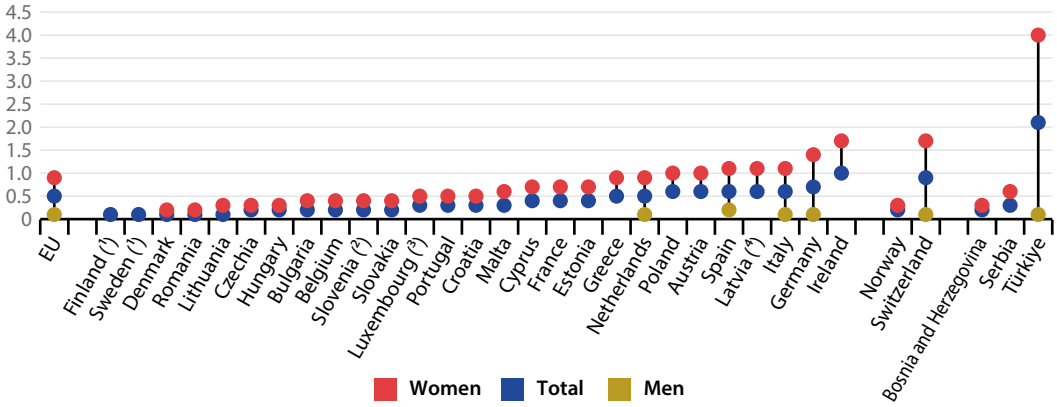


Note: Break in time series in 2021.
Source: Eurostat (online data code: sdg_05_40)

FIGURE 5.8

Persons outside the labour force due to caring responsibilities, by sex, by country, 2024

(% of population aged 20 to 64)



Note: Data availability and reliability are hampered for many countries due to a small sample size. Due to this reason, data for men are missing for many countries.
(1) No data by sex.
(2) 2023 data.
(3) 2022 data.
(4) 2021 data.
Source: Eurostat (online data code: sdg_05_40)

Seats held by women in national parliaments

LONG TERM 2009–2024

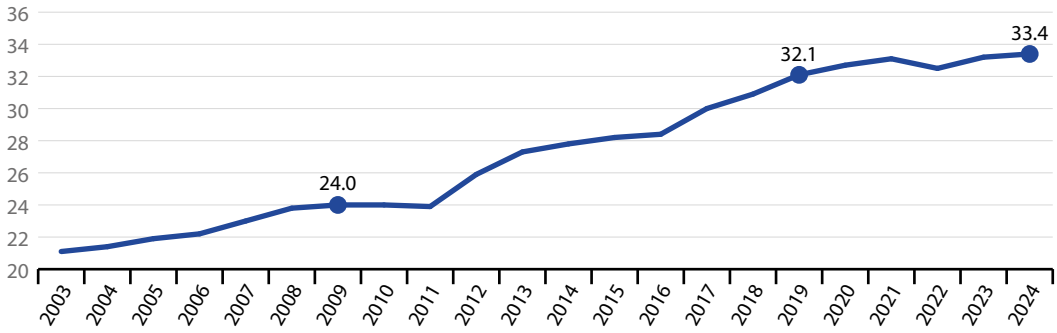
SHORT TERM 2019–2024

This indicator refers to the proportion of women in national parliaments in both chambers (lower house and upper house, where relevant). The data stem from the Gender Statistics Database of the European Institute for Gender Equality.

FIGURE 5.9

Seats held by women in national parliaments, EU, 2003–2024

(% of seats)

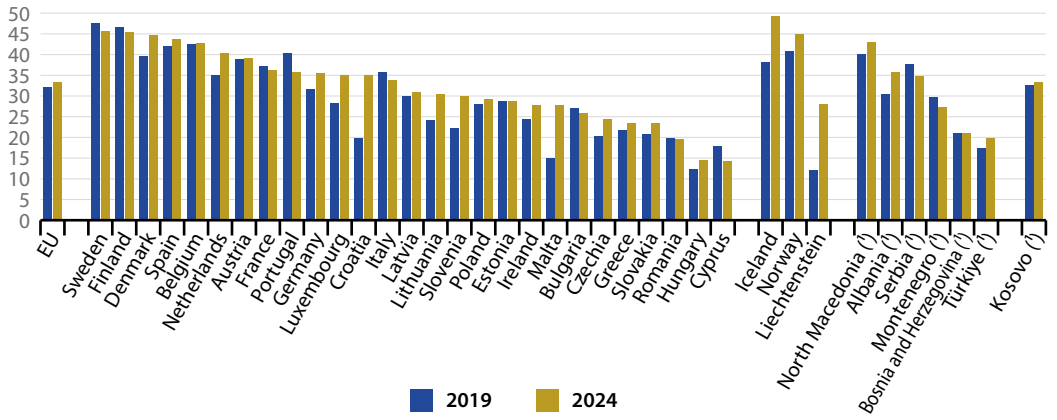


Source: European Institute for Gender Equality (EIGE) (Eurostat online data code: sdg_05_50)

FIGURE 5.10

Seats held by women in national parliaments, by country, 2019 and 2024

(% of seats)



(1) 2023 data (instead of 2024).

Source: European Institute for Gender Equality (EIGE) (Eurostat online data code: sdg_05_50)

Positions held by women in senior management

This indicator measures the share of female directors (executive and non-executive) and non-executive directors on formal boards in the largest publicly listed companies. The data presented in this section stem from the Gender Statistics Database of the European Institute for Gender Equality.

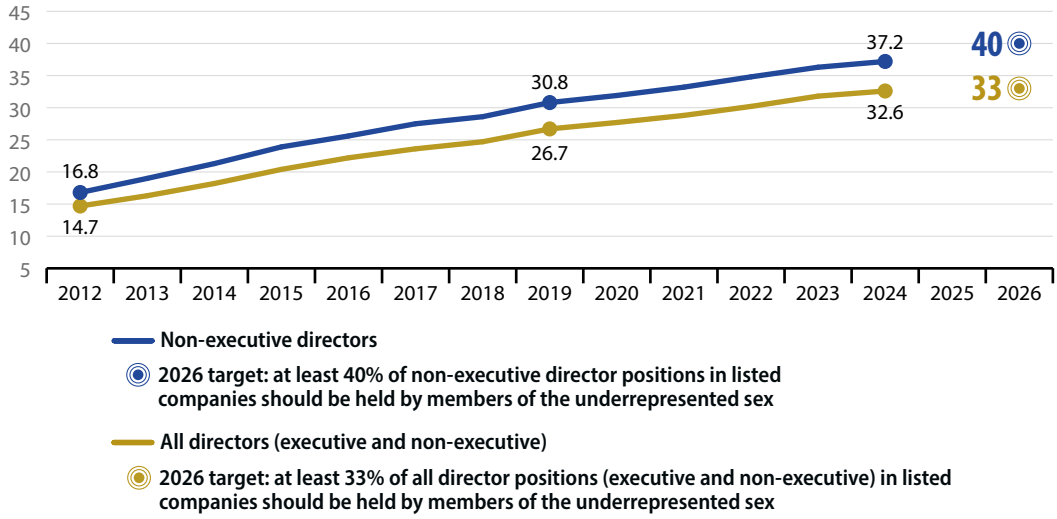
LONG TERM 2012–2024

SHORT TERM 2019–2024

FIGURE 5.11

Positions held by women in senior management, EU, 2012–2024

(% of positions)

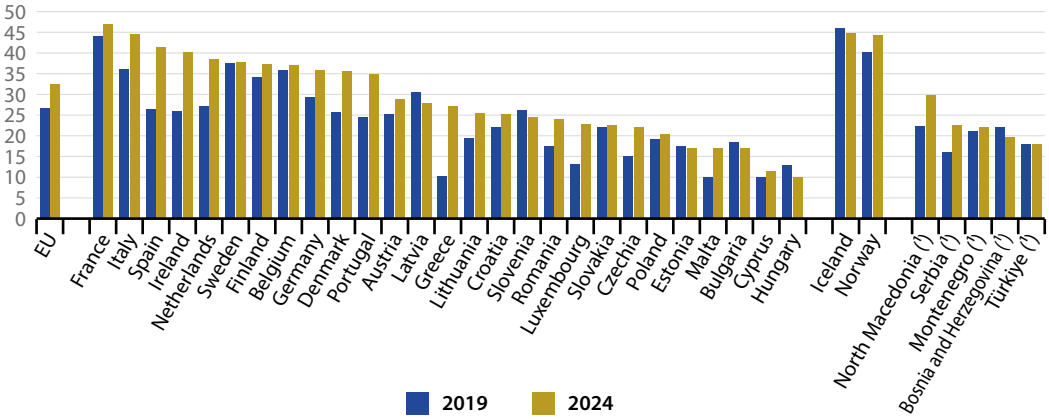


Source: European Institute for Gender Equality (EIGE) (Eurostat online data code: sdg_05_61)

FIGURE 5.12

Positions held by women in senior management, by country, 2019 and 2024

(% of executive and non-executive directors)



(1) 2023 data (instead of 2024).

Source: European Institute for Gender Equality (EIGE) (Eurostat online data code: sdg_05_61)

Notes

(1) Please note that the data were collected between September 2020 and March 2024. As most of the data were collected during 2021, it is referred as wave 2021.

(2) *Source*: Eurostat (online data code: gbv_any_du).

(3) *Source*: Eurostat (online data code: gbv_any_lim).

(4) *Source*: Eurostat (online data code: crim_hom_soff).

(5) *Source*: Eurostat (online data code: crim_hom_vrel).

(6) United Nations Office on Drugs and Crime (2022), *Gender-related killings of women and girls (femicide/feminicide)*.

(7) For more information see Eurostat metadata on Crime and criminal justice (crim).

(8) European Union Agency for Fundamental Rights (2014), *Violence against women: an EU-wide survey. Main results*, Publications Office of the European Union, Luxembourg, pp. 25–26, 32.

(9) European Commission (2025), *Joint Employment Report 2025*, Publications Office of the European Union, Luxembourg.

(10) *Source*: Eurostat (online data code: tepsr_lm230).

(11) *Source*: Eurostat (online data code: lfst_hheredty).

(12) *Source*: Eurostat (online data code: lfsa_epgar).

(13) *Source*: Eurostat (online data code: lfsi_pt_a).

(14) European Commission (2025), *Joint Employment Report 2025*, Publications Office of the European Union, Luxembourg.

(15) Eurostat (2021), *Gender pay gaps in the European Union — a statistical analysis*, Publications Office of the European Union, Luxembourg.

(16) European Institute for Gender Equality, Gender Statistics Database (National governments: presidents and prime ministers).

Ensure availability and sustainable management of water and sanitation for all

SDG 6 calls for ensuring universal access to safe and affordable drinking water, sanitation and hygiene, and ending open defecation. It also aims to improve water quality and water-use efficiency and to encourage sustainable abstractions and supply of freshwater.

Access to water is a basic human need. Provision of drinking water and sanitation services is a matter of public and environmental health in the EU. Clean water in sufficient quantity is also of paramount importance for agriculture, industry and the environment and plays a crucial role in providing climate-related ecosystem services. Monitoring SDG 6 within an EU context focuses on sanitation, water quality and water scarcity. While the EU has made further progress on access to sanitation, trends for water quality have been mixed over the assessed five-year period, leading to an overall unfavourable goal-level assessment. While organic pollution in EU rivers and concentrations of nitrate in EU groundwater bodies have fallen, phosphate concentrations have risen strongly and the share of inland bathing waters with excellent water quality have decreased. Water scarcity has deteriorated, driven by increases in water exploitation and seasonal variations attributed to more frequent and severe drought events.

Indicators measuring progress towards SDG 6, EU

Indicator	Period	Annual growth rate	Assessment	More info
Sanitation				
Population having neither a bath, nor a shower, nor indoor flushing toilet in their household	2010–2020	– 6.4 %	↑	page 117
	2015–2020	– 7.4 %	↑	
Population connected to at least secondary wastewater treatment	2007–2022	0.7 %	↗	page 118
	2017–2022	0.2 %	↗	
Water quality				
Biochemical oxygen demand in rivers	2007–2022	– 0.7 % (1)	↗	page 119
	2017–2022	– 1.3 % (1)	↑	
Nitrate in groundwater	2007–2022	– 0.2 % (2)	↗	page 120
	2017–2022	– 0.4 % (2)	↗	
Phosphate in rivers	2007–2022	– 1.6 % (3)	↑	page 121
	2017–2022	2.0 % (3)	↓	
Inland bathing waters with excellent quality (*)	2011–2023	0.9 %	↗	SDG 14, page 255
	2018–2023	– 0.6 %	↘	
Water scarcity				
Water exploitation index (WEI+)	2007–2022	– 0.1 % (4)	→	page 122
	2017–2022	1.7 % (4)	↓	
Drought impact on ecosystems (*)	2009–2023	3.1 % (5)	↓	SDG 15, page 272
	2018–2023	11.1 % (5)	↓	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

(*) Multi-purpose indicator.

(1) Data refer to an EU aggregate based on 17 Member States.
(2) Data refer to an EU aggregate based on 18 Member States.
(3) Data refer to an EU aggregate based on 15 Member States.
(4) Assessment based on a four-year moving average.
(5) Assessment based on a 10-year moving average.

Policy context

Sanitation

The Urban Wastewater Treatment Directive regulates the collection, treatment and discharge of domestic and industrial urban wastewater. Its 2024 revision that entered into force in January 2025 sets updated rules for secondary and tertiary treatment of wastewater and for the reuse of treated urban wastewater, among others.

The European Pillar of Social Rights lists water and sanitation as essential services everyone should have access to. In 2023, the Commission released a first EU Report on Access to Essential Services including access to water and sanitation.

Water quality

Protection of water resources, water ecosystems, and drinking and bathing water is a cornerstone of EU water policy, as mentioned in the 8th Environment Action Programme and reflected in the respective EEA Monitoring Report.

The Water Framework Directive is the main European legislation aimed at protecting and restoring water bodies, preventing and/or limiting deterioration by excessive abstractions or pollution, and achieving good status for Europe's surface waters and groundwaters.

The Towards Zero Pollution for Air, Water and Soil action plan released in May 2021 sets out key actions to speed up water pollution reduction. As part of the Zero Pollution package, the Commission adopted a proposal to revise the lists of surface and groundwater pollutants which entails changes in parts of the Water Framework Directive and its daughter directives, the Environmental Quality Standards Directive and the Groundwater Directive. The recast Urban Wastewater Treatment Directive enhances nitrogen and phosphorus standards, and addresses other sources of pollution including stormwater overflows and micropollutants.

The Nitrates Directive includes measures to prevent nitrates from agriculture polluting ground and surface waters by improving the nitrogen balance.

The recast Drinking Water Directive requires Member States to improve or maintain access to drinking water for all. It also addresses improvement in the efficiency of the water supply infrastructure.

The Bathing Water Directive requires Member States to monitor and assess bathing water for at least two parameters of (faecal) bacteria.

The Recovery and Resilience Facility under its green transition pillar finances reforms and investments for a sustainable use and protection of water and marine resources.

Water scarcity

The EU strategy on adaptation to climate change aims to reduce water use, encourage water efficiency and savings, and guarantee a stable and secure drinking water supply.

In addition, a new Regulation on minimum requirements for water reuse for agricultural irrigation has applied since June 2023.

The European Water Resilience Strategy is expected to be adopted during 2025. The cross-sectoral strategy aims to address water scarcity by ensuring that water sources are properly managed and by adopting a circular-economy approach.

Overview and key trends

Sanitation

Provision of drinking water and the adequate treatment of sewage are matters of public and environmental health. As a vital resource, water is considered a public good in the EU. Water utilities are subject to strict regulation regarding the quality and efficiency of services. The indicators chosen to monitor sanitation are the share of the population having neither a bath, nor a shower, nor indoor flushing toilet in their household and the share of the population connected to at least secondary wastewater treatment.

Most EU citizens have access to basic sanitation and are connected to secondary wastewater treatment

Overall, connection rates and the quality of water services in the EU were already high more than 10 years ago and have continued to improve. The share of the population without a bath, shower, or indoor flushing toilet in their household fell from 2.2 % in 2015 to 1.5 % in 2020. Data also show that the share of the EU population connected to secondary wastewater treatment has increased continuously since 2000, reaching 80.9 % in 2021.

1.5%
of the EU population lacked sanitary facilities at home in 2020

Conventional primary wastewater treatment mainly removes suspended solids and only reduces organic water pollution by 20–30 %. Secondary treatment processes, which are typically applied after primary treatment, remove about 70 % of organic pollution. Growth in the share of people connected to secondary treatment indicates that the Urban Wastewater Treatment Directive, which was first implemented in the 1990s, has helped to reduce pollution and improve water quality in Europe's rivers, lakes and coastal waters. Implementation of the revised Directive will bring additional improvements, not only for water quality but also for access to sanitation.

Differences in the level of access to water services and sanitation persist between Member States

Almost every household in the EU had basic sanitary facilities in 2020, and most countries reported that less than 1 % of their population were still living in households without a bath, shower or a flushing toilet. However, in some countries, this share remains comparatively high. In particular, Romania reported figures far above all other Member States, with 21.2 % of the population not having access to basic sanitary facilities in 2020. Relatively high shares were also reported by Lithuania, Bulgaria and Latvia, with values between 6.4 % and 7.0 % in the same year. These figures highlight the strong link between access to basic sanitary facilities and poverty, which can be seen across the EU. In 2020, 5.1 % of poor people in the EU lacked access to a bath, shower or toilet in their households, compared with only 0.8 % of those living above the poverty threshold.

80.9%
of the EU population were connected to at least secondary waste water treatment in 2022

Connection to secondary wastewater treatment is another important facility for enhancing access to sanitation. Connection rates have increased slowly but continuously across the EU, with 80.9 % of the EU population connected in 2022. This is a major increase compared with 2007, when the connection rate was 73.3 %. Between 2017 and 2022, connection rates increased in almost all reporting Member States. The lowest-scoring countries were in south-east Europe. It is

important to note that connection rates are not expected to reach 100 % in most cases because connection costs can be disproportionately high in some areas, in particular for rural areas with a low population density. So far, the Urban Wastewater Treatment Directive only obliges bigger agglomerations to introduce secondary treatment, while requiring smaller agglomerations to apply an appropriate treatment (when wastewater is collected) or other alternative solutions to reach the same level of protection for water bodies. However, the 2024 revision of the Directive makes secondary treatment obligatory for smaller agglomerations too.

Water quality

Pollution from the use of nutrients and pesticides in agriculture is the most significant pressure affecting the quality of surface and groundwater ([1]). Accidental spillage of harmful substances, and discharge of untreated or insufficiently treated domestic and industrial wastewater, as well as atmospheric deposition of pollutants such as mercury, pose additional threats to human and environmental health. These pressures, along with changes to the structure and flow of water bodies, hinder sustainable development. Water quality monitoring distinguishes between different kinds of chemical pollution such as organic pollution by nutrients, pesticides and pathogens. In this report, water quality is monitored through four indicators looking at nutrients in freshwater and at bathing water quality ([2]).

Between 2017 and 2022, the biochemical oxygen demand in EU rivers fell by

6.2 %

Improved wastewater treatment has reduced organic pollution in European rivers

Heavy organic pollution, caused by municipal wastewater and effluents from industry or livestock, can lead to the deoxygenation of water, killing fish and invertebrates. Thanks to improved wastewater collection and treatment, as well as manure treatment, organic pollution in European rivers has been declining, though the trend has slowed in recent years. A proxy for organic water pollution is the amount of oxygen needed for microbes to digest organic pollution under standard conditions, expressed as biochemical oxygen demand (BOD). The BOD values in European rivers range from less than 1 milligram per litre (mg/L) (very clean) to more than 15 mg/L (heavily polluted).

Available data for 17 Member States (see page 119) show an overall decline in BOD in EU rivers, from 3.0 mg/L in 2007 to 2.7 mg/L in 2022. The trend, however, has not been continuous. While BOD levels were showing a downward trend up to 2011, they had climbed back to 3.2 mg/L by 2015, before falling again. Overall, BOD levels in EU rivers have fallen by 9.9 % since 2007 and by 6.2 % since 2017. Between 2017 and 2022, 11 out of 17 reporting Member States saw reductions in BOD in their rivers. The overall decrease in BOD values is mainly linked to a general improvement in wastewater collection and treatment throughout Europe.

Nitrate concentrations in EU groundwater bodies have decreased slightly

Between 2017 and 2022, the concentration of nitrates in EU groundwater decreased by

1.9 %

An assessment of European waters published by the European Environment Agency (EEA) concludes that despite decades of legislation and the EU's target to reduce nutrient losses by 50 %, high concentrations of nitrogen and phosphorus continue to have severe ecological effects on European waters. In some regions, pollution of rivers with nitrate/ammonia (N) and phosphorous (P) is still causing severe eutrophication in coastal waters (also see the chapter on SDG 14 'Life below water' on page 245). Eutrophication can lead to algal blooms and oxygen depletion of surface waters, which in turn can harm fish, invertebrates and whole ecosystems. In 2022 and 2024, such

substantial toxic algal blooms caused widespread fish die-offs in the Oder River, leading to major ecological disasters ([3]).

The main sources of nutrient inputs are the use of fertilisers and animal waste in agriculture, as well as poorly treated wastewater from industry ([4]). Nitrates (NO_3), among other chemicals, can infiltrate and contaminate groundwater bodies. They are the most common cause of poor chemical status of groundwater in the EU Member States, having led to 14 % of groundwater bodies by area being in poor status ([5]). This is particularly problematic because groundwater is an important source of drinking water in Europe.

Data on nitrate concentrations in EU groundwater are available for 18 Member States (see page 120). Despite legislative efforts to tackle nutrient pollution, the average nitrate concentration in EU groundwaters has remained relatively stable since 2000 ([6]). NO_3 concentrations have stagnated at around 21 milligrams per litre (mg/L) over the long term, although since 2016 they have shown a downward trend, reaching 20.7 mg/L in 2022. This concentration is 2.9 % lower than in 2007 and 1.9 % lower than in 2017. Nevertheless, between 2016 and 2019, 14.1 % of groundwater stations showed NO_3 concentrations above the threshold considered unfit for drinking, which the Nitrates Directive sets at 50 mg/L ([7]). This represents almost one percentage point more than in the previous period from 2012 and 2015, where 13.2 % of groundwater stations were above the threshold ([8]). Even through results from a high-ambition model scenario indicate a significant potential for nutrient load reductions in the EU, it is unclear whether the current trend is adequate to fulfil the EU target of reducing nutrient losses to the environment by 50 % by 2030 ([9]).

Phosphate concentrations in EU rivers have risen strongly in recent years

Data on phosphate (PO_4) concentrations in EU rivers are available for 15 Member States (see page 121). Concentrations improved markedly between 2007 and 2011, but since then the trend has levelled off and has even started increasing again. Thus, while the PO_4 concentration of 0.074 mg/L recorded in 2022 is considerably below the values reported in the early 2000s of around 0.092 mg/L, it is 10.4 % higher than in 2017. The overall positive long-term trend is to some extent the result of measures implemented under the Urban Wastewater Treatment Directive, especially the introduction of phosphate-free detergents ([10]). The recent turnaround may be related to the slower decrease in phosphorus emissions from the agricultural sector as well as increasing phosphorus fertiliser consumption at EU level ([11]). Of all the reporting Member States, Finland and Sweden on average had the lowest concentrations of phosphate in rivers between 2017 and 2022. This is likely to be a result of their low population densities and high levels of wastewater collection and treatment. In contrast, relatively high concentrations were found in some Member States with high population densities and/or intensive agriculture. The higher short-term values observed, particularly in Lithuania, Spain, Bulgaria and Belgium, may lead to freshwater eutrophication ([12]).

Between 2017 and 2022, the concentration of phosphates in EU rivers increased by

10.4%

The share of inland bathing waters with excellent quality is on a downward trend

Contamination of water by faecal bacteria continues to pose a risk to human health. This is especially the case when it is found at bathing water sites, where it can cause illness among swimmers. Overall, the share of inland bathing waters with an excellent quality rating in the EU increased between 2011 and 2017, followed by a decline until 2020, slight improvements in 2021 and 2022, and a slight decrease again in 2023. The downward trend had been caused by a stagnation in the absolute number of

78.6%

of inland bathing waters in the EU showed excellent quality in 2023

bathing waters with excellent quality, while the total number of bathing waters included in the assessment rose. In 2023, 78.6 % of inland bathing waters showed excellent quality, compared with 80.8 % five years earlier and 79.3 % in 2022. The major sources of bathing water pollution are sewage and water draining from farmland. Such pollution increases during heavy rains and floods which wash sewage overflow and polluted drainage water into rivers and seas.

Water scarcity

SDG 6 also focuses on the sustainable use of freshwater resources and on reducing water stress. The water exploitation index (WEI+) aims to illustrate the pressure on renewable freshwater resources due to water demand, which is largely affected by population trends and socio-economic developments, and by climate conditions, which control the availability of renewable freshwater resources. The EU area impacted by drought is another indicator used, as severe and frequent droughts can exacerbate water scarcity conditions.

Water stress is low in most EU countries, but shows strong seasonal and local variability

Water stress occurs when water demand exceeds the available water resources at a specific place and time. A 2024 report by the European Environment Agency estimates that water stress affects on average 20 % of Europe's territory and 30 % of its population. Water scarcity is generally considered to occur when the ratio of water abstraction to long-term average available water resources exceeds 20 %, while ratios above 40 % indicate severe water scarcity, meaning the use of freshwater resources is unsustainable ([13]). The four-year smoothed average shows that the EU's WEI+ has decreased slightly by 0.1 index points over the past 15 years, from 5.0 % in 2007 to 4.9 % in 2022. The short-term trend since 2017 has, however, seen a strong increase in water exploitation in the EU, by 0.4 index points. A look at the annual figures shows that the change in the EU's WEI+ has not been constant but has varied both annually and between Member States. The recent increase can be partly attributed to more frequent and severe droughts, which have affected water availability in an increasingly larger area in the EU ([14]).

In 2022, Cyprus experienced severe water stress with a mean annual WEI+ of 71 %. Malta also showed water stress with a mean annual WEI+ of around 34 %. However, annual national values can mask regional and seasonal water stress, which is in fact common in many European regions. In 2022, 34 % of the EU population and 40 % of its territory was affected by water scarcity conditions in at least one quarter of the year, with seasonal WEI+ values of above 20 % ([15]).

Between 2017 and 2022, the EU's water exploitation index (WEI+) increased by

0.4

index points

Water scarcity is more common in southern Europe, where about 30 % of the population lives in areas with permanent water stress and up to 70 % of the population in areas with seasonal water stress during summer ([16]). Agriculture, public water supply and tourism put significant pressures on these regions, which are exacerbated by climate change ([17]). However, water scarcity also affects river basins in other parts of the EU, particularly in western Europe, where it is caused primarily by high population densities in urban areas, combined with high levels of abstraction for public water supply, energy and industry ([18]).

Drought impact in Europe is following a worsening trend

Severe and frequent droughts can increase the risks of water scarcity with detrimental effects on water supply for households, agriculture, energy and industry, and on ecosystems and biodiversity. Droughts pose challenges to achieving the objectives of the EU's Water Framework Directive and other water-related policies due to their effects on both water quality and quantity. It is therefore important for the EU to take action to reduce the severity of impacts and strengthen the resilience of ecosystems and water supply to

climate change-induced droughts. Monitoring meteorological drought impacts, in addition to hydrological water scarcity, supports these policy actions. As such, meteorological drought impacts caused by insufficient precipitation during the growing season may serve as an early warning signal for potential water scarcity, even though a direct relationship cannot be established with the current indicators.

3.6%
of the EU area was affected by drought in 2023

The drought impact indicator monitors anomalies in vegetation productivity in areas with a soil moisture deficit during the growing season (also see the chapter on SDG 15 'Life on land' on page 261). In 2023, Europe experienced its second warmest year on record ([19]), resulting in more than 143 000 square kilometres (km^2) or 3.6 % of the EU area being affected by drought. This is slightly above the long-term average of about 141 000 km^2 over the period 2000 to 2020. Although this is lower than in 2022, which had the largest drought-affected area on record, the overall extent of intense drought impacts in the EU is increasing ([20]). Between 2000 and 2022, the number of drought-impacted areas in the EU showed an upward trend due to low precipitation, high evaporation and heatwaves. This trend has been exacerbated by climate change and is negatively affecting ecosystem conditions ([21]).

Over the period from 2018 to 2023, the 10-year moving average of drought impact on ecosystems in the EU increased by 68.9 %. A look at the underlying annual data shows strong fluctuations, with the drought-affected area more than tripling in some years. There are also large variations between countries. In 2023, the area impacted by drought in most of the Member States remained lower than or equal to the average for the years 2000 to 2020 ([22]). The Baltic states, however, showed an increase in the area impacted by drought in 2023 compared with the 2000 to 2020 average, with more than 10 % of their land area affected.

Main indicators

Population having neither a bath, nor a shower, nor indoor flushing toilet in their household

LONG TERM 2010–2020

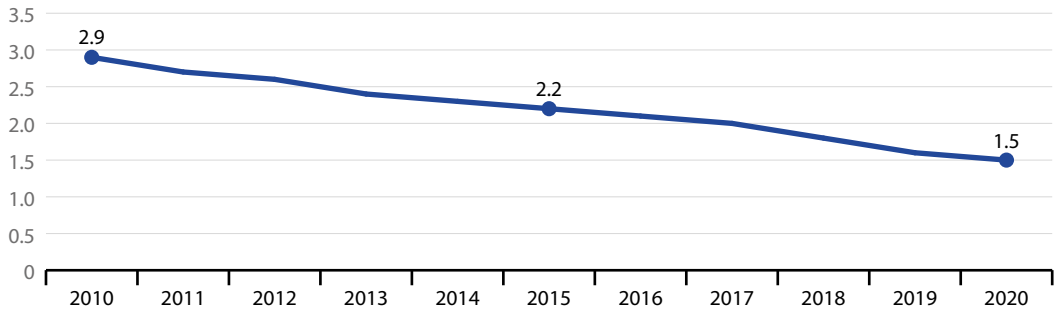
SHORT TERM 2015–2020

This indicator reflects the share of total population having neither a bath, nor a shower, nor an indoor flushing toilet in their household. Data presented in this section stem from the EU Statistics on Income and Living Conditions (EU-SILC).

FIGURE 6.1

Population having neither a bath, nor a shower, nor indoor flushing toilet in their household, EU, 2010–2020

(% of population)



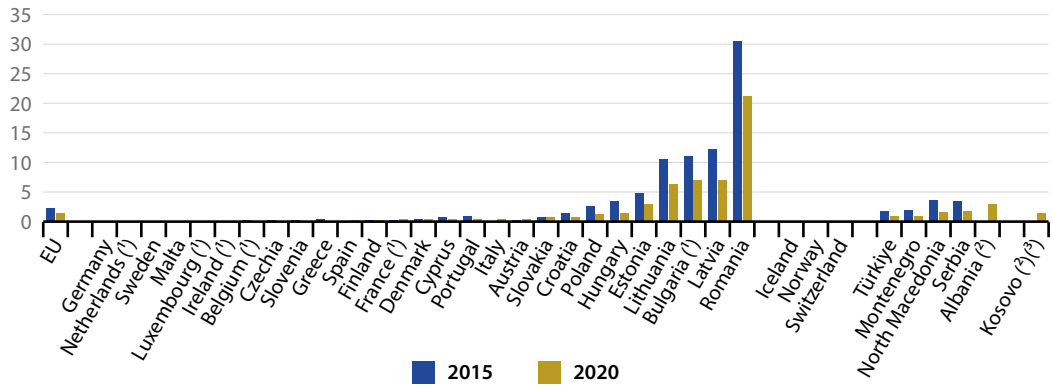
Note: Data for 2010–2019 are estimated.

Source: Eurostat (online data code: sdg_06_10)

FIGURE 6.2

Population having neither a bath, nor a shower, nor indoor flushing toilet in their household, by country, 2015 and 2020

(% of population)



(1) Break(s) in time series between the two years shown. (3) 2018 data (instead of 2020).
(2) No data for 2015.

Source: Eurostat (online data code: sdg_06_10)

Population connected to at least secondary wastewater treatment

LONG TERM 2007–2022

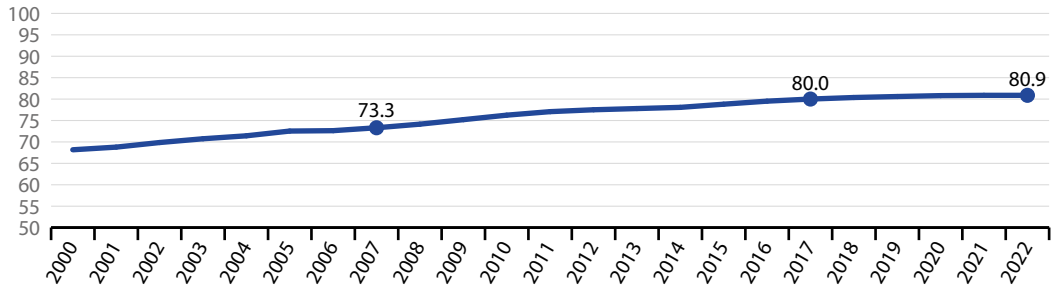
SHORT TERM 2017–2022

This indicator measures the percentage of the population connected to wastewater treatment systems with at least secondary treatment. Thereby, wastewater from urban or other sources is treated by a process generally involving biological treatment with a secondary settlement or other process that removes organic material and reduces its biochemical oxygen demand (BOD) by at least 70 % and chemical oxygen demand (COD) by at least 75 %. Data presented in this section stem from the Water Statistics of the European Statistical System (ESS).

FIGURE 6.3

Population connected to at least secondary wastewater treatment, EU, 2000–2022

(% of population)



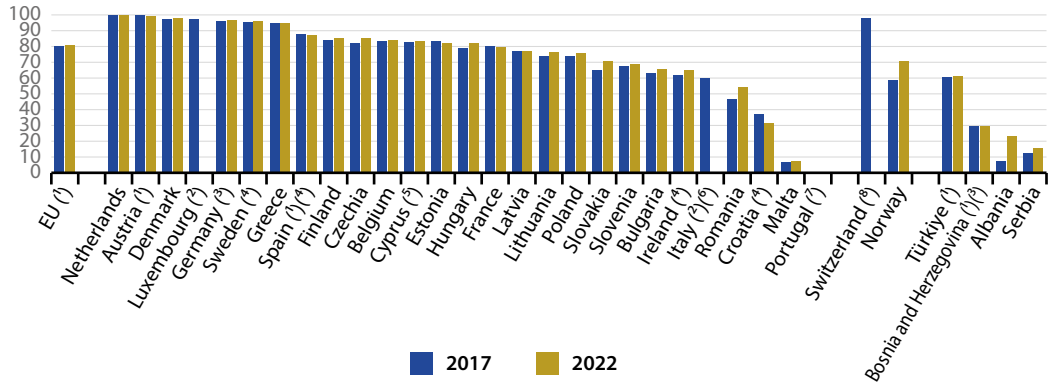
Note: Estimated data.

Source: Eurostat (online data code: sdg_06_20)

FIGURE 6.4

Population connected to at least secondary wastewater treatment, by country, 2017 and 2022

(% of population)



(1) Estimated data.
(2) No data for 2022.
(3) 2019 data (instead of 2022).
(4) 2021 data (instead of 2022).
(5) 2018 and 2020 data.
(6) 2015 data (instead of 2017).
(7) No data.
(8) 2019 data (instead of 2017); no data for 2022.

Source: Eurostat (online data code: sdg_06_20)

Biochemical oxygen demand in rivers

Biochemical oxygen demand (BOD) of water bodies is a key indicator to measure water quality. It refers to the amount of oxygen that aerobic microorganisms need to decompose organic substances in a water sample over a five-day period at 20 °C (BOD5). High BOD5 values usually indicate organic pollution, which affects water quality and the aquatic environment. Organic pollution caused by discharges from wastewater treatment plants, industrial effluents and agricultural run-off increase BOD. The cleanest rivers have a five-day BOD of less than 1 milligram per litre (mg/L). Moderately polluted rivers show values ranging from 2 to 8 mg/L. Data presented in this section stem from the EEA Waterbase database on the status and quality of Europe's rivers.

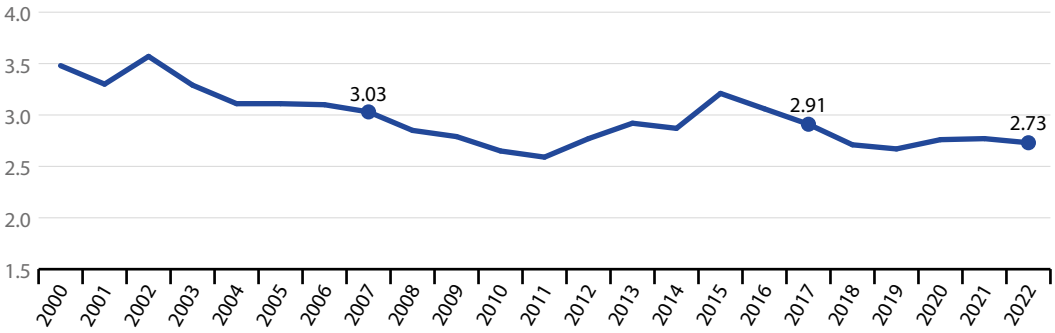
LONG TERM 2007–2022

SHORT TERM 2017–2022

FIGURE 6.5

Biochemical oxygen demand in rivers, EU, 2000–2022

(mg O_2 per litre)

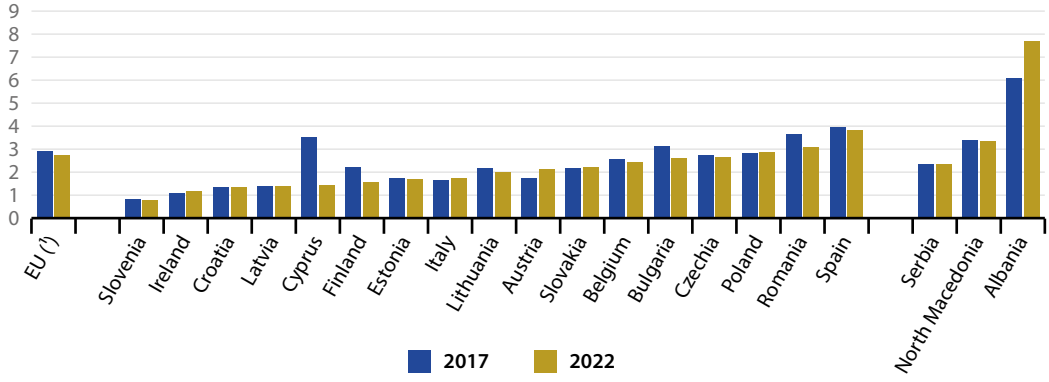


Note: 'EU' refers to an aggregate based on 17 Member States.
Source: EEA (Eurostat online data code: sdg_06_30)

FIGURE 6.6

Biochemical oxygen demand in rivers, by country, 2017 and 2022

(mg O_2 per litre)



(1) 'EU' refers to an aggregate based on 17 Member States.
Source: EEA (Eurostat online data code: sdg_06_30)

Nitrate in groundwater

LONG TERM 2007–2022

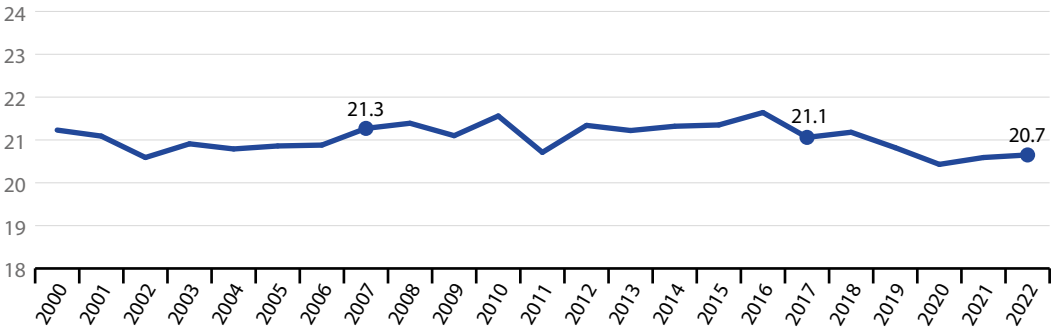
SHORT TERM 2017–2022

This indicator shows concentrations of nitrate (NO_3) in groundwater bodies measured as milligrams per litre (mg NO_3/L). The indicator can be used to illustrate geographical variations in current concentrations and temporal trends. Large inputs of nitrogen to water bodies from urban areas, industry and agricultural areas, can have negative impacts on the use of water for human consumption and other purposes. The data stem from the EEA Waterbase database on the status and quality of Europe's rivers.

FIGURE 6.7

Nitrate in groundwater, EU, 2000–2022

(mg NO_3 per litre)

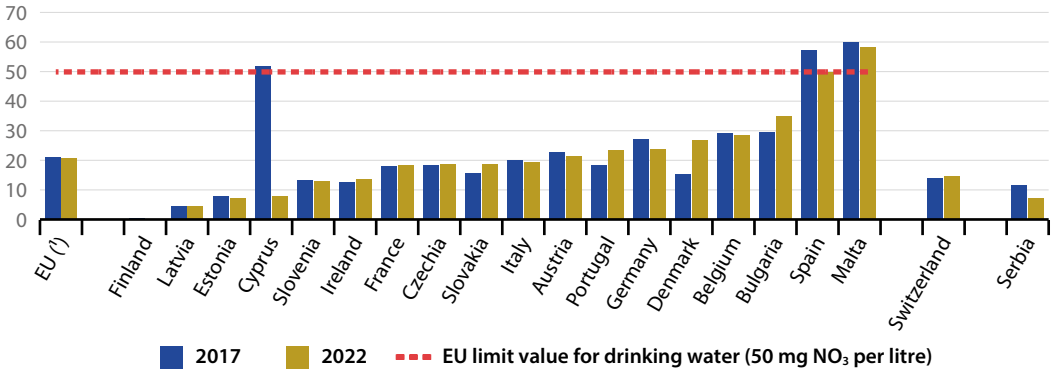


Note: 'EU' refers to an aggregate based on 18 Member States.
Source: EEA (Eurostat online data code: sdg_06_40)

FIGURE 6.8

Nitrate in groundwater, by country, 2017 and 2022

(mg NO_3 per litre)



(1) 'EU' refers to an aggregate based on 18 Member States.
Source: EEA (Eurostat online data code: sdg_06_40)

Phosphate in rivers

This indicator measures the concentration of phosphate (PO_4) per litre in the dissolved phase from water samples from river stations and aggregated to annual average values. At high concentrations phosphate can cause water quality problems, such as eutrophication, by triggering the growth of aquatic plants including algae. The data stem from the EEA Waterbase database on the status and quality of Europe's rivers.

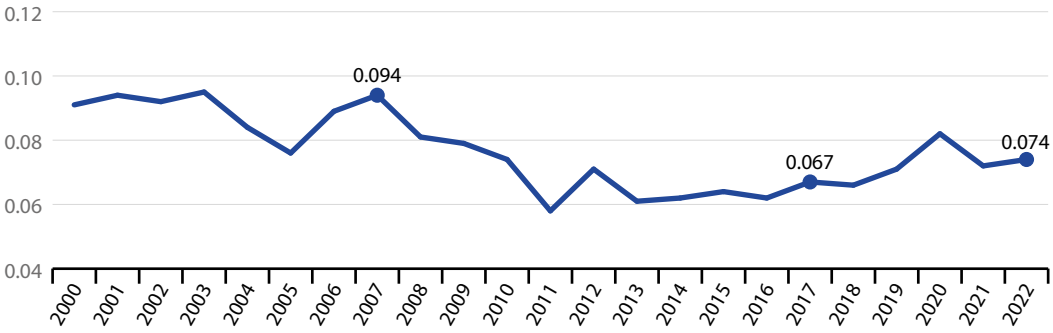
LONG TERM 2007–2022

SHORT TERM 2017–2022

FIGURE 6.9

Phosphate in rivers, EU, 2000–2022

(mg PO_4 per litre)

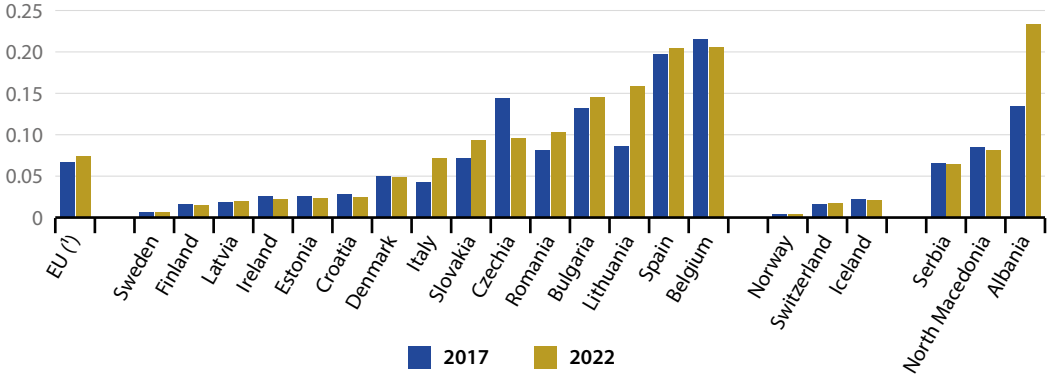


Note: 'EU' refers to an aggregate based on 15 Member States.
Source: EEA (Eurostat online data code: sdg_06_50)

FIGURE 6.10

Phosphate in rivers, by country, 2017 and 2022

(mg PO_4 per litre)



(1) 'EU' refers to an aggregate based on 15 Member States.
Source: EEA (Eurostat online data code: sdg_06_50)

Water exploitation index (WEI+)

LONG TERM
2007–2022

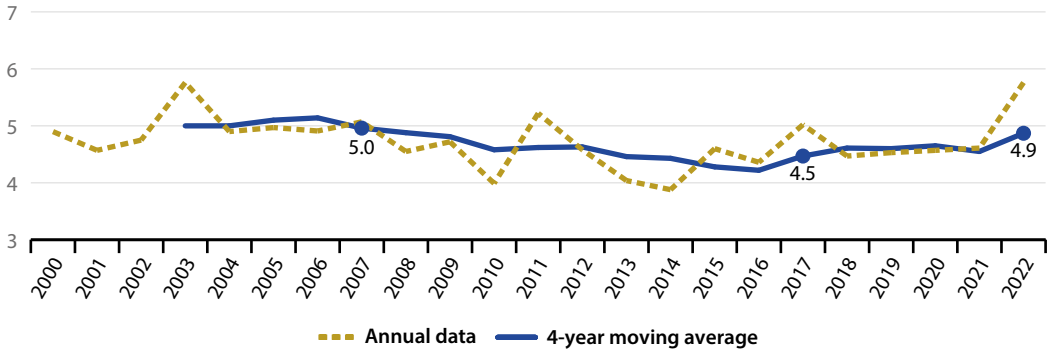
SHORT TERM
2017–2022

The water exploitation index (WEI+) provides a measure of total water consumption as a percentage of the renewable freshwater resources available for a given territory and period ([23]). It quantifies how much water is abstracted and how much water is returned to the environment by economic sectors before or after use. The difference between water abstractions and water returns is regarded as 'water consumption'. In the absence of agreed Europe-wide formal targets, values above 20 % are generally considered to be a sign of water scarcity, while values equal to or greater than 40 % indicate situations of severe water scarcity ([24]), meaning the use of freshwater resources is unsustainable. The indicator is produced by the European Environment Agency based on data from the WISE SoE-Water quantity database (WISE 3) and other open sources (Eurostat, OECD) and gap-filling methods.

FIGURE 6.11

Water exploitation index (WEI+), EU, 2000–2022

(% of renewable water resources)

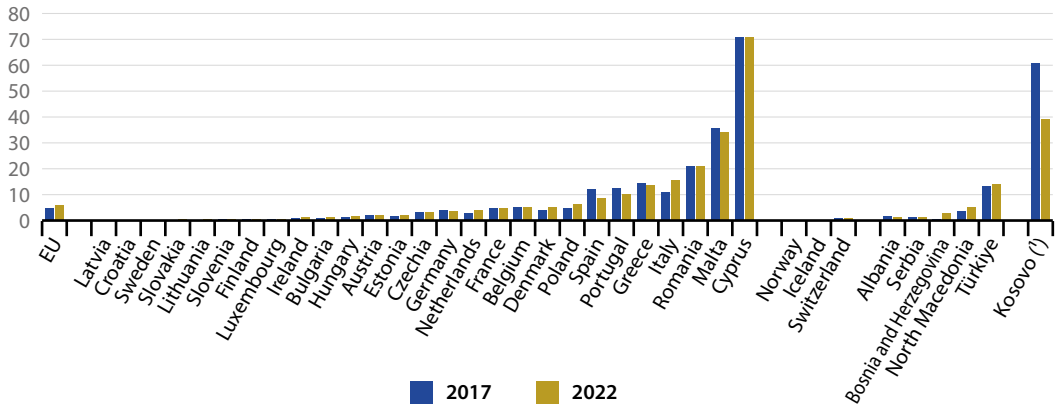


Source: EEA (Eurostat online data code: sdg_06_60)

FIGURE 6.12

Water exploitation index (WEI+), by country, 2017 and 2022

(% of renewable water resources)



(1) Data have lower reliability.

Source: EEA (Eurostat online data code: sdg_06_60)

Notes

(1) European Environment Agency (2024), *Europe's state of water 2024. The need for improved water resilience*, EEA Report No 07/2024, Publications Office of the European Union, Luxembourg, p. 12.

(2) Chemical water quality is not evaluated in this report because of a lack of a comprehensive series of suitable data.

(3) European Commission (2023), *Zero Pollution: New report draws lessons from the Oder River ecological disaster*; DW (2024), *Can Poland save the Oder River from toxic algae blooms?*

(4) European Environment Agency (2017), *Emissions of pollutants to Europe's waters — sources, pathways and trends*, ETC/ICM report, p. 17.

(5) European Environment Agency (2024), *Europe's state of water 2024. The need for improved water resilience*, EEA Report No 07/2024, Publications Office of the European Union, Luxembourg, p. 10.

(6) European Environment Agency (2024), *Nitrate in groundwater*.

(7) European Environment Agency (2024), *Nitrate in groundwater*; and European Commission (2021), *Report from the Commission to the Council and the European Parliament on the implementation of Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources based on Member State reports for the period 2016–2019*, COM(2021) 1000 final, p. 4.

(8) European Commission (2020), *Recommendations to the Member States as regards their strategic plan for the Common Agricultural Policy*, COM(2020) 846 final.

(9) European Environment Agency (2024), *Nitrate in groundwater*.

(10) European Environment Agency (2024), *Nutrients in freshwater in Europe*.

(11) Eurostat (2024), *Agri-environmental indicator — mineral fertiliser consumption*.

(12) European Environment Agency (2024), *Nutrients in freshwater in Europe.*

(13) European Environment Agency (2025), *Water scarcity conditions in Europe (Water exploitation index plus)*.

(14) Ibid.

(15) Ibid.

(16) Ibid.

(17) European Environment Agency (2024), *Drought impact on ecosystems in Europe*.

(18) European Environment Agency (2024), *Water abstraction by source and economic sector in Europe*.

(19) Copernicus Programme (2024), *ESOTC 2023 | Europe | Temperature and thermal stress.*

(20) European Environment Agency (2024), *Drought impact on ecosystems in Europe*.

(21) European Environment Agency (2023), *8th Environment Action Programme. Drought impact on ecosystems in Europe.*

(22) European Environment Agency (2024), *Drought impact on ecosystems in Europe*.

(23) European Environment Agency (2025), *Water scarcity conditions in Europe (Water exploitation index plus)*.

(24) Ibid.

Ensure access to affordable, reliable, sustainable and modern energy for all

SDG 7 calls for ensuring universal access to affordable, reliable and sustainable energy. This includes improving energy efficiency, increasing the share of renewables and further diversifying the energy mix while ensuring affordability of energy for all.

In everyday life, our well-being and the workings of the economy depend on reliable, affordable and sustainable energy services, such as electricity supply, heating and cooling, and transport services. Monitoring SDG 7 in an EU context involves looking at developments in energy consumption, energy supply and access to affordable energy. Overall, over the five-year period assessed, the EU has made moderate progress towards this goal. Energy consumption has continued to fall, but the EU needs to speed up progress in light of the 2030 targets. At the same time, energy productivity has continued to develop favourably throughout the EU, resulting in a further decoupling of economic growth from energy consumption. In the area of energy supply, the EU has made progress towards the new 2030 target for renewable energy, but the pace needs to accelerate to reach a 42.5 % share. After an exceptional year in 2022 that was marked by refilling of gas stocks, energy import dependency fell again in 2023, reaching levels comparable to previous years. Access to affordable energy saw a further strong backslide in 2023, following a hike in energy prices.

Indicators measuring progress towards SDG 7, EU

Indicator		Period	Annual growth rate	Assessment	More info
Energy consumption					
Energy consumption ◎	Primary energy consumption	2008–2023	Observed: – 1.4 % Required: – 1.8 %	↗	page 133
		2018–2023	Observed: – 2.6 % Required: – 2.7 %	↗	
	Final energy consumption	2008–2023	Observed: – 0.8 % Required: – 1.3 %	↗	
		2018–2023	Observed: – 1.7 % Required: – 2.0 %	↗	
Final energy consumption in households per capita		2008–2023	– 1.1 %	↑	page 135
		2018–2023	– 1.9 %	↑	
Energy productivity		2008–2023	2.4 %	↑	page 136
		2018–2023	3.9 %	↑	
Energy supply					
Share of renewable energy in gross final energy consumption ◎		2008–2023	Observed: 4.6 % Required: 5.7 %	↗	page 137
		2018–2023	Observed: 5.2 % Required: 6.9 %	↗	
Energy import dependency		2008–2023	0.0 %	→	page 138
		2018–2023	0.1 %	→	
Access to affordable energy					
Population unable to keep home adequately warm		2010–2023	0.5 %	↘	page 139
		2018–2023	6.9 %	↓	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

Policy context

The new Competitiveness Compass for the EU confirms the long-term objective to decarbonise Europe's energy systems to reach climate neutrality by 2050 while emphasising the affordability of energy. The Clean Industrial Deal outlines actions to support a switch to renewables, grid investments, and energy efficiency to cut costs and drive industrial decarbonisation.

To meet the EU climate target for 2030, the Commission proposed an interconnected set of measures in the areas of energy, transport, taxation and climate policies, also called 'Fit for 55', most of which has been adopted. To help shape the path for further progress after 2030, the Commission has recommended a new 2040 climate target.

REPowerEU is a strategic plan to reduce the EU's dependence on energy imports, particularly from Russia. In March 2022, the Communication on security of supply and affordable energy prices outlined immediate measures to prepare for the next two winters. Since then, the EU has agreed emergency rules on safeguarding gas supply as well as an emergency regulation. It included EU joint gas purchasing, which was made permanent through the Gas Package. The EU also agreed on an emergency law to accelerate renewable energy permitting. The Methane Regulation from 2024 aims to reduce harmful emissions from fossil fuels within and outside of Europe.

The Recovery and Resilience Facility supports under its 'green transition' pillar reforms and investments on sustainable mobility, energy efficiency, renewable energy and grids.

Energy consumption

The revised Energy Efficiency Directive implements energy efficiency as a priority across all sectors and establishes a binding target for EU countries to collectively reduce energy consumption by at least 11.7 % in 2030 compared with the 2020 EU Reference Scenario projections so that the EU's final energy consumption amounts to no more than 763 million tonnes of oil equivalent (Mtoe). Member States shall make efforts to collectively contribute to the indicative EU primary energy consumption target amounting to no more than 992.5 Mtoe in 2030.

Energy supply

The revised Renewable Energy Directive establishes a binding EU target for a share of renewable energy sources in gross final energy consumption of at least 42.5 % by 2030, aiming for 45 %. The Directive supports the uptake of renewable energies, including facilitating electrification and easier and faster permitting procedures for renewable energy and necessary infrastructure projects. It also aims to ensure the sustainability of biomass.

Access to affordable energy

The Action Plan on Affordable Energy proposes measures to stabilise energy prices, ensure supply security, and drive the energy transition. The European Pillar of Social Rights lists energy among the essential services that everyone should have access to, and the Commission released its first status report in 2023. The SAFE (Supporting Affordable Energy) measures allow Member States to use unspent Cohesion funds under their 2014–2020 allocation to provide direct support to vulnerable families and small and medium-sized businesses (SMEs). The EU Energy Poverty Advisory Hub is an initiative that provides a central platform of energy poverty expertise for local authorities and other stakeholders.

Overview and key trends

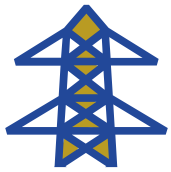
Energy consumption

Increasing energy efficiency is one of the main pillars for achieving an affordable, reliable, sustainable and modern energy system as envisaged in SDG 7. Efficient energy systems reduce consumption and costs, decrease energy dependencies and diminish the environmental and climate impacts linked to energy supply and use. The EU consequently aims to improve energy efficiency along the whole energy supply chain, by implementing 'energy efficiency first' as a principle of EU energy policy.

Energy consumption continues to decline but further reductions are needed to meet the 2030 target

The EU aims to reduce its energy consumption by at least 11.7 % by 2030, compared with the 2020 reference scenario projection. Translated into absolute levels, this means the EU should consume no more than 992.5 million tonnes of oil equivalent (Mtoe) of primary energy and 763 Mtoe of final energy by 2030.

The EU's primary energy consumption has seen a general downward trend since 2008, reaching 1 210.8 Mtoe in 2023, which is a 18.7 % reduction over the past 15 years. In comparison, final energy consumption has fallen to 894.4 Mtoe or by 11.8 % over the same period. The difference in primary and final energy reductions can be mainly traced back to more efficient energy production and the switch to renewable energies ([1]). Long-term progress on both fronts was mainly driven by energy policies that support efficiency improvements across all sectors, particularly buildings, electric appliances and industrial installations.



1 210.8
Mtoe
of primary energy were consumed in the EU in 2023

The short-term trend has been influenced by a remarkable drop in energy consumption of more than 8 % in 2020 compared with 2019, mainly as a result of measures taken to tackle the COVID-19 pandemic. When excluding this year as an exemption from past trends, the EU's energy consumption has seen a steady decline since 2017. Overall, the EU's primary energy consumption fell by 12.2 % between 2018 and 2023, while final consumption decreased by 8.2 %. The reduction was particularly strong in 2023, with primary consumption falling by 3.9 % and final consumption by 3.0 % compared with 2022. Nevertheless, additional improvements in energy efficiency and consumption patterns are necessary to ensure the EU meets both of its stricter 2030 energy consumption targets.

894.4
Mtoe
of final energy were consumed in the EU in 2023

EU citizens' energy consumption has fallen strongly since 2018

Households account for about a quarter of final energy consumption. At home, people use energy in particular for heating, cooling, cooking, lighting, sanitation and appliances. The level of household energy consumption mainly depends on outdoor temperatures, energy performance of buildings, use and efficiency of electrical appliances, and the behaviour and economic status of inhabitants (for example, their desired or affordable level of thermal comfort, frequency of clothes washing, use of TV-sets, games and lighting preferences).

511
kgoe
of final energy were consumed per EU inhabitant at home in 2023

Household energy consumption has decreased since 2018, reaching 511 kilograms of oil equivalent (kgoe) per EU inhabitant in 2023. This was 9.1 % less than in 2018. A large drop of 7.8 % occurred in 2022 compared with 2021, mainly due to a comparably warmer spring and winter in 2022 ([2]). The data show some annual variability that is due mainly to winter weather conditions, as more than 60 % of energy is used for heating ([3]).

When viewed over the longer term, efficiency improvements, particularly in space heating, have outweighed the effect of population growth and increases in the number and size of dwellings. Since 2008, final energy consumption per EU inhabitant has fallen by 15.0 %, which resulted from a 13.2 % decrease in total household energy consumption combined with a 2.0 % or 8.7 million increase in the EU's population over the same period ([4]).

Energy productivity in the EU has continued to improve significantly

Recent trends in Europe point to a decoupling of economic growth from energy consumption, which is measured here using gross domestic product (GDP) and gross available energy (GAE) respectively. Between 2008 and 2023, GAE fell by 18.6 % and thus by a similar amount to primary energy consumption. Over the same period, real GDP grew by 16.9 % ([5]). As a result, energy productivity — which measures GDP per unit of energy input — increased almost continuously from EUR 6.9 per kgoe in 2008 to EUR 9.8 per kgoe in 2023. The improvement in energy productivity was particularly strong in 2022 and 2023, due to a marked decrease in GAE alongside continued GDP growth.

In 2023, the EU's energy productivity amounted to

EUR 9.8

per kgoe

Between 2018 and 2023, energy productivity increased in all Member States. Ireland experienced the strongest increase over this period and reported the highest energy productivity rate of the EU in 2023, at PPS 29.3 per kgoe. Romania, Denmark and Luxembourg followed, both in terms of energy productivity increases and absolute value in 2023. In contrast, Finland and Malta experienced only low productivity increases over the period and remained at comparatively low levels of around PPS 7 per kgoe in 2023.

Energy supply

To achieve a clean and secure energy system, the EU is aiming to increase the share of renewable energy in gross final energy consumption to 42.5 % by 2030, with an additional 2.5 % indicative top-up that would allow the EU to reach 45 %. Most renewable energy sources are considered to be practically inexhaustible or renewable within a human lifetime. In contrast, fossil energy sources regenerate over millions of years and are the main source of man-made greenhouse gas (GHG) emissions, and therefore contribute significantly to the climate crisis. In addition, fossil fuels such as natural gas and crude oil are mainly imported from outside the EU. This dependence exposes consumers to significant costs and to the risk of supply shortages, as shown by the reduction in natural gas and crude oil deliveries from Russia. The risks increase as dependency on a single country grows. Therefore, the EU is seeking to increase domestic energy production, particularly from renewable energy sources, as well as reduce its energy consumption, and build and update infrastructure to allow clean energy to be distributed across Member States. The EU has also introduced legislation and sustainability criteria to address the negative impacts of certain renewable energy sources such as hydropower and biomass on other SDGs such as health, water, and marine and terrestrial ecosystems ([6]).

The share of renewables has kept rising in the EU, but even stronger growth is needed to meet the 2030 target

24.6%
of the energy consumed in the EU in 2023 came from renewable sources

Use of renewable energy has grown more or less steadily in the EU, almost doubling from 12.6% of gross final energy consumption in 2008 to reach 24.6% in 2023. Reductions in investment costs due to economies of scale and greater competition, more efficient technologies, supply chain improvements and renewable energy support schemes have driven this growth ([7]). Nevertheless, even faster growth will be needed across the EU to meet the 42.5% target in 2030.

The share of renewable energy grew in all three of the areas monitored here, namely electricity generation, heating and cooling, and transport. The share of renewables in electricity generation experienced the most pronounced growth, reaching 45.3% in 2023. The shares of renewables in heating and cooling and in transport were lower, at 26.2% and 10.8% in 2023, respectively. Still, additional efforts are required across all of these sectors to scale up the use of renewable energies.

Looking at specific renewable energy sources, the largest share of available renewable energy in 2023 came from solid biofuels (36.7%), followed by wind energy (15.8%), hydropower (10.9%) and solar photovoltaics (8.1%). Wind and solar photovoltaic energy made the biggest contribution to the absolute increase in renewable energy production between 2018 and 2023. Solar photovoltaic energy production more than doubled, and energy production from heat pumps increased by more than 50%, followed by wind, meaning these three sources saw the largest percentage increase over the period ([8]).

Energy import dependency in the EU remains high

Net imports amounted to
58.3%
of the gross available energy in the EU in 2023

Despite continuous growth in renewable energy sources within the EU over the past decade, fuel imports from non-EU countries remained an important energy source for the EU in 2023, contributing to 58.3% of gross available energy (GAE) — as measured by net imports (imports minus exports). Net imports were highest for oil and petroleum products (94.5% imported) and natural gas (90.0% imported), followed by solid fuels (predominantly coal, 40.8% imported). Net imports of renewable energy including biofuels accounted for 2.4% of gross available renewable energy in 2023 and just 0.8% of total net imports ([9]).

The EU's share of net imports of energy had remained relatively stable at around 55% until 2021, which can be explained by two opposing developments. On the one hand, the EU reduced its energy consumption and increased its use of domestic renewables. On the other hand, it reduced its primary production of fossil fuels because of exhausted or uneconomical domestic sources, particularly natural gas and crude oil ([10]). Between 2021 and 2022, however, energy import dependency increased strongly by 7.0 percentage points. This development was mainly driven by a need to increase stocks in 2022 as the amount of stored natural gas and oil had been relatively low towards the end of 2021 ([11]). In 2023, energy import dependency fell back to the levels reported before 2022, reaching 58.3%.

In 2023, the EU successfully reduced its energy dependency on Russia, which is no longer its main supplier of energy products. The drop was most significant for solid fossil fuel imports, for which Russia's share in total extra-EU imports decreased from 23.1% in 2022 to just 1.0% in 2023. Similarly, the share of imports of petroleum products from Russia fell from 21.1% to 3.6%. Gas import dependency was cut in half, from 22.4%

in 2022 to 11.2 % in 2023 ([12]). This follows the EU accelerating its phase out of Russian fossil fuels while increasing its diversification efforts. The EU set a ban on nearly 90 % of Russian oil imports to Europe, which took effect in December 2022 for seaborne crude oil and in February 2023 for refined petroleum products. Moreover, coal sanctions were put in place in April 2022 and took effect in August 2022 ([13]).

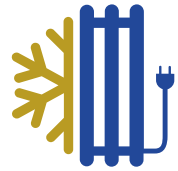
The EU reduced its dependency on Russia by decreasing overall its consumption of imported energy carriers and increasing imports from other countries. In 2023, a third of EU imports of gas came from non-EU Europe (33.0 %), with Norway being the main trade partner, followed by North America (19.3 %) and African countries (19.2 %). Around 20 % of petroleum products were imported from non-EU Europe, mainly from Norway and Ukraine, followed by imports from Africa (19.2 %) and the Middle East (18.0 %). For solid fossil fuels, the largest source was North America, which accounted for 26.2 % of extra-EU imports, followed by Oceania (23.7 %) and Central and South America (17.9 %) ([14]). All percentages reported here refer to shares of total imports from outside the EU only, so do not account for energy traded between Member States.

In 2023, all Member States were net importers of energy, with 16 importing more than half of their total energy consumption from other countries (EU countries and non-EU countries). Countries which imported almost all of their energy in 2023 included the island countries Malta (97.6 %) and Cyprus (92.2 %), along with Luxembourg (90.6 %). Luxembourg's high import dependency mainly results from significant fuel sales to foreign commuters and transit traffic ([15]).

Access to affordable energy

SDG 7 emphasises the need for affordable energy for reasons of social equality and justice. Principle 20 of the European Pillar of Social Rights also places energy among the essential services everyone should have access to. The inability to keep the home adequately warm is a survey-based indicator used to monitor access to affordable energy throughout the EU. A lack of access to affordable energy is strongly associated with low levels of income in combination with high expenditure on energy and low energy performance of buildings and appliances ([16]).

The share of people reporting to be without affordable access to heating increased further in 2023



10.6 %
of the EU population were unable to keep their home adequately warm in 2023

Between 2012 and 2021, the EU made progress on improving access to affordable energy, with the share of the population unable to keep the home adequately warm falling from 11.2 % to 6.9 %. However, in 2022, the natural gas and electricity price spikes, following cuts in Russian energy supplies, impacted the ability of households to pay for their energy bills. Consequently, the share of the EU population reporting they were unable to keep their home adequately warm rose strongly to 9.3 %. In 2023, the share increased even more, reaching 10.6 %, indicating that the actions taken at EU level to ensure affordable access have not yet resulted in a visible impact.

People with an income below the poverty threshold are more likely to be without access to basic needs (see the chapter on SDG 1 'No poverty' on page 21), and this also holds true for affordable heating. In 2023, 22.2 % of people from this group reported having difficulty affording an adequately warm home, compared with 8.3 % of people with an income above the poverty threshold.

Lack of adequate warmth appears to be a particular problem in southern and south-eastern Europe. In 2023, EU countries with the highest share of the population unable to afford a warm home were Spain and Portugal (both 20.8 %), Bulgaria (20.7 %), Lithuania (20.0 %) and Greece (19.2 %).

Main indicators

A variety of energy indicators are used to measure energy consumption at different stages of the supply chain and progress towards the EU energy targets. The following box explains the indicators and the differences between them.

Definitions of energy terms/concepts:

Gross available energy (GAE) represents a country's total energy demand. It is defined as: primary production + recovered/recycled products + imports – exports + stock changes.

Gross inland energy consumption (or gross inland consumption; GIC) represents energy demand including international aviation but excluding maritime bunkers. It is defined as: gross available energy – international maritime bunkers.

Total energy supply represents the total energy delivered and/or consumed in a country excluding deliveries to international aviation and international marine bunkers. It is defined as: gross inland energy consumption – international aviation.

Primary energy consumption (PEC) represents a country's total energy demand including consumption of the energy sector itself, losses during transformation and distribution, and the final consumption by end users. This means it excludes, for example, natural gas used in non-energy products, such as chemicals. It is defined as: gross inland energy consumption – non-energy use of energy carriers.

Primary energy consumption – Energy Efficiency Directive measures the progress towards the EU's 2020 and 2030 energy efficiency targets. It deviates from primary energy consumption only in that it excludes ambient heat. It is defined as: primary energy consumption – gross inland consumption of ambient heat (heat pumps).

Gross final energy consumption (or gross energy consumption) is the basis for measuring the share of renewable energies according to Directive 2009/28/EC on the promotion of renewable energies. It represents the energy commodities delivered for energy purposes to industry, transport, households, services including public services, agriculture, forestry and fisheries, the consumption of electricity and heat by the energy branch for electricity, heat and transport fuel production, and losses of electricity and heat in distribution and transmission.

Final energy consumption (FEC) (or final consumption – energy use) measures a country's energy use by end users, such as households, industry and transport. It excludes the energy used by the energy sector itself and losses incurred during energy transformation and distribution and any non-energy use of energy carriers. It is defined as: primary energy consumption – consumption by the energy sector – transformation/distribution losses – statistical differences.

Final energy consumption – Energy Efficiency Directive measures the progress towards the EU's 2020 and 2030 energy efficiency targets. It deviates from final energy consumption by excluding ambient heat and including international aviation. It is defined as: final energy consumption – final energy consumption of ambient heat (heat pumps) + international aviation.

Energy consumption

This indicator measures a country's total energy needs excluding all non-energy use of energy carriers (such as natural gas used for producing chemicals rather than for combustion). Primary energy consumption represents a country's total energy demand before any energy transformation, excluding energy carriers used for non-energy purposes. In comparison, final energy consumption covers the energy consumed by end users, such as industry, transport, households, services and agriculture.

LONG TERM 2008–2023 * **

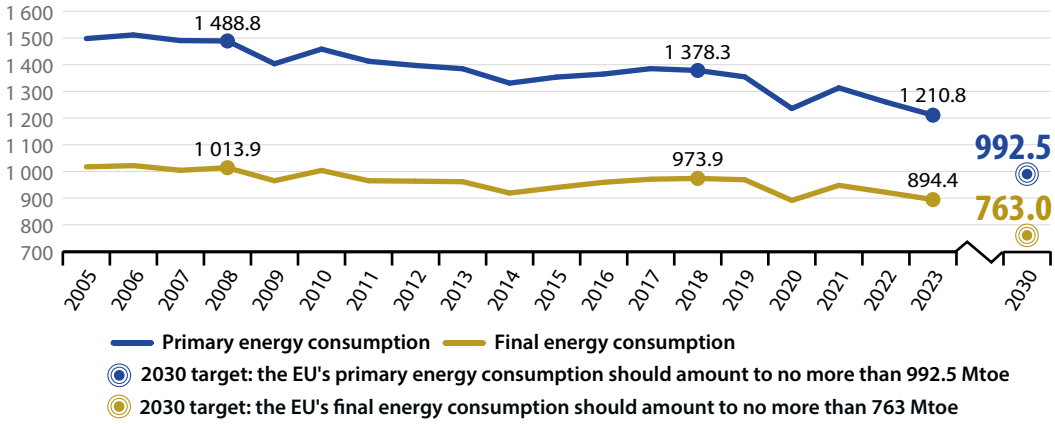
SHORT TERM 2018–2023 * **

* Primary ** Final

FIGURE 7.1

Primary and final energy consumption, EU, 2000–2023

(million tonnes of oil equivalent (Mtoe))

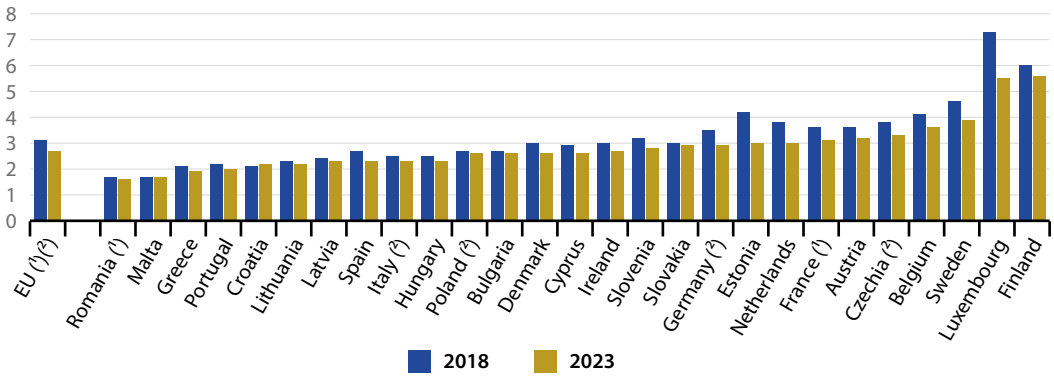


Note: Definition of primary and final energy consumption (Energy Efficiency Directive) is used.
Source: Eurostat (online data codes: sdg_07_10 and sdg_07_11)

FIGURE 7.2

Primary energy consumption, by country, 2018 and 2023

(tonnes of oil equivalent per capita)

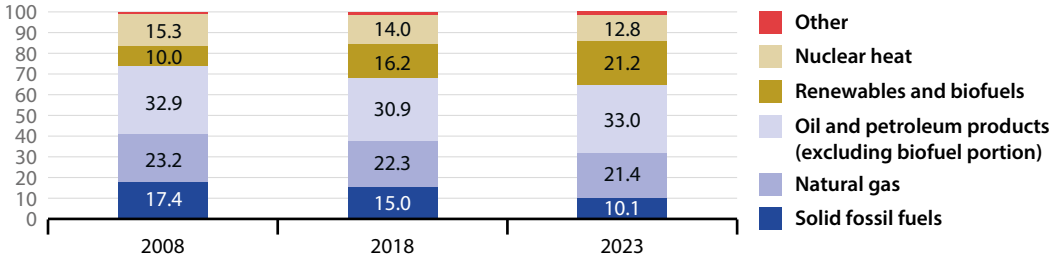


(1) Population data are estimated and/or provisional for one or both of the years shown.
(2) Break(s) in population data time series between the two years shown.
Source: Eurostat (online data code: sdg_07_10)

FIGURE 7.3

Primary energy consumption, by fuel type, EU, 2008, 2018 and 2023

(%)

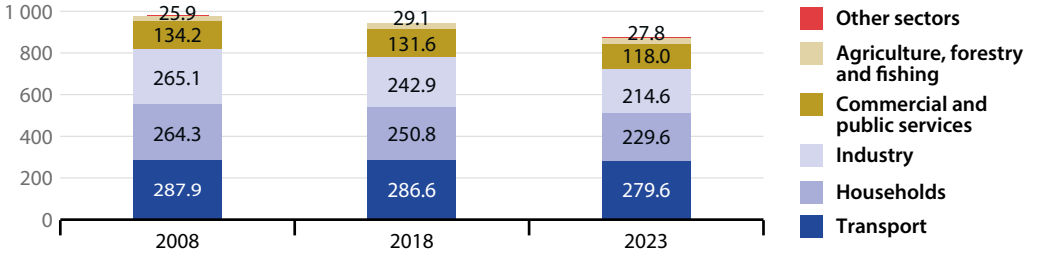


Note: Definition of primary energy consumption according to energy balances.
Source: Eurostat (online data code: nrg_bal_c)

FIGURE 7.4

Final energy consumption, by sector, EU, 2008, 2018 and 2023

(million tonnes of oil equivalent (Mtoe))



Note: Definition of final energy consumption according to energy balances.
Source: Eurostat (online data code: nrg_bal_c)

Final energy consumption in households per capita

This indicator measures how much energy each citizen consumes at home, excluding transport. Data are not temperature-adjusted, so variations from year to year are due in part to weather.

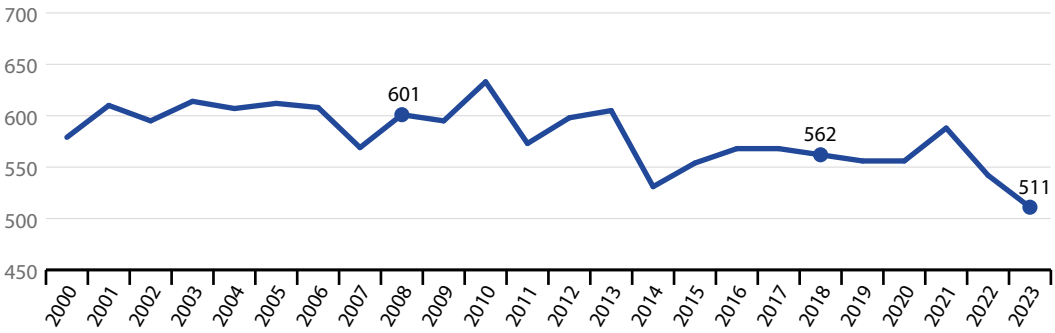
LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 7.5

Final energy consumption in households per capita, EU, 2000–2023

(kgoe)

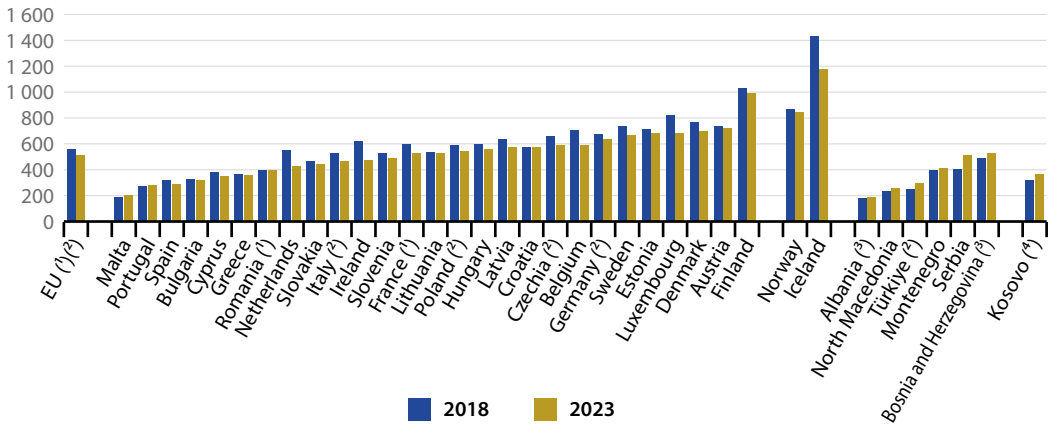


Note: Multiple breaks in population data time series; 2018–2023 population data provisional and/or estimated.
Source: Eurostat (online data code: sdg_07_20)

FIGURE 7.6

Final energy consumption in households per capita, by country, 2018 and 2023

(kgoe)



(1) Population data are estimated and/or provisional for one or both of the years shown.
(2) Break(s) in population data time series between the two years shown.
(3) 2022 data (instead of 2023).
(4) 2021 data (instead of 2023).

Source: Eurostat (online data ode: sdg_07_20)

Energy productivity

LONG TERM 2008–2023

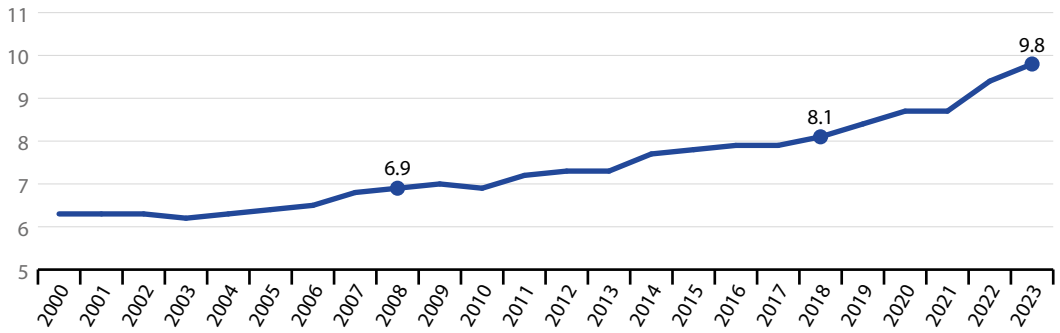
SHORT TERM 2018–2023

This indicator measures the amount of economic output produced per unit of gross available energy (GAE). Gross available energy represents the quantity of energy products needed to satisfy all demand of entities in the geographical area under consideration. Economic output is either given as euros in chain-linked volumes to the reference year 2010 at 2010 exchange rates or in the unit PPS (purchasing power standards).

FIGURE 7.7

Energy productivity, EU, 2000–2023

(EUR per kgoe)

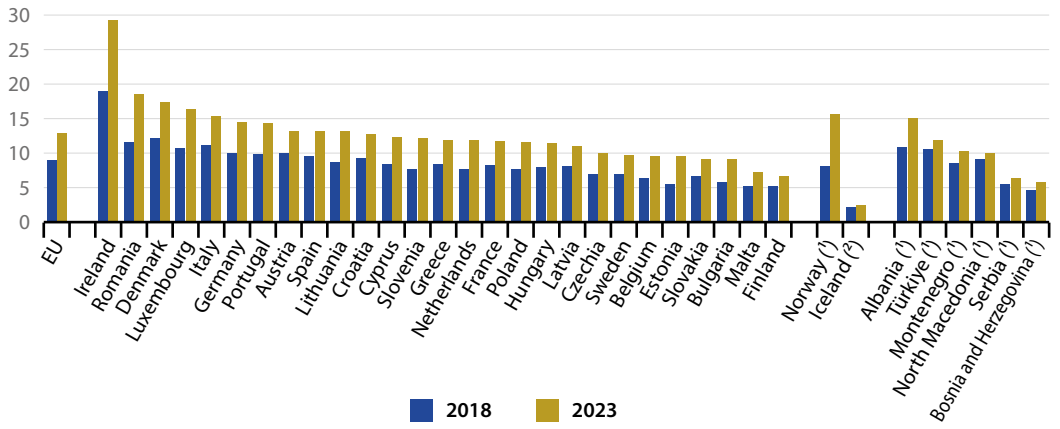


Source: Eurostat (online data code: sdg_07_30)

FIGURE 7.8

Energy productivity, by country, 2018 and 2023

(PPS per kgoe)



(1) 2022 data (instead of 2023).
(2) 2021 data (instead of 2023).

Source: Eurostat (online data code: sdg_07_30)

Share of renewable energy in gross final energy consumption

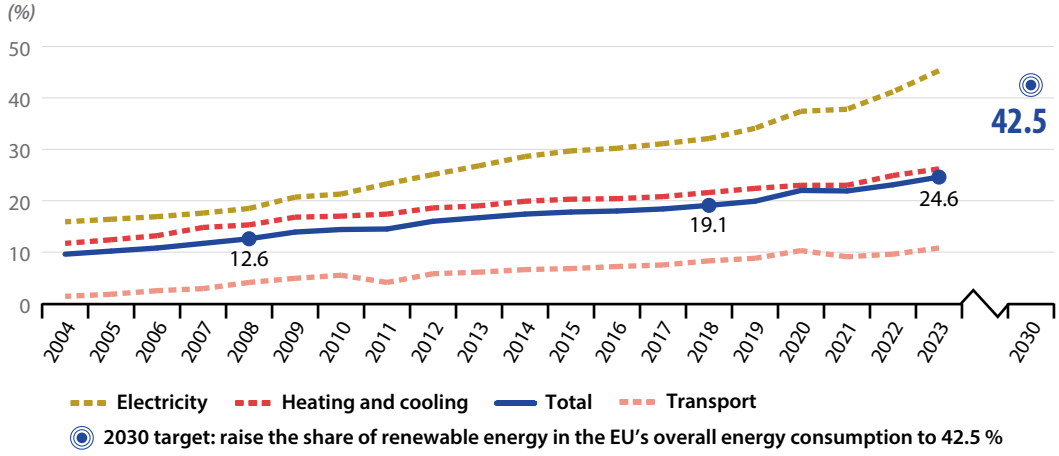
This indicator is defined as the share of renewable energy consumption in gross final energy consumption, according to the Renewable Energy Directive. The gross final energy consumption is the energy used by end consumers plus grid losses and power plants' own consumption.

LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 7.9

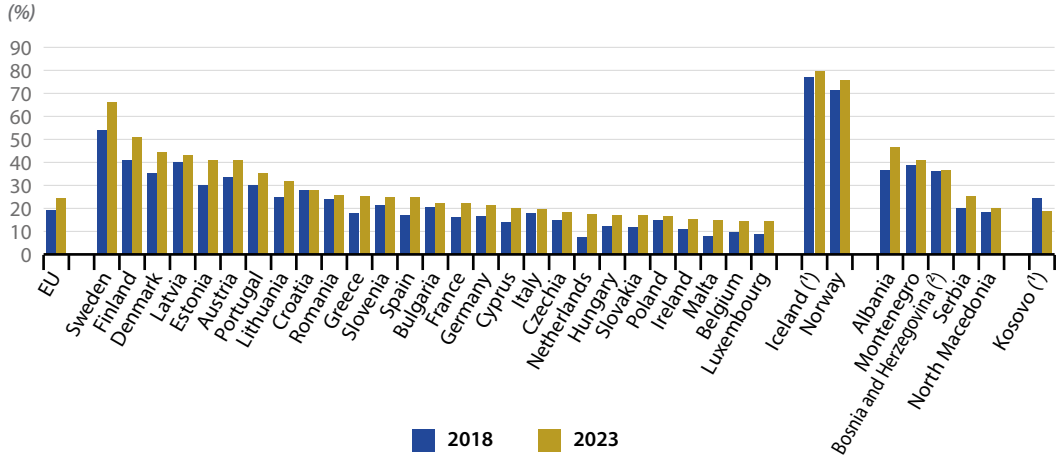
Share of renewable energy in gross final energy consumption, by sector, EU, 2004–2023



Source: Eurostat (online data code: sdg_07_40)

FIGURE 7.10

Share of renewable energy in gross final energy consumption, by country, 2018 and 2023



(1) 2022 data (instead of 2023). (2) 2021 data (instead of 2023).

Source: Eurostat (online data code: sdg_07_40)

Energy import dependency

LONG TERM 2008–2023

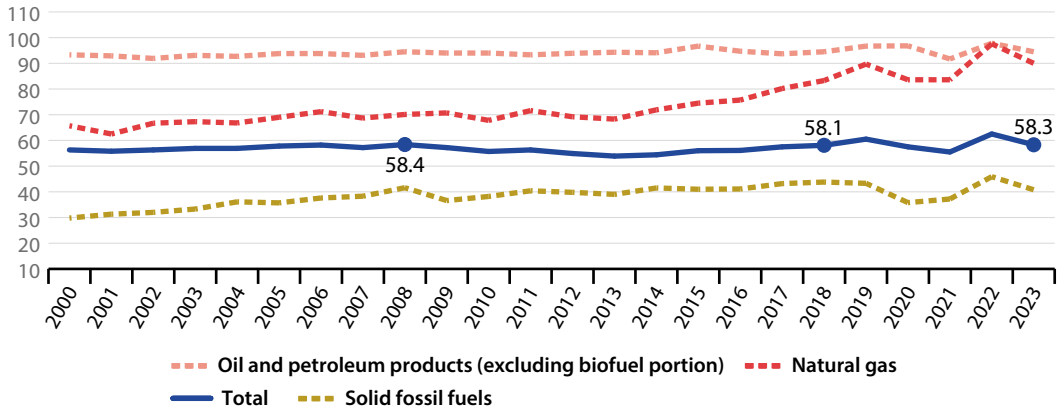
SHORT TERM 2018–2023

Energy import dependency shows the share of a country's total energy needs that are met by imports from other countries. It is calculated as net imports divided by the gross available energy (GAE). Energy import dependency = (imports – exports) / gross available energy.

FIGURE 7.11

Energy import dependency, by product, EU, 2000–2023

(% of imports in gross available energy)



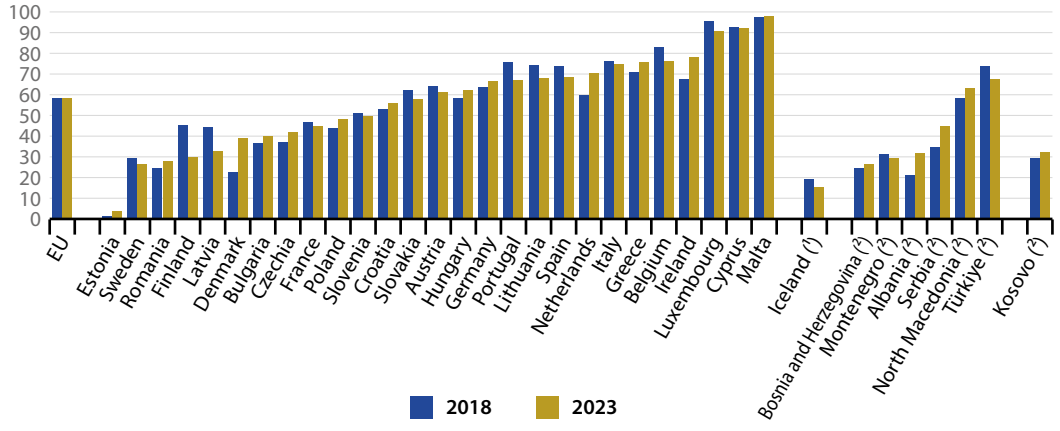
Note: 'Total' is not the average of the other three fuel categories shown — it also includes other energy sources, such as renewable energy or nuclear energy, which are treated as domestic sources.

Source: Eurostat (online data code: sdg_07_50)

FIGURE 7.12

Energy import dependency, by country, 2018 and 2023

(% of imports in gross available energy)



Note: Norway not shown on the graph with an import dependency of – 700 % in 2022.
(1) 2021 data (instead of 2023). (2) 2022 data (instead of 2023).

Source: Eurostat (online data code: sdg_07_50)

Population unable to keep home adequately warm

This indicator measures the share of people unable to afford to keep their home adequately warm. The data are collected as part of the EU Statistics on Income and Living Conditions (EU-SILC) to monitor the development of poverty and social inclusion in the EU. Data collection is based on a survey, which means that indicator values are self-reported.

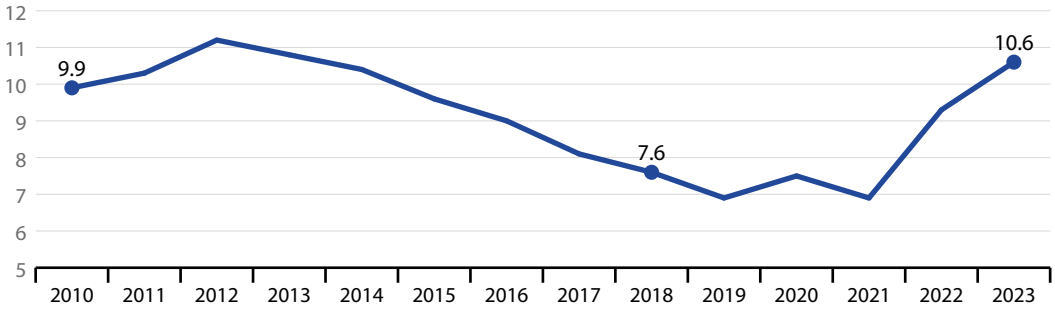
LONG TERM 2010–2023

SHORT TERM 2018–2023

FIGURE 7.13

Population unable to keep home adequately warm, EU, 2010–2023

(% of population)



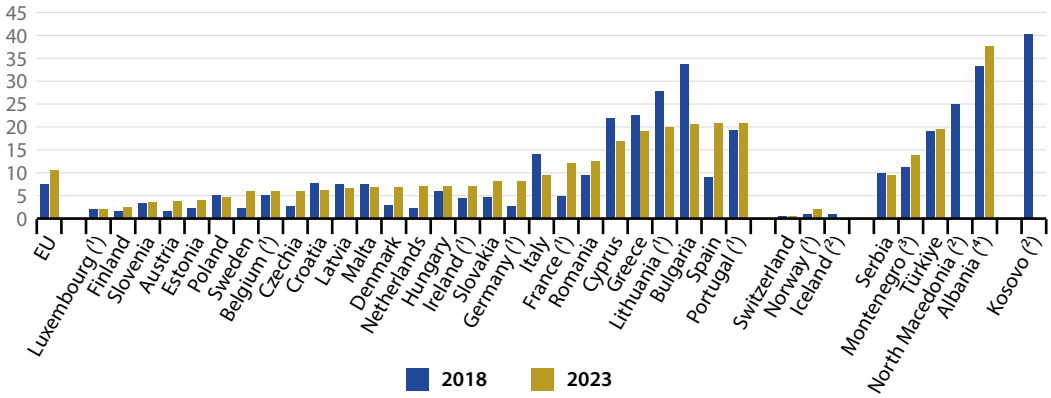
Note: 2010–2019 data are estimated.

Source: Eurostat (online data code: sdg_07_60)

FIGURE 7.14

Population unable to keep home adequately warm, by country, 2018 and 2023

(% of population)



(1) Break(s) in time series between the two years shown.
(2) No data for 2023.
(3) 2022 data (instead of 2023).
(4) 2021 data (instead of 2023).

Source: Eurostat (online data code: sdg_07_60)

Notes

(1) The substitution of fossil energy by renewable energies leads to a reduction of PEC via a statistical definition. The physical energy content method basically means fossil and biogenic fuel input quantities are multiplied by their calorific value. Wind, hydropower or photovoltaics produce energy with 100 % efficiency, geothermal energy with 10 % and nuclear energy with 33 %. This means that PEC decreases disproportionately with increasing substitution of fossil and nuclear fuels by renewable energies.

(2) *Source*: Eurostat (online data code: nrg_chdd_a).

(3) *Source*: Eurostat (online data code: nrg_d_hhq).

(4) *Source*: Eurostat (online data codes: nrg_bal_s and demo_gind).

(5) *Source*: Eurostat (online data codes: nrg_bal_s and nama_10_gdp).

(6) See for example Sayed, E.T. et al. (2021), *A critical review on environmental impacts of renewable energy systems and mitigation strategies: Wind, hydro, biomass and geothermal*, Science of the Total Environment, Volume 766; and Best, A. et al. (2021), *Assessment of resource nexus-related challenges and opportunities in the context of the European Green Deal*. Background report for the EEA Briefing 'Applying a 'resource nexus' lens to policy: opportunities for increasing coherence'.

(7) European Commission (2022), 2022 Report on the Achievement of the 2020 Renewable Energy Targets.

(8) *Source*: Eurostat (online data code: nrg_bal_c).

(9) *Source*: Eurostat (online data code: nrg_bal_s).

(10) *Source*: Eurostat (online data code: nrg_bal_s).

(11) *Source*: Eurostat (online data code: nrg_bal_s); European Council (2024), Infographic — How much gas have the EU countries stored?; Eurostat (online data code: nrg_stk_oem).

(12) *Source*: Eurostat (online data codes: nrg_ti_sff, nrg_ti_oil and nrg_ti_gas). Import shares for natural gas were calculated in cubic meters; solid fuel and oil import shares were calculated in tonnes.

(13) European Council (2023), *Council Decision 2014/512/CFSP of 31 July 2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine* (latest amendment in 2023); and European Council (2024), EU sanctions against Russia explained.

(14) *Source*: Eurostat (online data codes: nrg_ti_sff, nrg_ti_oil and nrg_ti_gas). Import shares for natural gas were calculated in cubic meters; solid fuel and oil import shares were calculated in tonnes.

(15) Ministry of the Environment, Climate and Biodiversity (2023), *Eighth National Communication of Luxembourg under the United Nations Framework Convention on Climate Change. Annex: Fifth Biennial Report of Luxembourg under the United Nations Framework Convention on Climate Change*.

(16) European Commission (2025), *Energy poverty*.

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

SDG 8 recognises the importance of sustained economic growth and high levels of economic productivity for the creation of well-paid quality jobs. It also calls for opportunities for full employment and decent work for all.

Sustainable economic growth and decent work are vital for the development and prosperity of European countries and the well-being and personal fulfilment of individuals. Monitoring SDG 8 in an EU context means looking into developments in the areas of sustainable economic growth, employment and decent work. As illustrated by the figure on the right, the EU has made strong progress towards SDG 8 over the assessed five-year period. The EU's economy has grown, and this growth has also become more sustainable as the material footprint decreased slightly. However, the investment share of GDP has declined over the past years. At the same time, the economic growth has improved the EU's overall employment situation. The EU is thus on track to meet its 2030 target for the overall employment rate, even though progress towards the complementary target on the share of young people neither in employment nor in education and training has slowed recently. Additionally, working conditions have also improved, with fewer fatal work accidents and fewer people being affected by in-work poverty.

Indicators measuring progress towards SDG 8, EU

Indicator	Period	Annual growth rate	Assessment	More info
Sustainable economic growth				
Real GDP per capita	2009–2024	1.2 %	↑	page 149
	2019–2024	0.8 %	↗	
Investment share of GDP	2009–2024	0.1 %	→	page 150
	2019–2024	– 0.6 %	↘	
Material footprint (*)	2008–2023	– 1.7 %	↑	SDG 12, page 219
	2018–2023	– 0.6 %	↗	
Employment				
Employment rate ◎	2009–2024	Observed: 0.8 % Required: 0.7 %	↑	page 151
	2019–2024	Observed: 0.8 % Required: 0.6 %	↑	
Long-term unemployment rate	2009–2024	– 3.2 %	↑	page 152
	2019–2024	– 6.8 %	↑	
Young people neither in employment nor in education and training (NEET) ◎	2009–2024	Observed: – 2.0 % Required: – 2.3 %	↗	page 153
	2019–2024	Observed: – 3.0 % Required: – 3.2 %	↗	
Gender gap for people outside the labour force due to caring responsibilities (*)	2009–2024	– 2.7 %	↑	SDG 5, page 102
	2019–2024	– 6.2 %	↑	
Decent work				
Fatal accidents at work	2010–2022	– 2.7 %	↑	page 154
	2017–2022	– 1.5 %	↑	
In work at-risk-of-poverty rate (*)	2010–2023	– 0.2 %	↗	SDG 1, page 35
	2018–2023	– 2.2 %	↑	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.
(*) Multi-purpose indicator.

Policy context

Sustainable economic growth

The Sustainable Europe Investment Plan under the European Green Deal will mobilise at least EUR 1 trillion in sustainable investments by 2027.

As part of NextGenerationEU put in place in response to the COVID-19 pandemic, the Recovery and Resilience Facility makes EUR 650 billion in loans and grants available to support reforms and investments undertaken by EU Member States. Under its social and territorial cohesion pillar, it tackles unemployment by supporting skills development.

The 8th Environment Action Programme from 2022 aims to decrease the EU's material and consumption footprints and foster a regenerative well-being economy.

Employment

The European Pillar of Social Rights Action Plan aims to increase the employment rate of people aged 20 to 64 to at least 78 % and to reduce the share of young people aged 15 to 29 neither in employment nor in education or training to 9 % by 2030.

The Council Recommendation on access to social protection for workers and the self-employed aims at extending the coverage and adequacy of social protection systems for all those economically active in the EU. The Directive for Work-Life Balance introduces a right to compensated paternity and parental leave, a right to carers' leave and a right to request flexible working arrangements for all working parents (of children up to at least 8 years), to facilitate women's participation in the labour market.

The Council Recommendation on the integration of the long-term unemployed into the labour market aims to help long-term unemployed people re-enter the labour market.

The Youth Employment Initiative supports quality employment, further education, quality traineeships and apprenticeships. The European Social Fund Plus supports access to employment and activations measures for all, especially for young people and long-term unemployed, modernisation of labour market institutions and gender-balanced labour market participation.

The European Care Strategy and Council Recommendations on high-quality early childhood education and care systems and access to high-quality affordable long-term care aim to improve care services across the EU, including the working conditions in the care sector and the work-life balance of persons with caring responsibilities.

Decent work

The Communication on decent work worldwide reaffirmed the EU's commitment to championing decent work at home and around the world. The Directive on adequate minimum wages in the European Union seeks to enhance the adequacy of minimum wages, helping to improve living and working conditions while reducing in-work poverty. The Directive on transparent and predictable working conditions in the European Union sets new minimum standards on working conditions.

The EU Strategic Framework on Health and Safety at Work 2021–2027 sets out key priorities for improving workers' health and safety. The Asbestos at Work Directive as well as the regularly updated Carcinogens, Mutagens or Reprotoxic Substances at Work Directive and Chemical Agents at Work Directive provide additional protection to workers.

Overview and key trends

Sustainable economic growth

While economic growth is an important driver of prosperity and society's well-being, it can also harm the environment it depends on. To ensure the well-being of future generations, the Commission has drawn up a new plan for Europe's sustainable prosperity and competitiveness in line with the EU's strategic agenda 2024–2029. A key objective of this plan is to foster a more circular and resilient economy by promoting sustainable production and consumption. The indicators selected to monitor sustainable economic growth in the EU show that over the assessed five-year period, Europeans have enjoyed solid economic growth while managing to slightly reduce the material footprint. However, the investment share of GDP has declined.

Real GDP per capita has grown over the past five years

Citizens' living standards depend on the performance of the EU economy, which can be measured using several indicators. One of these is growth in gross domestic product (GDP). Although GDP is not a measure of welfare, it gives an indication of an economy's potential to satisfy people's needs and its capacity to create jobs. It can also be used to monitor economic development.

The EU's real GDP per capita in 2024 was

EUR 33 530

Real GDP per capita (GDP adjusted for inflation) in the EU saw strong and continuous growth of 1.9 % per year on average between 2013 and 2019. In 2020, the economy was hit by the COVID-19 pandemic, resulting in a 5.5 % contraction of real GDP compared with 2019. Nevertheless, the economy rebounded from the recession as early as 2021, and real GDP per capita reached EUR 33 300 in 2022 (based on data chain-linked to 2020). This growth was mostly driven by a spending spree that came with an easing of COVID-19 containment measures ([1]). After a slight 0.1 % decrease in 2023, GDP per capita increased again in 2024, reaching EUR 33 530.

Over the short-term period between 2019 and 2024, the EU's real GDP per capita grew by 4.1 %. At Member State level, six countries (Czechia, Germany, Finland, Austria, Estonia and Luxembourg) experienced a decline in real GDP per capita over this period, by between 0.8 % and 3.3 %. In contrast, growth was strongest in Croatia, with 20.5 %, followed by Ireland and Bulgaria with 19.4 % and 16.9 %, respectively. With the exception of Ireland, the strongest growth rates over the period from 2019 to 2024 were generally reported by countries from eastern and southern Europe.

21.7 %
of GDP was invested in the EU in 2024

Investment contributes directly to economic growth. In addition, it enhances an economy's productive capacity and, therefore, future potential output. In 2024, the total investment share of GDP in the EU was 21.7 %, which was 0.7 percentage points below the 2019 share. Businesses were the biggest investors in 2024, with an investment share in GDP of 12.5 %, followed by households with 5.6 % and governments with 3.6 %. The investment share of households, which mainly reflects the purchase and renovation of dwellings, had been slowly growing between 2016 and 2022, but has decreased by 0.5 percentage points since 2022 and remains below the levels observed before the 2008 financial crisis. Government investment has followed a counter-cyclical pattern, increasing during both the financial crisis of 2008 and the COVID-19 crisis in 2020.

The EU has decreased its material footprint slightly compared with 2018

Meeting peoples' material needs often increases pressure on the environment. To lower this environmental impact, the EU aims to reduce its material footprint. The material footprint, also referred to as raw material consumption (RMC), shows the amount of material extracted from nature, both inside and outside the EU, to manufacture or provide the goods and services consumed by EU inhabitants. In other words, it refers to the resources needed to sustain the EU's economic and social activities.

The EU's material footprint had been growing between 2000 and 2008 before it was curtailed by the economic crisis. Following the EU's economic recovery, consumption resumed its upward trend, increasing by 8.4 % between 2015 and 2019. In subsequent years, the EU's material footprint fluctuated, with increases in 2021 and 2022 and decreases in 2020 and 2023. It ultimately reached 6.39 billion tonnes in 2023, which was a 4.5 % decline compared with the previous year and marks the lowest level recorded since 2016. As a result of these developments, the EU's material footprint decreased by 2.8 % over the five-year period from 2018 to 2023. When analysed by material type, the EU's consumption of metal ores saw the most significant reduction over this period (by 24.1 %), followed by fossil energy carriers (by 17.3 %). In contrast, consumption of non-metallic minerals grew by 8.1 %.

6.39
billion tonnes of globally extracted raw material were consumed in the EU in 2023

Despite the recent decrease, the EU's total material footprint is still above the global average and exceeds sustainable levels of resource extraction. This means that Earth's capacity to provide resources would be exceeded if all countries in the world were to consume resources at the same rate as the EU ([2]). The EU is thus not on track to significantly reduce its material footprint, as envisioned by the European Green Deal and the 8th Environmental Action Programme, unless the drop observed in 2023 continues. For more information on the EU's material footprint, see the chapter on SDG 12 'Responsible consumption and production' on page 211.

Employment

Decent employment for all — including for women, persons with disabilities, young people, older people, those with migrant backgrounds and other disadvantaged groups — is a cornerstone of socio-economic development. Apart from generating the resources needed for decent living standards and achieving life goals, work provides opportunities for meaningful engagement in society, which in turn promotes a sense of self-worth, purpose and social inclusion. Higher employment rates are a key condition for making societies more inclusive by reducing poverty and inequality in and between regions and social groups. The European Pillar of Social Rights Action Plan sets a target for at least 78 % of the population aged 20 to 64 to be in employment by 2030. It also envisions the complementary ambition of at least halving the gender employment gap and decreasing the rate of young people aged 15 to 29 who are neither in employment nor in education or training (NEETs) to 9 %.

The EU's employment rate reached a historic high in 2024

The EU employment rate has shown steady growth in both the long and the short terms. Despite the uncertain and challenging environment caused by Russia's war of aggression against Ukraine, the employment rate in the EU reached a record high of 75.8 % in 2024, which is a 3.1 percentage point increase since 2019 when it amounted to 72.7 %. The EU is thus well placed to reach its target of 78 % by 2030.

75.8 %
of 20- to 64-year-olds were employed in the EU in 2024

Employment rates in the EU differ only very slightly by degree of urbanisation. In 2024, the employment rate in cities reached 76.1 %, compared with 76.0 % in rural areas and 75.4 % in towns and suburbs ([3]).

Unemployment and long-term unemployment reached an all-time low in 2024

The EU's unemployment situation has improved almost steadily over the past decade. Between 2013 and 2024, the EU's unemployment rate for the age group 15 to 74 decreased by 5.7 percentage points, affecting 5.9 % of the population in the labour force in 2024 — the lowest value recorded since 2009 ([4]). Over the past years, city dwellers have been more affected by unemployment than those living in rural areas. In 2024, the unemployment rate in cities was 6.7 % compared with 5.1 % for rural areas ([5]).

Long-term unemployment usually follows the trends in unemployment, but with a delay. Being unemployed for a year or more can have long-lasting negative implications for individuals and society by reducing employability prospects, contributing to human capital depreciation, endangering social cohesion and increasing the risk of poverty and social exclusion. Beyond negatively impacting material living standards, it can also lead to a deterioration of individual skills and health status, thus hindering future employability, productivity and earnings.

Similar to the unemployment rate, long-term unemployment in the EU has been declining since 2014. In 2024, the rate reached the lowest value on record, at 1.9 %, which is 0.8 percentage points below the 2019 level. The proportion of long-term unemployment in total unemployment has also decreased since 2014, reaching 32.2 % in 2024, which is 7.1 percentage points below the level observed in 2019 ([6]).

1.9%
of the population in the labour force were long-term unemployed in 2024

The situation for young people in the labour market is improving

The labour market situation of young people has been improving steadily since 2014, disregarding the pandemic-related drop. By 2024, the youth employment rate, referring to people aged 20 to 24 years, reached 54.0 %, which is still significantly lower than for other age groups ([7]). The relatively low employment rate for people aged 20 to 24 can partly be explained by the fact that many people at this age are in education and thus not part of the labour force. In addition, however, youth unemployment has been significantly higher than unemployment in older age groups. Despite a strong 10.4 percentage point decrease in youth unemployment since 2013, 13.0 % of 20- to 24-year-olds who were part of the labour force were unemployed in 2024 ([8]).

Young people not engaged in employment nor in education and training (NEET) are among the most vulnerable groups in the labour market. Over the long term they may fail to gain new skills and suffer from erosion of competences, which in turn might lead to a higher risk of labour market and social exclusion. To improve the labour market situation of young people, the EU set a complementary target of decreasing the NEET rate to 9 % by 2030.

The NEET rate for 15- to 29-year-olds in the EU has been improving since 2013, reaching a record low of 11.0 % in 2024. However, the rate of decline slowed in 2023 and 2024, meaning further efforts seem necessary for the EU to reach its NEET rate target of 9 % by 2030. Since 2009, the NEET rate in rural areas and in towns and suburbs had been higher than in cities. By 2024, it amounted to 12.3 % in rural areas and 11.4 % in towns and suburbs, compared with 10.0 % in cities ([9]).

11.0%
of young people aged 15 to 29 were not employed nor in education and training in the EU in 2024

Participation of women in the labour market is growing, but gender differences persist

The employment rate of women in the EU has been increasing since 2009 and reached a new high of 70.8 % in 2024. The gender employment gap, however, continues to persist, despite narrowing by 3.4 percentage points since 2009. In 2024, it amounted to 10.0 percentage points, even as women are becoming increasingly well-qualified and are outperforming men in terms of educational attainment (see the chapter on SDG 5 'Gender equality' on page 141).

Underdeveloped care services — both for childcare and long-term care of a family member — and inflexible work-life-balance options may constitute impediments to women remaining in or returning to work. Caring responsibilities, which include care for children and care for adults with disabilities, are more often performed by women, contributing to the gender employment gap. In 2024, 0.9 % of women in the EU aged 20 to 64 who were willing to work were outside the labour force because they were caring for children or adults with disabilities. For men, this share was 0.1 %. Caring responsibilities are also the main reason why women are opting for part-time jobs ([10]). As a result, women were overrepresented in this type of employment, with 27.9 % of employed women working part-time in 2024, compared with 7.7 % of employed men ([11]).

0.9%

of women in the EU were outside of the labour force because of caring responsibilities in 2024

Interestingly, the share of women who indicated that caring responsibilities was the main reason for being in part-time employment in 2024 varied widely across Member States, from 1.8 % in Denmark to 37.8 % in the Netherlands ([12]). Similarly, the share of women working part-time varied significantly. While only 1.5 % of employed women in Bulgaria and 2.5 % in Romania performed part-time work, this was the case for 60.5 % in the Netherlands and 51.1 % in Austria in 2024 ([13]).

People with disabilities have lower employment rates than people without disabilities

People with disabilities experience difficulties with basic activities such as seeing, hearing, walking or communicating, or have a longstanding health condition. Disabilities impact people's lives in many areas, including participation in the labour market. In 2024, the employment rate of people with disabilities at the EU level was 24.0 percentage points lower than that of people without disabilities. For women with disabilities, this gap was 20.4 percentage points, while for men with disabilities it was 27.2 percentage points. The degree of disability is also an important factor affecting the employment rate. At the EU level, the employment rate for people with a severe disability was 45.5 percentage points lower than for people without a disability, while for people with a moderate disability, the gap was 16.0 percentage points in 2024 ([14]).

Decent work

For a society's sustainable economic development and well-being it is crucial that economic growth generates not just any kind of job but 'decent' jobs. This means that work should deliver fair income, workplace security and social protection for families, better prospects for personal development and social integration and equality of opportunity ([15]).

Safety at work has gradually improved over the past few years in the EU

A prerequisite for decent work is a safe and healthy working environment, without fatal and non-fatal accidents at work, occupational diseases and other work-related health problems, where risks of work-related hazardous events or exposures are avoided or, if not possible, minimised. Over the past few decades, the EU and its Member States have put considerable effort into ensuring minimum requirements are in place that provide a high level of protection in occupational health and safety at work. As a result, the rate of fatal accidents at work has declined by 28.1 % since 2010, amounting

to 1.66 fatalities per 100 000 employed persons in 2022. Mining and quarrying as well as construction have been especially prone to fatal accidents over the past decade, with the rate of fatal accidents at work amounting to 10.18 and 6.13 fatalities per 100 000 employed persons in 2022, respectively ([16]). While there has been a significant decrease of fatal accidents at work since 2010, a noticeable gender difference persists: in 2022, the incidence rate for women was only 0.25 per 100 000 employed persons, compared with 2.9 for men. This gender gap is due to the fact that economic activities with the highest incidence rates are mostly male-dominated ([17]).

1.66
per 100 000 workers in the EU had a fatal accident at work in 2022

Non-fatal accidents can also cause considerable harm, for example by leading to a permanent disability that may force people to leave the labour market or change their job. Non-fatal accidents happen considerably more often than fatal accidents, with an incidence rate of 1 507 per 100 000 employed persons in 2022 ([18]).

In-work poverty has continued to decrease in the EU

Besides safety at work, fair income and social protection are also important components of decent work. Poverty is often associated with the absence of a paid occupation but low wages can also push some workers below the poverty line. People working part-time or on temporary contracts, self-employed workers, low-skilled workers and non-EU born workers are especially affected by in-work poverty. In the EU, the share of the so-called 'working poor' (aged 18 and over) has been decreasing since 2016 and reached 8.3 % in 2023 — the lowest level recorded. For more information on in-work poverty, see the chapter on SDG 1 'No poverty' on page 21.

While fixed-term contracts, part-time employment or platform work may provide greater flexibility for both employers and workers, they are not always a personal choice for an employee and can thus significantly influence their well-being. In 2024, 3.4 % of European employees aged 20 to 64 reported they were involuntarily working on temporary contracts, corresponding to 28.9 % of all temporary employees. This share has decreased significantly over the past five years ([19]). Data on labour transitions from temporary to permanent contracts also shows that the share of such transitions has increased since 2015, reaching 36.3 % in 2023 (based on a three-year average) ([20]). Like involuntary temporary employment, the share of involuntary part-time employment in total employment in the EU also decreased, from 4.7 % in 2019 to 3.2 % in 2024 ([21]).

8.3 %
of employed people in the EU were at risk of income poverty in 2023

Self-employment is another non-standard form of work that offers both opportunities and challenges, particularly for solo self-employed workers (those without employees). While solo self-employment could point towards entrepreneurial initiative, it could also be used as a proxy for 'bogus' self-employment, which conceals dependent employment relationships ([22]). For the age group 20 to 64, the share of the solo self-employed in total employment has slightly decreased from 9.4 % in 2019 to 9.0 % in 2024 ([23]).

Main indicators

Real GDP per capita

Gross domestic product (GDP) is a measure of economic activity and is often used as a proxy for changes in a country's material living standards. It refers to the value of total final output of goods and services produced by an economy within a certain time period. Real GDP per capita is calculated as the ratio of real GDP (GDP adjusted for inflation) to the average population of the same year and is based on rounded figures.

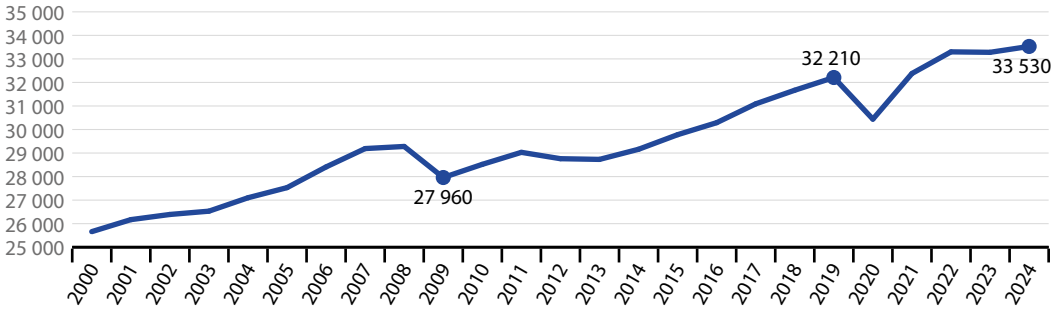
LONG TERM 2009–2024

SHORT TERM 2019–2024

FIGURE 8.1

Real GDP per capita, EU, 2000–2024

(EUR per capita, chain-linked volumes (2020))

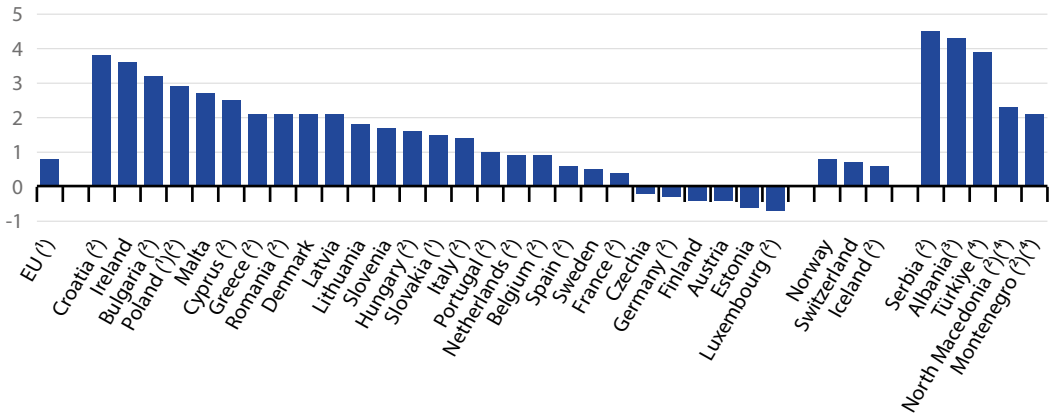


Note: Break in time series in 2020.
Source: Eurostat (online data code: sdg_08_10)

FIGURE 8.2

Change in real GDP per capita, by country, 2019–2024

(compound annual growth rate in %)



(1) Break(s) in time series between the two years shown.
(2) Provisional or estimated data.
(3) Change 2019–2022.
(4) Change 2018–2023.

Source: Eurostat (online data code: sdg_08_10)

Investment share of GDP

LONG TERM 2009–2024

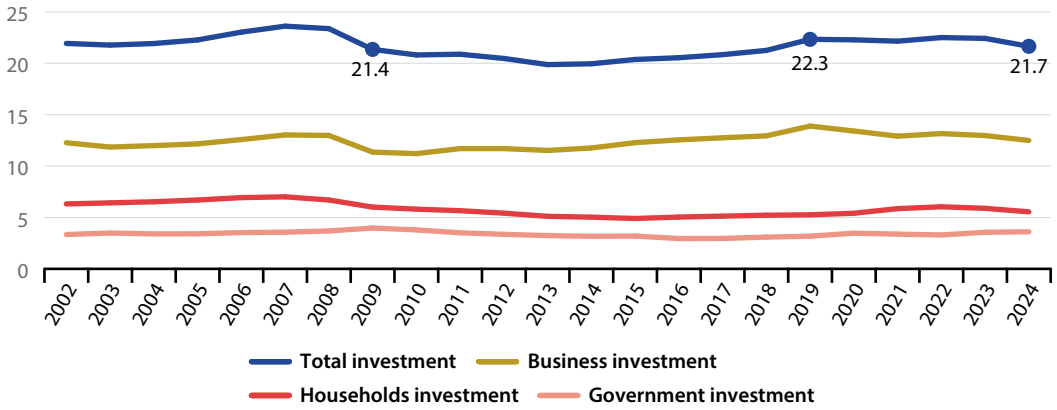
SHORT TERM 2019–2024

The investment share of GDP measures gross fixed capital formation (GFCF) for the total economy, government and business, as well as household sectors as a percentage of GDP.

FIGURE 8.3

Investment share of GDP, by institutional sector, EU, 2002–2024

(% of GDP)

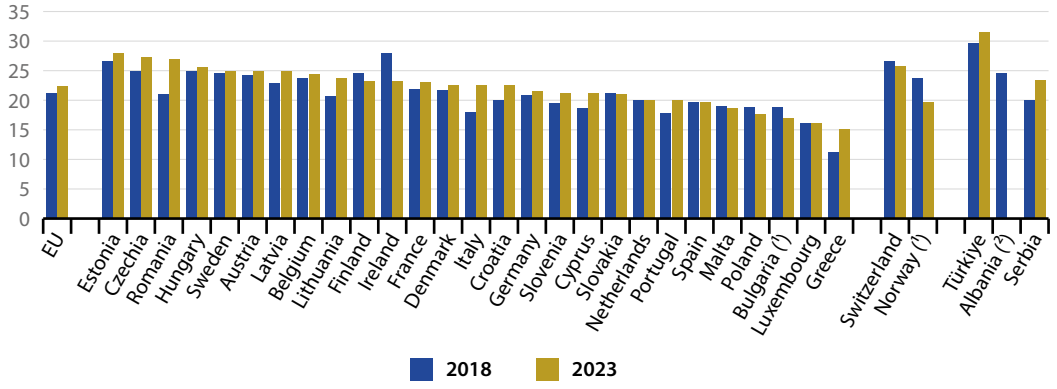


Source: Eurostat (online data code: sdg_08_11)

FIGURE 8.4

Investment share of GDP, by country, 2018 and 2023

(% of GDP)



(1) 2022 data (instead of 2023).
(2) 2017 data (instead of 2018); no data for 2023.
Source: Eurostat (online data code: sdg_08_11)

Employment rate

The employment rate is defined as the percentage of employed persons in relation to the total population. The data analysed here focus on the population aged 20 to 64. Employed persons are those who, during a reference week, worked at least one hour for pay or profit or were temporarily absent from such work. Data presented in this section stem from the EU Labour Force Survey (EU-LFS).

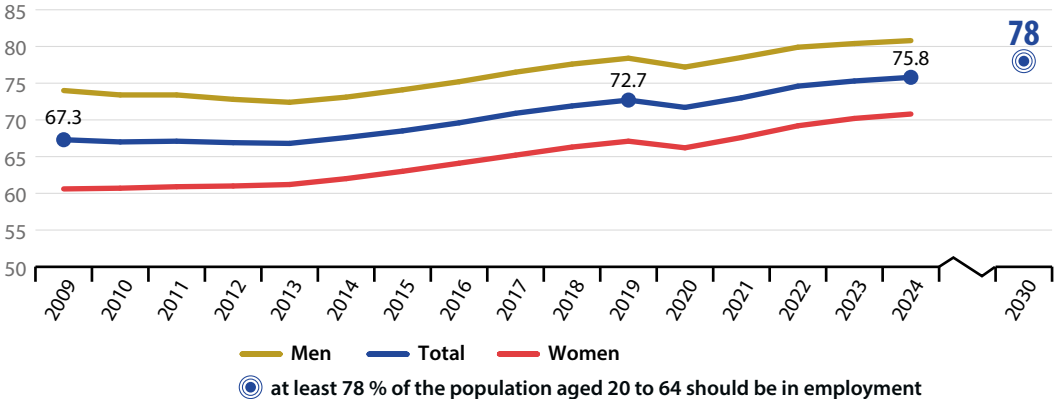
LONG TERM 2009–2024

SHORT TERM 2019–2024

FIGURE 8.5

Employment rate, by sex, EU, 2009–2024

(% of population aged 20 to 64)

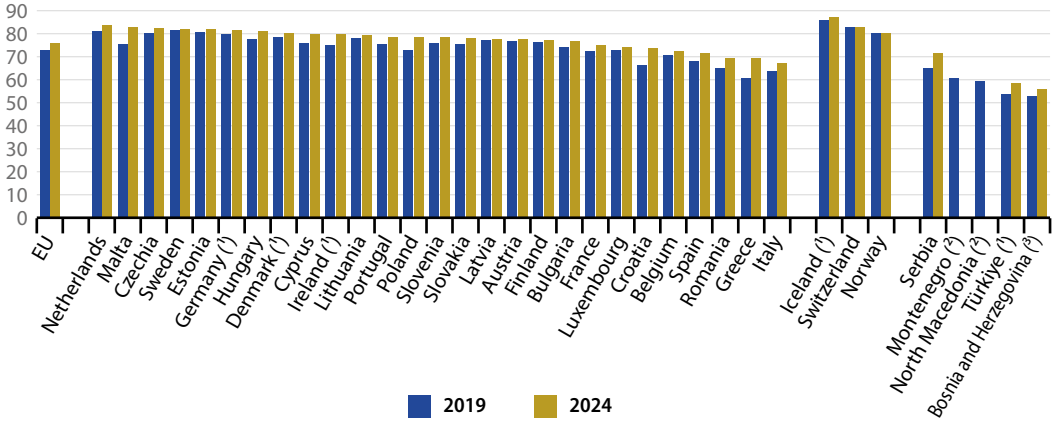


Source: Eurostat (online data code: sdg_08_30)

FIGURE 8.6

Employment rate, by country, 2019 and 2024

(% of population aged 20 to 64)



(1) Break(s) in time series between the two years shown.
(2) No data for 2024.
(3) 2021 and 2023 data.
Source: Eurostat (online data code: sdg_08_30)

Long-term unemployment rate

LONG TERM 2009–2024

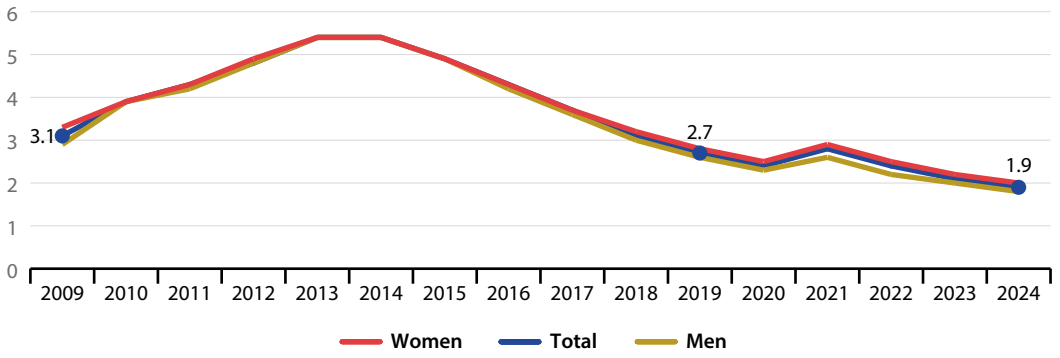
SHORT TERM 2019–2024

Long-term unemployment is measured as a percentage of the population in the labour force (which includes both employed and unemployed people) aged 15 to 74 who have been unemployed for 12 months or more. Unemployed persons are defined as all persons who were without work during the reference week, were currently available for work and were either actively seeking work in the last four weeks or had already found a job to start within the next three months. The unemployment period is defined as the duration of a job search, or as the length of time since the last job was held (if shorter than the time spent on a job search). Data presented in this section stem from the EU Labour Force Survey (EU-LFS).

FIGURE 8.7

Long-term unemployment rate, by sex, EU, 2009–2024

(% of population in the labour force aged 15 to 74)

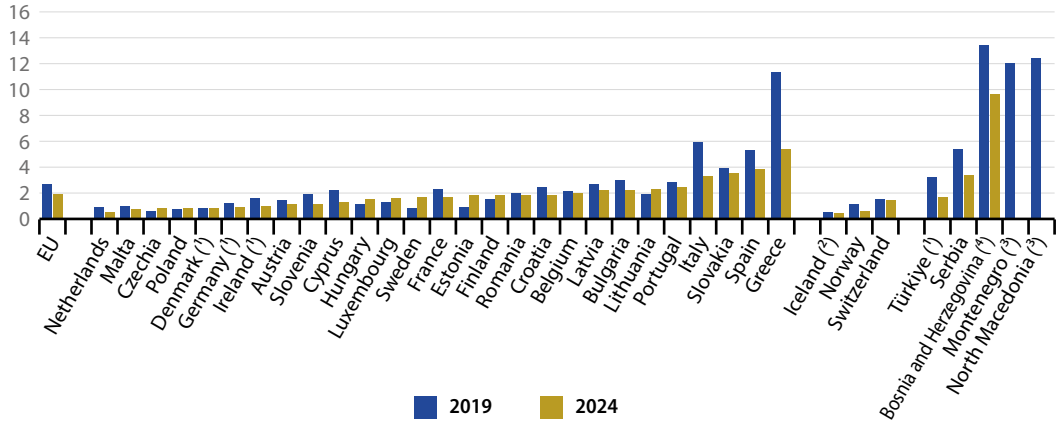


Source: Eurostat (online data code: sdg_08_40)

FIGURE 8.8

Long-term unemployment rate, by country, 2019 and 2024

(% of population in the labour force aged 15 to 74)



(1) Break(s) in time series between the two years shown.
(2) 2020 data (instead of 2019).
(3) No data for 2024.
(4) 2021 and 2023 data.

Source: Eurostat (online data code: sdg_08_40)

Young people neither in employment nor in education and training (NEET)

A considerable proportion of young people aged 15 to 29 in the EU are not employed. For some this is due to the pursuit of education and training. However, others have withdrawn from education and training as well. Those are captured by the statistics on young people who are neither in employment (meaning they are outside of the labour force or unemployed), nor in education and training (NEET rate). Data presented in this section stem from the EU Labour Force Survey (EU-LFS).

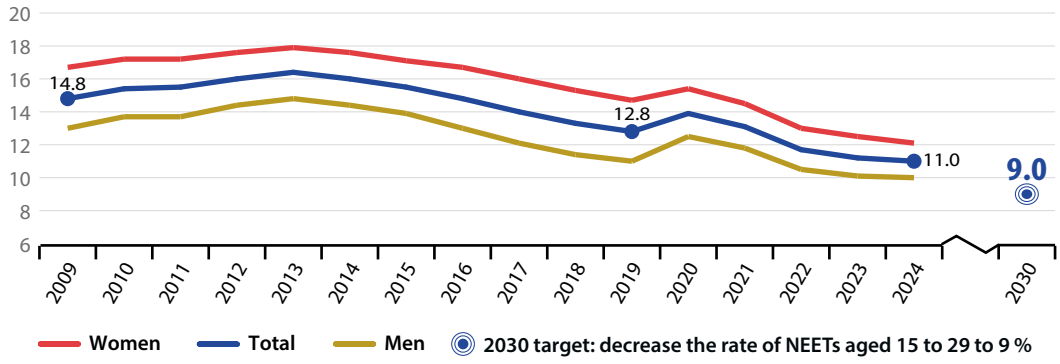
LONG TERM 2009–2024

SHORT TERM 2019–2024

FIGURE 8.9

Young people neither in employment nor in education and training (NEET), by sex, EU, 2009–2024

(% of population aged 15 to 29)

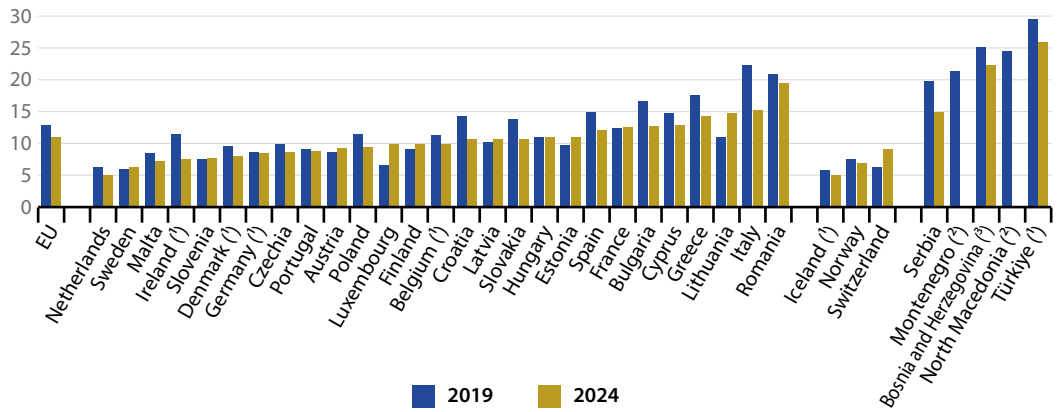


Source: Eurostat (online data code: sdg_08_20)

FIGURE 8.10

Young people neither in employment nor in education and training (NEET), by country, 2019 and 2024

(% of population aged 15 to 29)



(1) Break(s) in time series between the two years shown. (2) No data for 2024. (3) 2021 and 2023 data.

Source: Eurostat (online data code: sdg_08_20)

Fatal accidents at work

LONG TERM 2010–2022

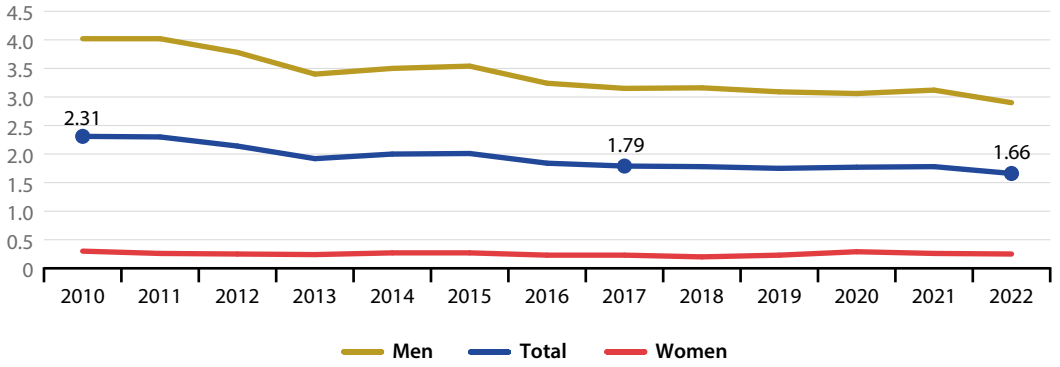
SHORT TERM 2017–2022

Fatal accidents at work are those occurring during the course of work and leading to the death of the victim within one year — commuting accidents occurring between the home and the workplace are excluded from data at EU level. The incidence rate refers to the number of accidents per 100 000 persons in employment. Data presented in this section are collected in the framework of the administrative data collection 'European Statistics on Accidents at Work (ESAW)' ([24]). As an exception, fatal road traffic accidents at work are not included in the data from the Netherlands.

FIGURE 8.11

Fatal accidents at work, by sex, EU, 2010–2022

(number per 100 000 workers)



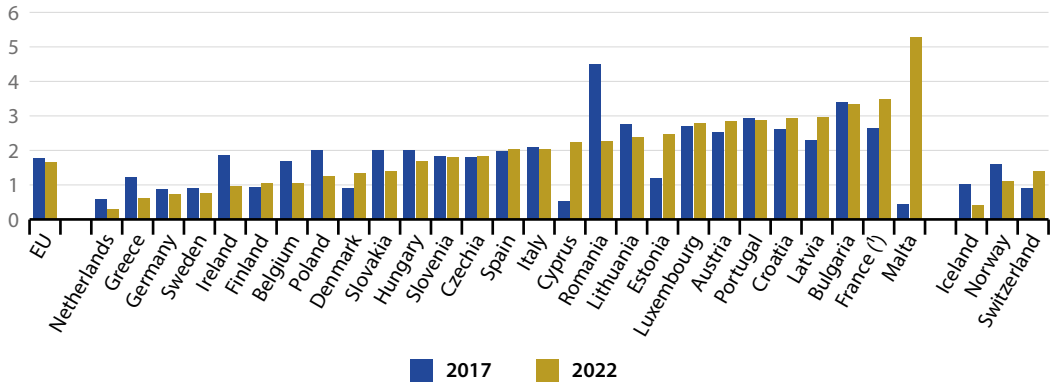
Note: Break in time series in 2020.

Source: Eurostat (online data code: sdg_08_60)

FIGURE 8.12

Fatal accidents at work, by country, 2017 and 2022

(number per 100 000 workers)



Note: Break in time series in 2020 for all countries. Countries with a smaller workforce may sometimes experience larger changes in fatal accident rates from year to year due to natural fluctuations in the low number of such accidents.

(1) Additional break(s) in time series (after 2020).

Source: Eurostat (online data code: sdg_08_60)

Notes

(1) European Commission (2022), *European Economic Forecast, Autumn 2022*, Publications Office of the European Union, Luxembourg, p. 1.

(2) EEA (2024), *Europe's material footprint*.

(3) *Source*: Eurostat (online data code: lfst_r_ergau).

(4) *Source*: Eurostat (online data code: une_rt_a).

(5) *Source*: Eurostat (online data code: lfst_r_urgau).

(6) *Source*: Eurostat (online data code: une_ltu_a).

(7) *Source*: Eurostat (online data code: lfsa_ergan).

(8) *Source*: Eurostat (online data code: lfsa_urgaed).

(9) *Source*: Eurostat (online data code: edat_lfse_29).

(10) *Source*: Eurostat (online data code: lfsa_epgar).

(11) *Source*: Eurostat (online data code: lfsa_epgaed).

(12) *Source*: Eurostat (online data code: lfsa_epgar).

(13) *Source*: Eurostat (online data code: lfsa_epgaed).

(14) *Source*: Eurostat (online data code: hlth_dlm200).

(15) International Labour Organisation (2022), Decent work.

(16) *Source*: Eurostat (online data code: hsw_n2_02).

(17) In the two most fatal incident-prone economic activities (mining and quarrying and construction), men constituted 86% and 89% of all employees in 2024, respectively. Source: Eurostat (online data code: lfsa_egan2).

(18) *Source*: Eurostat (online data code: hsw_n2_01).

(19) *Source*: Eurostat (online data code: lfsa_etgar).

(20) *Source*: Eurostat (online data code: ilc_lvhl36).

(21) *Source*: Eurostat (online data codes: lfsa_epgar and lfsa_epgaed).

(22) European Commission (2024), *Proposal for a Joint Employment Report*, COM(2024) 701 final, Strasbourg, p.96. Dependent self-employed are those workers who worked during the last 12 months for only one or dominant client, and this client decided about their working hours — see Eurostat (2018), Statistics explained: self-employment statistics.

(23) Calculations based on Eurostat (online data code: lfsa_egaps).

(24) Eurostat (2013), *European Statistics on Accidents at Work (ESAW) — Summary methodology*, Publications Office of the European Union, Luxembourg.

Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

SDG 9 calls for building resilient and sustainable infrastructure and promotes inclusive and sustainable industrialisation. It also recognises the importance of research and innovation for finding solutions to social, economic and environmental challenges.

Research and development (R&D), innovations, and sustainable industries and infrastructures are key to achieving the SDGs. Monitoring SDG 9 in an EU context focuses on elements such as R&D intensity and personnel, patent applications, the air emissions intensity of industry, and the use of different transport modes by passengers and for freight. Over the five-year period assessed in this report, the EU has experienced strong progress in many of these indicators. However, there have also been recent unfavourable trends. The EU's R&D intensity has experienced ups and downs since 2018, and the EU is not on track to reach its respective 2030 target. Additionally, the shares of more environmentally friendly transport modes for both freight and passengers are still below pre-pandemic levels.

Indicators measuring progress towards SDG 9, EU

Indicator	Period	Annual growth rate	Assessment	More info
R&D and innovation				
Gross domestic expenditure on R&D ◎	2008–2023	Observed: 1.2 % Required: 2.2 %	↘	page 165
	2018–2023	Observed: 0.6 % Required: 2.7 %	↘	
Patent applications to the European Patent Office	2011–2024	1.3 %	↑	page 167
	2019–2024	0.6 %	↗	
R&D personnel	2008–2023	2.7 %	↑	page 168
	2018–2023	2.6 %	↑	
Tertiary educational attainment (*) ◎	2009–2024	Observed: 2.3 % Required: 1.8 %	↑	SDG 4, page 86
	2019–2024	Observed: 2.2 % Required: 1.2 %	↑	
Sustainable industry				
Air emissions intensity of industry	2008–2022	– 4.2 %	↑	page 169
	2017–2022	– 3.0 %	↑	
Gross value added in environmental goods and services sector (*)	2007–2022	5.3 %	↑	SDG 12, page 223
	2017–2022	8.1 %	↑	
Sustainable infrastructure				
Share of buses and trains in inland passenger transport	2007–2022	– 0.3 %	↘	page 171
	2017–2022	– 0.7 %	↘	
Share of rail and inland waterways in inland freight transport	2008–2023	– 1.1 %	↓	page 172
	2018–2023	– 2.4 %	↓	
Share of households with high-speed internet connection (*) ◎	Time series too short for long-term assessment		✕	SDG 17, page 307
	2019–2023	Observed: 11.9 % Required: 6.4 %	↑	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.
(*) Multi-purpose indicator.

Policy context

R&D and innovation

The new European Research Area (ERA) aims to build a single, borderless area for research, innovation and technology. The Council Recommendation on a Pact for Research and Innovation in Europe reaffirmed the EU's long-standing objective of increasing its R&D intensity to 3 % of GDP and outlines the long-term vision for the ERA. The ERA Policy Agenda 2022–24 translated the vision into 20 tangible actions. The Commission's proposal for a Council Recommendation on the next ERA Policy Agenda 2025–2027 sets out 11 longer-term 'structural policies' and eight short-term 'ERA actions' to strengthen the ERA.

The EU research and innovation programme Horizon Europe supports researchers and innovators to drive the systemic changes needed to ensure a green, healthy and resilient Europe. The New European Innovation Agenda (2022) aims to position Europe at the forefront of the new wave of deep tech innovation and startups.

The Competitiveness Compass (2025) places innovation at the core of Europe's renewal. It outlines key flagship measures for 2025–2026, including the Startup and Scale-up Strategy, the European Innovation Act, the European Research Area Act, the Life Science Strategy, the Biotech Act and the Bioeconomy Strategy.

The Recovery and Resilience Facility under its 'Smart, sustainable and inclusive growth' pillar promotes entrepreneurship, competitiveness, industrialisation and reindustrialisation, digitalisation of businesses and digital connectivity.

Sustainable industry

The Clean Industrial Deal (2025) is the EU's new plan for competitiveness and decarbonisation. It aims to turn decarbonisation into a driver of growth for European industries, by lowering energy prices and by creating quality jobs and the right conditions for companies to thrive.

The Green Deal Industrial Plan (2023) seeks to enhance the competitiveness of Europe's net-zero industry and support the fast transition to climate neutrality. The Net-Zero Industry Act (2023) aims to enhance the manufacturing capabilities of net-zero technologies in Europe.

Sustainable infrastructure

The Sustainable and Smart Mobility Strategy put forward an action plan to make all transport modes more sustainable, smart and resilient. The Automotive Industrial Action Plan will support the entire automotive industry's transition to sustainable mobility while ensuring its international competitiveness and maintaining a strong European production base.

The Trans-European Transport Network (TEN-T) policy, supported by the Connecting Europe Facility (CEF), aims to build an effective, EU-wide and multimodal network of roads, railway lines, inland waterways, ports, airports and rail-road terminals. The initiative also seeks to mitigate the environmental and climate impacts of transport while enhancing the network's safety and resilience. The Action Plan to boost long-distance and cross-border passenger rail aims to put the transport sector on track to cut its emissions while increasing connectivity across Europe.

The Digital Decade policy programme 2030 outlines Europe's digital transformation and sets the target of ensuring gigabit network coverage for all households by 2030.

Overview and key trends

R&D and innovation

Research and development (R&D) expenditure is a key enabling factor for smart, sustainable and inclusive growth. Introducing new ideas to the market promotes job creation, labour productivity and efficient use of resources. Highly skilled human resources are imperative for keeping the EU's research and innovation capacity and competitiveness up to date and for supporting the digital and green transitions. Innovative products and services — often the result of R&D activities — contribute to smart growth and sustainable industrialisation. R&D and innovation are also essential for finding solutions to societal and environmental challenges such as climate change and clean energy, public security or health protection and promotion.

Growth in EU expenditure on R&D has so far been insufficient to reach 3 % of GDP by 2030

The EU economy is facing increasing global competition and can only preserve its competitiveness by strengthening its scientific and technological base. Therefore, one of the key aims of EU policy over recent decades has been to encourage greater investment in R&D. This is monitored here by looking at gross domestic expenditure on R&D as a percentage of gross domestic product (GDP), referred to as R&D intensity, which reflects both growth in spending on R&D and growth in GDP.

2.24%
of GDP was spent on R&D in the EU in 2023

Despite the EU's long-standing 3 % target, the EU's R&D intensity has grown only modestly over the past two decades. After prolonged stagnation between 2000 and 2007, the EU's R&D intensity increased slowly, reaching 2.28 % in 2020. It declined again slightly in the following years and stood at 2.24 % in 2023. This corresponded to an R&D expenditure of about EUR 386 billion (1). In absolute terms, expenditure in 2023 was higher than in previous years, suggesting that the recent decline in R&D intensity is a result of GDP growth outpacing growth in R&D expenditure. With a gap of 0.76 percentage points, the EU remains at some distance from its ambition of raising R&D expenditure to 3 % of GDP by 2030.

Business expenditure accounts for two-thirds of total R&D expenditure

An analysis of gross domestic expenditure on R&D by sector of performance shows that the two biggest spenders in 2023 remained the business enterprise sector (66.7 % of total R&D expenditure) and the higher education sector (21.2 %). The share of the government sector was 10.7 %, while the private non-profit sector accounted for only 1.4 % of total R&D expenditure (2).

The business enterprise sector has increased its R&D expenditure over the past 15 years, from 1.18 % of GDP in 2008 to 1.49 % in 2023. Simultaneously the higher education sector increased its R&D expenditure from 0.42 % of GDP in 2008 to 0.48 % in 2023. In contrast, the government sector's R&D expenditure has more or less stagnated at levels around 0.25 % of GDP. The R&D expenditure of the private non-profit sector remained at a very low level, amounting to 0.03 % of GDP in 2023.

The number of patent applications to the European Patent Office has grown

Patent applications provide a valuable measure of the creative and innovative capacity of countries, regions and companies, and of the economic exploitation of research results. In 2024, 70 204 patent applications from within the EU were submitted to the European Patent Office. This is a 17.5 % increase compared with 2011, when 59 733 applications were submitted. The number

of applications has increased almost continuously since 2011. However, the pace of the development has slowed in recent years, with applications growing only 3.3 % between 2019 and 2024. In relation to population size, the highest number of patent applications in 2024 were submitted by inventors from Denmark, Sweden and the Netherlands, with 431, 405 and 389 applications per million inhabitants, respectively.

70 204

patent applications from within the EU were submitted to the European Patent Office in 2024

The availability of human capital for a knowledge-based society is growing, but gender disparities remain

The growing knowledge orientation of the EU's economy and society, together with developments in the labour market and demographic trends, make highly skilled human capital increasingly important. Achieving the SDGs will require ambitious investments in research and development (R&D) and significant innovation, as well as further investment in skills development and in lifelong learning ([3]).

R&D personnel consists of researchers engaged directly in R&D and the people providing direct services for R&D activities (such as R&D managers, administrators, technicians and clerical staff) ([4]). The share of R&D personnel in the labour force has increased steadily since 2008, rising from 1.04 % to reach 1.56 % in 2023 (full-time equivalent). This trend was mainly driven by the business enterprise sector, which employed about 60 % of the R&D workforce in 2023 ([5]).

1.56 %

of the economically active population in the EU worked in R&D in 2023

An analysis by sex, however, reveals that women remain considerably underrepresented among researchers in the EU, accounting for only 33.7 % in 2021. This underrepresentation is particularly strong in the business enterprise sector, where women only made up 22.4 % of researchers in 2021. In contrast, women accounted for more than 40 % of researchers in the other three sectors (government, higher education and the non-profit sector), with the private non-profit sector achieving parity at 50.5 % in 2021 ([6]).

Regarding skills, data show a general long-term increase in tertiary educational attainment of the EU population. Between 2009 and 2024, the share of 25- to 34-year-olds with a university degree or similar increased from 31.2 % to 44.2 %. The EU is therefore well on track to reach its target of raising this share to at least 45 % by 2030, as set out in the Council Resolution from 2021 on the European Education Area. However, differences between the sexes remain considerable, and when compared with the situation for R&D personnel, the gender imbalance is reversed. While 49.9 % of women aged 25 to 34 years had accomplished tertiary education in 2024, only 38.7 % of men in this age group had done so. This gender gap has been widening almost continuously since 2009. For further details on tertiary education and the gender gap, see the chapters on SDG 4 'Quality education' and SDG 5 'Gender equality' on pages 75 and 91.

44.2 %

of the EU population aged 25 to 34 had accomplished tertiary education in 2024

Sustainable industry

Mobilising industry for a clean and circular economy is one of the key priorities of the European Green Deal, which seeks to support and accelerate the EU's industry transition to a sustainable model of inclusive growth. This requires a massive reduction in harmful air emissions from industrial production alongside increased use of greener products and services (also see the chapter on SDG 12 'Responsible consumption and production' on page 211).

The air emissions intensity of EU industry has continued to improve in recent years

Industry is vital for Europe's prosperity and future development. The EU industrial sector accounts for more than 20 % of the EU economy and employs about 35 million people ([7]). However, industry is also a source of many environmental pressures such as material consumption and the emission of greenhouse gases and other air pollutants. This analysis focuses on air pollutants emitted by industry, using particulate matter emissions from manufacturing as a proxy.

14.3 %
improvement in the manufacturing sector's emissions intensity of fine particulate matter between 2017 and 2022

Poor air quality causes premature deaths, impacts quality of life and damages ecosystems ([8]). Particulate matter, especially fine particulate matter ($PM_{2.5}$), is one of the most harmful components of air pollution for human health ([9]). Exposure to air pollution by $PM_{2.5}$ caused about 239 000 premature deaths in the EU in 2022 (see the chapters on SDG 3 'Good health and well-being' and on SDG 11 'Sustainable cities' on pages 55 and 195). In 2022, the EU's manufacturing sector was responsible for about a fifth (19.7 %) of total $PM_{2.5}$ emissions. In comparison, in the same year, more than a third (36.4 %) of total $PM_{2.5}$ emissions could be attributed to transportation and storage, and almost a quarter (23.3 %) to agriculture, forestry and fishing ([10]).

Data on emissions intensity are used to monitor a sector's air emissions relative to its economic output in terms of gross value added (GVA). Between 2008 and 2022, the EU's manufacturing sector's $PM_{2.5}$ air emissions intensity dropped by 45.5 %, from 0.11 grams per euro to 0.06 grams per euro. This improvement is a result of the sector's $PM_{2.5}$ emissions falling by 35.8 % between 2008 and 2022 while its GVA grew by 21.5 % ([11]). The decline in industrial emissions of air pollutants can be partly attributed to European regulation, advancements in energy efficiency and abatement technologies, and the relocation of heavy polluting industries outside Europe ([12]).

Between 2017 and 2022, $PM_{2.5}$ emissions from manufacturing decreased by 10.1 %, alongside a 9.8 % increase in the sector's GVA ([13]). This resulted in a 14.3 % improvement in the sector's emissions intensity over this most recent five-year period. More recently, between 2020 and 2022, the recovery from the COVID-19 pandemic initially led to an increase in the sector's $PM_{2.5}$ emissions, but they returned to the pre-pandemic trend and decreased slightly in 2022. The sector's emissions intensity for the broader group of fine and coarse particulate matter (PM_{10}) have experienced a similar trend over the past 15- and five-year periods, decreasing by 50.0 % between 2008 and 2022 and by 20.0 % between 2017 and 2022.

Gross value added of the environmental goods and services sector has grown strongly

462.8
billion EUR of gross value added were generated by the EU's environmental goods and services sector in 2022

The EU's updated New Industrial Strategy for Europe strives for a greener industry. Products and services that, for instance, prevent or limit environmental pollution, repair and correct resource depletion or protect biodiversity may contribute to a so-called green economy. These kinds of environmental goods and services (EGSS) are gaining in importance. In 2022, they accounted for a gross value added of EUR 462.8 billion. This is a 116 % increase compared with 2007, when the EU's GVA of environmental goods and services amounted to EUR 213.8 billion. In relation to the whole economy, the environmental goods and services sector grew from 1.8 % of GDP in 2007 to 3.3 % in 2022. This indicates the sector grew — in gross value added terms — faster than other economic sectors.

Employment (in full-time equivalent) in the sector has also increased since 2007, by 88.3 %.

In 2022, the sector employed slightly more than 6.6 million people in the EU ([14]). The development is related to multiple factors, which, among other things, include growth in private investments in environmental goods and services, encouraged by increasing government interventions in this area ([15]).

Sustainable infrastructure

The European Green Deal aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy. To achieve this vision, the EU needs to address the twin challenges of the green and the digital transitions. In this context, the Green Deal calls for an acceleration in the shift to sustainable and smart mobility, and for investment in digitalisation to support the green transition. Multimodal and energy-efficient freight transport as well as automated and connected multimodal mobility will consequently need to play an increasing role, together with smart traffic management systems enabled by digitalisation.

Use of public transport has recovered considerably since the end of the pandemic

16.6%
of passenger-km in the EU were covered by buses and trains in 2022

Well-functioning and efficient transport and mobility systems are key elements for a competitive economy. Growth in transport activities puts increasing pressure on natural resources and on societies. Emissions of greenhouse gases, air pollutants and noise from transport affect the climate, the environment and human health. Because the transport sector is responsible for about one-quarter of greenhouse gas (GHG) emissions in the EU (see the chapter on SDG 13 'Climate action' on page 227), sustainable transport is an essential ingredient in sustainable development strategies. Rethinking future mobility includes optimising the use of all means of transport, promoting car sharing and the integration between different modes of collective transport such as trains and buses.

The modal share of buses and trains in inland passenger transport in the EU had remained quite stable in the period 2000 to 2019 and accounted for 17.5 % of passenger-km in 2019 ([16]). With the onset of the COVID-19 pandemic, however, this share fell significantly, reaching a low of 13.0 % in 2020 and seeing only small improvements in 2021. With the recovery from the pandemic, the modal share of buses and trains bounced back to almost pre-pandemic levels, reaching 16.6 % in 2022. Conversely, the share of passenger-km covered by cars — which remains by far the dominant mode for inland passenger transport — increased from 82.5 % in 2019 to 87.0 % in 2021 and dropped back to 83.4 % in 2022 ([17]).

The EU's freight transport system still relies heavily on road transport

21.9%
of freight tonne-km in the EU was carried out via rail and inland waterways in 2023

Despite the EU policy objective of shifting freight from road to rail and inland waterways, road continues to have by far the largest share in EU freight transport among the three inland transport modes analysed in this report (road, rail and inland waterways). Since 2012, the share of rail and inland waterways in total freight transport in the EU has declined almost continuously. It accounted for 21.9 % in 2023, which is a new low in the time series and corresponds to a 4.6 percentage point decrease compared with the peak of 26.5 % in 2012. In the short-term, the share of rail and inland waterways fell by 2.8 percentage points between 2018 and 2023, mainly due to declining shares of rail transport.

Considerable differences do exist at the country level. In 2023, the Netherlands, Romania and Latvia were the only Member States reporting shares for rail and inland waterways above 40 %. Notably, in all Member States, more freight was transported by road than by rail or inland waterways. Looking

at the transport modes separately, the highest shares of rail transport were reported from the Baltic countries Latvia (44.0 %) and Lithuania (39.1 %). In the Netherlands, freight transport via inland waterways still plays an important role, with a modal split of 40.9 % in 2023.

Considerable progress has been made in rolling out fixed very high capacity network connections across the EU

78.8 %
of EU households had high-speed internet coverage in 2023

Digital connections are crucial for today's economies and societies. Instant communication between individuals, bank transfers, office work, public dissemination of information, or data analysis are only some of the activities that depend on the internet. Especially in rural and remote areas, fast internet connection can significantly improve access to various services such as health care and education. Regions without fast internet connections have serious social and economic disadvantages in a digitalised world. The Digital Decade policy programme thus proposed the target that by 2030 all European households should be covered by a gigabit network, with all populated areas covered by 5G.

Data collected by the European Commission services for monitoring the key performance indicators of the Digital Decade show that the uptake of fixed very high capacity network (VHCN) connectivity — referring to fibre connections or other networks offering similar bandwidth ([18]) — has improved considerably in the EU over the past few years. While just about half (50.3 %) of EU households had access to such connectivity in 2019, this share has risen considerably, reaching 78.8 % of households in 2023. The EU has thus made strong progress towards its target of 100 % coverage by 2030. VHCN connectivity has also improved in rural areas ([19]). Between 2019 and 2023, the share of rural households with fixed VHCN connection increased from 21.0 % to 55.7 % across the EU. Despite this positive development, VHCN connectivity in rural areas remains at some distance from the 2030 target. In addition, basic digital skills for all citizens (see the chapter on SDG 4 'Quality education' on page 75) are a general prerequisite for ensuring they benefit from digital developments ([20]).

Main indicators

Gross domestic expenditure on R&D

This indicator measures gross domestic expenditure on R&D (GERD) as a percentage of gross domestic product (GDP) — also called R&D intensity. The OECD's Frascati Manual on collecting R&D data defines research and experimental development (R&D) as creative and systematic work undertaken to increase the stock of knowledge — including knowledge of humankind, culture and society — and to devise new applications of available knowledge.

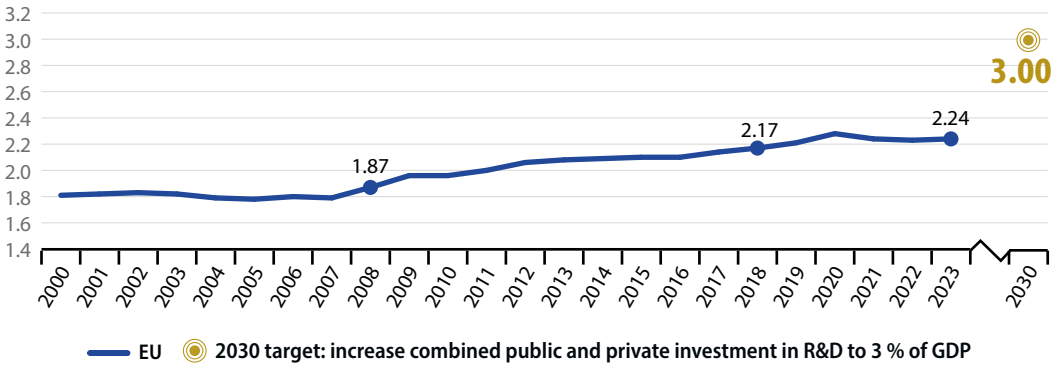
LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 9.1

Gross domestic expenditure on R&D, EU, 2000–2023

(% of GDP)

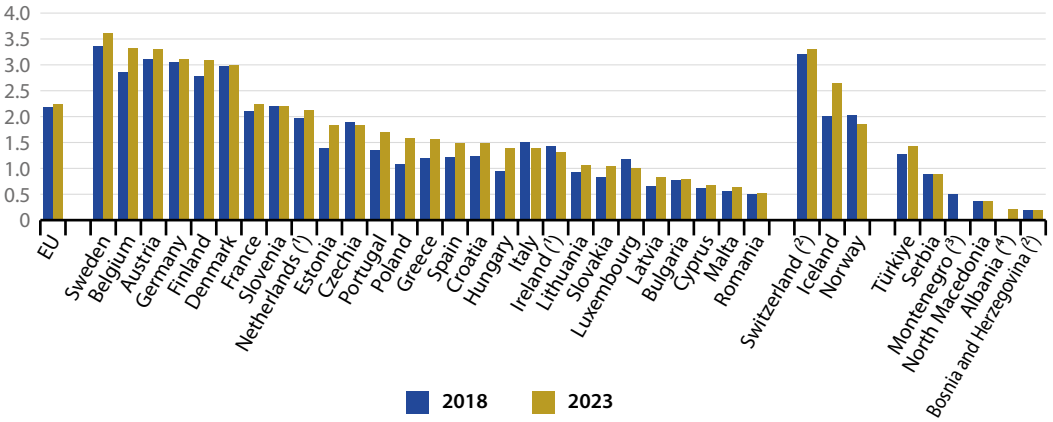


Note: Estimated data.
Source: Eurostat (online data code: sdg_09_10)

FIGURE 9.2

Gross domestic expenditure on R&D, by country, 2018 and 2023

(% of GDP)



Note: 2023 data are provisional data and/or estimated for many countries.
(1) Break(s) in time series between the two years shown.
(2) 2019 and 2021 data.
(3) No data for 2023.
(4) 2022 data (instead of 2023); no data for 2018.

Source: Eurostat (online data code: sdg_09_10)

Patent applications to the European Patent Office

This indicator measures requests for the protection of an invention filed with the European Patent Office (EPO) regardless of whether they are granted or not. Applications are allocated according to the country of residence of the inventor.

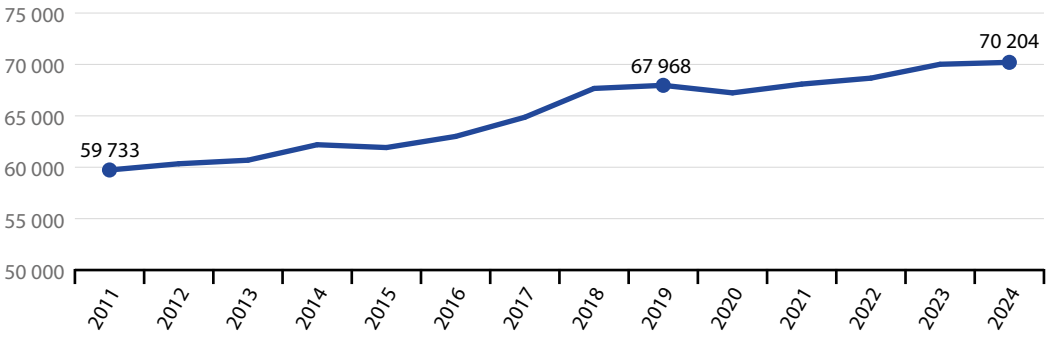
LONG TERM 2011–2024

SHORT TERM 2019–2024

FIGURE 9.3

Patent applications to the European Patent Office (EPO), EU, 2011–2024

(number)



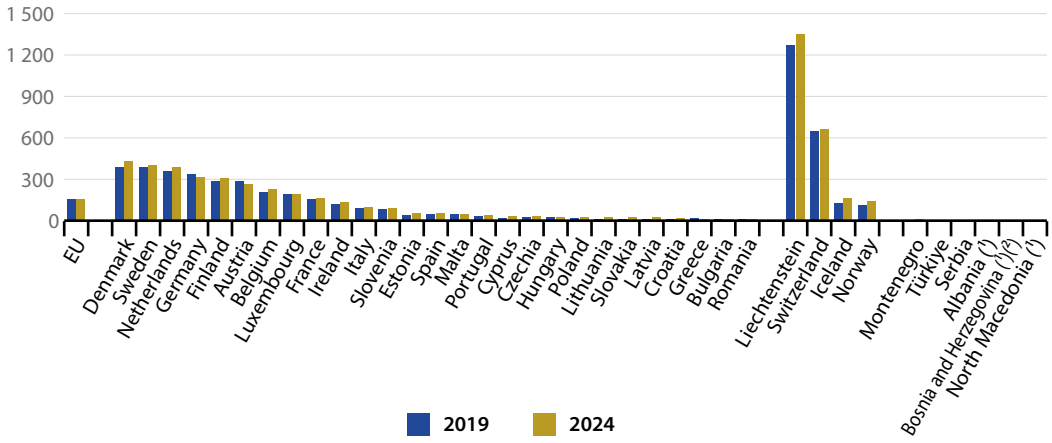
Note: 2024 data are provisional.

Source: EPO (Eurostat online data code: sdg_09_40)

FIGURE 9.4

Patent applications to the European Patent Office (EPO), by country of inventor, 2019 and 2024

(per million inhabitants)



Note: 2024 data are provisional.
(1) 2023 data (instead of 2024).
(2) 2018 data (instead of 2019).

Source: EPO, Eurostat (online data code: sdg_09_40)

R&D personnel

LONG TERM 2008–2023

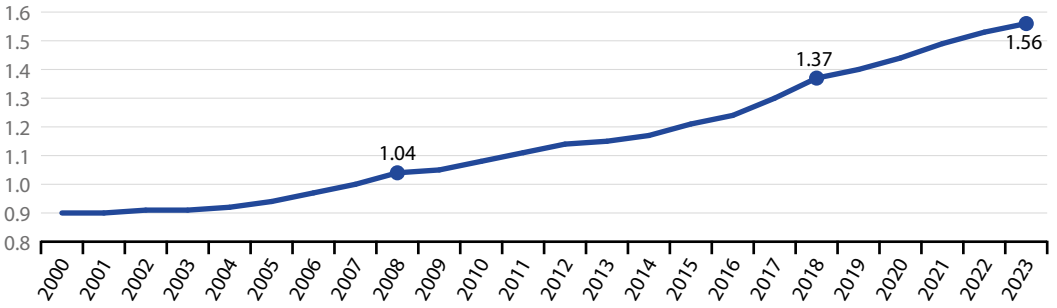
SHORT TERM 2018–2023

This indicator measures the share of R&D personnel in the following institutional sectors: business enterprise, government, higher education and private non-profit. Data are presented in full-time equivalents as a share of the labour force. R&D personnel consists of persons engaged directly in R&D, which refers to the creative and systematic work undertaken to increase the stock of knowledge, including knowledge of humankind, culture and society, and to devise new applications of available knowledge. In addition, R&D personnel also includes those providing direct services for the R&D activities, such as R&D managers, administrators, technicians and clerical staff.

FIGURE 9.5

R&D personnel, EU, 2000–2023

(% of population in the labour force)



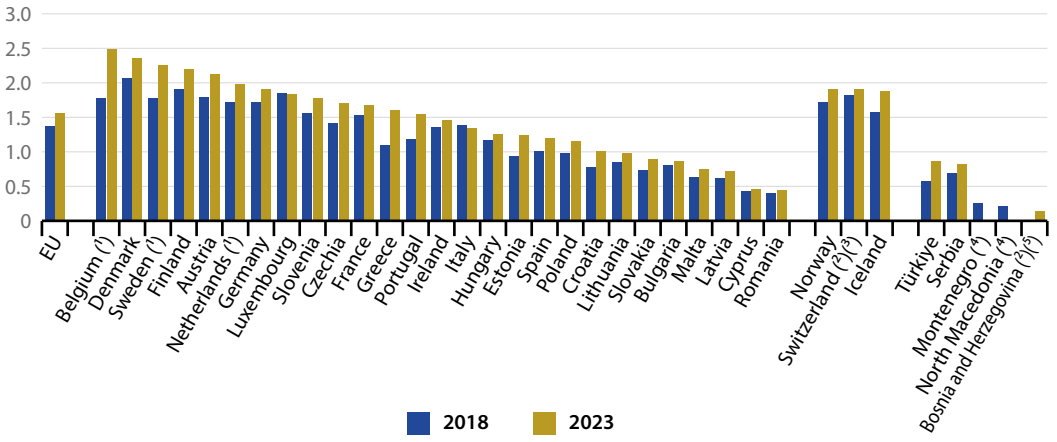
Note: Estimated data.

Source: Eurostat (online data code: sdg_09_30)

FIGURE 9.6

R&D personnel, by country, 2018 and 2023

(% of population in the labour force)



Note: 2023 data are provisional and/or estimated for many countries.
(1) Break(s) in time series between the two years shown.
(2) 2021 data (instead of 2023).
(3) 2019 data (instead of 2018).
(4) No data for 2023.
(5) No data for 2018.

Source: Eurostat (online data code: sdg_09_30)

Air emissions intensity of industry

This indicator measures the emissions intensity of particulate matter (PM_{10} and $PM_{2.5}$) from the manufacturing sector (NACE Rev. 2 sector 'C'). Air emissions are defined as flows of gaseous and particulate materials emitted into the atmosphere. Fine and coarse particulates (PM_{10}) are less than 10 micrometres in diameter and can be carried deep into the lungs, where they can cause inflammation and exacerbate the condition of people suffering from heart and lung diseases. Fine particulates ($PM_{2.5}$) are less than 2.5 micrometres in diameter and are therefore a subset of the PM_{10} particles. Their negative health impacts are more serious than PM_{10} because they can be drawn further into the lungs and may be more toxic. Emission intensity is calculated by dividing the sector's PM emissions by its gross value added (GVA), which is defined as output (at basic prices) minus intermediate consumption (at purchaser prices).

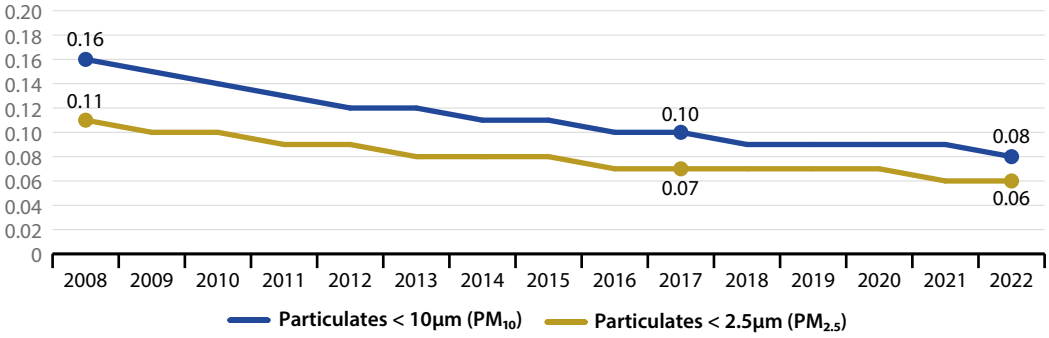
LONG TERM 2008–2022

SHORT TERM 2017–2022

FIGURE 9.7

Air emissions intensity of industry for particulate matter, EU, 2008–2022

(grams per euro, chain-linked volumes, 2010)



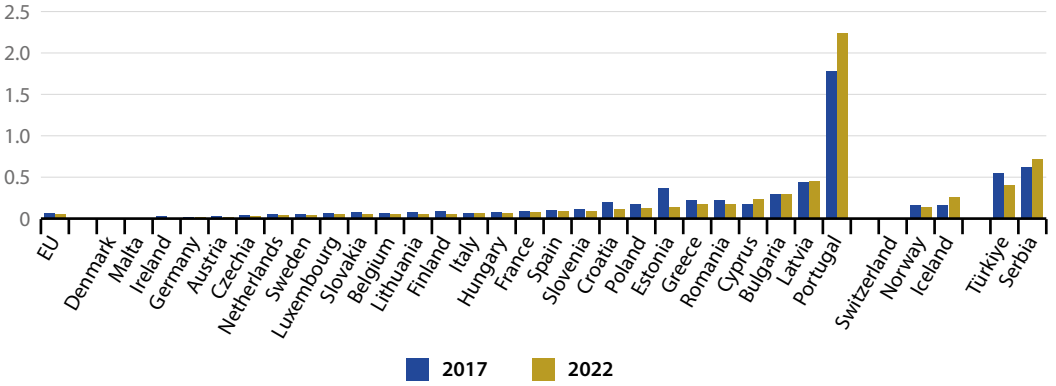
Note: 2008 data are imputed.

Source: Eurostat (online data code: sdg_09_70)

FIGURE 9.8

Air emissions intensity of industry for fine particulate matter ($PM_{2.5}$), by country, 2017 and 2022

(grams per euro, chain-linked volumes, 2010)



Source: Eurostat (online data code: sdg_09_70)

Share of buses and trains in inland passenger transport

This indicator measures the share of buses, including coaches and trolley-buses, and trains in inland passenger transport, expressed in passenger-kilometres (pkm). Passenger transport here includes transport by passenger cars, buses and coaches, and trains, but excludes inland waterways, air and sea transport. All data are based on movements within national territories, in most cases regardless of the vehicle's nationality. Road data stem from a voluntary collection and are not fully harmonised at the EU level. Tram and metro systems are not included because the data collection methodology for these means of transport is not sufficiently harmonised between Member States.

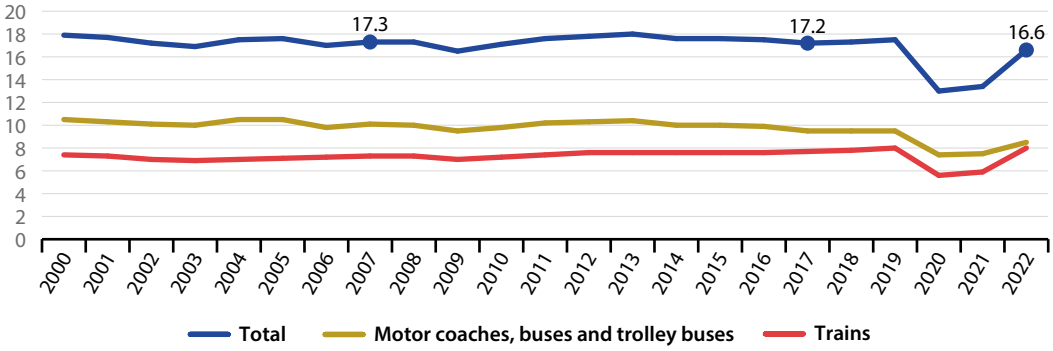
LONG TERM 2007–2022

SHORT TERM 2017–2022

FIGURE 9.9

Share of buses and trains in inland passenger transport, EU, 2000–2022

(% of passenger-km)



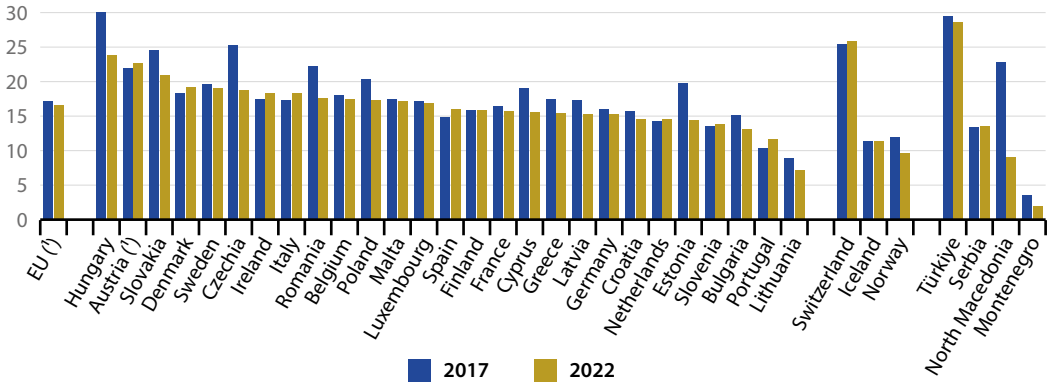
Note: Estimated data; multiple breaks in time series.

Source: Eurostat (online data code: sdg_09_50)

FIGURE 9.10

Share of buses and trains in inland passenger transport, by country, 2017 and 2022

(% of passenger-km)



Note: Estimated data for EU and many countries. (1) Break(s) in time series between the two years shown.

Source: Eurostat (online data code: sdg_09_50)

Share of rail and inland waterways in inland freight transport

LONG TERM 2008–2023

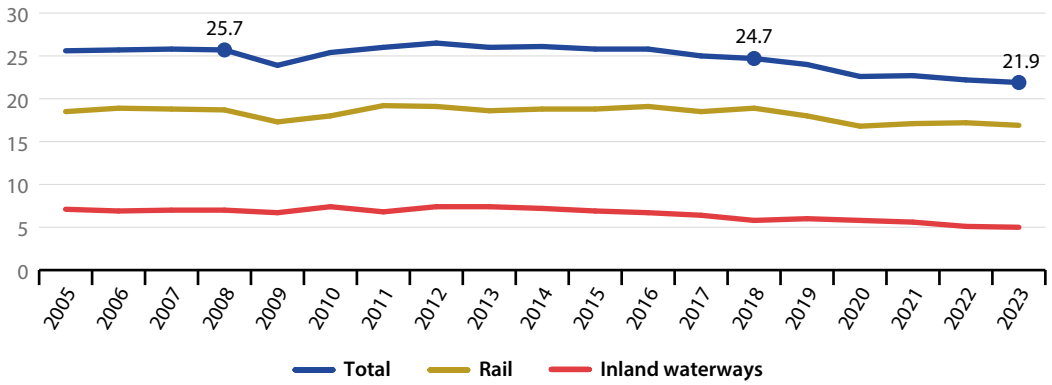
SHORT TERM 2018–2023

This indicator measures the share of rail and inland waterways in inland freight transport, expressed in tonne-kilometres (tkm). Inland freight transport includes road, rail and inland waterways. All data are based on movements on national territory; rail and inland waterways transport are collected based on movements on national territory, regardless of the nationality of the train or vessel. Road transport activity is collected according to the country of registration of the vehicle, regardless of the territory where the activity is performed. The activity is redistributed to the territory where the activity is actually performed by modelling the likely journey itinerary on the European road network. Neither sea nor air freight transport are currently included.

FIGURE 9.11

Share of rail and inland waterways in inland freight transport, EU, 2005–2023

(% of freight tonne-km)

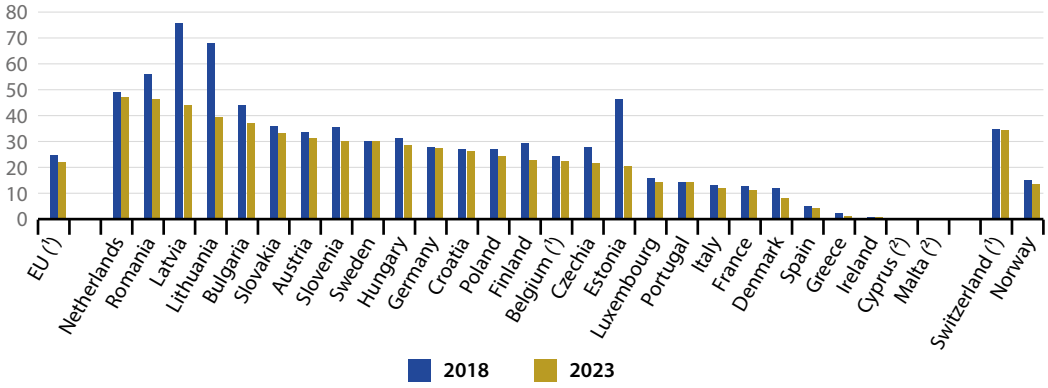


Note: Data for 2005–2008 and 2012–2023 are estimated.
Source: Eurostat (online data code: sdg_09_60)

FIGURE 9.12

Share of rail and inland waterways in inland freight transport, by country, 2018 and 2023

(% of freight tonne-km)



(1) Estimated data.
(2) Not applicable (no rail or inland waterways).

Source: Eurostat (online data code: sdg_09_60)

Notes

(1) *Source*: Eurostat (online data code: rd_e_gerdtot).

(2) Ibid.

(3) International Labour Organization (2021), *World Employment and Social Outlook — Trends 2021*, p. 114.

(4) Eurostat (2024), *Research and development (R&D) — Reference Metadata*.

(5) *Source*: Eurostat (online data code: rd_p_persocc).

(6) *Source*: Eurostat (online data code: rd_p_femres).

(7) European Commission (2020), *A New Industrial Strategy for Europe*, COM(2020) 102 final, p. 2.

(8) European Commission (2024), *Air*.

(9) World Health Organization (2022), *Ambient (outdoor) air pollution*.

(10) *Source*: Eurostat (online data code: env_ac_ainah_r2).

(11) *Source*: Eurostat (online data codes: env_ac_ainah_r2 and nama_10_a10).

(12) European Environment Agency (2024), *Industrial pollutant releases to air in Europe*.

(13) *Source*: Eurostat (online data codes: env_ac_ainah_r2 and nama_10_a10).

(14) *Source*: Eurostat (online data code: env_ac_egss1).

(15) European Environment Agency (2019), *Environmental Goods and Services Sector: employment and value added*.

(16) Tram and metro systems, as well as active modes (walking, cycling), are not included because the data collection methodology for these means of transport is not sufficiently harmonised between Member States.

(17) *Source*: Eurostat (online data code: tran_hv_psmod).

(18) Data until 2018 refer to FTTP (fibre to the premises) only, while data from 2019 onwards refer to both FTTP and DOCSIS 3.1 (Data Over Cable Service Interface Specification). DOCSIS allows adding high-bandwidth data transfer to existing cable television systems.

(19) In the context of the EU's digital agenda scoreboard indicators, rural areas are defined as those with fewer than 100 people per km^2.

(20) European Commission (2021), *2030 Digital Compass: the European way for the Digital Decade*, COM(2021) 118 final, p. 6.

Reduce inequality within and among countries

SDG 10 addresses inequalities within and among countries. It calls for nations to reduce inequalities in income as well as those based on age, sex, disability, race, ethnicity, origin, religion, or economic or other status within a country. The goal also addresses inequalities among countries and calls for support for safe migration and mobility of people.

It is widely agreed that economic prosperity at aggregated levels alone will not achieve social progress. High levels of inequality risk leaving much human potential unrealised, damage social cohesion, hinder economic activity and undermine democratic participation. Leaving no one behind is thus a crucial part of achieving the SDGs. Monitoring SDG 10 in an EU context thus focuses on inequalities within countries, inequalities between countries, and migration and social inclusion. The EU made significant progress on income inequalities within countries over the five-year period assessed. Additionally, the trends in economic disparities between EU countries show a long-term convergence of Member States in terms of GDP and income. The picture is also positive in the area of social inclusion of people with a migrant background, where the EU has made progress in reducing differences in social and labour-market inclusion between home-country nationals and non-EU citizens.

Indicators measuring progress towards SDG 10, EU

Indicator	Period	Annual growth rate	Assessment	More info
Inequalities within countries				
Income quintile share ratio	2010–2023	– 0.3 %	↗	page 185
	2018–2023	– 1.3 %	↑	
Income share of the bottom 40 % of the population	2010–2023	0.1 %	→	page 186
	2018–2023	0.5 %	↗	
Relative median at-risk-of-poverty gap	2010–2023	0.0 %	→	page 187
	2018–2023	– 1.3 %	↑	
Urban–rural gap for risk of poverty or social exclusion (*)	Time series too short for long-term assessment		✕	page 191
	2018–2023	– 41.0 % (1)	↑	
Inequalities between countries				
Disparities in GDP per capita	2009–2024	– 1.1 % (2)	↑	page 188
	2019–2024	– 0.8 % (2)	↗	
Disparities in household income per capita	2008–2023	– 2.7 % (2)	↑	page 189
	2018–2023	– 4.2 % (2)	↑	
Migration, asylum and social inclusion				
Asylum applications	No assessment due to lack of policy targets		✕	page 190
Citizenship gap for risk of monetary poverty after social transfers (*)	2010–2023	– 0.2 % (3)	↗	page 192
	2018–2023	– 1.0 % (3)	↑	
Citizenship gap for early leavers from education and training (*)	2009–2024	– 3.2 % (3)	↑	page 192
	2019–2024	– 3.0 % (3)	↑	
Citizenship gap for young people neither in employment nor in education and training (NEET) (*)	2009–2024	– 2.3 % (3)	↑	page 193
	2019–2024	– 4.4 % (3)	↑	

Indicator	Period	Annual growth rate	Assessment	More info
Citizenship gap for employment rate (*)	2009–2024	1.2 % (3)	↓	page 193
	2019–2024	– 2.0 % (3)	↑	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

(*) Multi-purpose indicator.

(1) Assessment based on evolution of gap between cities and rural areas.

(2) Assessment based on coefficient of variation.

(3) Assessment based on evolution of gap between citizens of reporting EU countries and non-EU citizens.

Policy context

Inequalities within countries

The European Pillar of Social Rights sets out 20 key principles to support fair and well-functioning labour markets and welfare systems and to tackle inequalities.

Under its 'social and territorial cohesion' pillar, the Recovery and Resilience Facility finances reforms and investments to support socially vulnerable groups through, for example, lifelong learning and employment support.

The Just Transition Mechanism supports those who will be most affected by the transition to a climate-neutral society. The Social Climate Fund helps vulnerable households, micro-enterprises and transport users to cope with the price impacts of an emissions trading system on the road transport and building sectors.

The Fund for European Aid to the Most Deprived supports the most vulnerable in society by providing them with food and basic material assistance, complemented by accompanying measures for social inclusion.

The Communication on better assessing the distributional impact of Member States' policies calls for a more systematic assessment of the distributional impacts of planned (or existing) measures on various population groups (including income groups).

The revised European Social Fund Plus (ESF+), with a total budget of EUR 142 billion from the Multiannual Financial Framework 2021–2027, helps to reduce inequalities. The ESF+ contributes to equal opportunities for children, a fair start for young people, more inclusive labour markets, and social integration for more disadvantaged people.

The Commission has committed to making progress towards a Union of Equality and has adopted several strategies and actions since 2020. These include the Gender Equality Strategy 2020–2025, the LGBTIQ Equality Strategy 2020–2025, the EU anti-racism action plan 2020–2025, the EU Roma strategic framework for equality, inclusion and participation, the Strategy for the Rights of Persons with Disabilities 2021–2030, the Strategy on Combating Antisemitism and Fostering Jewish life (2021–2030), and actions to combat anti-Muslim hatred. Moreover, the Communication 'No place for hate: a Europe united against hatred' was adopted in December 2023.

Inequalities between countries

By reducing disparities in the level of development across European regions, the European Regional Development Fund strengthens economic and social cohesion in the EU.

The 2021–2027 EU Cohesion Policy seeks to ensure that all EU regions participate in the green and digital transitions in a fair and territorially balanced way.

Migration, asylum and social inclusion

The European Commission's Pact on Migration and Asylum aims to secure external borders, make procedures faster and more efficient, create an effective system of solidarity and responsibility, and embed migration in international partnerships.

The Action Plan on Integration and Inclusion (2021–2027) supports migrants' inclusion in education and employment, access to health services and affordable housing.

The EU Skills Profile Tool for Third Country Nationals assists displaced persons, migrants and citizens of non-EU countries in profiling their skills and work qualifications to reception, employment and education services.

Overview and key trends

Inequalities within countries

A high level of inequality can harm society in many ways. It can hamper social cohesion, result in lost opportunities for many, hinder economic activity, reduce social trust in institutions, lead to disproportionate exposure to adverse environmental impacts such as climate change and pollution, and undermine democratic participation ([1]). Technological innovation and financial globalisation are some of the many factors driving inequality within countries by favouring people with specific skills or accumulated wealth ([2]). Similarly, the transition to a climate-neutral society will have to be managed well to prevent rising inequality.

The income gap between high-income and low-income households in the EU has narrowed over the past few years

Analysing income distribution is one of the ways inequality within EU countries can be measured. The income quintile share ratio compares the income received by the 20 % of the population who have the highest equivalised disposable income with the income of the 20 % with the lowest equivalised disposable income. The higher this ratio, the bigger the income inequality between the bottom and the top ends of the income distribution. In the EU, this ratio had been decreasing in recent years, falling from 5.22 in the income year 2013 to 4.89 in the income year 2019 ([3]). After a reversal of this trend in the income year 2020, when the ratio rose to 4.99 owing to the impacts of COVID-19, the decline resumed in the income year 2022 with the ratio falling to 4.72. This means that the income of the richest 20 % of the EU households was 4.72 times as much as the income of the poorest 20 %.

In the income year 2022, the income of the richest 20 % of the population in the EU was

4.72

times higher than that of the poorest 20 %

Reflecting the trend in the income quintile share ratio, the income share of the bottom 40 % of the population in the total equivalised disposable income had been increasing between the income years 2013 and 2018, followed by a stagnation and a slight decline in the next two years. However, this was also a temporary reversal, with the indicator showing a marked increase to 21.7 % in the income year 2021 and remaining at this level in the income year 2022. This represents a 0.5 percentage point improvement relative to the income year 2017. It needs to be noted that recent trends in the two income inequality indicators analysed in this report are affected by methodological changes in data collection from 2020 (referring to the income year 2019) onwards in a few Member States ([4]).

21.7 %

was the share of total income earned by the bottom 40 % of the EU population in the income year 2022

Economic inequality affects children's long-term opportunities

Inequality is also particularly concerning for the long-term outcomes and opportunities of children. It puts those affected at a disadvantage from the start and has long-lasting consequences in areas such as education and physical and mental health, thus undermining their development and human potential. To evaluate these disadvantages, indicators on several dimensions of childhood inequality of opportunity, such as income ([5]) and education ([6]), have been developed. Circumstances outside an individual's control, particularly parental background, lead to unequal outcomes in employment opportunities and disposable income. Adults who experienced socioeconomic disadvantage in their childhood

tend to have 20 % lower earnings than those from privileged backgrounds ([7]).

Moreover, there are wide variations between EU Member States regarding the childcare gap, which refers to a period in which families with young children are unable to benefit from childcare leave or a guaranteed place in early childhood care. While some Member States experience no childcare gap (for example, Denmark and Slovenia), others offer a relatively short period of childcare leave and guarantee a place in early childhood care only relatively late in the child's life, at around five years of age (for example, the Netherlands and Ireland). In addition, childcare affordability remains an issue, especially for parents with multiple children or on low incomes ([8]). Children from socio-economically disadvantaged backgrounds are also less likely to participate in early childhood education and care, despite the observed positive benefits this has for such groups. This is particularly the case for children under the age of three years who are at risk of poverty and social exclusion, whose parents do not hold tertiary qualifications, and who live in large families ([9]).

The poverty gap and the at-risk-of-poverty-or-social-exclusion gap between urban and rural areas have narrowed in recent years

Inequality and poverty are closely interrelated. The poverty gap, defined as the distance between the median (equivalised disposable) income of people at risk of poverty and the poverty threshold (set at 60 % of the national median equivalised disposable income after social transfers), has decreased since 2018 ([10]), showing significant progress in the short run. In 2023, this gap amounted to 23.0 % in the EU, which means the median income of those below the poverty threshold was 23.0 % lower than the poverty threshold itself. This is a 1.5 percentage point narrowing of the gap since 2018, representing a significant short-term improvement in the 'depth' of monetary poverty in the EU. The long-term trend is characterised by an increase in the gap between 2010 and 2016, followed by a decrease that resulted in the poverty gap in 2022 and 2023 falling back to the levels seen in 2010.

The median distance from the poverty threshold for those at risk of poverty in 2023 was

23.0 %

In 2023, 21.3 % of the EU population were at risk of poverty or social exclusion ([11]). However, this rate differs between cities and rural areas. At the EU level, people living in rural areas used to have a higher at-risk rate than those living in cities. However, due to a strong decrease in the risk of poverty or social exclusion in rural areas, the urban–rural gap has narrowed in recent years and the situation even reversed in 2023, with the rate for cities being slightly higher than for rural areas. In this year, the urban–rural gap in the at-risk-of-poverty-or-social-exclusion rate amounted to 0.2 percentage points, with 21.6 % of people living in cities being in this situation, compared with 21.4 % of people in rural areas. This represents a 2.6 percentage point decrease in the gap compared with 2018, which is the result of a 2.8 percentage point decrease in the rate for rural areas combined with a 0.2 percentage point increase for cities. Overall, at the EU level, the lowest share of people at risk of poverty or social exclusion was observed in towns and suburbs, with 21.0 % of people at risk in 2023.

The share of people at risk of poverty or social exclusion in rural areas was

0.2

percentage points lower than in cities in 2023

However, the overall EU figures mask the full scope of the broad variations in gaps among Member States. Rural poverty remains extremely high in some European countries, such as Bulgaria and Romania, where 39.3 % and 45.1 % of the rural population were at risk of poverty or social exclusion in 2023. This amounted to an urban–rural gap of 17.3 and 26.6 percentage points in these two countries, respectively. However, while rural areas generally tend to be at a higher risk of poverty due to out-migration and limited access to services, infrastructure, labour markets and educational opportunities ([12]), this is not the

case in all Member States. A total of 11 Member States reported higher poverty rates in cities than in rural areas in 2023, of which Austria, Belgium, Germany and France reported a gap higher than five percentage points.

There also exist large regional variations within the Member States, with more than 30 % of the population in numerous regions in Spain, Italy, Greece, Romania and Bulgaria being at risk of poverty ([13]). Specifically, certain minorities such as Roma are at a much higher risk of monetary poverty. As of 2021, 80 % of Roma were at risk of monetary poverty, with their situation remaining unchanged since 2016. Moreover, 48 % of Roma were living in severe material deprivation in 2021, a reduction of 14 percentage points compared with 2016. Roma children under the age of 18 are particularly affected by poverty, with 83 % of those being at risk of poverty and 54 % living in households with severe material deprivation in 2021. This further adds to the vulnerability of the Roma population ([14]).

The gap between high-income and low-income population groups extends to their carbon and environmental footprints

In recent years, research has increasingly pointed to an inequality in greenhouse gas (GHG) emissions between high-income and low-income population groups, highlighting that poorer population groups contribute less to overall GHG emissions and thus to the climate crisis. As such, several studies have tried to quantify the amount of CO_2 emitted by individuals in order to compare the shares emitted by different income groups. The Oxfam Carbon Inequality in 2030 report, for instance, makes rough estimates based on the World Inequality Database and national consumption emissions assuming an income-dependent consumption behaviour. The researchers call on the EU to address carbon inequality while striving to reach the 2030 GHG emission target. The European Commission Joint Research Centre developed a methodology to convert household expenditures to consumption (carbon and other environmental) footprints. The study finds that the consumption footprint of high-income households is mainly driven by the consumption of food, mobility and housing, whereas for lower income groups the consumption footprint for food and housing prevails with mobility playing a much smaller role.

Inequalities between countries

We live in an interconnected world, where problems and challenges — such as poverty, climate change or migration — are rarely confined to one country or region. Therefore, reducing inequalities between countries is important, not only from a social cohesion perspective, but also as a prerequisite for solving many interdependent problems. Cohesion between Member States is one of the EU's objectives, as mentioned in the Treaty on European Union (article 3.3).

Economic disparities between EU countries in terms of GDP and household income have fallen notably in recent years

GDP per capita between Member States varied by

38.0 %

in 2024

Not only have economic performance, incomes and living standards improved across the EU as a whole over time, they have also converged between countries. A way to measure such conversion is by looking at the coefficient of variation, expressed as the ratio of the standard deviation to the mean (in %). A lower coefficient of variation indicates less disparities between Member States. The two indicators used to measure this convergence show that inequalities between EU countries have decreased over the 15-year period assessed.

The coefficient of variation in gross domestic product (GDP) per capita — expressed in purchasing power standards (PPS) — shows that economic disparities between Member States have narrowed since 2000, reaching 38.0 % in 2024. Most of this convergence took place in the period leading up to the 2008 economic crisis and

between 2015 and 2019. The development since 2019 has been less clear, showing an increase in economic disparities between countries during the COVID-19 crisis in 2020 and 2021, followed by a decrease in 2022 and 2023 and a stagnation in 2024. Overall, the EU coefficient of variation fell slightly by 1.6 percentage points between 2019 and 2024, reaching 38.0 % in 2024. The long-term trend has been more favourable, showing a 6.6 percentage point reduction in the EU coefficient of variation. At Member State level, purchasing power adjusted GDP per capita ranged from 66 % of the EU average in Bulgaria to 241 % in Luxembourg in 2023.

While GDP per capita is used to measure a country's economic performance, adjusted gross household disposable income provides an indication of the average material well-being of people. Gross household disposable income reflects households' purchasing power and ability to invest in goods and services or save for the future, by taking into account taxes, social contributions and in-kind social benefits.

Household disposable income across the EU varied by

21.2 %

in 2023

The coefficient of variation in gross household disposable income between Member States has fallen significantly over time, reaching 21.2 % in 2023. This figure is 5.1 percentage points lower than in 2018 and a 11.0 percentage point improvement since 2008.

However, a clear north–south and west–east divide is evident when looking at the geographical distribution of GDP per capita and household income (from national accounts) in the EU. Citizens living in northern and western European countries with above-average GDP per capita levels had the highest gross disposable income per capita. At the other end of the scale were eastern and southern EU countries, which displayed gross household disposable incomes and GDP per capita levels below the EU average.

Migration, asylum and social inclusion

The Syrian conflict, unstable situations in Afghanistan and some African countries, crises in several Latin American countries such as Venezuela, Colombia, Honduras and Nicaragua, and the war in Iraq have contributed to an unprecedented surge of migration into the EU over the past few years. Russia's invasion of Ukraine has led to a mass movement of people fleeing the war to seek temporary protection in the EU. The successful integration of migrants is decisive for the future well-being, prosperity and cohesion of European societies. To ensure the social inclusion of immigrants and their children, it is essential to strengthen the conditions that will enable their participation in society, including their active participation in education and training and their integration into the labour market. Successful integration of migrants into the EU labour force has the potential to slow the ongoing trend of population ageing and to address skills shortages.

The number of asylum applications in the EU fell in 2024

The urge to seek international protection is one of the main reasons why people cross borders. In 2024, the EU received 911 940 first-time asylum applications, which is 13 % lower than in 2023 but still more than twice as high as the pandemic-related low in 2020 ([15]). Around 387 600 people were granted protection status in the first instance in the EU in 2024, which is 8 % more than in 2023 ([16]).

2 030

first-time asylum applications per million inhabitants were submitted in the EU in 2024

In relation to population size, these numbers equal 2 030 first-time asylum applications and 863 positive first-instance decisions per million EU inhabitants in 2024. Cyprus and Greece received the highest numbers of asylum applications relative to population size across Member States,

with around 7 000 and 6 600 applications per million inhabitants in 2024, respectively. Overall, of the 911 940 first-time asylum applications the EU received in 2024, around 16 % were lodged by Syrians, and 8 % each by asylum seekers from Venezuela and Afghanistan ([17]).

In addition to asylum applications, the Council Decision of March 2022 enabled non-EU citizens fleeing Ukraine as a consequence of the Russian invasion on 24 February 2022 to receive immediate and temporary protection. At the end of January 2025, nearly 4.3 million displaced people were still beneficiaries of this temporary protection in the EU. Germany and Poland hosted the highest absolute number of beneficiaries, providing temporary protection to around half of all beneficiaries in the EU ([18]).

Despite improvements in recent years, the social inclusion of non-EU citizens remains a challenge

The social integration of migrants is monitored here by comparing the situation of non-EU citizens with citizens of EU countries that reside in their home country — referred to as 'home-country nationals' in this publication — in the areas of poverty, education and the labour market. In all these areas, people from outside the EU fare less well than EU nationals. However, short-term trends have been clearly favourable, with the gap between home-country nationals and non-EU citizens narrowing strongly in all areas monitored here.

The monetary poverty rate for non-EU citizens was

22.5

percentage points higher than for home-country nationals in the EU in 2023

Trends in the citizenship gap for people at risk of monetary poverty after social transfers show that between 2018 and 2023, poverty rates have moderately improved for EU home-country nationals with a 1.2 percentage point improvement compared with 2018, while a stronger improvement of 2.3 percentage points was observed for non-EU citizens over the same period. This has contributed to the narrowing of the gap between the two groups by 1.1 percentage points since 2018. Still, this gap remains large, with 36.6 % of non-EU citizens being at risk of monetary poverty (after social transfers) in 2023, compared with 14.1 % of home-country nationals.

The employment rate for non-EU citizens was

12.5

percentage points lower than for EU home-country nationals in 2024

Between 2019 and 2024, the employment rate for EU home-country nationals aged 20 to 64 increased by 2.9 percentage points, while the rate for non-EU citizens grew by 4.2 percentage points. As a result, the gap between the two groups has narrowed by 1.3 percentage points since 2019. While 76.7 % of EU home-country nationals were employed in 2024, the rate for non-EU citizens stood at 64.2 %. Thus, despite the stronger improvement for non-EU citizens since 2019, the gap remained considerable, at 12.5 percentage points in 2024.

The gaps between home-country nationals and non-EU citizens in the area of education and training have similarly narrowed in recent years. The shares of young people not in employment nor in education and training (NEET) decreased for both groups between 2019 and 2024. The NEET rate for 15- to 29-year-old non-EU citizens fell by 4.0 percentage points, reaching 20.1 % in 2024. For home-country nationals of the same age, the NEET rate decreased by 1.5 percentage points in the same period, amounting to 10.2 % in 2024. Thus, a narrowing of the gap by 2.5 percentage points has been visible since 2019. Despite these improvements, the citizenship gap between

The NEET rate for non-EU citizens was

9.9

percentage points higher than for EU home-country nationals in 2024

the two groups still amounted to 9.9 percentage points in 2024.

The most striking difference between non-EU citizens and EU home-country nationals is visible for 18- to 24-year-old early leavers from education and training. The early leaving rate of home-country nationals has fallen continuously since 2019, reaching 8.0 % in 2024. The early leaving rate for non-EU citizens evolved less steadily but still fell by 3.3 percentage points compared with 2019, reaching 23.4 % in 2024. As a result, the citizenship gap has narrowed by 2.5 percentage points since 2019, reaching 15.4 percentage points in 2024. Because early school leaving and unemployment both have an impact on people's future job opportunities and their lives in general, further efforts are needed to fully integrate young migrants into European societies.

The share of early school leavers among non-EU citizens was

15.4

percentage points higher than for EU home-country nationals in 2024

Main indicators

Income quintile share ratio

LONG TERM 2010–2023

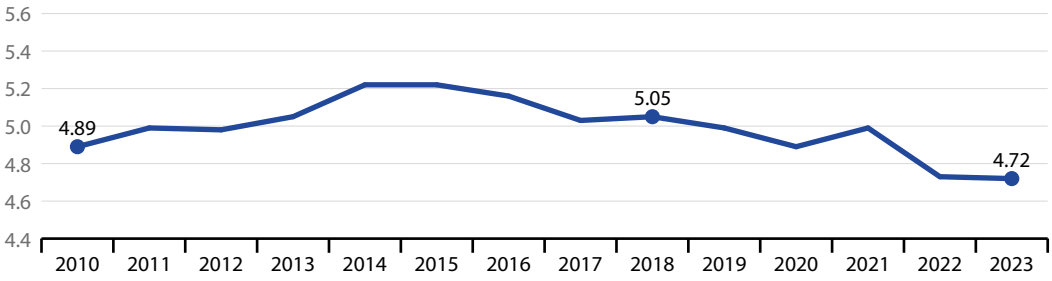
SHORT TERM 2018–2023

The distribution of income can be measured by using, among others ([19]), the ratio of total equivalised disposable income received by the 20 % of the population with the highest income (top quintile) to that received by the 20 % of the population with the lowest income (lowest quintile). Equivalised disposable income is a household's total income (after taxes and other deductions) that is available for spending or saving, divided by the number of household members converted into equivalised adults. Data presented in this section stem from the EU Statistics on Income and Living Conditions (EU-SILC).

FIGURE 10.1

Income quintile share ratio, EU, 2010–2023

(ratio)



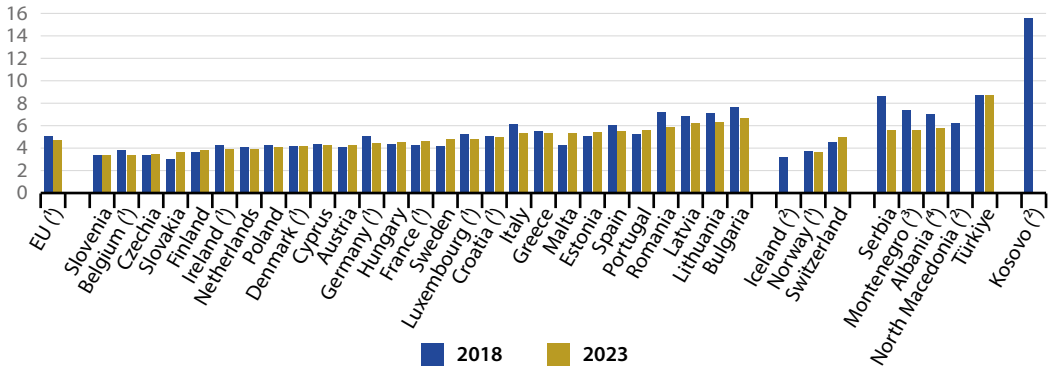
Note: 2014–2019 data are estimated; break in time series in 2020. The data are presented according to the year of the data collection but refer to the income of the previous year (for example, the data for 2023 refer to the income in 2022).

Source: Eurostat (online data code: sdg_10_41)

FIGURE 10.2

Income quintile share ratio, by country, 2018 and 2023

(ratio)



Note: The data are presented according to the year of the data collection but refer to the income of the previous year (meaning that the data for 2023 refer to the income in the year 2022).

(1) Break(s) in time series between the two years shown. (3) 2022 data (instead of 2023).

(2) No data for 2023. (4) 2021 data (instead of 2023).

Source: Eurostat (online data code: sdg_10_41)

Income share of the bottom 40 % of the population

LONG TERM 2010–2023

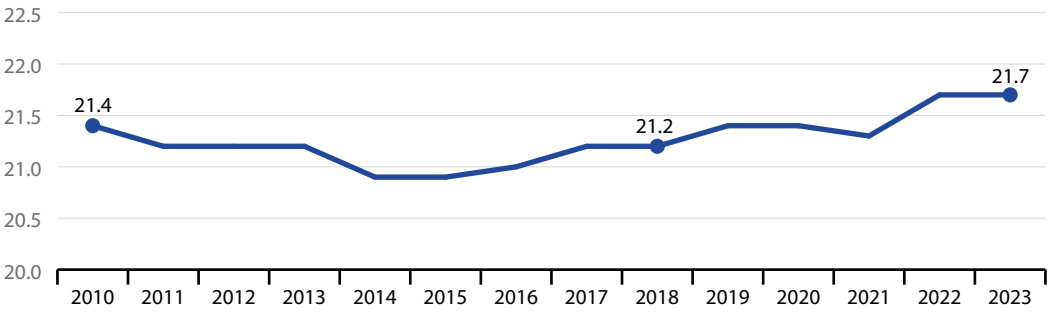
SHORT TERM 2018–2023

This indicator measures the income share received by the bottom 40 % of the population (in terms of income). The income concept used is the total disposable household income, which is a households' total income (after taxes and other deductions) that is available for spending or saving. Data presented in this section stem from the EU Statistics on Income and Living Conditions (EU-SILC).

FIGURE 10.3

Income share of the bottom 40 % of the population, EU, 2010–2023

(% of income)



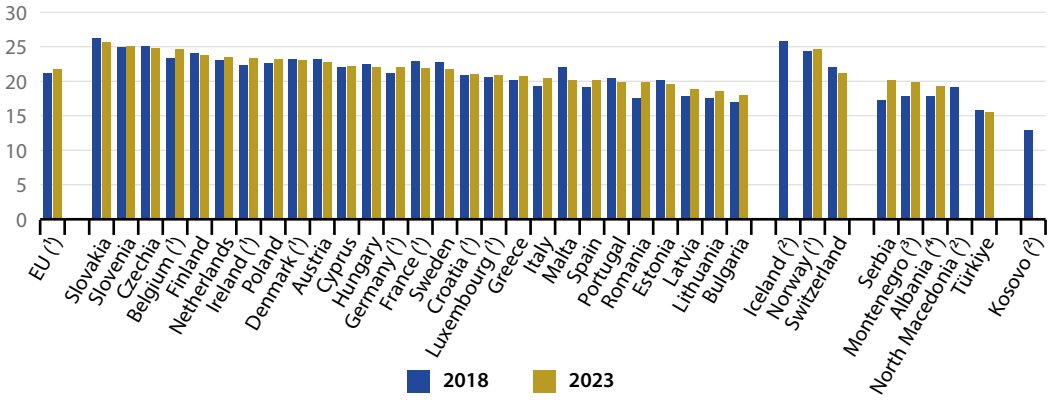
Note: 2014–2019 data are estimated; break in time series in 2020. The data are presented according to the year of the data collection but refer to the income of the previous year (for example, the data for 2023 refer to the income in 2022).

Source: Eurostat (online data code: sdg_10_50)

FIGURE 10.4

Income share of the bottom 40 % of the population, by country, 2018 and 2023

(% of income)



Note: The data are presented according to the year of the data collection but refer to the income of the previous year (meaning that the data for 2023 refer to the income in the year 2022).

(1) Break(s) in time series between the two years shown.

(2) No data for 2023.

(3) 2022 data (instead of 2023).

(4) 2021 data (instead of 2023).

Source: Eurostat (online data code: sdg_10_50)

Relative median at-risk-of-poverty gap

The relative median at-risk-of-poverty gap helps to quantify how poor the poor are by showing the distance between the median income of people living below the poverty threshold and the threshold itself, expressed in relation to the poverty threshold. The poverty threshold is set at 60 % of the national median equivalised disposable income of all people in a country and not for the EU as a whole.
Data presented in this section stem from the EU Statistics on Income and Living Conditions (EU-SILC).

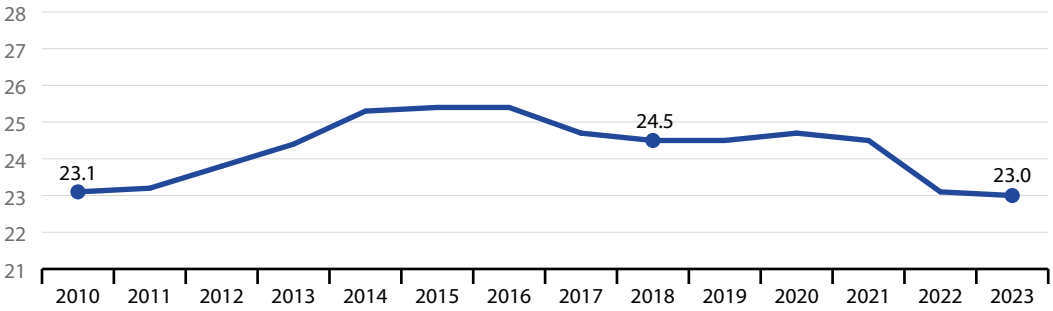
LONG TERM 2010–2023

SHORT TERM 2018–2023

FIGURE 10.5

Relative median at-risk-of-poverty gap, EU, 2010–2023

(% distance to poverty threshold)



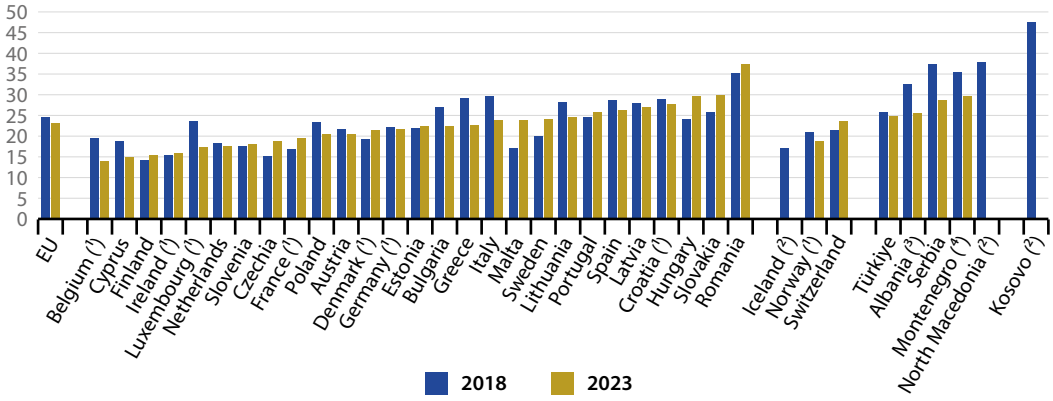
Note: 2014–2019 data are estimated. The data are presented according to the year of the data collection but refer to the income of the previous year (for example, the data for 2023 refer to the income in 2022).

Source: Eurostat (online data code: sdg_10_30)

FIGURE 10.6

Relative median at-risk-of-poverty gap, by country, 2018 and 2023

(% distance to poverty threshold)



Note: The data are presented according to the year of the data collection but refer to the income of the previous year (meaning that the data for 2023 refer to the income in 2022).

(1) Break(s) in time series between the two years shown.

(2) No data for 2023.

(3) 2021 data (instead of 2023).

(4) 2022 data (instead of 2023).

Source: Eurostat (online data code: sdg_10_30)

Disparities in GDP per capita

LONG TERM 2009–2024

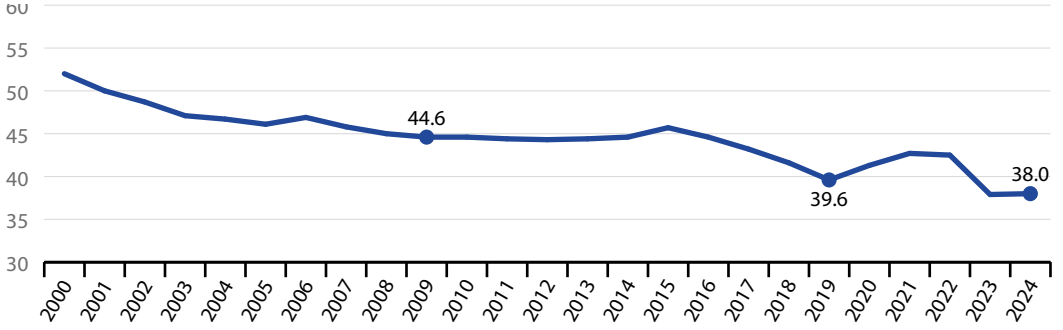
SHORT TERM 2019–2024

GDP per capita is calculated as the ratio of GDP to the average population in a specific year. Basic figures are expressed in purchasing power standards (PPS) which represent a common currency that eliminates differences in price levels between countries to allow meaningful volume comparisons of GDP. The disparities indicator for the EU is calculated as the coefficient of variation of the national figures.

FIGURE 10.7

Disparities in purchasing power adjusted GDP per capita, EU, 2000–2024

(coefficient of variation, in %)

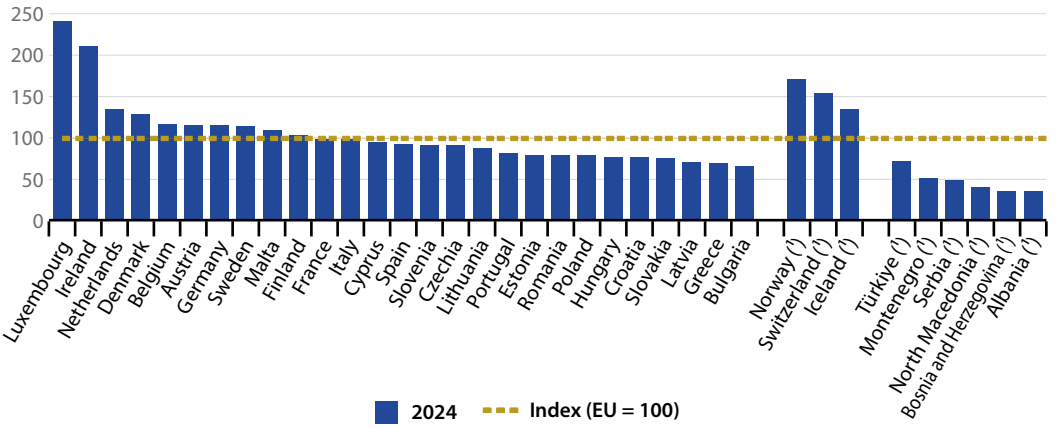


Note: 2024 data are provisional.
Source: Eurostat (online data code: sdg_10_10)

FIGURE 10.8

Purchasing power adjusted GDP per capita, by country, 2024

(index EU = 100)



Note: Provisional data for most countries.
(1) 2023 data.
Source: Eurostat (online data code: sdg_10_10)

Disparities in household income per capita

The adjusted gross disposable income of households reflects the purchasing power of households, after taxes and social contributions, and including social benefits in kind. The disparities indicator for the EU is calculated as the coefficient of variation of the national income data for households and non-profit institutions serving households in PPS per capita.

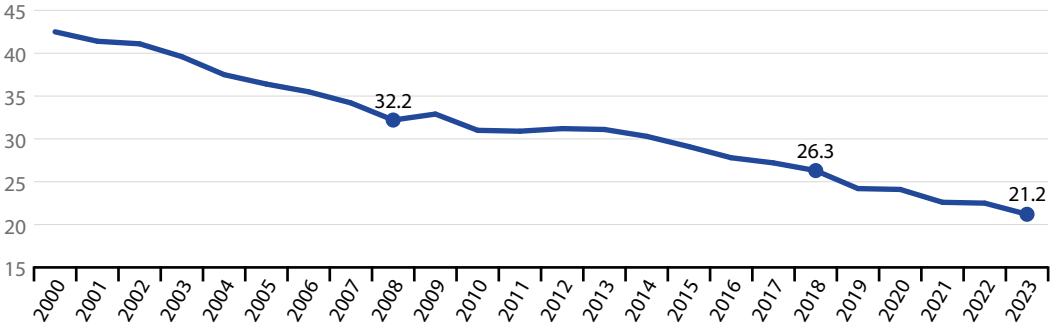
LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 10.9

Disparities in adjusted gross disposable income of households per capita, EU, 2000–2023

(coefficient of variation, in %)

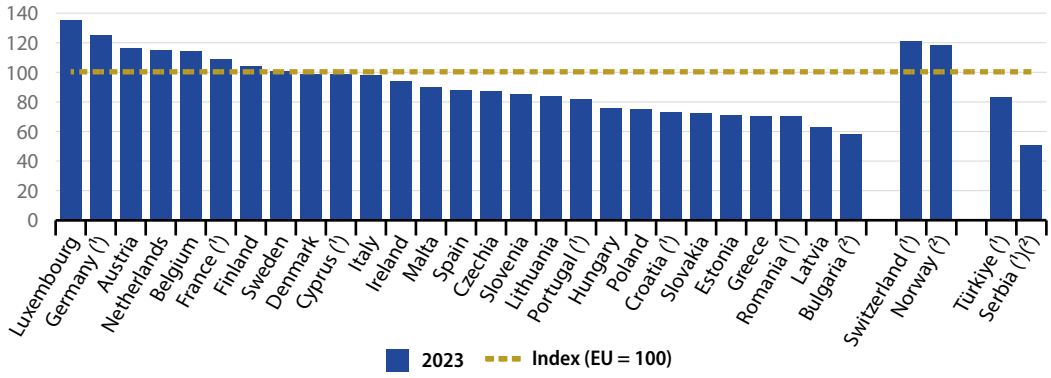


Note: 2023 data are imputed.
Source: Eurostat (online data code: sdg_10_20)

FIGURE 10.10

Adjusted gross disposable income of households per capita, by country, 2023

(index EU = 100)



(1) Provisional or estimated data.
(2) 2022 data.
Source: Eurostat (online data code: nasa_10_nf_tr)

Asylum applications

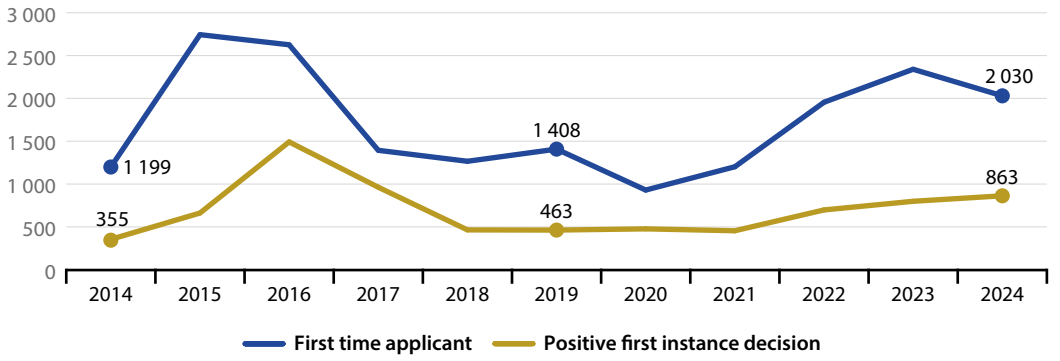
Assessment of progress not applicable due to lack of policy targets

This indicator shows the number of first-time asylum applicants per million inhabitants and the number of positive first-instance decisions per million inhabitants. A first-time applicant for international protection is a person who lodged an application for asylum for the first time in a given Member State. First-instance decisions are decisions granted by the respective authority acting as a first instance of the administrative or judicial asylum procedure in the receiving country. The source data are supplied to Eurostat by the national ministries of interior and related official agencies.

FIGURE 10.11

Asylum applications and decisions, EU, 2014–2024

(number per million inhabitants)

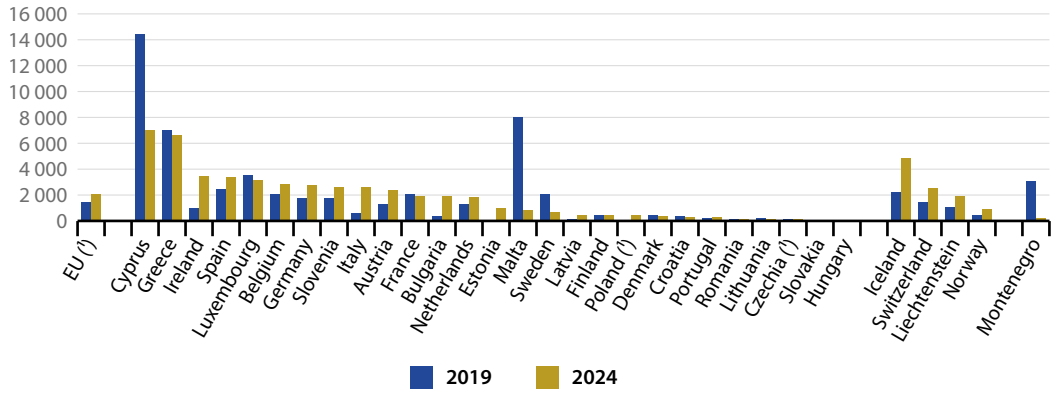


Note: Population data are provisional and/or estimated and have multiple breaks in time series.
Source: Eurostat (online data code: sdg_10_60)

FIGURE 10.12

First-time asylum applications, by country, 2019 and 2024

(number per million inhabitants)



Note: 2024 data are provisional estimates.
(1) Break(s) in population data time series between the two years shown.
Source: Eurostat (online data code: sdg_10_60)

Additional multi-purpose indicators

Urban–rural gap for risk of poverty or social exclusion

Statistics on the degree of urbanisation classify local administrative units as 'cities', 'towns and suburbs' or 'rural areas' depending on population density and the total number of inhabitants. This classification is used to determine the difference in the shares of people at risk of poverty or social exclusion (see page 29 for a description of the main indicator) between cities and rural areas. Data presented in this section stem from the EU Statistics on Income and Living Conditions (EU-SILC).

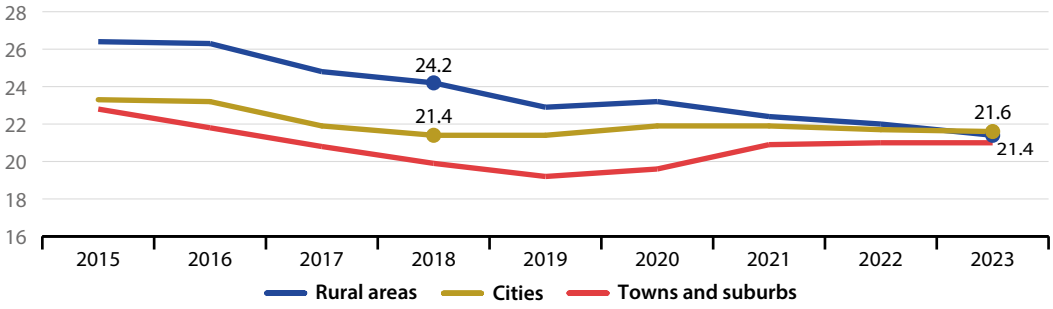
LONG TERM Time series too short

SHORT TERM 2018–2023

FIGURE 10.13

People at risk of poverty or social exclusion, by degree of urbanisation, EU, 2015–2023

(% of population)

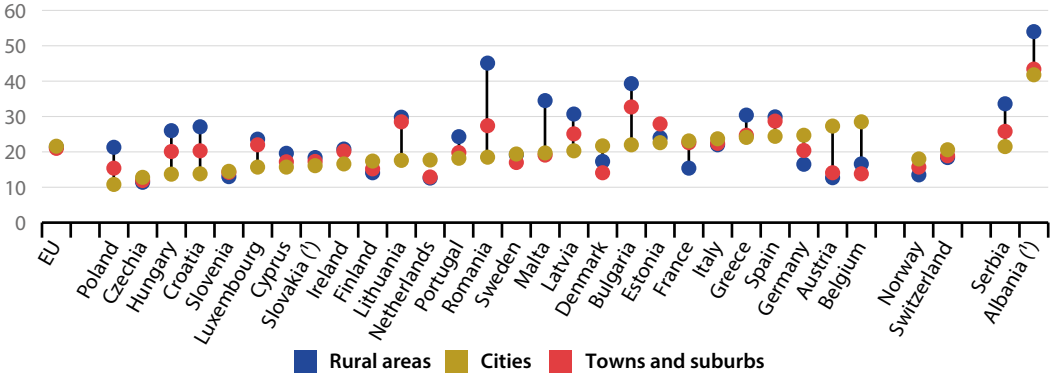


Note: Break in time series in 2020.
Source: Eurostat (online data code: sdg_01_10a)

FIGURE 10.14

People at risk of poverty or social exclusion, by degree of urbanisation, by country, 2023

(% of population)



(1) 2021 data (instead of 2023).
Source: Eurostat (online data code: sdg_01_10a)

Citizenship gaps between non-EU citizens and citizens of reporting EU countries

This section provides data for different indicators by citizenship. Data are shown for non-EU citizens, referring to citizens of non-EU Member States, and for citizens of the reporting countries, referring to citizens of EU Member States that reside in their home country. Data presented in this section stem from the EU Statistics on Income and Living Conditions (EU-SILC) and from the EU Labour Force Survey (EU-LFS).

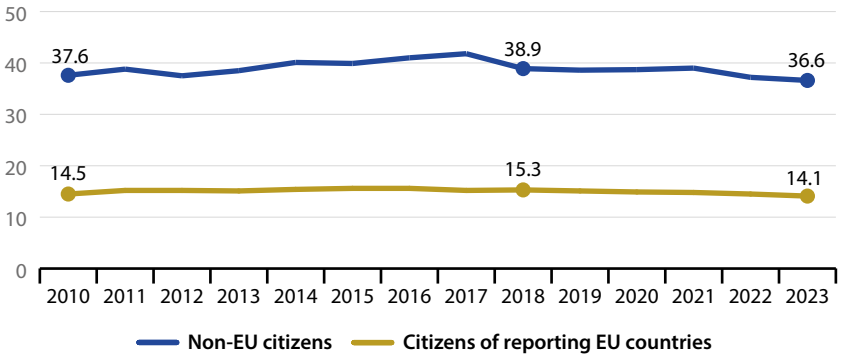
FIGURE 10.15

People at risk of monetary poverty after social transfers, by citizenship, EU, 2010–2023

(% of population aged 18 or over)

LONG TERM 2010–2023

SHORT TERM 2018–2023



Note: 2010–2019 data are estimated; 2010–2011 data for non-EU citizens have low reliability.
Source: Eurostat (online data code: sdg_01_20a)

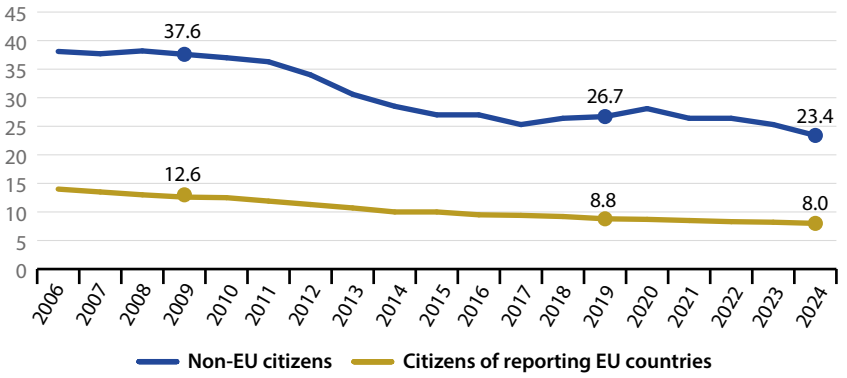
FIGURE 10.16

Early leavers from education and training, by citizenship, EU, 2006–2024

(% of population aged 18 to 24)

LONG TERM 2009–2024

SHORT TERM 2019–2024

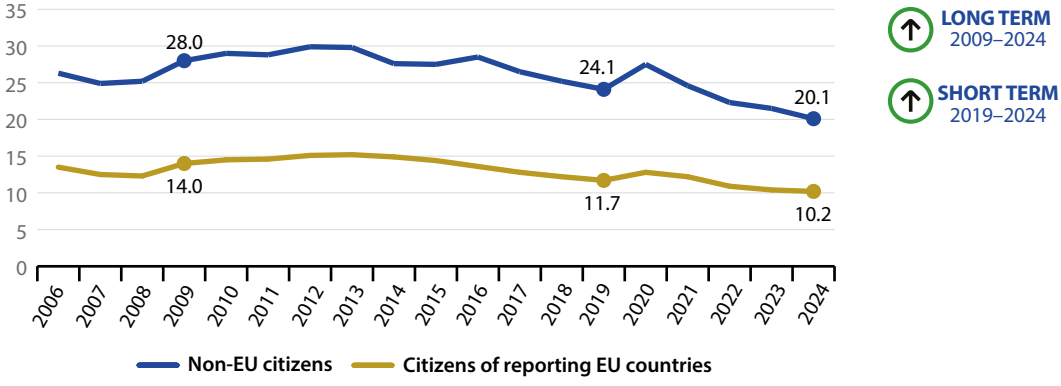


Note: Breaks in time series in 2014 and 2021.
Source: Eurostat (online data code: sdg_04_10a)

FIGURE 10.17

Young people neither in employment nor in education and training (NEET), by citizenship, EU, 2006–2024

(% of population aged 15 to 29)

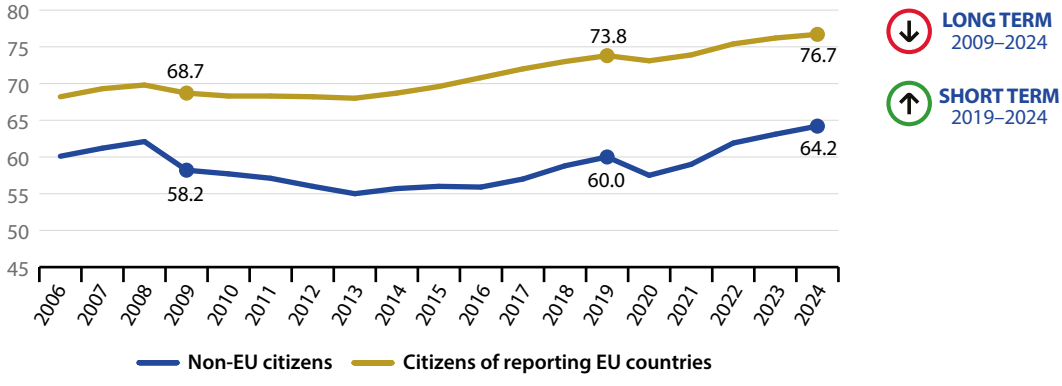


Note: Break in time series in 2021.
Source: Eurostat (online data code: sdg_08_20a)

FIGURE 10.18

Employment rate, by citizenship, EU, 2006–2024

(% of population aged 20 to 64)



Note: Break in time series in 2021.
Source: Eurostat (online data code: sdg_08_30a)

Notes

(1) OECD (2017), *Understanding the socio-economic divide in Europe. Background report*.

(2) Darvas, Z. and Wolff, B. (2016), *An Anatomy of Inclusive Growth in Europe*, pp. 14–15.

(3) The term 'income year' is used here to emphasise that the income data collected for EU-SILC in a given year refer to the income situation of the previous year. The EU-SILC indicators provide insights on the economic well-being and other living conditions on EU residents based on data collected during a specific year, denoted as N. This data encompasses both the characteristics of households for that year (N) and the income from the preceding year, N-1. The income for year N-1 is an estimate for income of year N within EU-SILC. Income data collected for SILC refer to the situation in the previous year, meaning that data labelled as 2022 refer to people's incomes in 2021. To emphasise this aspect, the analysis of SILC income data in this chapter uses the term 'income year', thereby highlighting that the data describe the situation in the year N-1 rather than in the year N when they were collected.

(4) In 2020, the German EU-SILC survey was integrated into the newly designed German microcensus, leading to a substantial break in the time series between 2019 and 2020, with income variables being the most affected by the break. For more information see the related information note. Additionally, further countries such as France also reported methodological changes in 2020, which also affected the EU total.

(5) European Commission, *EU social indicators dataset: Inequality of opportunity — income dimension*.

(6) European Commission, *EU social indicators dataset: Inequality of opportunity — education dimension*.

(7) European Commission (2024), *Employment and social developments in Europe 2024*, Publications Office of the European Union, Luxembourg.

(8) European Platform for Investing in Children (EPIC) (2020), *The Childcare Gap in EU Member States*, Publications Office of the European Union, Luxembourg.

(9) European Commission (2024), *Employment and social developments in Europe 2024*, Publications Office of the European Union, Luxembourg.

(10) Similar to the two indicators on income inequality above, the data for the at-risk of poverty gap refer to the income of the previous year, meaning data for 2018 refer to the income year 2017.

(11) *Source*: Eurostat (online data code: sdg_01_10).

(12) Volonteurope (2016), *Rural isolation of citizens in Europe*.

(13) European Commission (2022), *Cohesion in Europe towards 2050 — Eighth report on economic, social and territorial cohesion*, Publications Office of the European Union, Luxembourg.

(14) European Union Agency for Fundamental Rights (2022), *Roma in 10 European Countries. Main results*, Vienna.

(15) *Source*: Eurostat (online data code: migr_asyappctza).

(16) *Source*: Eurostat (online data code: migr_asydcfsta).

(17) *Source*: Eurostat (online data code: migr_asyappctza).

(18) *Source*: Eurostat (online code: migr_asytpsm) and Eurostat (2025), *Temporary protection for persons fleeing Ukraine — monthly statistics.*

(19) The income quintile share ratio looks at the two ends of the income distribution. Other indicators, such as the Gini index, measure total inequality along the whole income distribution.

Make cities and human settlements inclusive, safe, resilient and sustainable

SDG 11 aims to renew and plan cities and other human settlements in a way that offers opportunities for all, with access to basic services, energy, housing, transport, waste management, clean air and green public spaces, while reducing resource use and environmental impact.

Almost three-quarters of the EU population live in urban areas — cities, towns and suburbs — with about 39 % residing in cities alone ([1]). With the share of Europe's urban population projected to rise to about 80 % by 2050 ([2]), cities, towns and suburbs will need to become more sustainable in order for the 2030 Agenda to be achieved. Monitoring SDG 11 in an EU context means looking at developments in the quality of life in cities and communities, sustainable mobility and adverse environmental impacts. Overall, the EU has made moderate progress towards SDG 11 over the past five-year period assessed. While there has been strong progress towards increasing the quality of life in cities and communities, trends in sustainable mobility are rather unfavourable. The picture is diverse when it comes to impacts on the environment, where both sustainable and unsustainable developments have been observed.

Indicators measuring progress towards SDG 11, EU

Indicator	Period	Annual growth rate	Assessment	More info
Quality of life in cities and communities				
Severe housing deprivation rate	2010–2023	– 3.2 %	↑	page 204
	2018–2023	– 1.4 %	↑	
Population living in households suffering from noise	2010–2023	– 0.9 %	↗	page 205
	2018–2023	0.0 %	→	
Premature deaths due to exposure to fine particulate matter ($PM_{2.5}$) ◎	2007–2022	Observed: – 2.5 % Required: – 2.5 %	↑	page 206
	2017–2022	Observed: – 4.7 % Required: – 3.4 %	↑	
Population reporting crime, violence or vandalism in their area (*)	2010–2023	– 2.1 %	↑	SDG 16, page 286
	2018–2023	– 2.8 %	↑	
Sustainable mobility				
Road traffic deaths ◎	2008–2023	Observed: – 3.9 % Required: – 5.2 %	↗	page 207
	2018–2023	Observed: – 2.7 % Required: – 5.8 %	↘	
Share of buses and trains in inland passenger transport (*)	2007–2022	– 0.3 %	↘	SDG 9, page 171
	2017–2022	– 0.7 %	↘	
Impacts on the environment				
Soil sealing index	2006–2018	0.3 %	↘	page 208
	2015–2018	0.3 %	↘	
Recycling rate of municipal waste ◎	2008–2023	Observed: 1.9 % Required: 2.3 %	↗	page 209
	2018–2023	Observed: 0.8 % Required: 2.2 %	↘	
Population connected to at least secondary waste water treatment (*)	2007–2022	0.7 %	↗	SDG 6, page 118
	2017–2022	0.2 %	↗	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.
(*) Multi-purpose indicator.

Policy context

Quality of life in cities and communities and impacts on the environment

Under the EU Cohesion Policy, a minimum of 8 % of the European Regional Development Fund of each national envelope is dedicated to supporting sustainable urban development. It is accompanied by the European Urban Initiative supporting innovation, capacity and knowledge building in urban areas.

The Environmental Noise Directive is the main EU instrument for identifying and combating noise pollution.

The EU addresses air pollution through specific legislation on clean air as well as legislation addressing the key sources of emissions. The EU emission standards for road vehicles, for example, will help improve air quality in cities. With the Green City Accord, European Mayors can commit to improving their cities by addressing five areas of environmental management — air, water, noise, nature and biodiversity and waste.

The Action Plan 'Towards Zero Pollution for Air, Water and Soil' includes the target of reducing the health impacts due to air pollution by 55 % by 2030, compared with 2005, and maximises synergies with relevant EU policies, such as limiting soil sealing and urban sprawl. The 2022 Zero Pollution package proposed stricter rules for cleaner air and water. The revised Ambient Air Quality Directive aligns EU air quality standards more closely with WHO recommendations, and improves air quality monitoring, modelling and plans.

The affordable housing initiative has contributed to ensuring that social and affordable housing facilities also benefit from the renovation wave.

The EU Soil Strategy for 2030 aims to protect and restore soils and ensure their sustainable use. It also sets a goal that there should be no net land take by 2050.

The 2015 circular economy action plan supports the transition to a stronger and more circular economy. In 2018, the legally binding targets for recycling and reuse of municipal waste entered into force. EU countries will now be required to recycle at least 55 % of their municipal waste by 2025, 60 % by 2030 and 65 % by 2035. The Packaging and Packaging Waste Regulation aims to reduce packaging waste and increase recycling.

The New European Bauhaus initiative brings citizens, experts, businesses and institutions together to reimagine sustainable living in Europe and beyond, along the values of sustainability, aesthetics and inclusion.

Sustainable mobility

The EU guidelines for sustainable urban mobility planning and funding for related projects, combined with the Sustainable and Smart Mobility Strategy adopted in 2020, support the green and digital transformation of the EU transport system.

The 2021 Communication on the Urban Mobility Framework reinforces the enabling EU framework for Member States, regions and cities to develop safe, accessible, inclusive, smart, resilient and zero-emission urban mobility. The revised TEN-T Regulation adopted in 2024 reinforced the link between transport networks and urban mobility.

The Strategic Action Plan on Road Safety and the EU road safety policy framework 2021–2030 set a 50 % reduction target for deaths and serious injuries by 2030 compared with 2019 and aims to move close to zero road deaths by 2050.

Overview and key trends

Quality of life in cities and communities

While European cities and communities provide opportunities for employment and other economic and cultural activities, many inhabitants still face considerable social challenges and inequalities. Problems affecting the quality of housing and the wider residential area, such as noise disturbance, crime and vandalism, are some of the most visible challenges that cities and communities can face and which impact quality of life.

Quality of housing in the EU has been improving since 2010

Safe and adequate homes are a foundation for living an independent, healthy and fulfilling life. Poor housing conditions, on the other hand, are associated with lower life chances, health inequalities, increased risks of poverty and environmental hazards.

4.0%
of the EU population experienced severe housing deprivation in 2023

The severe housing deprivation rate refers to the share of the total population living in an overcrowded household while also experiencing types of housing deprivation such as a leaking roof, damp walls, floors or foundations; rot in window frames or floors; lack of sanitary facilities; or a dwelling that is considered too dark. Between 2010 and 2023, the share of EU residents who lived in such conditions fell by 2.1 percentage points, which indicates a significant improvement in the perceived quality of the EU's housing stock. In 2023, 4.0 % of the EU population faced severe housing deprivation in 2023, compared with 6.1 % in 2010 and 4.3 % in 2018.

Perceived safety in residential areas has continued to improve, but noise disturbance levels have stagnated

Noise disturbance can cause annoyance, stress, sleep deprivation, poor mental health and well-being, as well as harm to the cardiovascular and metabolic system ([3]). Likewise, crime and vandalism can also reduce quality of life and housing satisfaction in a residential area. In 2023, 18.2 % of the EU population (close to 82 million people) said their household suffered from noise disturbance ([4]).

18.2%
of the EU population experienced noise disturbance in 2023

While this constitutes a long-term improvement of 2.4 percentage points since 2010, the rate has been stagnating since 2018, with no improvement nor worsening of the situation. At the same time, 10.0 % of the EU population perceived there had been crime, violence and vandalism in their neighbourhoods in 2023, showing an improvement from 13.1 % in 2010. This trend has been steadily improving since its peak of 14.1 % in 2013.

The EU's zero pollution action plan aims to reduce the share of people chronically disturbed by transport noise by 30 % by 2030 compared with 2017. At 55 decibels (dB) noise levels can start to have critical effects, ranging from severe annoyance and sleep disturbance to hearing impairment ([5]). The more recent WHO guidelines for Europe are even more stringent, recommending that the noise level from road traffic should be below 53 dB during the day and below 45 dB at night. While railways and airports represent further significant sources of local noise pollution, their impact on the overall population is much lower. According to European Environment Agency (EEA) estimates on the exposure of Europe's population to environmental noise, over 20 % of the European population is

exposed to long-term unhealthy noise levels from transportation sources. This figure increases to 30 % when considering the more stringent WHO regulations. According to the Zero pollution monitoring and outlook 2025, reducing the number of people chronically disturbed by transport noise by 30 % until 2030 is unlikely, with the most optimistic scenario only estimating a 23 % reduction by 2030, while a reduction of only 2 % would be achieved under a conservative scenario.

Exposure to fine particulate matter leads to premature deaths and lost years of life, but improvements are visible in the EU

Pollutants such as fine particulate matter ($PM_{2.5}$) suspended in the air reduce people's life expectancy, and can lead to or aggravate many chronic and acute respiratory and cardiovascular diseases ([6]). Exposure to air pollution is of particular concern in cities because the concentration of economic activities and high population densities mean there are many potential emission sources and a large number of people are affected.

According to data from the European Environment Agency (EEA), three EU Member States (Croatia, Greece and Italy) recorded $PM_{2.5}$ concentrations above the EU annual limit value of 25 micrograms per cubic metre (µg/m³) ([7]) in 2023. The higher $PM_{2.5}$ concentrations in central and eastern Europe are mainly due to solid fuel use and an older vehicle fleet ([8]). However, when considering the more stringent WHO air quality guideline of 5 µg/m³, all EU Member States reported concentration levels that exceeded the limit. Additionally, EEA estimates suggest that most of the EU's population was exposed to key air pollutants above the WHO guideline levels, especially in urban areas. Almost all EU city dwellers (94 %) were exposed to $PM_{2.5}$ concentrations above the WHO guideline level of 5 µg/m³ in 2023.

239 000
people died prematurely in the EU in 2022 due to $PM_{2.5}$ exposure

In the EU, long-term exposure to fine particulate matter was responsible for around 239 000 premature deaths in 2022. This number represents a 44.6 % reduction since 2005, meaning the EU appears to be on track to meet the zero pollution action plan target for 2030. This aims to reduce the number of premature deaths due to fine particulate matter exposure by more than 55 % compared with 2005. According to an EEA analysis, if the long-term trend observed over the past 17 years were to continue, the EU would achieve a 63 % decline in this number, thereby overachieving the EU's 2030 target.

Urban residents remain the group most affected by noise pollution and crime in the EU

Statistics on the degree of urbanisation provide an analytical and descriptive lens through which to view urban and rural communities. Eurostat differentiates between three types of area — 'cities', 'towns and suburbs' and 'rural areas' ([9]) — based on the share of the local population living in urban centres and clusters.

In 2023, the perceived occurrence of crime and vandalism in cities (19.0 %) was almost three times higher than in rural areas (5.9 %) and above the level observed in towns and suburbs (10.1 %) ([10]). The perceived level of noise pollution also varied greatly depending on the degree of urbanisation. People living in EU cities were more likely to report noise from neighbours or from the street (24.3 %) compared with those living in towns and suburbs (16.9 %) or in rural areas (10.5 %) ([11]). People living in cities also faced more issues with their dwelling, with a severe housing deprivation rate of 4.9 %, compared with rural areas (3.5 %) and towns and suburbs (3.3 %) ([12]).

19.0 %
of people living in EU cities reported occurrence of crime and vandalism in their area in 2023

Access to green spaces makes urban residents more satisfied with their city

Green spaces in cities have a great potential to boost human health and well-being, and play a crucial role for children, the elderly and those with lower incomes, who may otherwise have limited access to nature. Universal accessibility to green spaces that are safe, inclusive and open is therefore essential. According to the survey on quality of life in European cities in 2023, around 76 % of European urban residents were satisfied with the green spaces available within their city. This satisfaction rate was lower for those living in capital cities (73 %) compared with non-capital cities (78 %). Overall, Geneva, Malmö, Oslo and Munich received the highest scores from their residents, with more than 90 % of the people surveyed in these cities stating satisfaction with their green spaces. Four of the top 10 cities with the highest satisfaction rates in Europe lie in the Scandinavian region. Among the Member States, southern countries showed lower than average satisfaction with green spaces, with rates below 60 %. Overall, urban residents in Europe with greater access to green spaces tend to be more satisfied with the cities they live in. This was especially noted for retired residents, where access to green urban areas within a 400-metre walk was associated with lower levels of loneliness.

Sustainable mobility

A functioning transport system is necessary for people to reach their places of work, education, services and social activities, all of which affect quality of life and equal opportunities for everyone. In addition to availability, accessibility, quality and safety of transport systems are also crucial when designing sustainable and inclusive cities and communities.

Use of public transport modes improved in 2022 but remained below the pre-pandemic level

The EU aims to improve citizens' quality of life and strengthen the economy by promoting sustainable urban mobility and greater use of clean and energy-efficient vehicles, together with reducing the demand for individual car transport. Public transport networks help to relieve traffic jams, reduce harmful pollution and offer more affordable and sustainable ways to commute to work, access services and travel for leisure.

Since 2000, the share of buses and trains in inland passenger transport has stagnated well below 20 %, accounting for only 16.6 % of passenger-kilometres (pkm) in 2022. The onset of the pandemic in 2020 drastically hit this sector, with its share falling by 4.5 percentage points compared with 2019, to 13.0 %. The precautionary measures put in place, including domestic and international travel restrictions, quarantine restrictions, introduction of remote-working policies and changing mobility habits had led to a reduction in the use of public transport ([13]) and passengers' perceptions about safety and comfort. The increase in the share of buses and trains in inland passenger transport in 2022 by 3.6 percentage points relative to 2020, represents a partial recovery since the pandemic. Nonetheless, the shares of public modes of mobility remain below pre-pandemic levels.

16.6 %
of inland passenger-kilometres were covered by buses and trains in 2022

The figures presented above do not include tram and metro systems, which are common transport modes in — especially larger — cities. According to the 2023 survey on the quality of life in European cities, an average of 43 % of respondents used public transport on a typical day, with this figure increasing as city size grows. Overall, the survey reveals that 73 % of city residents in the EU are satisfied with public transport in their cities. Furthermore, around 83 % of respondents consider their city's public transport to be safe and accessible, 74 % view it as frequent, 72 % find it reliable and around 70 % regard it as affordable.

Walking, cycling and other active modes of transport are low-cost and emission-free, while offering health benefits associated with an active lifestyle. The survey shows that in 2023, 27 % of people walked on a typical day in the city

where they live. Between 2019 and 2023, the percentage of people walking increased by 15 % (or 3 percentage points). This shift may reflect changes in preferences due to social distancing during the COVID-19 pandemic or the rising energy costs of other modes of transport.

According to the survey, 48 % of city residents used cars, but this percentage declined as city size increased. Nonetheless, cars continue to remain the dominant form of passenger mobility ([14]) in the EU, accounting for 83.4 % of passenger-kilometres travelled in the EU in 2022. However, this represents a 3.6 percentage point decrease compared with the pandemic values from 2020, signalling a potential return to pre-pandemic levels ([15]).

Deaths from road crashes have stagnated in recent years, and stronger progress is needed to meet the 2030 target

Road traffic injuries are a public health issue and have a huge economic cost. About 100 000 people are estimated to be seriously injured in road accidents in the EU each year ([16]). In 2023, about 56 people a day lost their lives on EU roads. This corresponds to about 20 400 people for the entire year — a loss equivalent to the size of a medium town. Nevertheless, the EU has made progress in this respect compared with 2008, when road deaths amounted to almost 37 000. In recent years, however, the figures have experienced some fluctuations, in part explained by significant changes in traffic volumes as a result of the COVID-19 pandemic. After the pandemic-related low in 2020, road traffic deaths have more or less stagnated at around 20 000 deaths each year. Compared with the reference year 2019, road deaths had fallen by 10.4 % by 2023, meaning the EU is still far from its 2030 target of halving the total death toll on EU roads relative to 2019. The most recent preliminary figures show that road fatalities fell to 19 800 deaths in 2024, a 3 % improvement compared with 2023. Despite this positive step, the overall pace of improvement remains too slow.

20 380
people were killed in road accidents in the EU in 2023

The highest share of road-traffic fatalities in 2023 was recorded on rural roads (50 %), followed by roads inside urban areas (36 %) and motorways (8 %) ([17]). Most of the fatalities on rural roads involve car occupants, light goods vehicles and motorcyclists, while most of the fatalities in urban areas involve vulnerable road users such as pedestrians, cyclists and mopeds ([18]). Data by age group show that younger people aged 18 to 24 and older people aged 65 or over have the highest rates of road fatalities, with 66 and 61 deaths per million inhabitants in 2023, respectively ([19]). In both age groups, men had considerably higher road fatality rates than women. Data by transport mode show that over the period 2019 to 2023, the reduction in road fatalities was strongest for pedestrians and mopeds, by 20 %, while fatalities for cyclists and motorcyclists only fell by 4 % and 2 %, respectively ([20]). According to the European Road Safety Observatory's thematic report on alcohol and drugs, around 25 % of all road deaths in the EU are alcohol related. It is also estimated that 1.5 % to 2 % of the kilometres driven in the EU are done by drivers with an illegal blood alcohol content.

Impacts on the environment

While cities, towns and suburbs are a focal point for social and economic activity, if not managed sustainably, they risk causing considerable environmental damage. At the same time, large and densely populated cities provide opportunities for effective environmental action, indicating that urbanisation is not necessarily a threat but can act as a transformative force for more sustainable societies ([21]). EU progress in reducing the environmental impacts of cities and communities is monitored by three indicators on the management of municipal waste, wastewater treatment and artificial land cover.

Soil sealing is increasing slowly but constantly in the EU

Offering numerous cultural, educational and job opportunities, an urban lifestyle is attractive to many people. However, growth in the urban population has also come with increased land take. Land take is described as the process of transforming agricultural, forest and other semi-natural and natural areas into artificial areas. Between 2012 and 2018, the net land take in cities and their commuting zones, also known as functional urban areas, amounted to 450 square kilometres (km^2) annually. Additionally, most of the net land take (about 78 %) happened in commuting areas ([22]).

In 2018, the area of sealed soil surface in the EU was

2.7 %

Soil sealing is the most intense form of land take and is essentially an irreversible process. It destroys or covers soil with layers of partly or completely impermeable artificial material such as asphalt and concrete ([23]). Increases in the extent of sealed land can be used to estimate land-use change for human use or intensification. The area of sealed soil in the EU has increased in all Member States since 2006. Between 2006 and 2018, the total EU area covered with impervious materials grew by 3 605 km^2 or 3.4 %. In 2018, the area of sealed soil surface reached 2.7 % in the EU. Across Member States, the share of area covered with impervious materials ranged from below 1 % in Sweden and Finland to around 10 % in Belgium and the Netherlands up to 18 % in Malta.

The EU might miss its target for municipal waste recycling as progress slows

The 'waste hierarchy' is the overarching logic that guides EU waste policy. It prioritises waste prevention, followed by preparing for reuse, recycling, other recovery and finally disposal, including landfilling, as the last resort. Waste management activities promote recycling, which reduces the amount of waste going to landfills and leads to higher resource efficiency. Although municipal waste accounts for only about 10 % of the weight of total waste generated in the EU ([24]), it is highly visible and closely linked to consumption patterns. Sustainable management of this waste stream reduces the adverse environmental impact of cities and communities, which is why the EU has set a target to recycle or prepare for reuse at least 60 % of its municipal waste by 2030 ([25]).

48.2 %

of total municipal waste generated in the EU was recycled in 2023

In 2023, the EU residents generated 229 129 thousand tonnes of municipal waste, corresponding to 511 kilograms (kg) of waste per capita per year ([26]). Between 2018 and 2023, the annual amount of waste generated per capita grew by 11 kg, which represents an increase of 2.2 %. Although the EU has not reduced its municipal waste generation, it has clearly shifted to more recycling. Since 2000, the recycling rate of municipal waste — covering both recycling and preparing for re-use — has increased from 27.3 % to 48.2 % in 2023. However, this positive trend halted in 2021, and the recycling rate dropped by 1.7 percentage points between 2021 and 2023. Over the short-term period from 2018 to 2023, the share of recycled municipal waste thus only increased by 1.8 percentage points. Stronger efforts are therefore needed to put the EU back on track to meet its 2030 recycling targets.

Uptake in the connection rate to wastewater treatment in the EU has slowed

80.9 %

of the EU population were connected to at least secondary wastewater treatment in 2022

Urban areas also place significant pressure on the water environment through wastewater from households and industry that contains organic matter, nutrients and hazardous substances. The share of the EU population connected to at least

secondary wastewater treatment plants, which decompose most of the organic material and retain some of the nutrients, has been steadily growing since 2000 and reached 80.9 % in 2022, although the pace has slowed. In six Member States, more than 90 % of the population were connected to such services according to the most recent data (which refer to 2017, 2019, 2020, 2021 or 2022, depending on the country). However, it may not be suitable to connect 100 % of the population to a sewage collection system, either because it would produce no environmental benefit or would be too costly (see chapter on SDG 6 'Clean water and sanitation' on page 109).

Main indicators

Severe housing deprivation rate

LONG TERM 2010–2023

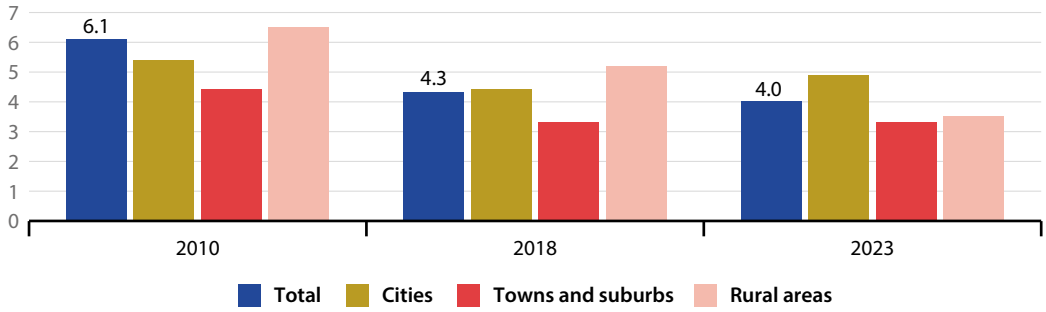
SHORT TERM 2018–2023

The severe housing deprivation rate is defined as the percentage of the population living in a dwelling which is considered to be overcrowded, while also exhibiting at least one of the following housing deprivation measures: i) a leaking roof, ii) no bath/shower and no indoor toilet, and iii) considered too dark. The data stem from the EU Statistics on Income and Living Conditions (EU-SILC).

FIGURE 11.1

Severe housing deprivation rate, by degree of urbanisation, EU, 2010, 2018 and 2023

(% of population)

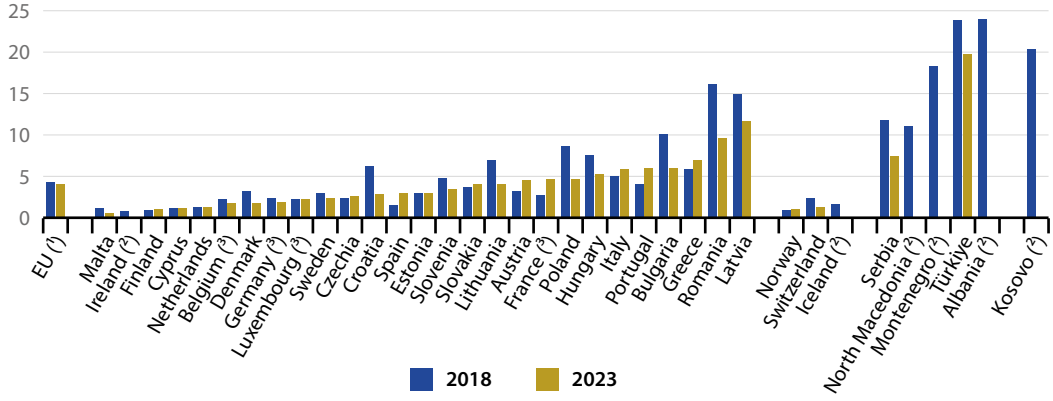


Note: Estimated data. 2012 data for cities, towns and suburbs and rural areas instead of 2010.
Source: Eurostat (online data codes: sdg_11_11 and ilc_mdho06d)

FIGURE 11.2

Severe housing deprivation rate, by country, 2018 and 2023

(% of population)



Note: 2023 data are estimated for many countries.
(1) Estimated data. (2) No data for 2023. (3) Break(s) in time series between the two years shown.
Source: Eurostat (online data code: sdg_11_11)

Population living in households suffering from noise

This indicator measures the share of the population who declare they are affected either by noise from neighbours or from the street. Because the assessment of noise pollution is subjective, it should be noted that the indicator accounts for both the levels of noise pollution and what people consider to be acceptable. Therefore, an increase in the value of the indicator may not necessarily indicate a similar increase in noise pollution levels; it may also indicate a decrease in the levels that European citizens are willing to tolerate and vice versa. In fact, there is empirical evidence that perceived environmental quality by individuals is not always consistent with the actual environmental quality assessed using 'objective' indicators, particularly for noise. The data stem from the EU Statistics on Income and Living Conditions (EU-SILC).

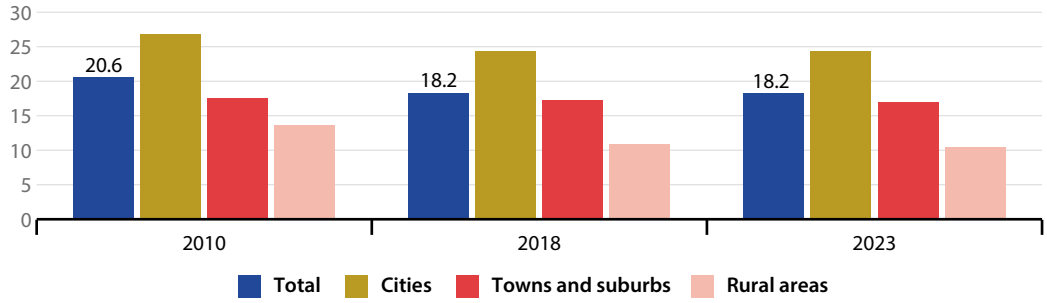
LONG TERM 2010–2023

SHORT TERM 2018–2023

FIGURE 11.3

Population living in households considering that they suffer from noise, by degree of urbanisation, EU, 2010, 2018 and 2023

(% of population)



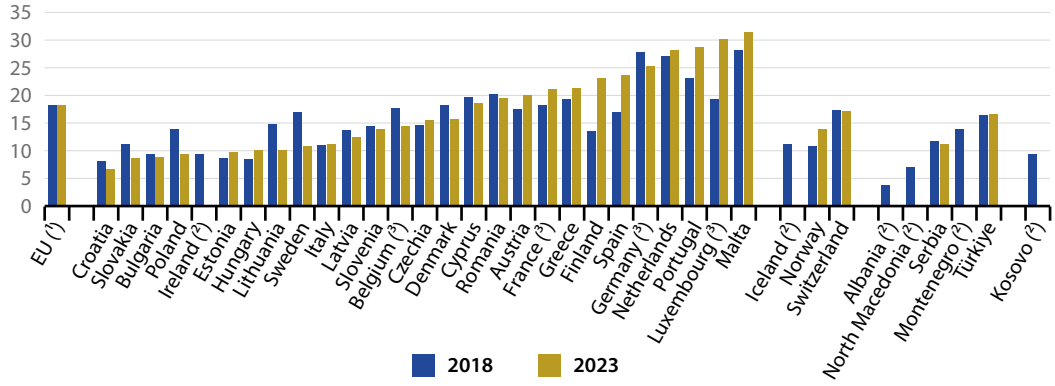
Note: Estimated data.

Source: Eurostat (online data codes: sdg_11_20 and ilc_mddw04)

FIGURE 11.4

Population living in households considering that they suffer from noise, by country, 2018 and 2023

(% of population)



(1) Estimated data. (2) No data for 2023. (3) Break(s) in time series between the two years shown.

Source: Eurostat (online data code: sdg_11_20)

Premature deaths due to exposure to fine particulate matter ($PM_{2.5}$)

LONG TERM 2007–2022

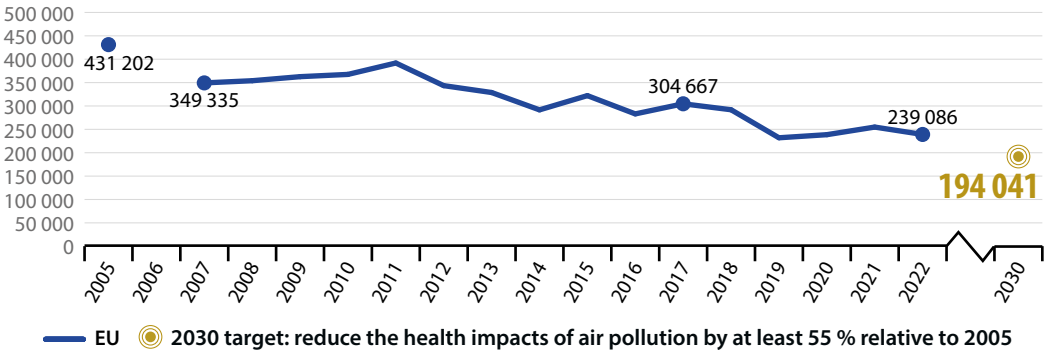
SHORT TERM 2017–2022

The indicator measures the number of premature deaths due to exposure to particulate matter. Fine particulates ($PM_{2.5}$) are particulates whose diameter is less than 2.5 micrometres, meaning they can be carried deep into the lungs where they can cause inflammation and exacerbate the condition of people already suffering from heart and lung diseases. Premature deaths refer to those deaths that occur before the expected age of death. This expected age is typically defined by accounting for the life expectancy in the country, stratified by sex and age. The data stem from the European Environment Agency.

FIGURE 11.5

Premature deaths due to exposure to fine particulate matter ($PM_{2.5}$), EU, 2005–2022

(number)



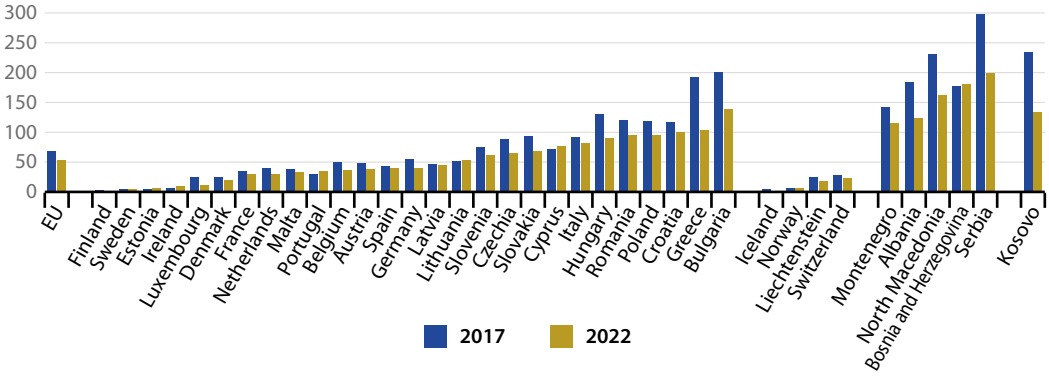
Note: No data available for 2006.

Source: EEA (Eurostat online data code: sdg_11_52)

FIGURE 11.6

Premature deaths due to exposure to fine particulate matter ($PM_{2.5}$), by country, 2017 and 2022

(number per 100 000 people)



Source: EEA (Eurostat online data code: sdg_11_52)

Road traffic deaths

This indicator measures the number of fatalities caused by road crashes, including drivers and passengers of motorised vehicles and pedal cycles, as well as pedestrians. People who die from road crashes up to 30 days after the crash occurred are counted as fatalities. The data come from the CARE database managed by DG Mobility and Transport (DG MOVE).

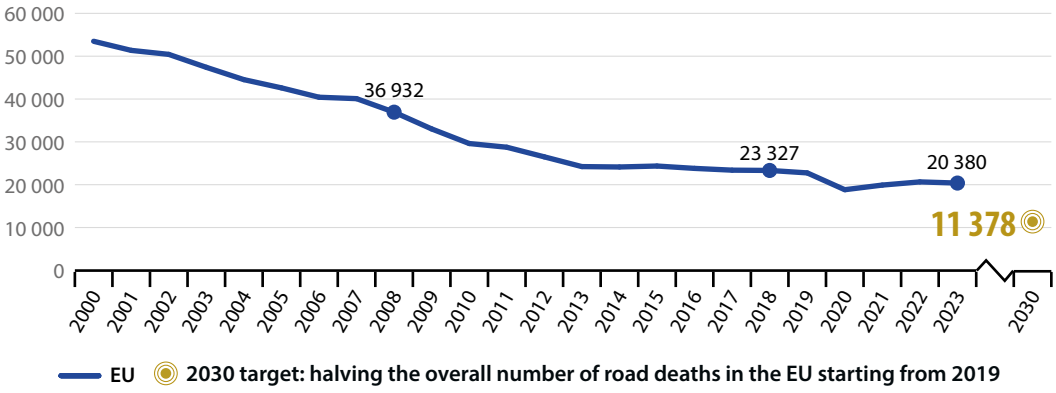
LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 11.7

Road traffic deaths, EU, 2000–2023

(number)

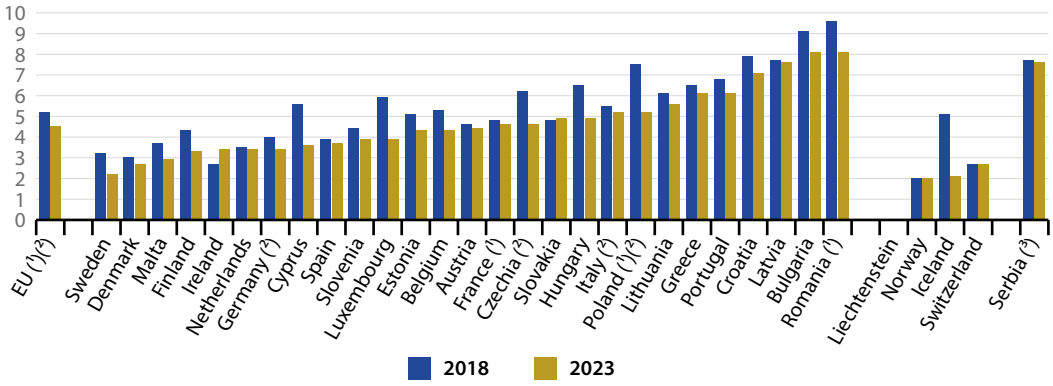


Source: European Commission services, DG Mobility and Transport (Eurostat online data code: sdg_11_40)

FIGURE 11.8

Road traffic deaths, by country, 2018 and 2023

(number per 100 000 people)



(1) 2018 and/or 2023 population data are estimated and/or provisional.
(2) Break(s) in population data time series between the two years shown.
(3) 2019 data (instead of 2018).

Source: European Commission services, DG Mobility and Transport (Eurostat online data code: sdg_11_40)

Soil sealing index

LONG TERM 2006–2018

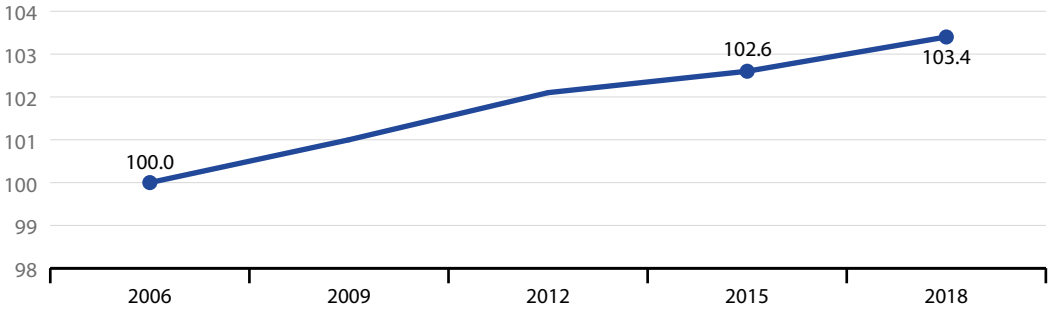
SHORT TERM 2015–2018

This indicator estimates the increase in sealed soil surfaces with impervious materials due to development and construction (such as buildings, constructions and laying of completely or partially impermeable artificial material, such as asphalt, metal, glass, plastic or concrete). This provides an indication of the rate of soil sealing, which occurs when there is a change in land use towards artificial and urban land use. The indicator builds on data from the Imperviousness High Resolution Layer (a product of the Copernicus Land Monitoring Service).

FIGURE 11.9

Soil sealing index, EU, 2006–2018

(index 2006 = 100)

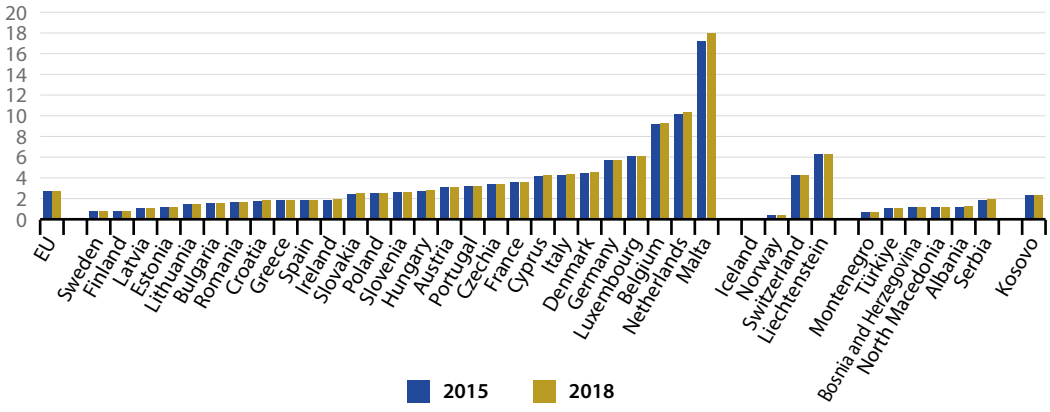


Source: EEA (Eurostat online data code: sdg_11_32)

FIGURE 11.10

Soil sealing, by country, 2015 and 2018

(% of total surface)



Source: EEA (Eurostat online data code: sdg_11_32)

Recycling rate of municipal waste

This indicator measures the tonnage recycled or prepared for re-use from municipal waste divided by the total municipal waste generated. Recycling includes material recycling, composting and anaerobic digestion. Municipal waste primarily consists of waste generated by households but it also includes similar types of waste generated by small businesses, offices and public institutions that are collected by or on behalf of municipalities. The specific composition of municipal waste can vary from municipality to municipality and from country to country, depending on the local waste management systems in place. For areas not covered by a municipal waste collection scheme the amount of waste generated is estimated.

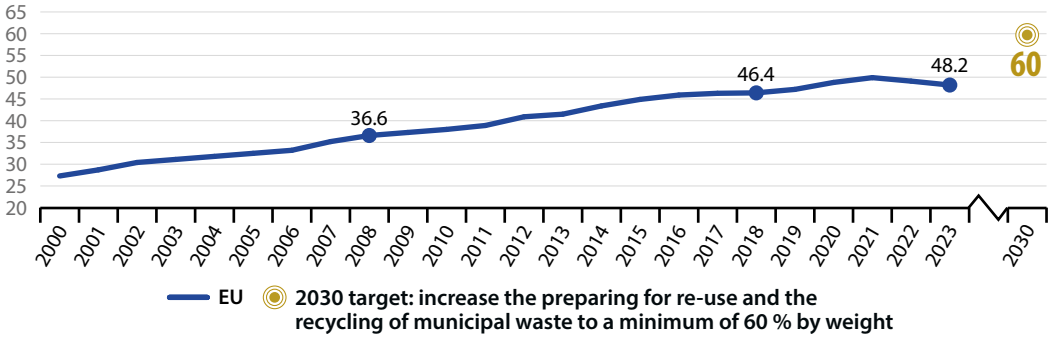
LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 11.11

Recycling rate of municipal waste, EU, 2000–2023

(% of total municipal waste generated)



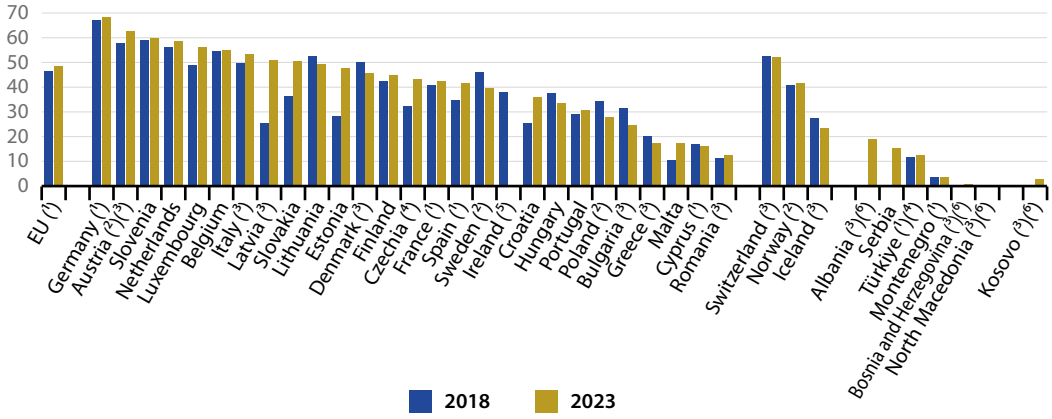
Note: Data for 2000–2006, 2019 and 2021–2023 are imputed.

Source: Eurostat (online data code: sdg_11_60)

FIGURE 11.12

Recycling rate of municipal waste, by country, 2018 and 2023

(% of total municipal waste generated)



(1) Estimated, imputed and/or provisional data.
(2) Break(s) in time series between the two years shown.
(3) 2022 data (instead of 2023).
(4) 2021 data (instead of 2023).
(5) No data for 2023.
(6) No data for 2018.

Source: Eurostat (online data code: sdg_11_60)

Notes

(1) 2023 data. *Source*: Eurostat (online data codes: ilc_lvho01 and demo_gind).

(2) Eurostat (2016), *Urban Europe: Statistics on cities, towns and suburbs*, Publications Office of the European Union, Luxembourg, p. 9.

(3) European Environment Agency (2019), *Population exposure to environmental noise*.

(4) It needs to be noted that the figures on noise disturbance presented here include noise from different sources than those covered by the Environmental Noise Directive.

(5) Berglund, B., Lindvall, T., Schwela, D.H. (1999), *Guidelines for Community Noise*, World Health Organization (WHO), Geneva.

(6) World Health Organization (2021), *WHO global air quality guidelines: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide*; European Environment Agency (2023), *Harm to human health from air pollution in Europe: burden of disease 2023*, Briefing no. 23/2023.

(7) For $PM_{2.5}$, the Ambient Air Quality Directive 2008/50/EC introduced a target value to be attained by 2010, which became a limit value starting in 2015. For more information on EU air quality standards see: http://ec.europa.eu/environment/air/quality/standards.htm

(8) European Environment Agency (2024), *Europe's air quality status 2024*.

(9) Degree of urbanisation classifies local administrative units as 'cities', 'towns and suburbs' or 'rural areas'. In 'cities' at least 50 % of the population lives in an urban centre. If less than 50 % lives in an urban centre but more than 50 % of the population lives in an urban cluster it is classified as 'towns and suburbs', and if more than 50 % of the population lives outside an urban cluster it is classified as a 'rural area'. An urban centre is a cluster of contiguous grid cells of 1 square kilometre (km^2) with a density of at least 1 500 inhabitants per km^2 and a minimum population of 50 000 people. An urban cluster is a cluster of contiguous grid cells of 1 km^2 with a density of at least 300 inhabitants per km^2 and a minimum population of 5 000 people.

(10) *Source*: Eurostat (online data code: ilc_mddw06).

(11) *Source*: Eurostat (online data code: ilc_mddw04).

(12) *Source*: Eurostat (online data code: ilc_mdho06d).

(13) Lozzi, G., Cré, I., Ramos, C. (2022), *Research for TRAN Committee – Relaunching transport and tourism in the EU after COVID-19 – Part VI: Public Transport*, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.

(14) Tram and metro systems, as well as active modes (walking, cycling), are not included because the data collection methodology for these means of transport is not sufficiently harmonised between Member States.

(15) *Source*: Eurostat (online data code: tran_hv_psmod).

(16) European Commission (2024), *Facts & Figures: Serious injuries*.

(17) *Source*: Eurostat (online data code: tran_sf_roadro).

(18) European Commission (2025), *Annual statistical report on road safety in the EU 2025*, p. 37.

(19) *Source*: Eurostat (online data code: tran_sf_roadus).

(20) European Commission (2025), *Annual statistical report on road safety in the EU 2025*, p. 15.

(21) UN-Habitat (2016), *Urbanization and Development: Emerging Futures, World Cities report 2016*, pp. 85–100.

(22) European Environment Agency (2023), *8th Environment Action Programme. Land Take: net land take in cities and commuting zones in Europe*.

(23) Prokop G, Jobstmann H, Schonbauer A (2011), *Report on best practices for limiting soil sealing and mitigating its effects*, Brussels.

(24) Eurostat (2024), *Statistics explained: Municipal waste statistics*.

(25) European Commission (2018), Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste (Text with EEA relevance).

(26) *Source*: Eurostat (online data code: env_wasmun).

Ensure sustainable consumption and production patterns

SDG 12 calls for a comprehensive set of actions from businesses, policymakers and consumers to adapt to sustainable practices. It envisions sustainable production and consumption based on advanced technological capacity, resource efficiency and reduced global waste.

Consumption and production patterns have wide environmental and social impacts. Monitoring SDG 12 in an EU context focuses on developments in the areas of consumption patterns, the green economy, and waste generation and management. Overall, the EU's progress towards this goal over the five-year period assessed has been largely favourable. Consumption patterns with regards to raw materials, chemicals, CO_2 emissions from car fleets and energy productivity have shown positive developments in the EU, and the value added from the environmental goods and services sector has grown strongly. The picture on waste generation and management is mixed. While waste generation has reduced, circular use of materials is not growing fast enough in the EU to meet the 2030 target.

Indicators measuring progress towards SDG 12, EU

Indicator	Period	Annual growth rate	Assessment	More info
Consumption patterns				
Material footprint	2008–2023	– 1.7 %	↑	page 219
	2018–2023	– 0.6 %	↗	
Consumption footprint	2010–2023	0.3 %	↘	page 221
	2018–2023	– 0.5 %	↗	
Consumption of hazardous chemicals	2008–2023	– 2.4 %	↑	page 222
	2018–2023	– 5.4 %	↑	
Energy productivity (*)	2008–2023	2.4 %	↑	SDG 7, page 136
	2018–2023	3.9 %	↑	
Average CO_2 emissions per km from new passenger cars (*) ◎	Long-term assessment not possible due to break in time series in 2017		✕	SDG 13, page 237
	2018–2023	Observed: – 5.9 % Required: – 8.6 %	↗	
Green economy				
Gross value added in the environmental goods and services sector	2007–2022	5.3 %	↑	page 223
	2017–2022	8.1 %	↑	
Waste generation and management				
Circular material use rate ◎	2008–2023	Observed: 1.7 % Required: 4.2 %	↘	page 224
	2018–2023	Observed: 0.3 % Required: 5.6 %	↘	
Generation of waste	2008–2022	0.2 %	↘	page 225
	2018–2022	– 1.2 %	↑	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.
(*) Multi-purpose indicator.

Policy context

Consumption patterns and green economy

The 8th Environment Action Programme (EAP) aims to accelerate the transition to a climate-neutral, resource-efficient and regenerative economy.

The Green transition pillar of the Recovery and Resilience Facility supports reforms and investments to boost sustainable consumption and production patterns, for example in the areas of sustainable mobility and the circular economy.

The 2020 EU industrial strategy and its 2021 update aim to help Europe's industry lead the twin transitions towards climate neutrality and digital leadership. The Green Deal Industrial Plan aims to enhance the competitiveness of Europe's net-zero industry and support the fast transition to climate neutrality. The 2025 Competitive Compass and the Clean Industrial Deal aim to improve competitiveness and support decarbonisation.

The 2025 Automotive Industrial Action Plan will support the automotive industry's transition to guarantee competitiveness and maintain a strong European production base. EU legislation also sets mandatory CO_2 emission targets for cars and vans.

The Chemicals Strategy for Sustainability, aims to improve the protection of the environment and our health from risks posed by chemicals and to support innovation for safe and sustainable chemicals, including the REACH Regulation and the CLP Regulation on the classification, labelling and packaging of chemical substances and mixtures.

The 2021 Zero Pollution Action Plan calls for air, water and soil pollution to be reduced to levels no longer considered harmful to health and ecosystems, respecting planetary boundaries and creating a toxic-free environment. In 2022 the Commission adopted a Zero Pollution package proposing stricter rules for cleaner air and water. This includes a soil monitoring law.

Waste generation and management

The Waste Framework Directive emphasises waste prevention and establishes targets for the EU to prepare to re-use and recycle 55 % of municipal waste by weight by 2025, increasing to 60 % and 65 % by 2030 and 2035 respectively. The new Commission proposal for a revision introduces food waste reduction targets of 10 % in processing and manufacturing of food and of 30 % in retail and consumption by 2030. It also introduces mandatory Extended Producer Responsibility schemes for textiles to make producers responsible for the full life cycle of textiles products.

The Circular Economy Action Plan from 2020 aims to double the EU's circular material use rate in the coming decade to support the achievement of climate neutrality by 2050, decouple economic growth from resource use, reduce waste generation, and keep resource consumption within ecological boundaries. In 2022, the European Commission proposed a package on Circular Economy measures, leading to the Ecodesign for Sustainable Products Regulation to make sustainable products the norm in the EU and to boost circular business models. The Council Recommendation on ensuring a fair transition towards climate neutrality calls for facilitating access to sustainable consumption, especially for people and households in vulnerable situations.

The Single-Use Plastics Directive and the Packaging and Packaging Waste Regulation, both from 2025, establish targets for a minimum percentage of recycled content.

Overview and key trends

Consumption patterns

Economic growth improves people's well-being but has long been associated with greater environmental impacts due to increased resource and energy consumption. Continuous growth in the consumption of finite resources is not sustainable. The EU's long-term objective, as outlined in the 8th Environment Action Programme, is to build a well-being economy, where resource and energy efficiency are improved, and environmental and climate impacts associated with production and consumption are reduced.

The EU's material footprint has decreased slightly compared with 2018

The material footprint, also referred to as raw material consumption (RMC), is the amount of materials used along the supply chains of goods and services that are finally consumed in a country. The indicator thus measures the materials extracted (both domestically and abroad) to produce the goods and services consumed by final users inside EU borders and estimates the volume of traded products — imports and exports — in raw material equivalents.

6.39
billion tonnes of globally extracted raw material were consumed in the EU in 2023

The EU's material footprint grew steadily between 2000 and 2008 before being curtailed by the economic crisis. Following the recovery of the EU's economy, raw material consumption resumed its upward trend, increasing by 8.4 % between 2015 and 2019. In subsequent years, the EU's material footprint fluctuated, with increases in 2021 and 2022 and decreases in 2020 and 2023, ultimately reaching 6.39 billion tonnes in 2023 — a 4.5 % decline compared with the previous year. Over the most recent five-year period, from 2018 to 2023, the EU's material footprint fell by 2.8 %. However, with a material footprint of 14.2 tonnes per capita, the EU's raw material consumption level is still above the global average, and further efforts might be required to meet the objectives of the European Green Deal, which calls for a reduction in environmental pressures alongside economic growth (also see the section on spillover effects on page 323).

The EU's consumption footprint considerably transgresses planetary boundaries

The consumption footprint, based on a basket of products in five consumption areas, shows that EU consumption patterns considerably transgress several planetary boundaries. This means that the impact of consumption is higher than the Earth can sustainably support over the longer term, emphasising the need for further efforts to reduce consumption and achieve the EU's policy goals. Overall, the EU's consumption footprint transgressed planetary boundaries by 3.3 times in 2023. Although this represents a 2.4 % improvement compared with 2018, the long-term trend remains negative, with an overall increase of 3.5 % in boundary transgression since 2010. The EU's transgression of planetary boundaries was particularly high for the impacts on climate change (by 8.0 times), particulate matter pollution (by 9.3 times) and freshwater ecotoxicity (by 10.1 times) (1). Luxembourg, Ireland and Denmark had the highest consumption footprints in 2023, whereas Romania, Slovakia, Bulgaria and Hungary had the lowest.

The EU's consumption footprint transgressed planetary boundaries by

3.3
times in 2023

The EU continues to depend heavily on imported fossil energy carriers and metal ores

Material import dependency captures the extent to which an economy relies on imports to meet its material needs. Material import dependency is calculated as the ratio of imports to direct material input (DMI), which is the sum of imports and domestic extraction. In 2023, imports accounted for 22.0 % of the EU's DMI. Import dependency was highest for fossil energy carriers, at 73.3 % in 2023, followed by metal ores at 47.2 %. The EU's import dependency on fossil energy carriers has increased by 13.3 percentage points over the past decade (up from 60.0 % in 2013), while dependency on metal ore imports has slightly decreased. In contrast, the EU is almost completely self-sufficient for non-metallic minerals, with an import dependency of only 2.7 % in 2023 ([2]).

The EU's self-sufficiency is especially relevant for critical raw materials (CRMs), which are raw materials of high importance to the EU economy and with a high supply risk. To address the challenge of ensuring reliable and unhindered access to certain raw materials, the European Commission presents a list of critical raw materials that is reviewed every three years. The CRM list from 2023 contains 34 materials; data on the EU's self-sufficiency are available for eight of them. They show that in 2022, the EU's self-sufficiency was highest for vanadium (100 %), copper (52 %) and fluorspar (40 %). However, the EU economy was (almost) completely dependent on imports for borate (0 % self-sufficiency), natural graphite (1 %) and tantalum (1 %) ([3]). To ensure access to a secure and sustainable supply of the critical raw materials needed for the EU to meet its 2030 climate and digital objectives, the Critical Raw Materials (CRM) Act was adopted in 2024. The act sets benchmarks for domestic consumption of raw materials to be met by 2030, for example at least 10 % from domestic extraction and at least 25 % from recycled materials.

Resource and energy productivity have increased in the EU over the five-year period assessed

Resource productivity ([4]) monitors how much output an economy produces per unit of material used and can provide insights into whether decoupling between the use of natural resources and economic growth is taking place. It is measured as the ratio of gross domestic product (GDP) to domestic material consumption (DMC). Between 2018 and 2023, the EU economy (in terms of GDP) grew by 6.3 %, while DMC decreased by 2.9 % over the same period. This resulted in a 9.2 % increase in the EU's resource productivity, from EUR 2.04 per kg of DMC in 2018 to EUR 2.23 per kg in 2023 ([5]).

Energy productivity ([6]) measures economic output (in terms of GDP) per unit of energy used. Observed trends for energy productivity are stronger than for resource productivity, due to larger decreases in energy consumption than in material use. Between 2018 and 2023, economic growth of 6.3 % in the EU was accompanied by a 12.2 % reduction in gross available energy (GAE) ([7]). This resulted in an increase of energy productivity by 20.9 %, from EUR 8.1 per kg of oil equivalent (kgoe) to EUR 9.8 per kgoe.

In 2023, the EU's energy productivity amounted to

9.8

EUR per kgoe

Consumption of hazardous chemicals has dropped by 25 % since 2021

Many everyday products used by businesses and consumers are produced with the help of chemicals. This makes them a significant contributor to the EU economy, with chemical sales worth EUR 655 billion in 2023 ([8]). The consumption of chemicals provides benefits to society but can also entail environmental and health risks. The level of risk depends on both the hazardous properties of chemicals and the exposure to them. The consumption volumes of industrial (manufactured) chemicals that are

hazardous to human and environmental health can be used as a proxy for human exposure ([9]).

Between 2010 and 2021, the consumption of toxic chemicals in the EU remained relatively stable. However, a significant decline of 25.1 % between 2021 and 2023 led to an overall reduction in consumption levels over both the short- and long-term periods. In 2023, the EU consumed 167.7 million tonnes of hazardous chemicals, which was 30.8 % less than in 2008 and 24.1 % less than in 2018.

167.7
million tonnes of hazardous chemicals were consumed in the EU in 2023

Average CO_2 emissions per km from new cars hit a record low, but sharp cuts are needed to meet the 2030 target

Road transport was responsible for almost a quarter of the EU's total GHG emissions in 2022, with passenger cars responsible for more than half of these emissions ([10]). Reducing emissions from road transport requires a shift towards more sustainable mobility. To drive this transition, the EU has set targets for the fleet-wide average CO_2 emissions of new passenger cars and vans, and new heavy duty vehicles registered each year.

107.6
grams of CO_2 per km were emitted on average by new passenger cars in the EU in 2023

Over the period 2018 to 2023, average CO_2 emissions per km from new passenger cars registered in the EU fell by 26.1 %, reaching the lowest level on record at 107.6 g/km in 2023. However, further reductions are needed to meet the EU targets of 93.6 g/km by 2025 and 49.5 g/km by 2030 ([11]). From 2035 onwards, the target for CO_2 emissions from new vehicles will be 0 g/km ([12]).

A key factor in achieving these targets is increasing the market share of zero-emission vehicles (including battery and fuel cell electric vehicles). For cars, this share rose from 1.0 % in 2018 to 14.5 % in 2023 in the EU. However, the share differs considerably between countries. Sweden reported the highest share with 38.6 % in 2023, followed by Denmark with 36.1 % and Finland with 33.8 %. In contrast, zero-emission vehicles accounted for around 3 % of newly registered passenger cars in Croatia, Slovakia and Czechia ([13]).

Green economy

An economy is considered green when it is resource efficient and low in carbon emissions while maintaining social justice, and therefore contributes to the achievement of a good life for all on a healthy planet. The EU is promoting the green economy through various policies such as the European Green Deal. The environmental goods and services sector (EGSS) produces the goods and services used in environmental protection and resource management activities, and thus helps to 'green' the economy. Such goods and services can include, for example, products to prevent, measure, control, limit, minimise or correct environmental damage and resource depletion. Increasing the market share of green technologies in the EU can also have important socio-economic benefits in terms of value added and employment ([14]).

462.8
billion EUR of gross value added were generated by the EU's environmental goods and services sector in 2022

The environmental goods and services sector has grown much faster than the overall economy

The EGSS gross value added in the EU has grown by 116 % over the 15-year period assessed, from EUR 213.8 billion in 2007 to EUR 462.8 billion in 2022 (all numbers here are given in 2015 chain-linked prices). Growth in the renewable energy and energy efficiency sectors, along with increased spending on green infrastructure, are among the main drivers of this development ([15]).

In relation to the whole economy, the EGSS grew from 1.8 % of EU GDP in 2007 to 3.3 % in 2022. This indicates the sector grew much faster than other economic sectors. Notably, the sector's gross value added continued to grow in 2020 compared with the previous year, by 1.8 %, when the EU's GDP fell by 5.6 % as a result of the COVID-19 pandemic ([16]). Employment in the sector has also increased, in terms of full-time equivalent, by 88.3 % since 2007. In 2022, the sector provided 6.7 million full-time equivalent jobs throughout the EU ([17]).

Waste generation and management

Production and consumption patterns characterised by products being made, used and then disposed of are not sustainable. Therefore, the EU aims to move towards a circular economy where materials and resources are kept in the economy for as long as possible (through repair, recycling and reuse) and waste is minimised or even prevented. Because waste contains resources, recycling can put these materials back into the economy and ensure they are used again to preserve the value embedded within them.

On average, EU citizens continue to produce around 5 000 kg of waste per year

In 2022, 2.2 billion tonnes of waste were generated in the EU by all economic activities and households together, corresponding to 4 991 kilograms (kg) of waste per inhabitant. Almost two-thirds (64.4 % or 3.2 tonnes per inhabitant) of this waste was major mineral waste, including dredging spoils and contaminated soils that are mainly created in the mining and construction sectors ([18]). Of the total waste, 5.3 % was hazardous to health or the environment, corresponding to 266 kg per resident in 2022. The total amount of waste generated in the EU increased between 2008 and 2018 but fell by 7.9 % in 2020, likely due to the economic slowdown caused by the COVID-19 pandemic. However, by 2022, waste generation had risen again, increasing by 3.7 % compared to 2020. Over the short-term period from 2018 to 2022, the total waste generated in the EU decreased by 4.5 %, corresponding to a 4.7 % reduction in waste generated per EU inhabitant during this time.

4 991
kg of waste were generated in the EU per inhabitant in 2022

In 2022, 795 million tonnes of waste, excluding major mineral waste, was generated in the EU. From this amount, 216 million tonnes were recorded for waste and water services, followed by households (193 million tonnes) and manufacturing activities (166 million tonnes) ([19]). In 2022, food waste accounted for 58 million tonnes in the EU. More than half (53 %) of food waste was generated by household activities, followed by the manufacture of food products and beverages (18 %) ([20]).

The EU is not on track to reach its target for circular material use

When not managed sustainably, waste has a huge impact on the environment, causing pollution and greenhouse gas emissions, and significantly lowering the efficient use of materials ([21]). Recycling waste and feeding it back into the economy as secondary raw materials is crucial for reducing the EU's demand for primary raw materials, and relies heavily on improved waste management systems ([22]). Between 2008 and 2023, the EU circular material use (CMU) rate — the share of used materials derived from collected waste — increased from 9.1 % to 11.8 %. Since 2016, however, the CMU rate has stagnated, meaning the EU will need to make stronger progress in the next few years to meet its goal of doubling the materials it uses from collected waste by 2030 to 22.4 %.

11.8%
of the materials used in the EU came from collected waste in 2023

In 2022, 56 % of waste in the EU (excluding major mineral wastes) was recycled ([23]). The difference between this relatively high end-of-life recycling

rate and the CMU rate (11.8 % in 2023) may seem surprising. However, the comparatively low degree of circularity in the EU can be attributed to three structural barriers. First, a large fraction of the materials extracted, in particular minerals, is used to build and maintain buildings, infrastructure and other long-life goods and is not readily available for recycling. The second barrier is the large amount of materials used to generate energy. For these materials, in particular for fossil fuels, closing the loop is hardly possible and the high share of these materials keeps the degree of circularity low ([24]). Another barrier is that in many cases, despite the relatively high recycling rate, secondary (recycled) raw materials often are not of sufficient quality to be used in new products (for example, in construction products, packaging or transport) and therefore lack market demand.

Main indicators

Material footprint

LONG TERM 2008–2023

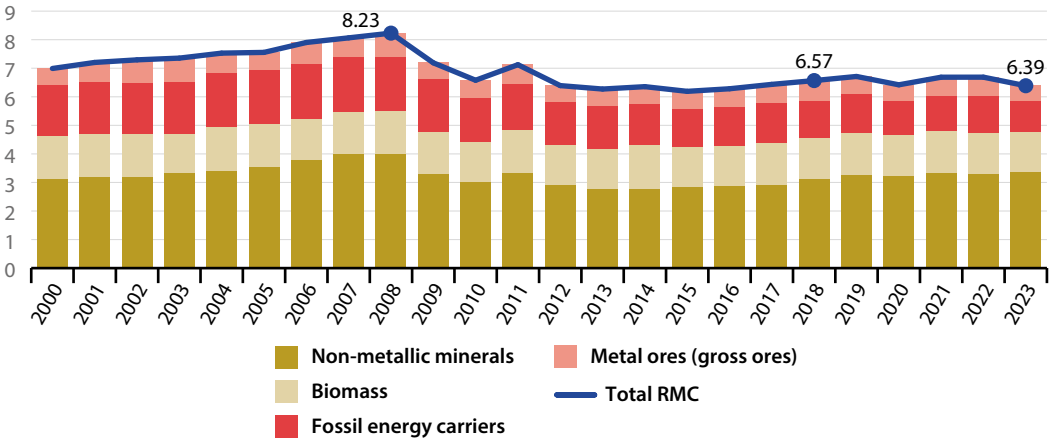
SHORT TERM 2018–2023

The material footprint, also referred to as raw material consumption (RMC), represents the demand for the extraction of materials (minerals, metal ore, biomass and fossil energy materials) induced by consumption of goods and services within a geographical reference area. Data for material footprints stem from material flow accounts, which model the flows of natural resources from the environment into the economy. They include domestic extraction of materials measured in tonnes of gross material (for example, gross ore or gross harvest) as well as estimated imports and exports of the raw material equivalents of the products traded (domestic and abroad extraction required to produce the traded products). RMC thus measures the amount of extraction needed to produce the goods demanded by final users in the geographical reference area, irrespective of where in the world the material extraction took place.

FIGURE 12.1

Raw material consumption, by material, EU, 2000–2023

(billion tonnes)



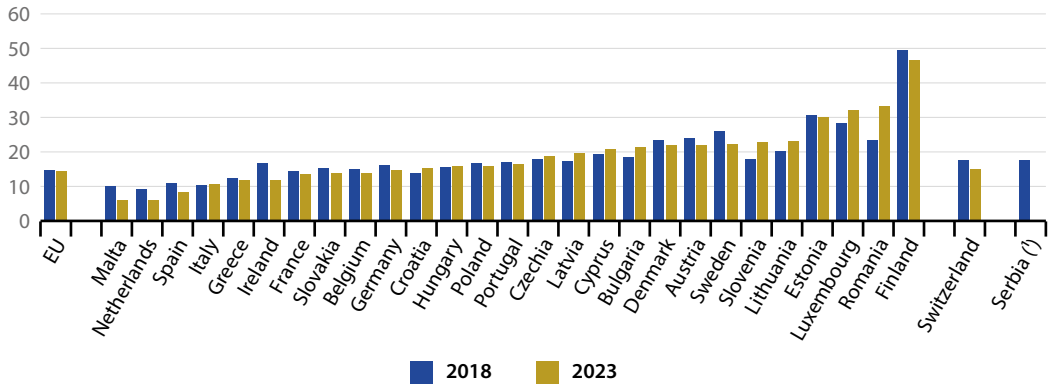
Note: Estimated data.

Source: Eurostat (online data code: sdg_12_21 and env_ac_rme)

FIGURE 12.2

Raw material consumption, by country, 2018 and 2023

(tonnes per inhabitant)



Note: Estimated data for most countries.
(1) No data for 2023

Source: Eurostat (online data code: sdg_12_21)

Consumption footprint

LONG TERM 2010–2023

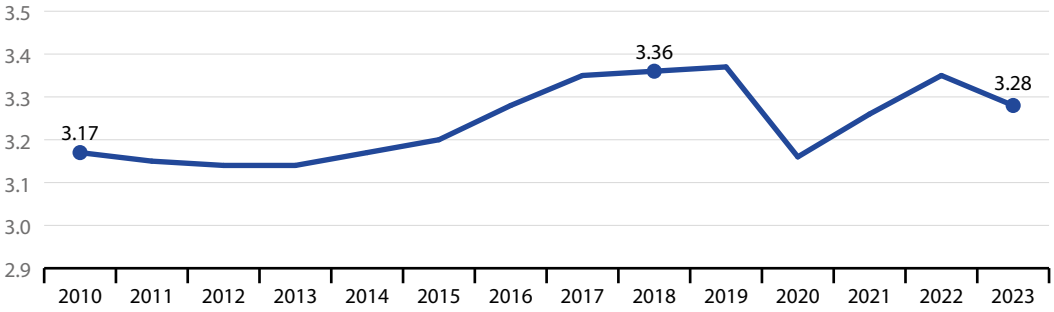
SHORT TERM 2018–2023

The consumption footprint is a set of 16 life cycle assessment (LCA)-based indicators that assess the environmental impacts of EU and its Member States consumption by combining data on consumption intensity and environmental impacts of representative products ([25]). It is based on the combination of: (a) the emissions to air, soil and water, as well as the resources used along the life cycle of around 165 representative products, belonging to five areas of consumption (food, mobility, housing, household goods, and appliances), (b) the consumption intensities of those products, which are calculated based on consumption statistics, and (c) the Environmental Footprint (EF) impact assessment method, which translates emissions and resource consumption into 16 potential environmental impacts that can be aggregated into a single score. The EF impact indicators can be compared with a set of thresholds based on the Planetary Boundaries framework ([26]).

FIGURE 12.3

Consumption footprint, EU, 2010–2023

(overall transgression of planetary boundaries)

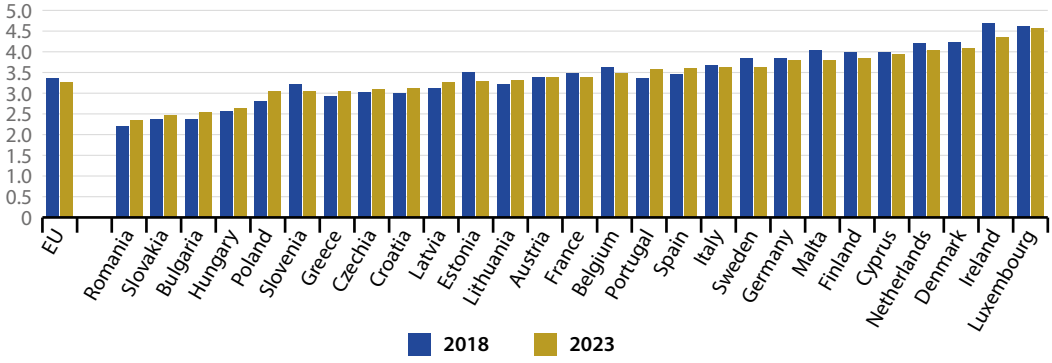


Source: Eurostat (online data code: sdg_12_31)

FIGURE 12.4

Consumption footprint, by country, 2018 and 2023

(overall transgression of planetary boundaries)



Source: Eurostat (online data code: sdg_12_31)

Consumption of hazardous chemicals

LONG TERM 2008–2023

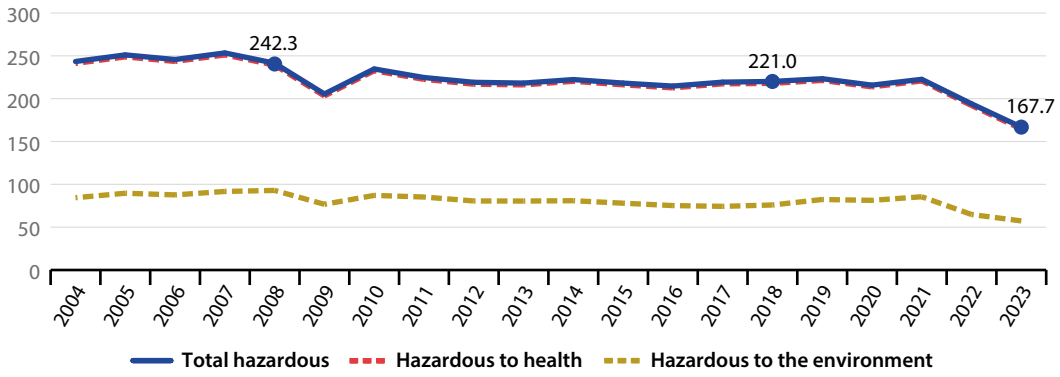
SHORT TERM 2018–2023

This indicator measures the consumption of toxic chemicals, expressed in million tonnes. The consumption of chemicals is calculated as the sum of the production volumes and the net import volumes of the chemicals according to the equation: consumption = production + imports – exports. The two sub-categories of hazardous chemicals — hazardous to human health and hazardous to the environment — overlap by definition and as a result their sum is not equal to the total consumption of hazardous chemicals.

FIGURE 12.5

Consumption of hazardous chemicals, EU, 2004–2023

(million tonnes)



Source: Eurostat (online data code: sdg_12_10)

Gross value added in the environmental goods and services sector

The environmental goods and services sector (EGSS) is defined as that part of a country's economy that is engaged in producing the goods and services used in environmental protection and resource management activities either domestically or abroad. Gross value added in EGSS represents the contribution of the environmental goods and services sector to GDP and is defined as the difference between the value of the sector's output and intermediate consumption.

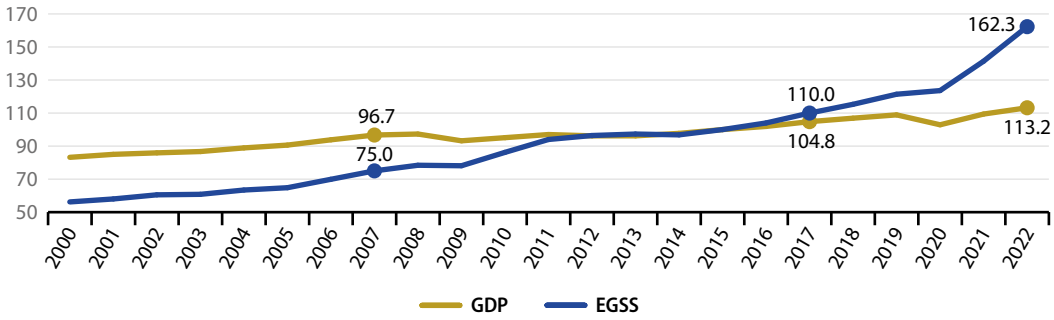
LONG TERM 2007–2022

SHORT TERM 2017–2022

FIGURE 12.6

Gross value added in the environmental goods and services sector, EU, 2000–2022

(chain-linked volumes, index 2015 = 100)



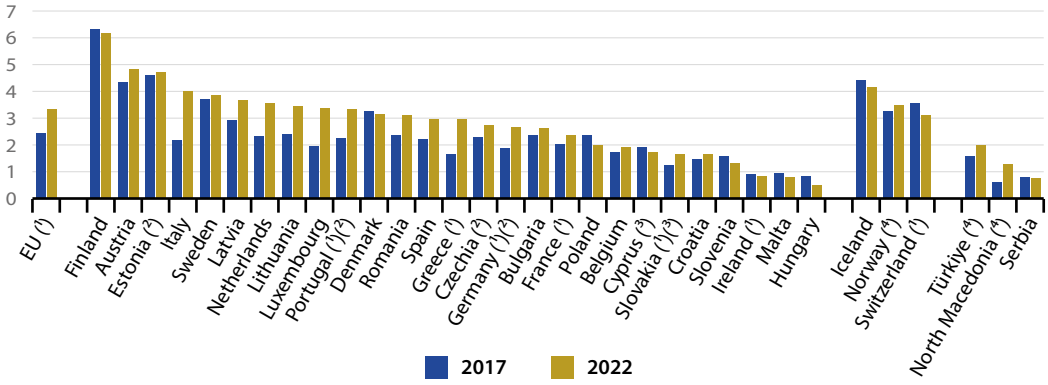
Note: Data for EGSS are imputed.

Source: Eurostat (online data codes: sdg_12_61 and nama_10_gdp)

FIGURE 12.7

Gross value added in the environmental goods and services sector, by country, 2017 and 2022

(% of GDP)



(1) Data are estimated, imputed and/or provisional for one or both of the years shown.
(2) Break(s) in time series between the two years shown.
(3) 2018 data (instead of 2017).
(4) 2019 data (instead of 2017).

Source: Eurostat (online data code: sdg_12_61)

Circular material use rate

LONG TERM 2008–2023

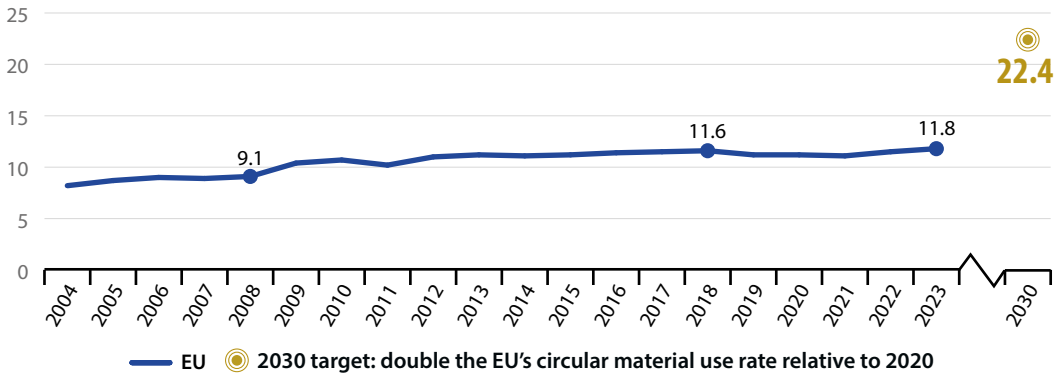
SHORT TERM 2018–2023

The circular material use rate (CMU) measures the share of material recovered and fed back into the economy in overall material use. The CMU is defined as the ratio of the circular use of materials to the overall material use. The overall material use is measured by summing up the aggregate domestic material consumption (DMC) and the circular use of materials. DMC is defined in economy-wide material flow accounts. The circular use of materials is approximated by the amount of waste recycled in domestic recovery plants minus imported waste destined for recovery plus exported waste destined for recovery abroad. A higher CMU rate value means more secondary materials are being substituted for primary raw materials, thus reducing the environmental impacts of extracting primary material.

FIGURE 12.8

Circular material use rate, EU, 2004–2023

(% of material input for domestic use)



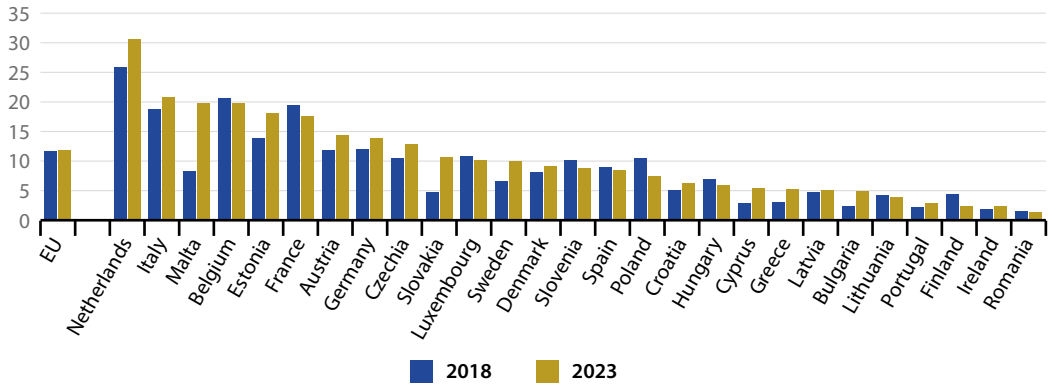
Note: Data for 2023 are imputed.

Source: Eurostat (online data code: sdg_12_41)

FIGURE 12.9

Circular material use rate, by country, 2018 and 2023

(% of material input for domestic use)



Note: 2023 data are imputed for most countries.

Source: Eurostat (online data code: sdg_12_41)

Generation of waste

This indicator is defined as all waste generated in a country. It covers waste generated by industrial production (including the waste management sector itself) and by households. Major mineral wastes, dredging spoils and soils are included. This leads to high quantities of waste in some countries with substantial economic activities such as mining and construction.

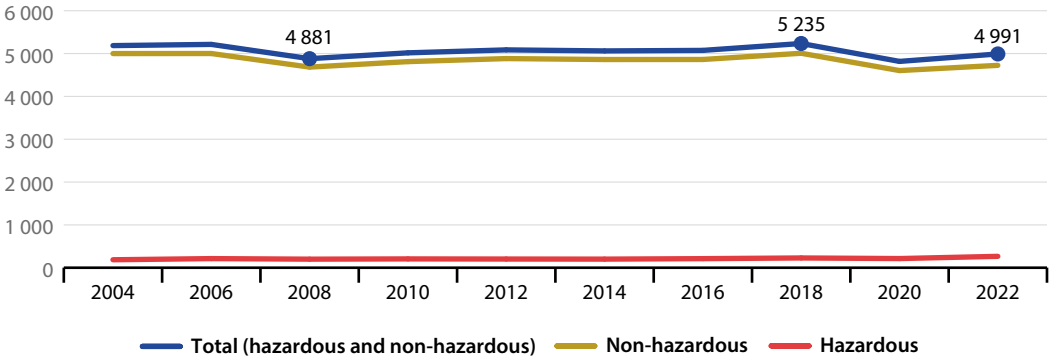
LONG TERM 2008–2022

SHORT TERM 2018–2022

FIGURE 12.10

Generation of waste, by hazardousness, EU, 2004–2022

(kg per capita)

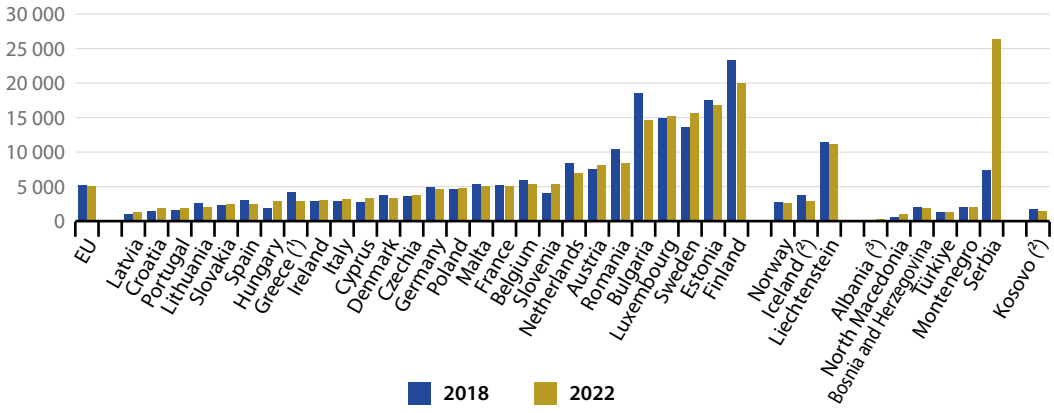


Source: Eurostat (online data code: sdg_12_51)

FIGURE 12.11

Generation of waste, by country, 2018 and 2022

(kg per capita)



(1) 2022 data are provisional.
(2) 2020 data (instead of 2022).
(3) No data for 2018.
Source: Eurostat (online data code: sdg_12_51)

Notes

(1) *Source*: JRC (Eurostat online data code: cei_gsr010).

(2) *Source*: Eurostat (online data code: env_ac_mid).

(3) *Source*: Eurostat (online data code: cei_gsr020). Copper does not meet the CRM threshold but is included on the CRM list as strategic raw material in line with the Critical Raw Materials Act.

(4) Resource productivity is defined as GDP per unit of domestic material consumption (DMC), measured in EUR per kilogram. Part of these materials is directly consumed by households, which means they are not used as an input to production activities. Thus, resource productivity is not directly comparable to concepts such as labour or capital productivity.

(5) *Source*: Eurostat (online data codes: env_ac_rp, env_ac_mfa and nama_10_gdp).

(6) Energy productivity is defined as GDP per unit of gross inland energy consumption, measured in EUR per kg of oil equivalent. Part of the energy considered is consumed by households, which means it is not used as an input to production activities. Thus, energy productivity is not directly comparable to concepts such as labour or capital productivity. Note that the indicator's inverse is energy intensity.

(7) *Source*: Eurostat (online data codes: nama_10_gdp and nrg_bal_s).

(8) The European Chemical Industry Council (2023), *CEFIC Facts and Figures 2023*.

(9) European Environment Agency (2019), *Consumption of hazardous chemicals*.

(10) *Source*: Eurostat (online data code: env_air_gge).

(11) European Commission (2023), *Commission Implementing Decision (EU) 2023/1623* of 3 August 2023 specifying the values relating to the performance of manufacturers and pools of manufacturers of new passenger cars and new light commercial vehicles for the calendar year 2021 and the values to be used for the calculation of the specific emission targets from 2025 onwards.

(12) Please note that the EU targets also cover vehicles registered in Norway and Iceland, while those countries are not included in the emission values quoted, which relate to EU-27.

(13) *Source*: Eurostat and European Alternative Fuels Observatory (online data code: road_eqr_zev).

(14) European Environment Agency (2019), *Environmental Goods and Services Sector: employment and value added*.

(15) Ibid.

(16) *Source*: Eurostat (online data code: nama_10_gdp).

(17) *Source*: Eurostat (online data code: env_ac_egss1).

(18) *Source*: Eurostat (online data code: env_wasgen).

(19) *Source*: Eurostat (online data code: env_wasgen).

(20) *Source*: Eurostat (online data code: env_wasfw).

(21) European Commission (2010), *Being wise with waste: the EU's approach to waste management*, Publication Office of the European Union, Luxembourg.

(22) European Commission (2024), *Circular economy*.

(23) *Source*: Eurostat (online data code: env_wasoper).

(24) Haas, W., Krausmann, F., Wiedenhofer, D., Heinz, M. (2015), *How Circular is the Global Economy?: An Assessment of Material Flows, Waste Production, and Recycling in the European Union and the World in 2005*, Journal of Industrial Ecology 19(5), 765–777.

(25) Sanye Mengual, E. and Sala, S. (2023), *Consumption Footprint and Domestic Footprint: Assessing the environmental impacts of EU consumption and production*, Publications Office of the European Union, Luxembourg.

(26) Sala, S., Crenna, E., Secchi, M., Sanyé-Mengual, E. (2020), *Environmental sustainability of European production and consumption assessed against planetary boundaries*, Journal of Environmental Management, Volume 269, 110686.

Take urgent action to combat climate change and its impacts

SDG 13 seeks to achieve a climate-neutral world by mid-century and to limit global warming to well below 2 °C — with an aim of 1.5 °C — compared with pre-industrial times. It aims to strengthen countries' climate resilience and adaptive capacity, with a special focus on supporting least-developed countries.

Climate change increases global air and ocean temperatures, impacts precipitation patterns, raises the global average sea level, provokes extreme weather events, harms biodiversity and increases ocean acidity. Its impacts threaten the viability of social, environmental and economic systems and may make some regions less habitable. Monitoring SDG 13 in an EU context focuses on climate change mitigation, climate change impacts and financing climate action. As surface temperatures rise, the EU continues to face intensifying climate impacts and economic losses from climate-related events. The EU's net greenhouse gas (GHG) emissions fell strongly in 2023, but more efforts are needed to meet the target of reducing net GHG emissions by at least 55 % by 2030 compared with 1990. The 2030 target includes net GHG removals from land use, land use change and forestry, which have further declined since 2018 and remain far below the levels needed. The share of renewables has been rising steadily in the EU, but stronger progress will be needed to meet the new 2030 target. Financing of the transition saw new funds made available via the issuance of green bonds from corporate and governmental issuers. Climate finance has continued to progress, with climate-related expenditure for developing countries increasing further.

Indicators measuring progress towards SDG 13, EU

Indicator	Period	Annual growth rate	Assessment	More info
Climate change mitigation				
Net greenhouse gas emissions ◎	2008–2023	Observed: – 2.1 % Required: – 3.1 %	↗ (1)	page 234
	2018–2023	Observed: – 3.8 % Required: – 4.5 %	↗ (1)	
Net greenhouse gas emissions from land use, land use change and forestry ◎	2008–2023	Observed: 3.9 % Allowed: 0.6 % (2)	↓	page 236
	2018–2023	Observed: 0.5 % Required: – 3.6 %	↓	
Share of renewable energy in gross final energy consumption (*) ◎	2008–2023	Observed: 4.6 % Required: 5.7 %	↗	SDG 7, page 137
	2018–2023	Observed: 5.2 % Required: 6.9 %	↗	
Average CO_2 emissions per km from new passenger cars ◎	Long-term assessment not possible due to break in time series in 2017		×	page 237
	2018–2023	Observed: – 5.9 % Required: – 8.6 %	↗	
Climate change impacts				
Climate-related economic losses	2009–2023	3.3 %	↓	page 239
	2018–2023	5.8 %	↓	
Financing climate action				
Green bond issuance	Time series too short for long-term assessment		×	page 240
	2018–2023	27.5 %	↑	
Contribution to the international USD 100bn commitment on climate-related expenditure	Time series too short for long-term assessment		×	page 241
	2018–2023	7.0 %	↑	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

(*) Multi-purpose indicator.

(1) Assessment based on past progress and not on projections of future emissions based on current and planned legislation and policy measures.

(2) Note that carbon removals in 2008 were already above the target value but have decreased at a higher rate than what would have been allowed to remain on top of this level.

Policy context

Climate change mitigation

The European Climate Law establishes the goal of reducing net GHG emissions by at least 55 % between 1990 and 2030 with the aim of achieving climate-neutrality by 2050. An intermediate 2040 GHG reduction target of 90 % on 1990 levels is recommended by the Commission.

To set in motion the transformative change, the Fit for 55 package comprises an interconnected set of EU climate and energy legislation ([1]) — including carbon pricing through a strengthened and expanded Emission Trading System (ETS), an updated 2030 target for natural carbon sinks, updated CO_2 emission standards for new vehicles and support measures.

The Just Transition Mechanism supports regions that are the most carbon-intensive or have the most people who will be affected, such as those working in fossil fuel industries. The Council Recommendation on ensuring a fair transition provides guidance for addressing relevant employment and social aspects linked to the green transition. The Social Climate Fund supports vulnerable households, micro-enterprises and transport users to help them cope with the price impacts of emissions trading in road transport and buildings.

The EU's climate policy framework was recently reinforced by the Competitiveness Compass and by the Clean Industrial Deal which outlines measures to make decarbonisation a catalyst for growth in European industries.

Climate change impacts

The Climate Law mandates continuous progress on enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change. The EU Adaptation Strategy urges smarter, faster and more systematic adaptation so that by 2050 the EU is a climate-resilient society. Better coherence is targeted internationally under the Sendai Framework for Disaster Risk Reduction and at EU level under the EU Civil Protection Mechanism. The Communication on Managing Climate Risks responds to the EU-wide climate risk assessment, identifying paths to protecting people and prosperity.

Financing climate action

Support for climate action in the EU comes from the EU budget, the Recovery and Resilience Facility, ETS revenues, and its climate-related funds including the Innovation Fund and the Modernisation Fund.

To shift private and public investments towards sustainable activities, the EU introduced a taxonomy for sustainable economic activities, requesting sustainability-related disclosures to investors for financial products and establishing two new climate-friendly benchmarks for investment portfolios. There is also a European Green Bond standard available. Further work is summarised in the Commission's strategy for financing the transition.

To support developing countries, the EU and its Member States contribute to the joint goal of developed countries under the Paris Agreement to provide USD 100 billion per year in climate finance through to 2025. They will also contribute to the new goal of providing USD 300 billion per year through to 2035 on climate finance to developing countries, from a wide variety of sources, with developed countries taking the lead.

Overview and key trends

Climate change mitigation

Climate change mitigation aims to reduce emissions of climate-harming greenhouse gases (GHG) originating from human activity through measures such as promoting low-carbon technologies and practices or encouraging sustainable forest management and land use that enhance carbon removals. The EU has set into law the target to reach climate neutrality with no net GHG emissions by 2050. This means reducing GHG emissions as much as possible while compensating for the residual and unavoidable emissions by removing carbon dioxide (CO_2), for example through natural carbon sinks and by using carbon-removal technologies. As an intermediate target on the path to climate neutrality in 2050, the EU has committed itself to reducing net GHG emissions by at least 55 % by 2030 compared with 1990 levels. In February 2024, the European Commission issued a Communication on the EU's 2040 climate target, with a recommendation for a net reduction of emissions of 90 % relative to 1990 levels, launching a debate with stakeholders.

GHG emissions fell strongly in 2023, but further progress is required to meet the 2030 target

Between 1990 and 2023, the EU achieved a 35.5 % reduction in its net GHG emissions ([2]). A large proportion of this reduction occurred between 2008 and 2023, with net emissions falling by 27.6 % during this period. The decrease in emissions has further accelerated in recent years, with a particularly strong drop of 8.5 % in 2023. However, over the next seven years emissions will need to fall even faster than they have on average over the past five years for the EU to reach its net GHG emission reduction target of 55 % by 2030.

The EU reduced its net GHG emissions by

17.5 %

between 2018 and 2023

Per capita GHG emissions have fallen strongly in most Member States

In 2023, the EU's net GHG emissions amounted to 6.8 tonnes of CO_2-equivalent per capita, which is 18.1 % lower than in 2018. Across Member States, domestic net GHG emissions ([3]) ranged from 1.2 tonnes per capita in Sweden to 11.1 tonnes in Ireland in 2023. Between 2018 and 2023, domestic net GHG emissions per capita fell in all but three Member States. The strongest reductions over the period from 2018 to 2023 were reported by Estonia, Slovenia and Luxembourg, where domestic per capita emissions fell by 46.0 %, 43.8 % and 37.3 %, respectively. In contrast, domestic per capita emissions increased in Latvia, Sweden and Croatia, by 39.3 %, 9.1 % and 8.3 %, respectively. The strong increase for Latvia is largely due to growing emissions from land use and forestry.

Carbon removals have declined and remain far from the target

Net GHG removals come from land use and forestry, which is also referred to as the 'land use, land use change and forestry (LULUCF)' sector according to the Intergovernmental Panel on Climate Change (IPCC) classification. Within this sector, forests remove CO_2 from the air (as trees capture CO_2 through photosynthesis), which in most Member States overcompensates for emissions from land use (for example, from the use of fertilisers) and land use change (for example, when grassland is converted to cropland).

Between 2008 and 2023, GHG net removals from land use and forestry fell by 44.5 % in the EU. The strong decline in forest carbon sinks has been attributed to several trends, including slowdowns in net afforestation and in forest biomass growth as well as increases in tree mortality and in timber harvesting ([4]). In the short-term period between

2018 and 2023, the EU's net removals from land use and forestry declined by 2.3 %. Due to the reductions in total GHG emissions, net removals still compensated for more than 6 % of emissions in 2023. In absolute numbers, net removals amounted to 198.4 million tonnes (Mt) of CO_2-equivalent in 2023. This is far below the EU's net carbon removal target for land use and forestry of at least 310 Mt of CO_2-equivalent by 2030.

Net carbon removals from land use and forestry in the EU in 2023 amounted to

198.4

Mt CO_2-eq

Emissions associated with energy consumption have fallen thanks to reduced energy use and increased use of renewables

A sectoral breakdown of GHG emissions for 2023 shows that two sectors — energy industries (which covers electricity and central heat generation) and transport — were responsible for about half of total EU emissions, accounting for 24.3 % and 25.6 % of emissions, respectively. Industry and other energy consumers were the third and fourth largest emitters of GHGs in the EU, accounting for 20.2 % and 14.3 % of total emissions in 2023, respectively. Between 2018 and 2023, energy industries showed the strongest reduction in emissions, of 31.4 %. Emissions from industry and from other energy consumers fell by 18.8 % and 17.1 %, respectively, while transport emissions dropped by 4.4 % over the same period ([5]).

Emissions arise mainly from fossil energy consumption, whereby related reductions result from the general drop in energy consumption and an increasing share of renewable energies (see the chapter on SDG 7 'Affordable and clean energy' on page 125). In total, renewable energy contributed 24.6 % of the EU's gross final energy consumption in 2023. While this was an increase of 5.5 percentage points between 2018 and 2023, stronger progress is vital to reaching a 42.5 % share of renewable sources in energy consumption by 2030. A sectoral breakdown shows that the share of renewables was largest in electricity generation, reaching 45.3 % in 2023. The shares of renewables in heating and cooling and in transport were lower, at 26.2 % and 10.8 %, respectively, in 2023.

24.6 %

of energy consumed in the EU in 2023 came from renewable sources

Average CO_2 emissions per km from new cars have reached the lowest level recorded, but further reductions are needed to meet the 2030 target

Road transport was responsible for almost a quarter of the EU's total GHG emissions in 2022, and more than half of road transport emissions came from passenger cars ([6]). To reduce those emissions, the EU has set targets for the fleet-wide average CO_2 emissions of new passenger cars, vans and heavy duty vehicles. The targets for average CO_2 emissions per kilometre (km) from new passenger cars have been set to 93.6 grams per km (g/km) for the period 2025 to 2029 and to 49.5 g/km for 2030 to 2034, while from 2035 onwards the target is 0 g/km ([7]).

107.6

grams of CO_2 per km were emitted on average by new passenger cars in the EU in 2023

Over the period 2018 to 2023, the average CO_2 emissions per km from new passenger cars registered in the EU fell by 26.1 %, with most of this reduction taking place between 2019 and 2021. The EU average CO_2 emissions reached 107.6 g/km in 2023. This is the lowest level on record but still far from the EU targets for 2025 and 2030.

Accelerating the market uptake of new zero-emission vehicles is a crucial step to achieving the CO_2 emission targets. The share of zero-emission vehicles (mostly battery electric cars) in newly registered cars in the EU rose from 1.0 % in 2018 to 14.5 % in 2023. However, the share differs considerably between countries. Sweden reported the highest share with 38.6 % in 2023, followed by Denmark with 36.1 % and Finland with 33.8 %. In

contrast, zero-emission vehicles only accounted for around 3 % of newly registered passenger cars in Czechia, Croatia and Slovakia ([8]).

Climate change impacts

Rising concentrations of CO_2 emissions and other GHGs lead to global warming and increased ocean acidity. As a consequence of global anthropogenic GHG emissions, the decade 2013 to 2023 was the warmest on record, with a global mean near-surface temperature increase of 1.19–1.22 °C compared with the pre-industrial level. This means that more than half of the warming allowed under the Paris Agreement has already occurred. This agreement aims to keep the rise in global temperature to well below 2 °C and to continue efforts to limit warming to 1.5 °C. However, the average annual temperature over the European continent has increased by more than this, by 2.12–2.19 °C during this decade ([9]).

Climate impacts are a consequence of rising temperatures and the related intensity and quantity of extreme events which affect environmental, social and economic systems. The EU's SDG monitoring focuses on the economic costs that arise from weather- and climate-related extreme events. To minimise the impacts, countries are taking action to adapt to climate change by introducing measures such as flood protection, adapted agricultural practices and forest management, and sustainable urban drainage systems. However, adaptation is lagging far behind the impacts.

Economic losses from weather- and climate-related extreme events have continued to rise significantly

Studies have shown that various weather- and climate-related extreme events in Europe and beyond have become more severe and frequent as a result of global climate change. The resulting impact on human systems and ecosystems has led to measurable losses to nature, economies and people's livelihoods ([10]). Reported economic losses generally include monetised direct damages to certain assets and as such only partially estimate the full damages. They do not consider losses related to productivity, mortality and health, cultural heritage or ecosystems services, which would considerably raise the estimate ([11]).

Over the period 1980 to 2023, weather- and climate-related losses accounted for a total of 738 billion ([12]). 2023 marked another negative year with climate-related economic losses amounting to EUR 43.9 billion, most of which (EUR 25.7 billion) was caused by hydrological events such as floods. This marks the third year in a row with economic losses well above the long-term trend. In 2021, losses had amounted to EUR 63.0 billion, mainly caused by extreme floods after record precipitation in central Europe. In 2022, EUR 56.0 billion had been lost, caused mainly by climatological events such as heat waves, droughts and forest fires.

In 2023, weather- and climate-related economic losses in EU countries amounted to

EUR 43.9 billion

However, recorded losses vary substantially over time: about 61 % of total losses have been caused by just 5 % of unique extreme events ([13]). This variability makes the analysis of historical trends difficult. A closer look at a 30-year moving average shows an almost steady increase in annual climate-related economic losses, from EUR 12.8 billion in 2009 to EUR 20.1 billion in 2023 ([14]), corresponding to a 57.7 % increase. Over the period from 1980 to 2023, hydrological hazards (floods) accounted for 44 % of economic losses in the EU, followed by meteorological hazards (storms, including lightning and hail) with 29 % and heat waves with 19 %. The remaining 8 % was caused by droughts, forest fires and cold waves ([15]).

Financing climate action

As part of the transition towards climate neutrality and climate resilience, the EU is endeavouring to redirect public and private investments to areas where they will support this objective. For this reason, the EU has adopted the EU taxonomy as a classification system for sustainable economic activities and a European green bond standard as a voluntary 'gold' standard for the green bond market. At the EU level, climate change mitigation and adaptation has been integrated into all major spending programmes ([16]) and the EU has also committed to support international climate action.

Green bond issuance has shown an increasing trend despite dropping in 2023

Investments into clean technologies and supportive infrastructure are key for the transition to climate neutrality. Such investments often rely on funds which can be raised for example through the issuance of bonds. There are different issuers active in the green bond market such as the EU, which issues for example the NextGenerationEU Green Bonds to finance climate action in the EU.

The share of green bonds in total bond issuance increased sharply from 2.0 % to 9.2 % between 2018 and 2022 before dropping to 6.8 % in 2023. In 2023, green bonds made up 7.1 % and 5.9 % of total bond issuance by corporates and governments respectively, compared with 1.7 % and 3.0 % in 2018. While for governments the share of green bonds in 2023 was the highest on record, for corporates the share fell in 2023 compared to the peak of 11.1 % in 2022.

Green bonds reached a share of

6.8 %

in total bonds in the EU in 2023

The issuance of green bonds by corporates and governments increased significantly in most EU Member States between 2018 and 2023. Denmark, Sweden, Finland and Austria saw substantial growth in green bond issuance, with these bonds accounting for more than 15 % of total bonds issuance in 2023. In contrast, several countries from eastern and southern Europe exhibited little to no activity in this period.

The EU's contribution to climate finance for developing countries has been increasing since 2014

In addition to investing in climate action within its borders, the EU and its Member States have also committed to raising money to help developing countries combat climate change and adapt to climate impacts. They take part in a commitment made by the world's developed countries to jointly mobilise USD 100 billion per year by 2025 ([17]) and in the fulfilment of the New Collective Quantified Goal of securing at least USD 300 billion per year by 2035 for developing countries, from a wide variety of sources, instruments and channels, with developed countries taking the lead ([18]).

Total EU public finance contributions (including all 27 Member States as well as the EU institutions) increased from about EUR 12.9 billion in 2014 to EUR 28.6 billion in 2023. This equals roughly USD 32 billion contribution to the global target. The two largest EU contributors in the period were Germany and France. The European Commission and the European Investment Bank (EIB) were the third and fourth largest donors in 2023, respectively. In 2023, the EU, its Member States and the EIB together were the biggest contributors of public climate finance to developing countries worldwide ([19]).

In 2023, the EU contribution to the international USD 100 billion commitment amounted to

EUR 28.6 billion

Main indicators

Net greenhouse gas emissions

LONG TERM 2008–2023

SHORT TERM 2018–2023

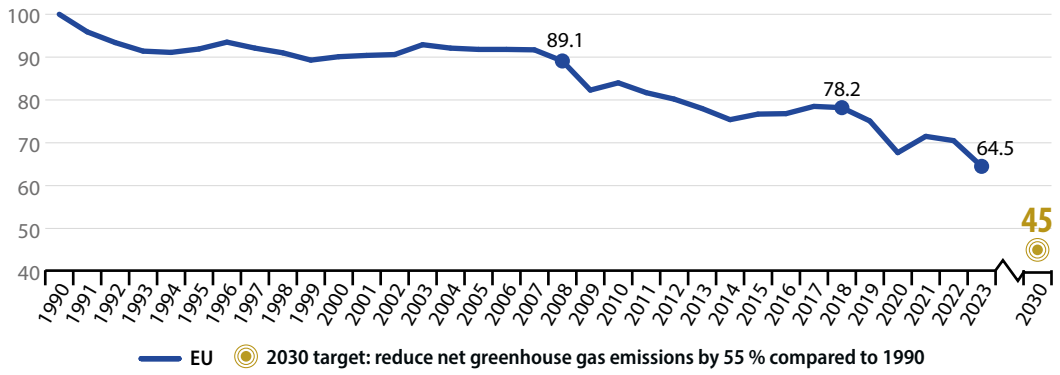
This indicator measures man-made greenhouse gas (GHG) emissions as well as carbon removals on EU territory. The 'Kyoto basket' of GHGs includes carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and the so-called F-gases, which include hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride (NF_3) and sulphur hexafluoride (SF_6). Emissions and removals are integrated into a single indicator — net GHG emissions — expressed in units of CO_2 equivalents based on the global warming potential (GWP) of each gas. At present, carbon removals are accounted for only in the land use, land use change and forestry (LULUCF) sector. At the EU level, the scope of the data used is aligned with the scope of EU climate policies and the target to reduce GHG emissions by at least 55 % by 2030 compared to 1990. Estimated emissions from international aviation and maritime transport are included and calibrated for this purpose. At country level, emissions from international transport are excluded.

The indicator refers to GHG emissions in the EU territory. GHG emissions derived from the production of goods imported and consumed in the EU are counted in the export country, following the United Nations Framework Convention on Climate Change (UNFCCC) rules. Emissions and removals data, known as GHG inventories, are submitted annually by Member States to the EU and the UNFCCC. The European Environment Agency (EEA) compiles the EU aggregate data and publishes data for the EU and all Member States. Eurostat republishes the EEA data.

FIGURE 13.1

EU net greenhouse gas emissions (according to EU climate policies and targets), 1990–2023

(index 1990 = 100)



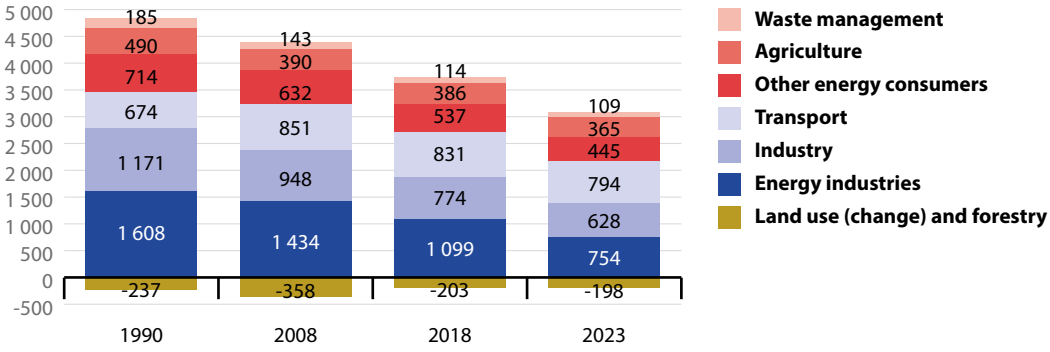
Note: All data are provisional. The EU target scope, as defined in the European Climate Law, includes
— for international aviation: intra-EU flights, departing flights from the EU to Iceland, Norway, Switzerland and the United Kingdom;
— for International maritime transport: emissions from voyages between two EU Member States, 50% of emissions from voyages between an EU Member State and Norway, Iceland or any third country ([20]).

Source: EEA, Joint Research Centre, Eurostat (online data code: sdg_13_11)

FIGURE 13.2

Greenhouse gas emissions and removals, by sector, EU, 1990, 2008, 2018 and 2023

(million tonnes of CO_2 equivalent)

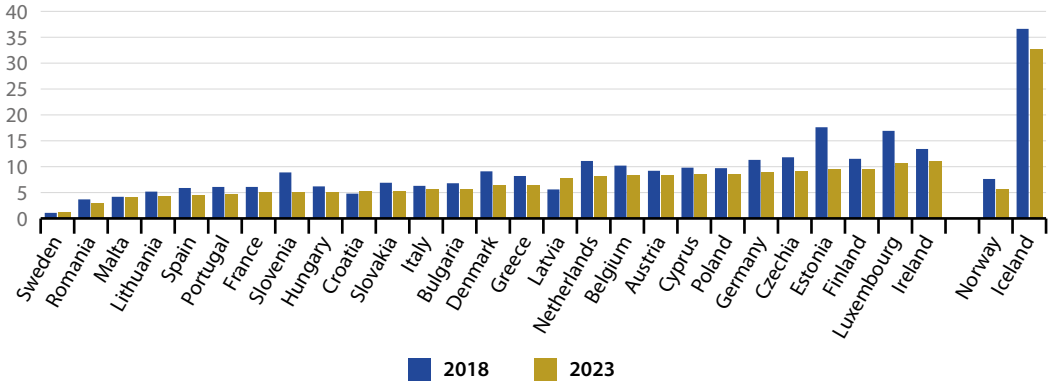


Note: Emissions from transport do not include international aviation or international maritime transport.
Source: EEA, Eurostat (online data code: env_air_gge)

FIGURE 13.3

Domestic net greenhouse gas emissions per capita, by country, 2018 and 2023

(tonnes per capita)



Source: EEA, Eurostat (online data code: sdg_13_10)

Net greenhouse gas emissions from land use, land use change and forestry

LONG TERM 2008–2023

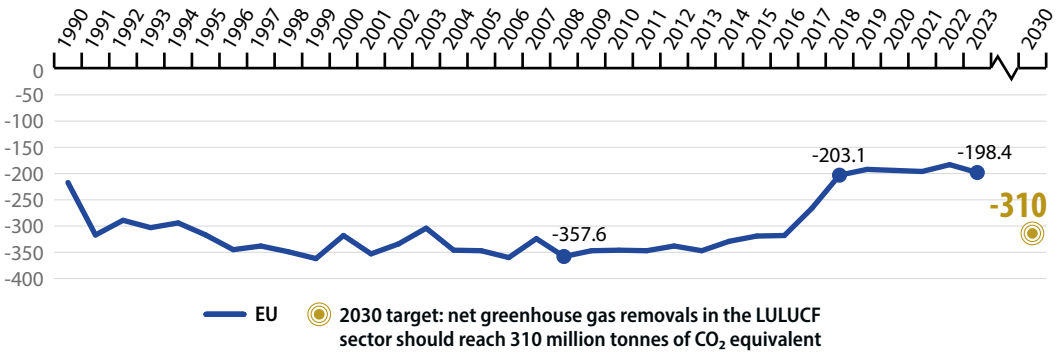
SHORT TERM 2018–2023

This indicator measures net carbon removals from the land use, land use change and forestry (LULUCF) sector, considering both emissions and removals from the sector. The indicator is expressed as CO_2 equivalents using the global warming potential (GWP) of each gas. Emissions and removals data, known as greenhouse gas (GHG) inventories, are submitted annually by Member States to the EU and the United Nations Framework Convention on Climate Change (UNFCCC). The European Environment Agency (EEA) compiles the EU aggregate data and publishes data for the EU and all Member States. Eurostat republishes the EEA data.

FIGURE 13.4

Net greenhouse gas emissions from land use, land use change and forestry, EU, 1990–2023

(million tonnes of CO_2 equivalent)

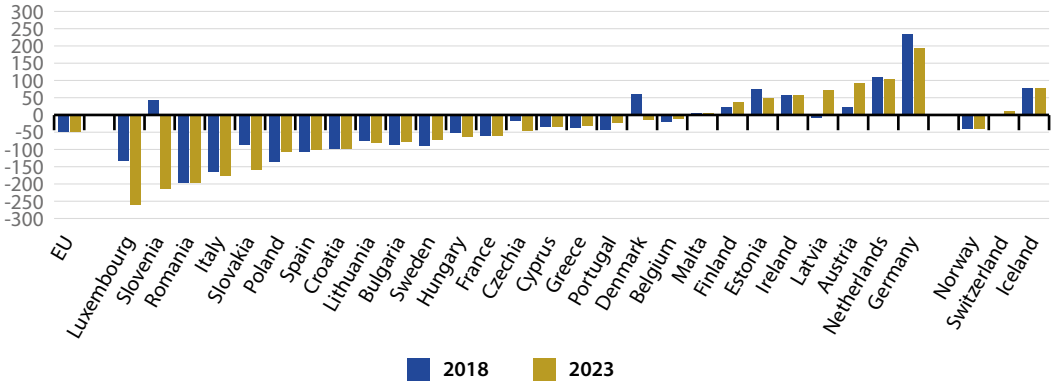


Source: EEA, Eurostat (online data code: sdg_13_21)

FIGURE 13.5

Net greenhouse gas emissions from land use, land use change and forestry, by country, 2018 and 2023

(tonnes of CO_2 equivalent per km^2)



Source: EEA, Eurostat (online data code: sdg_13_21)

Average CO_2 emissions per km from new passenger cars

This indicator is defined as the average carbon dioxide (CO_2) emissions per km from new passenger cars registered in the EU in a given year. The reported emissions are based on emission tests during type-approval and can deviate from the actual CO_2 emissions of those cars on the road. Data up to (and including) 2019 were determined according to the New European Driving Cycle (NEDC) procedure, while the data collected from 2021 onwards is based on the World Harmonised Light-vehicle Test Procedure (WLTP). For 2020, data were collected for both test procedures. For the purpose of monitoring progress in this report, emission data for 2017 to 2019 are presented according to WLTP based on a conversion factor, which was calculated from the 2020 data in NEDC and WLTP. Data before 2017 are presented according to NEDC. Data presented in this section are provided by the European Commission, Directorate-General for Climate Action and the European Environment Agency (EEA).

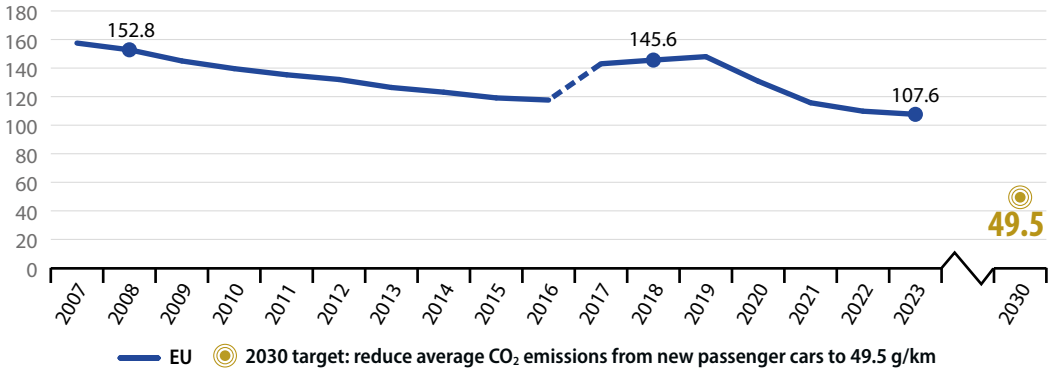
LONG TERM
Assessment not possible due to break in time series in 2017

SHORT TERM
2018–2023

FIGURE 13.6

Average CO_2 emissions per km from new passenger cars, EU, 2007–2023

(g CO_2 per km)



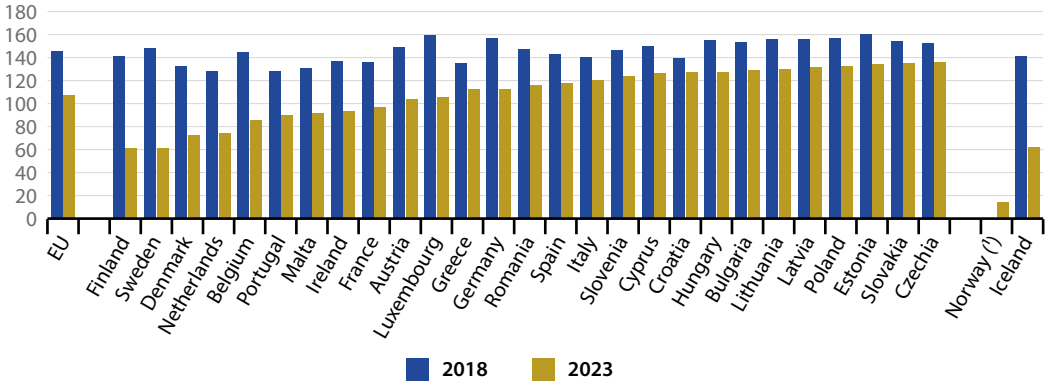
Note: 2017–2019 data are estimated; break in time series in 2017 (see indicator description above). The target also covers vehicles registered in Norway and Iceland, while those countries are not included in the emission values presented, which relate to the EU only.

Source: EEA, European Commission services (Eurostat online data code: sdg_13_31)

FIGURE 13.7

Average CO_2 emissions per km from new passenger cars, by country, 2018 and 2023

(g CO_2 per km)

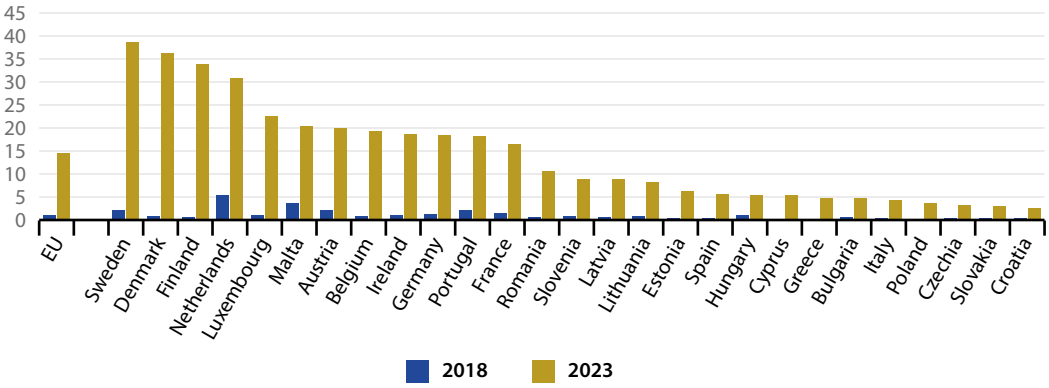


Note: 2018 data are estimated.
(1) No data for 2018.
Source: EEA, European Commission services (Eurostat online data code: sdg_13_31)

FIGURE 13.8

Share of zero emissions vehicles, by country, 2018 and 2023

(% of newly registered passenger cars)



Note: Eurostat estimates based on European Alternative Fuels Observatory (EAFO) data, in particular concerning the number of vehicles fuelled by hydrogen and fuel cells.
Source: Eurostat, EAFO (online data code: road_eqr_zev)

Climate-related economic losses

This indicator includes the overall monetary losses from weather- and climate-related events. The European Environment Agency (EEA) compiles the EU aggregate data from CATDAT of RiskLayer. Eurostat republishes the EEA data. Due to the variability of the annual figures, the data are also presented as a 30-year moving average to facilitate the analysis of historical trends.

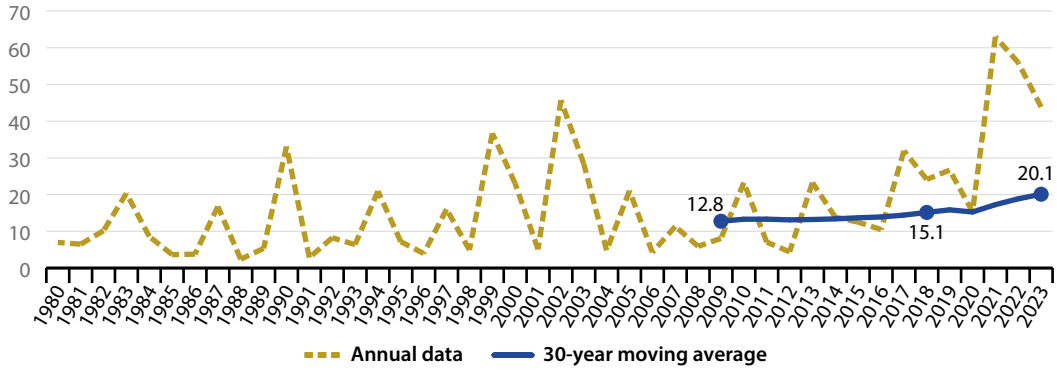
LONG TERM 2009–2023

SHORT TERM 2018–2023

FIGURE 13.9

Climate-related economic losses, EU, 1980–2023

(EUR billion, constant prices)

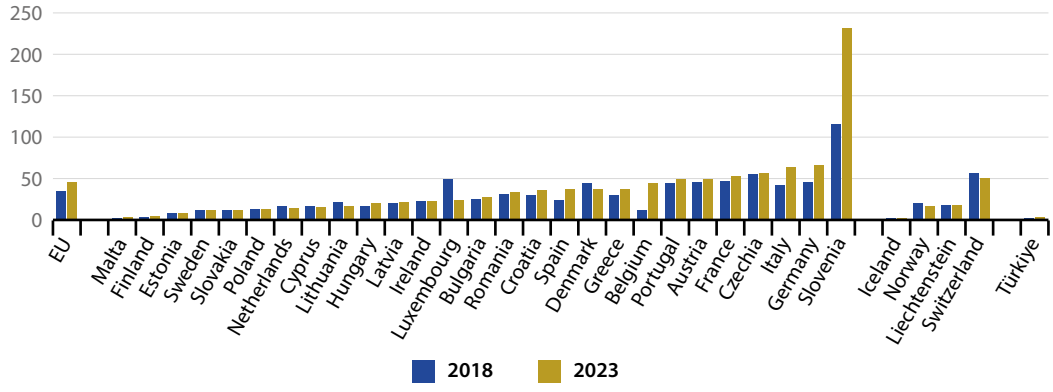


Note: The annual data points for the 30-year moving average refer to the average over the 30-year period up to these years.
Source: EEA, Eurostat (online data code: sdg_13_40)

FIGURE 13.10

Climate-related economic losses (30-year moving average) by country, 2018 and 2023

(EUR per capita, constant prices)



Note: Data are shown as 30-year moving average (annual data points refer to the 30-year period up to that year).
Source: EEA, Eurostat (online data code: sdg_13_40)

Green bond issuance

LONG TERM Time series too short

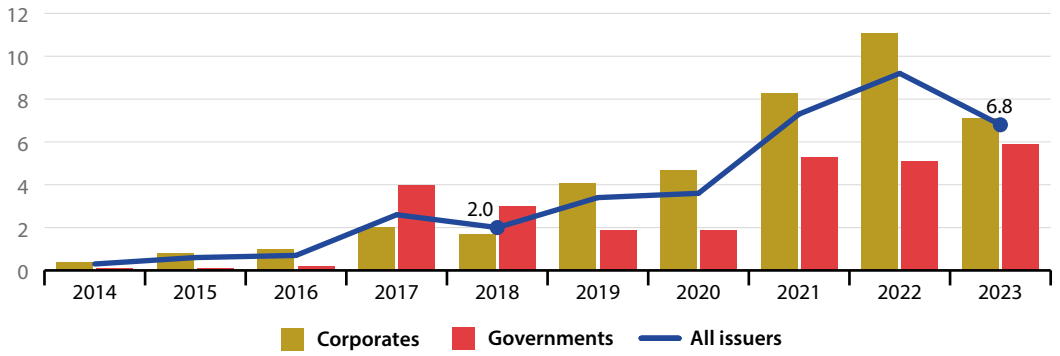
SHORT TERM 2018–2023

Green bonds are loans provided by an investor to a borrower which are used to fund projects or activities that promote climate change mitigation or adaptation or other environmental objectives. While the green bond definition can vary, this indicator includes bonds that are aligned with the four core components of the International Capital Market Association (ICMA) green bond principles or are certified by the Climate Bond Initiative (CBI) ([21]). Issuers include cooperates such as a company or financial corporation and sovereign bond issuers which are national governments.

FIGURE 13.11

Green bond issuance, by type of issuer, EU, 2014–2023

(% of total bond issuance)

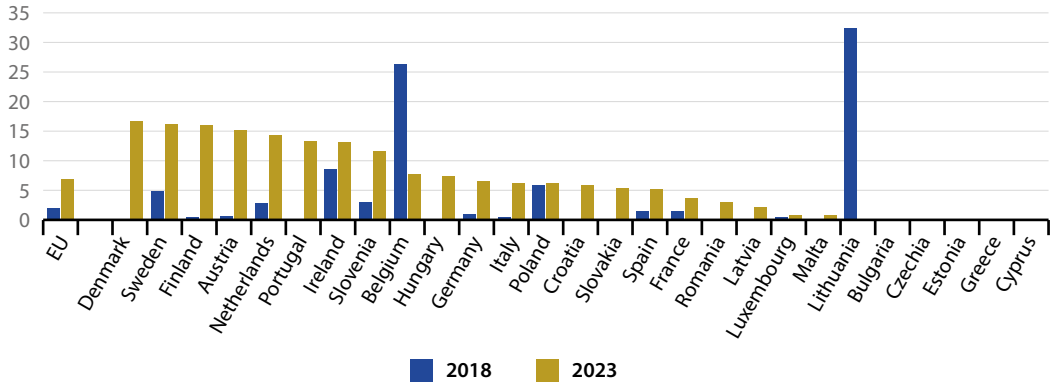


Source: EEA (Eurostat data code: sdg_13_70)

FIGURE 13.12

Green bond issuance by corporates and governments, by country, 2018 and 2023

(% of total bond issuance)



Source: EEA (Eurostat data code: sdg_13_70a)

Contribution to the international USD 100bn commitment on climate-related expenditure

The intention of the international commitment on climate finance under the United Nations Framework Convention on Climate Change (UNFCCC) is to enable and support enhanced action by developing countries to advance low-emission and climate-resilient development. The data presented in this section are reported to the European Commission under the Monitoring Mechanism Regulation (Regulation (EU) 525/2013) for the period up to 2019 and under the Governance Regulation (Regulation (EU) 2018/1999) for subsequent years. Data from 2020 onwards thus cover *commitments* for both multilateral and bilateral public finance and are not fully comparable with earlier years. In addition, since 2022, the methodology is based on *commitments* for bilateral finance and *disbursements* of multilateral finance made in the same year. The data refer to public finance only and do not include private finance.

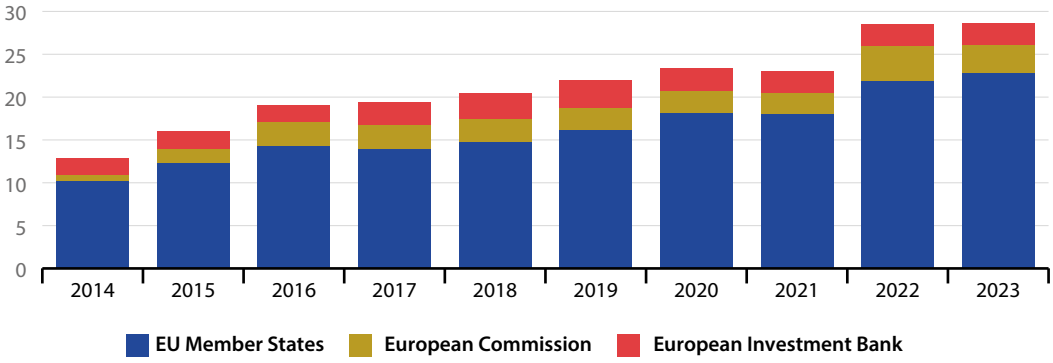
LONG TERM Time series too short

SHORT TERM 2018–2023

FIGURE 13.13

Contribution to the international USD 100bn commitment on climate-related expenditure, EU, 2014–2023

(EUR billion, current prices)



Note: Breaks in time series in 2020 and 2022.
Source: EEA, European Commission services (Eurostat online data code: sdg_13_50)

TABLE 13.1

Contribution to the international USD 100bn commitment on climate-related expenditure, by country, 2018 and 2023

(EUR million, current prices)

Country	2018	2023
EU Member States	14 792.8	22 849.9
European Commission	2 652.5	3 182.4
European Investment Bank	2 972.4	2 598.0
Belgium	80.7	241.2
Bulgaria	0.0	0.1
Czechia	7.2	9.3
Denmark	198.2	478.5
Germany	6 612.0	9 464.6
Estonia	1.0	1.0
Ireland	77.2	159.8
Greece	3.8	1.6
Spain	694.9	1 442.9
France	5 088.8	7 183.0
Croatia	0.1	0.0
Italy	452.0	838.4
Cyprus	0.0	0.0
Latvia	0.0	0.3
Lithuania	0.8	3.5
Luxembourg	41.0	74.9
Hungary	3.1	36.1
Malta	0.1	0.6
Netherlands	577.8	1 407.6
Austria	239.5	538.7
Poland	49.5	15.1
Portugal	1.6	6.6
Romania	0.0	33.2
Slovenia	4.4	9.5
Slovakia	4.2	8.1
Finland	46.6	227.7
Sweden	608.6	667.4

Note: Breaks in time series in 2020 and 2022.

Source: EEA, European Commission services (Eurostat online data code: sdg_13_50)

Notes

(1) European Parliament, Legislative Train Schedule.

(2) The data presented here cover GHG emissions produced inside the EU territory and do not take into account those that occurred outside the EU as a result of EU consumption. At the EU level, the scope of the data used is aligned with the scope of EU climate policies and the target to reduce GHG emissions by at least 55 % by 2030 compared to 1990. Estimated emissions from international aviation and maritime transport are included and calibrated for this purpose.

(3) The data on Member States' net GHG emissions exclude international transport and international maritime transport, while these are partly included in the EU data.

(4) See for example: ESABCC (2024), *Towards EU climate neutrality — Progress, policy gaps and opportunities, European Scientific Advisory Board on Climate Change*; and Hyyrynen, M., Ollikainen, M., & Seppälä, J. (2023), *European forest sinks and climate targets: Past trends, main drivers, and future forecasts*, European Journal of Forest Research, 142(5), 1207–1224.

(5) *Source*: Eurostat (online data code: env_air_gge).

(6) *Source*: Eurostat (online data code: env_air_gge).

(7) European Commission (2023), *Commission Implementing Decision (EU) 2023/1623* of 3 August 2023 specifying the values relating to the performance of manufacturers and pools of manufacturers of new passenger cars and new light commercial vehicles for the calendar year 2021 and the values to be used for the calculation of the specific emission targets from 2025 onwards.

(8) *Source*: Eurostat and European Alternative Fuels Observatory (online data code: road_eqr_zev).

(9) European Environment Agency (2024), *Global and European temperatures*.

(10) IPCC (2023), *Climate change 2023 — Synthesis Report — Summary for Policymakers*, Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1–34.

(11) IPBES (2019), *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*, Bonn; and European Environment Agency (2016), *Climate change impacts and vulnerability in Europe: An indicator-based report*, Report No. 1/2017, Copenhagen.

(12) European Environment Agency (2024), *Economic losses from weather- and climate-related extremes in Europe*.

(13) Ibid.

(14) A 30-year moving average shows the average over the past 30 years for a given year. For example, for 2017, the data point shows the average from 1988 to 2017.

(15) European Environment Agency (2024), *Economic losses from weather- and climate-related extremes in Europe*.

(16) European Commission, *The EU long-term budget*.

(17) European Commission (2018), *A modern budget for a Union that protects, empowers and defends: The Multiannual Financial Framework for 2021–2027*, COM(2018) 321 final, Brussels.

(18) UNFCCC (2024), *COP29 UN Climate Conference Agrees to Triple Finance to Developing Countries, Protecting Lives and Livelihoods*.

(19) European Council (2025), *Europe's contribution to climate finance (in €bn)*.

(20) European Commission, Joint Research Centre, Jaxa-Rozen, M., Rozsai, M. and Neuwahl, F., *Aligning historical international aviation and maritime transport data to the scope of EU climate policies*, Publications Office of the European Union, Luxembourg, JRC139028.

(21) EEA (2024), *Green bonds*.

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

SDG 14 aims to protect and ensure the sustainable use of oceans. This includes reducing marine pollution and ocean acidification, ending overfishing and conserving marine and coastal ecosystems. SDG 14 is strongly related to other SDGs because oceans sustain coastal economies and livelihoods, contribute to food production and function as a carbon sink.

The livelihoods and well-being of Europeans depend heavily on the health and productivity of marine ecosystems. At the same time, the marine and coastal environments are affected by climate change, habitat destruction, degradation and alteration, biodiversity loss, over-exploitation of marine resources and pollution from various sources. Monitoring SDG 14 in an EU context thus involves looking into trends in the areas of ocean health, marine conservation and sustainable fisheries. The assessment of the EU's progress towards SDG 14 over the most recent five-year period is neutral. On the positive side, fish stocks in EU marine waters (especially in the North-East Atlantic) seem to be recovering due to reduced fishing pressure. However, unsustainable trends are visible in the areas of ocean acidification (as a result of carbon dioxide emissions from human activities) and eutrophication. Additionally, despite an increase in marine protected areas in the past decade, the designation of new areas would need to speed up significantly to achieve the target of protecting at least 30 % of EU seas by 2030.

Indicators measuring progress towards SDG 14, EU

Indicator	Period	Annual growth rate	Assessment	More info
Ocean health				
Mean surface seawater acidity	2009–2024	0.5 %	↘	page 253
	2019–2024	0.6 %	↘	
Marine waters affected by eutrophication	2009–2024	0.0 % (1)	→	page 254
	2019–2024	5.8 % (1)	↓	
Coastal bathing waters with excellent quality	2011–2023	0.7 %	↗	page 255
	2018–2023	0.2 %	↗	
Marine conservation				
Marine protected areas ◎	2012–2022	Observed: 11.3 % Required: 11.5 %	↑	page 256
	2019–2022	Observed: 4.1 % Required: 9.6 %	↘	
Sustainable fisheries				
Estimated trends in fish stock biomass	2007–2022	1.0 %	↑	page 258
	2017–2022	0.8 %	↗	
Estimated trends in fishing pressure	2007–2022	– 4.7 %	↑	page 259
	2017–2022	– 7.3 %	↑	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

(1) Assessment based on a four-year moving average.

Policy context

Ocean health and marine conservation

The Marine Strategy Framework Directive (MSFD) aims for good environmental status in EU waters and promotes marine protected areas, which the Maritime Spatial Planning Directive (MSPD) integrates into maritime spatial planning.

The EU Mission 'Restore our Ocean and Waters', launched in September 2021, aims to protect and restore the health of our ocean and waters by 2030 through research and innovation, citizen engagement and investments in the sustainable blue economy.

The Water Framework Directive requires Member States to draw up management plans to ensure good ecological status of coastal waters. The EU Bathing Water Directive lays down provisions for monitoring bathing water quality at designated bathing sites.

The UN Biodiversity Conference (COP 15) in 2022 adopted a global biodiversity framework to protect at least 30 % of the global sea areas by 2030. This goal was taken up by the landmark Treaty of the High Seas to protect the ocean.

The BBNJ Agreement establishes a global framework for protecting marine biodiversity in areas beyond national jurisdiction.

The EU Biodiversity Strategy for 2030 aims to achieve good environmental status for marine ecosystems. Additionally, the Nature Restoration Law aims to restore European habitats in poor condition, including marine ecosystems.

The EU Habitats Directive contributes to the conservation of marine habitat types and species. The Birds Directive lists bird species that depend on marine habitats.

Making ocean sustainability a reality by 2030 is one of the four pillars of the EU's updated International Ocean Governance Agenda.

The EU combats marine pollution through a wide set of legal instruments on waste management, port reception facilities and single-use plastics.

The Zero Pollution Action Plan for Air, Water and Soil sets out key actions to improve water quality by reducing emissions of waste, plastic litter at sea and microplastics.

The EU's approach for a sustainable blue economy fosters activities that preserve marine ecosystems, reduce pollution and increase resilience to climate change.

The EU Ship-Source Pollution Directive strengthens measures to prevent and respond to marine pollution caused by illegal discharges from ships.

The updated EU Arctic policy stresses the utmost importance of conserving and sustainably using Arctic marine living resources.

The EU strategy on adaptation to climate change aims to tackle ocean acidification and encourage nature-based solutions for sustaining Europe's seas.

Sustainable fisheries

The Common Fisheries Policy (CFP) aims at ensuring that fishing and aquaculture activities are environmentally and socio-economically sustainable in the long-term.

The EU IUU Regulation aims to combat illegal, unreported and unregulated fishing.

The Action plan on protecting and restoring marine ecosystems for sustainable and resilient fisheries contributes to the delivery of the EU Biodiversity Strategy for 2030.

Overview and key trends

Ocean health

Accomplishing the goal of a clean, healthy and productive ocean requires an integrated approach that addresses different pressures. To monitor SDG 14 in the EU context, indicators have been chosen that focus on ocean acidification, eutrophication and bathing water quality. The EU is committed to improving water quality in marine waters and coastal areas in the sea basins around the EU. It aims to do this through a range of land-based and marine policies, by active engagement in Regional Sea Conventions, the EU sea-basin and macro-regional strategies, and support to its outermost regions. As a result, some positive trends have been emerging for bathing water quality and the reduction of point-source pollution through improved wastewater treatment. The ocean, however, has continued to acidify as a result of global climate change.

Seawater acidification remains on an upward trajectory

Seawater acidification occurs when increased levels of carbon dioxide (CO_2) from the atmosphere are absorbed by the sea. Dissolved atmospheric CO_2 reacts with water molecules and increases the hydrogen ion concentration in the ocean, thus increasing ocean acidity. The global yearly ocean carbon uptake shows that the sea has absorbed more carbon as atmospheric concentrations of CO_2 have risen ([1]). While the ocean helps to mitigate atmospheric warming by absorbing this greenhouse gas, its capacity to do so is limited and the added CO_2 fundamentally changes the ocean's chemistry. Acidification reduces calcification and affects biochemical processes such as photosynthesis, with knock-on effects for entire ecosystems ([2]). Because cold water absorbs more CO_2, polar regions are disproportionately affected by acidification. Research has shown that organisms relying on calcification (for example, mussels, corals and plankton) and photosynthesis (plankton and algae) are particularly vulnerable to increased acidity ([3]). A decline in the extent of coral reefs does not only lead to habitat loss for many species and impacts on the food web, but also increases flood risk due to coastal erosion.

The Copernicus Marine Services has been monitoring ocean acidification since 1985. Over the whole period from 1985 to 2024, the mean concentration of hydrogen ions in surface seawater in the Northeast Atlantic and the Mediterranean and Black Sea increased by 17.2 %, reaching 8.76 nanomoles per litre (nmol/l). This corresponds to a pH value of 8.06, which is considerably below pre-industrialisation surface seawater pH levels, which had varied between 8.3 and 8.2. Ocean acidification in EU marine areas has accelerated slightly in recent years, with the hydrogen ion concentration increasing by 8.2 % since 2009 and by 3.0 % since 2019. Unless CO_2 emissions are significantly reduced, ocean acidification is projected to double or triple by 2100. Mitigating climate change (SDG 13) is thus vital for reaching SDG target 14.3 on minimising seawater acidification.

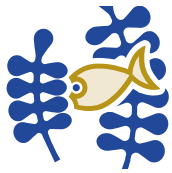
Between 2019 and 2024, the mean concentration of hydrogen ions in European surface waters increased by

3.0 %

Pollution continues to threaten the marine environment

In addition to acidification, Europe's marine ecosystems continue to be under threat from organic and chemical pollutants from human activities, as well as marine litter and noise pollution. Excessive nutrient loads from agriculture and municipal wastewater — in particular compounds of phosphorus and nitrogen — cause eutrophication, which can lead to problematic algal blooms and oxygen depletion, with severe consequences for the marine ecosystem's health and biodiversity.

The Copernicus Marine Service monitors all EU sea basins for oxygen depletion and measures anomalies in chlorophyll-a levels as an indicator of eutrophication. The chlorophyll data show strong annual fluctuations in the area of EU marine waters affected. Since 2004, eutrophication has affected between 5 000 and slightly above 50 000 square kilometres (km^2) of EU marine waters, corresponding to between 0.07 % and 0.71 % of the EU's exclusive economic zone (EEZ). In 2024, almost 43 000 km^2 of EU marine waters were affected by eutrophication, corresponding to 0.61 % of the EU's EEZ. A smoothed four-year moving average for the trend assessment reveals that over the five-year period from 2019 to 2024 the area affected by eutrophication rose by 33 % in the EU. At the same time, the long-term trend since 2009 shows no clear development, with the 2024 value (based on the four-year moving average) being almost the same as it was in 2009. An analysis from the European Environment Agency (EEA) covering the period 1980 to 2021 shows that while some locations demonstrated a decline in chlorophyll-a, indicating an improvement in the water quality, most areas (94.5% of cases) have shown no significant trend since 1980. Particularly in the Baltic and Greater North Seas, eutrophication remains a large-scale problem. However, the EEA's analysis also shows that levels of nutrient input, specifically nitrogen, have significantly decreased during this period.



0.61 %

of marine waters in the EU's exclusive economic zones were classified as eutrophic in 2024

Chemical pollution from hazardous substances, marine plastic litter and microplastics is another relevant threat to the marine environment. Chemical pollution stems from a number of land-based and marine sources, including agriculture (through the application of pesticides and veterinary medicines), industry, households and the transport sector. Of particular concern are persistent organic pollutants (POPs), which degrade slowly and can bioaccumulate in the food chain. Marine litter, such as plastic bottles and packaging, can also break down into smaller particles through photodegradation, releasing chemicals such as bisphenol A (BPA) and phthalates into the water. All in all, the transfer of toxic chemicals from the litter into the food web is already taking place at large scale and ultimately poses combined risks on marine life and human health such as organ failure, reduced fertility and increased cancer ([4]).

Estimates of plastic litter entering the ocean are highly tentative, due to a lack of data. However, the European Commission estimates that 150 000 to 500 000 tonnes of plastic enter the EU's marine waters every year, with most of it being carried to the sea by rivers. Accordingly, 75 % of the marine areas assessed by the EEA are classified as polluted. Plastic pollution has many harmful effects on the marine environment, for example it traps and strangles marine animals or is ingested by them. Marine litter can come from both sea- and land-based sources, with the latter accounting for 80 % (most of which is plastic). Single-use plastics account for about 50 % of all marine litter on European beaches ([5]). Based on a Commission initiative, in 2019 the European Parliament and the Council adopted for the first time a European Directive on Single-Use Plastics targeting these plastics and fishing gear alongside other plastic products.

Noise, caused by ships and offshore activities such as oil and gas exploration industry, is one of the most widespread human-induced pressures in the marine environment ([6]). Noise pollution can negatively affect marine life, causing increased stress and resulting in behavioural changes that can impact animals' foraging and reproductive abilities. Furthermore, the constant noise frequencies released by ships potentially obscure the sounds that various marine species, such as whales and dolphins, make to communicate, hunt, navigate and protect themselves. According to the European Maritime Transport Environmental Report 2025, underwater radiated noise from ships in EU waters increased steadily between 2014 and 2019, with a slight decrease in 2020 likely to have been due to reduced maritime traffic during the COVID-19 pandemic. Between 2020 and 2023, noise levels rose again, but they have not yet returned to 2019 levels.

Human-induced eutrophication, contaminant concentrations, marine litter and noise pollution are common multiple pressures that must be minimised for marine waters to achieve good environmental status under the Marine Strategy Framework Directive (MSFD) and good ecological status for coastal waters under the Water Framework Directive (WFD).

European coasts continue to offer a high number of bathing waters with excellent quality

Coastal water quality is affected by land-based pollution from sewage, agriculture run-off, and surface run-off from coastal cities, which can carry hazardous chemicals, nutrients and plastic litter and microplastics. The resulting pollution puts significant pressure on aquatic ecosystems and underwater life.

In the EU, recent developments have been quite favourable in this regard, and as a result the quality of the EU's coastal bathing waters has improved almost continuously. Across the EU, the share of coastal bathing waters with 'excellent' quality grew from 81.3 % in 2011 to 88.8% in 2023, even though the trend has slowed in recent years. One of the most important factors affecting the quality of these waters is microbiological contamination. It should be noted that the bathing water indicator provides only a limited view of pollution in European seas because it is focused on the shore and transitional waters but excludes waters further away from the coast ([7]). In addition, because the classification of bathing water quality considers datasets reported for the past four bathing seasons, this indicator does not tend to fluctuate greatly from year to year.

88.8 %
of EU coastal bathing waters had excellent quality in 2023

Marine conservation

The lives of European citizens depend in many ways on the services marine ecosystems provide, including climate regulation, fish and seafood provision, coastal protection, cultural value, recreation and tourism. Against this backdrop, the European Commission and Member States have taken multiple steps to combat the destruction and degradation of aquatic and coastal habitats and biodiversity, which poses a serious threat to human livelihoods, food security and climate stability ([8]). A crucial step has been the designation of a network of marine protected areas (MPAs) ([9]), in which some human activities are subject to stricter regulation. The degree of protection and hence the effectiveness of MPAs depends on the management plan regulating each protected area. Management measures may range from a total ban on fishing, mining or wind power generation, to a more moderate protection regime where economic activity is restricted, for example, allowing only certain types of fishing methods. However, many MPAs still lack comprehensive management plans or permit some level of commercial or recreational exploitation of fisheries ([10]). One of the commitments taken by the international community at the 2022 One Ocean summit and the UN COP15 on Biodiversity has been to designate new MPAs to achieve the goal of 30 % of marine space under protection by 2030. This goal is also supported by the BBNJ Agreement and is included in the EU Biodiversity Strategy for 2030. With the ambition to accelerate the implementation of SDG 14 globally, the EU pledged 52 commitments worth up to EUR 7 billion at the UN Ocean Conference in June 2022.

The extent of marine protected areas has been growing too slowly in the EU, and the conservation status of marine habitats and species remains unfavourable

A 2019 report by the European Environment Agency (EEA) revealed that a high proportion of marine species and habitats across Europe's seas are still in 'unfavourable conservation status' and that the marine ecosystem condition is generally

not 'good'. One approach to protect the state of marine ecosystems is the designation of MPAs.

12.3 %
of the EU's marine area was protected in 2022

Between 2012 and 2022, the extent of marine protected areas grew from 216 972 square kilometres (km^2) to 628 749 km^2. However, most of this growth took place between 2012 and 2019, while the designation of additional MPAs has slowed since then. In 2022, MPAs represented only 12.3 % of overall EU marine area, and efforts will need to increase significantly for the EU to meet its 30 % target by 2030. Since 2019, MPA coverage has grown in 12 out of the 22 EU Member states with a sea border. The largest relative improvements were reported from Italy and France, where the extent of protected areas increased by 80 % and 20 %, respectively, from 2019 to 2022.

Growth in the extent of protected areas alone does not provide a good indication of how well species and habitats are being protected. In fact, the EU currently has no overview or assessment of how effective the management plans associated with designated MPAs in EU regional seas are. In a special report on the marine environment, the European Court of Auditors concluded that EU MPAs provide limited protection in practice.

Research suggests that MPAs may help increase fish populations inside their borders. The benefit for nearby fisheries depends on the MPA's age, local conditions and if it is part of a larger MPA network ([11]). The Biodiversity Strategy for 2030 requires the Commission, in cooperation with Member States and the EEA, to advance criteria and guidelines for the identification and designation of new protected areas, as well as for coherent management planning. The European Commission adopted an action plan for protecting and restoring marine ecosystems for sustainable and resilient fisheries. This action plan calls on the EU Member States to take measures for minimising the by-catch of sensitive species and for prohibiting mobile bottom fishing in certain MPAs, owing to their high impact on seabed species and habitats. This objective is flanked by the EU Mission Restore our Ocean and Waters and the EU Blue Parks Community Initiative.

Sustainable fisheries

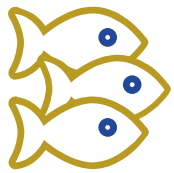
Besides pollution, the unsustainable use of living resources is the main threat to marine habitats and species in the EU. An ecosystem-based approach to managing Europe's fishing fleets is provided for under the EU's common fishing policy and is required for biodiversity conservation.

Governance of fisheries in EU waters mainly focuses on fair access and sustainable supply. The European Common Fisheries Policy (CFP) aims to ensure that fishing and aquaculture activities are environmentally sustainable in the long term and are managed in a way that achieves economic, social and employment benefits, and contributes to the availability of seafood supplies. The CFP limits the total amount of fish catches and controls who is allowed to fish how, when and where to prevent damage to vulnerable marine ecosystems and preserve fish stocks. Thus, the CFP's ambition and implementation will directly affect whether SDG 14 is achieved, in particular its aim of ending overfishing, destructive and/or illegal, unreported and unregulated fishing practices, and subsidies that encourage these activities. In addition, unsustainable fisheries are a major threat to marine ecosystems through seabed degradation and the bycatch of non-target species (such as birds and cetaceans). The CFP empowers Members States and the Commission to regulate fisheries so they comply with the obligations of the Birds and Habitats Directives and the Marine Strategy Framework Directive (MSFD).

Fisheries in EU marine waters have become more sustainable

European fisheries affect fish stock productivity and stock size through catches. However, because stock size also varies naturally, managing fisheries is a complex exercise. Controlling fishing mortality is one way of managing fisheries. Fishing mortality (F) reflects the proportion of fish of

a given age that is caught by fisheries during one year. For fisheries to be sustainable, fishing mortality should not exceed the maximum sustainable yield (F_{MSY}), which is the largest catch that can be taken from a fish stock over an indefinite period without harming it.



Between 2007 and 2022, fishing pressure in EU marine waters decreased by

51%

The model based median value of all F/F_{MSY} stock assessments can be used to estimate fishing pressures on fish stocks. Values above 1.0 mean the current fishing mortality (F) exceeds the estimated maximum sustainable yield (F_{MSY}). The results for EU marine waters show a 51 % reduction in fishing pressure, from 1.56 in 2007 to 0.76 in 2022. This overall figure aligns with the fact that fish stocks both in the North-East Atlantic (including the Baltic Sea) and in the Mediterranean and Black Sea were on average fished sustainably (F/F_{MSY} median of 0.59 in 2023 in the North-East Atlantic and F/F_{MSY} median of 0.94 in 2022 in the Mediterranean and Black Sea). This means that while in the North-East Atlantic almost 80 % of fish stocks were exploited sustainably in 2023, this share was slightly below 50 % in the Mediterranean and Black Sea in 2022 ([12]). In this context, it is important to mention the negative consequences of decreased freshwater flow on marine ecosystems in the Mediterranean Sea, affecting the biomass of commercial fish and invertebrate species, with lowest flows observed in 2022 ([13]). Amidst this background and despite an improving trend, the EU needs to further increase efforts in these sea regions to meet its own targets for sustainable fisheries.

The EU's approach to sustainable fisheries is not limited to respecting MSY. The Marine Strategy Framework Directive requires commercially exploited fish and shellfish populations to have a healthy distribution of age and size. The status of stocks and their reproductive capacity can be measured and described by fish stock biomass as well as by spawning stock biomass (SSB). Biomass estimates are, however, associated with high levels of uncertainty due to the high annual variability of stock biomass. Fish stocks can also take time to respond to changes in management measures, and results can be masked by other factors, such as environmental conditions and predation ([14]). For this reason, analyses of stock biomass trends should always focus on longer term patterns. Model-based estimates show a 16 % increase in fish stock biomass in EU marine waters between 2007 and 2022. In the short term between 2017 and 2022, growth in fish stock biomass amounted to 4 %.

Between 2007 and 2022, fish stock biomass in EU marine waters increased by

16%

Main indicators

Mean surface seawater acidity

This indicator shows the yearly mean concentration of hydrogen ions in surface seawater in the Northeast Atlantic and the Mediterranean and Black Sea, expressed in nanomoles per litre (nmol/l). An increase in the concentration of hydrogen ions corresponds to a decline in pH values and an increase in seawater acidity. This trend is caused by an increase in atmospheric carbon dioxide (CO_2) concentrations, which increases the uptake of CO_2 by the ocean. The Copernicus Marine Service has reconstructed the trends in global ocean acidification from 1985 onwards.

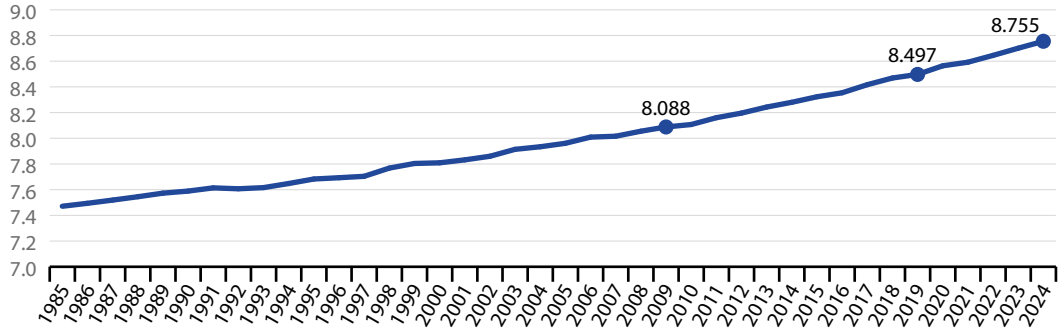
LONG TERM
2009–2024

SHORT TERM
2019–2024

FIGURE 14.1

Mean surface seawater acidity in the Northeast Atlantic and the Mediterranean and Black Sea, 1985–2024

(nmol/l)



Source: EEA, Copernicus Marine Service (Eurostat online data code: sdg_14_50)

Marine waters affected by eutrophication

LONG TERM
2009–2024

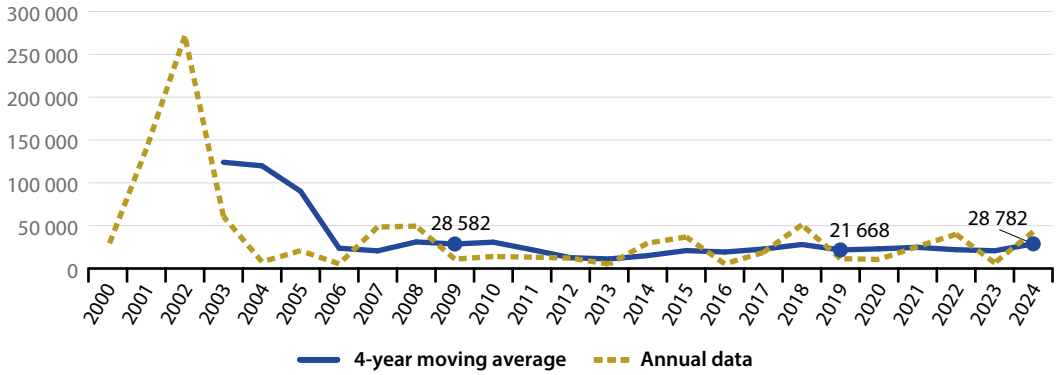
SHORT TERM
2019–2024

Eutrophication is the process by which an excess of nutrients — mainly phosphorus and nitrogen — leads to increased growth of plant material, particularly planktonic algae, in an aquatic body, resulting in a decrease in water quality. This can, in turn, cause death by hypoxia of aquatic organisms. Anthropogenic activities, such as farming, agriculture, aquaculture, industry and sewage, are the main source of nutrient input in problem areas. This indicator shows the extent of eutrophic marine waters in the EU's exclusive economic zone (EEZ). An area is classified as eutrophic if chlorophyll-a concentrations, as a proxy, are above the 90th percentile of the 1998–2017 reference base line for more than 25 % of the observation days in a given year. The Copernicus Marine Service calculates the indicator from satellite imagery.

FIGURE 14.2

Marine waters affected by eutrophication, EU, 2000–2024

(km²)

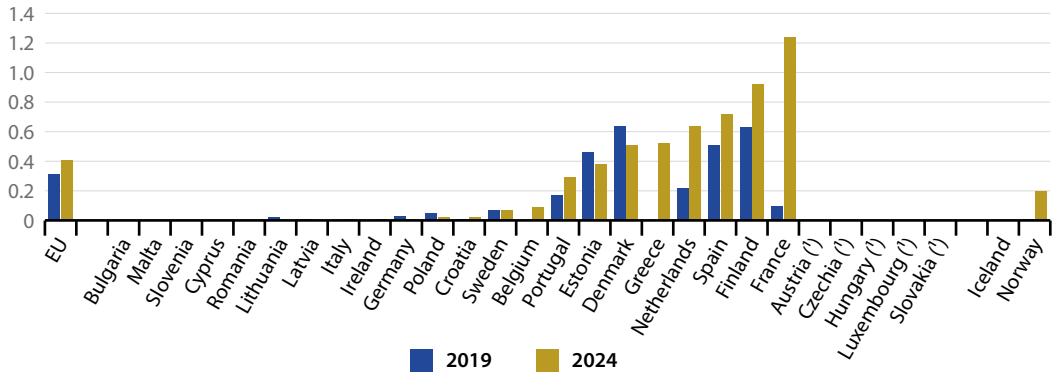


Source: Mercator Ocean International, Copernicus Marine Service (Eurostat online data code: sdg_14_60)

FIGURE 14.3

Marine waters affected by eutrophication, by country, 2019 and 2024

(% of exclusive economic zone (EEZ))



Note: Data are presented as four-year moving average. (1) Not applicable (landlocked country).
Source: Mercator Ocean International, Copernicus Marine Service (Eurostat online data code: sdg_14_60)

Bathing waters with excellent quality

This indicator shows the share of inland and coastal bathing waters with excellent quality in the EU and is calculated based on the moving average of 16 sampling events in four years to be sure that most weather events are covered. Bathing water quality is assessed according to standards for microbiological parameters (intestinal *Enterococci* and *Escherichia coli*). The Bathing Water Directive (BWD) requires Member States to identify and assess the quality of all inland and marine bathing waters and to classify these waters as 'poor', 'sufficient', 'good' or 'excellent' depending on the levels of faecal bacteria detected. The data presented in this section stem from the European Environment Agency (EEA) and are based on Member States reporting under the BWD.

LONG TERM
2011–2023

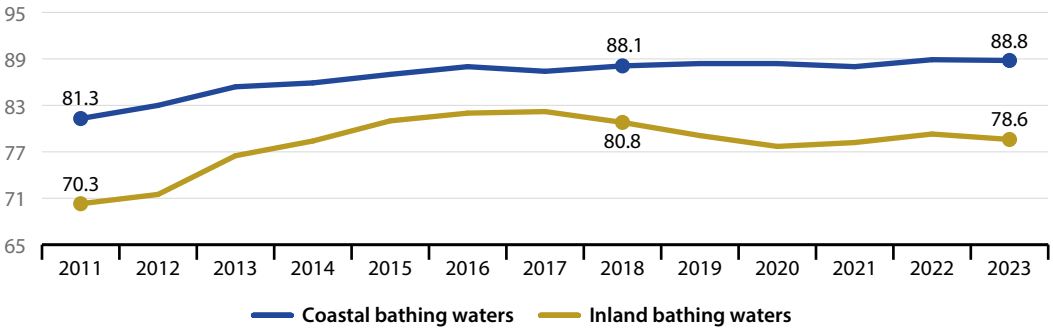
SHORT TERM
2018–2023

* Coastal bathing waters
** Inland bathing waters

FIGURE 14.4

Bathing waters with excellent quality, by location, EU, 2011–2023

(% of bathing waters)



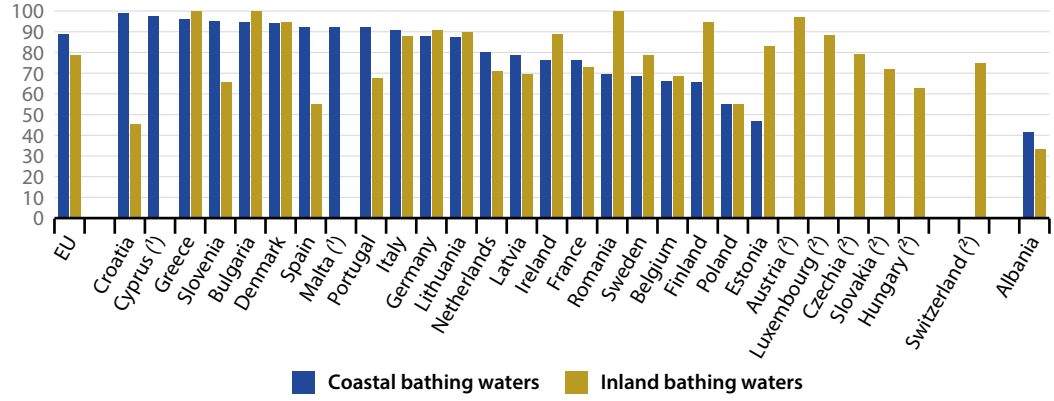
Note: EU aggregate refers to 22 Member States for coastal bathing waters (no data for landlocked countries) and 25 Member States for inland bathing waters (no data for Cyprus and Malta).

Source: EEA (Eurostat online data code: sdg_14_40)

FIGURE 14.5

Bathing waters with excellent quality, by location, by country, 2023

(% of bathing waters)



(1) No measurements of inland bathing waters.
(2) No coastal bathing waters (landlocked country).

Source: EEA (Eurostat online data code: sdg_14_40)

Marine protected areas

LONG TERM 2012–2022

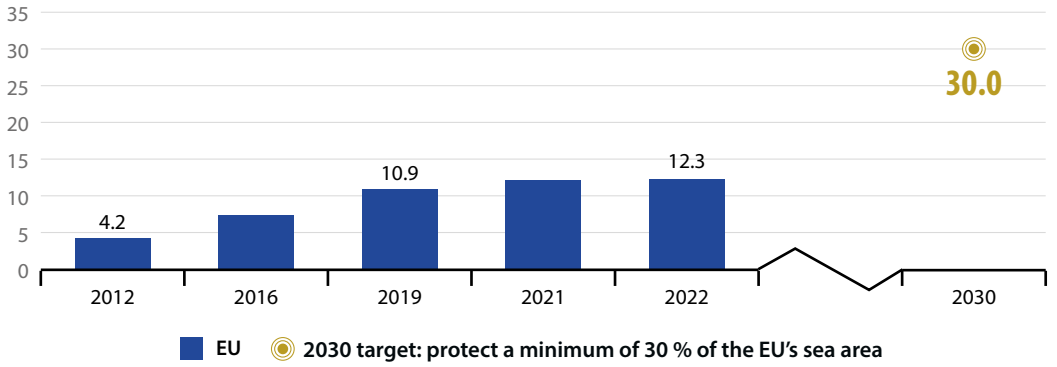
SHORT TERM 2019–2022

This indicator measures the extent of marine protected areas (MPAs) in EU marine waters in square kilometres and as a share of the EU's marine area. MPAs are biodiversity 'hotspots' and can serve various objectives including species and habitats protection, biodiversity conservation and restoration, but also resource use within defined ecological boundaries. MPAs may also positively impact neighbouring areas. The indicator comprises nationally designated protected areas and Natura 2000 sites. A nationally designated area is an area protected by national legislation. The Natura 2000 network comprises both marine and terrestrial 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. The EU biodiversity strategy for 2030 aims to protect at least 30 % of land and sea in Europe, including both nationally designated sites and Natura 2000 sites. Data provided by the Member States to the Commission are consolidated by the European Environment Agency and collected by European Commission Directorate-General for the Environment.

FIGURE 14.6

Marine protected areas, EU, 2012–2022

(% of marine area)



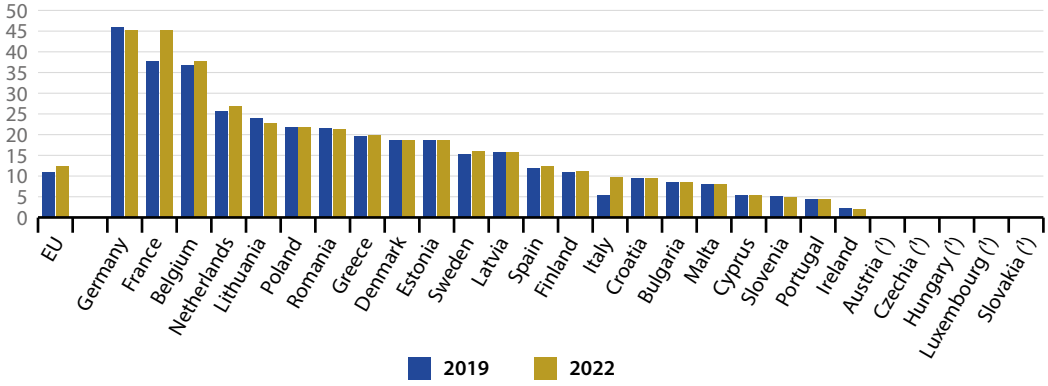
Note: Break in time series in 2022.

Source: EEA (Eurostat online data code: sdg_14_10)

FIGURE 14.7

Marine protected areas, by country, 2019 and 2022

(% of marine area)



Note: Break in time series in 2022.
(1) Not applicable (landlocked country).
Source: EEA (Eurostat online data code: sdg_14_10)

Estimated trends in fish stock biomass

LONG TERM
2007–2022

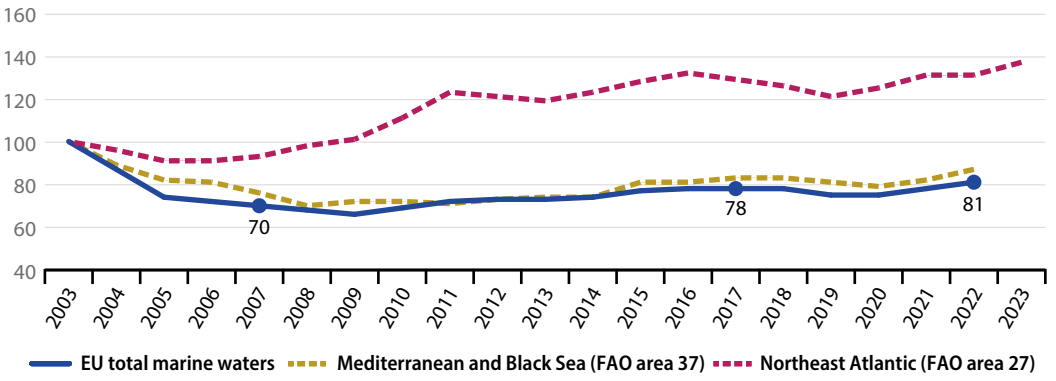
SHORT TERM
2017–2022

Fish stock biomass is a function of biological characteristics such as abundance and weight and can indicate the status of a fish stock when measured against reference values. This is a model-based indicator that is computed using results from single-species quantitative stock assessments. It shows the median value of fish stock biomass relative to 2003. The full time series is updated every year, sometimes including new stocks due to newly available quantitative assessments which can result in small differences from one release year to the next.

FIGURE 14.8

Estimated trends in fish stock biomass, by fishing area, 2003–2023

(index 2003 = 100)



Note: Data for Mediterranean and Black Sea (FAO area 37) are only available until 2022. Also note that the visualisation of the trends is affected by indexing the data to the year 2003 and that the data for the three areas shown are not fully comparable in terms of coverage.

Source: Joint Research Centre (JRC) — Scientific, Technical and Economic Committee for Fisheries (STECF) (Eurostat online data code: sdg_14_21)

Estimated trends in fishing pressure

The indicator presents the model-based median value of fishing pressure (F/F_{MSY}) in EU marine waters of the North-East Atlantic and adjacent seas (FAO area 27) and the Mediterranean and the Black Sea (FAO area 37) for which current fishing mortality (F) exceeds the estimated fishing mortality consistent with achieving maximum sustainable yield (F_{MSY}). Fishing mortality is a measure for death or removal of fish from a population due to fishing. The fishing mortality consistent with achieving maximum sustainable yield is determined by the long-term average stock size that allows fishing at this level. For fisheries to be sustainable, F should not exceed F_{MSY} — the point at which the largest catch can be taken from a fish stock over an indefinite period without harming it. The model-based median value of fishing pressure (F/F_{MSY}) indicates the trend of exploitation: values below 1 indicate sustainable fishing levels ($F \leq F_{MSY}$).

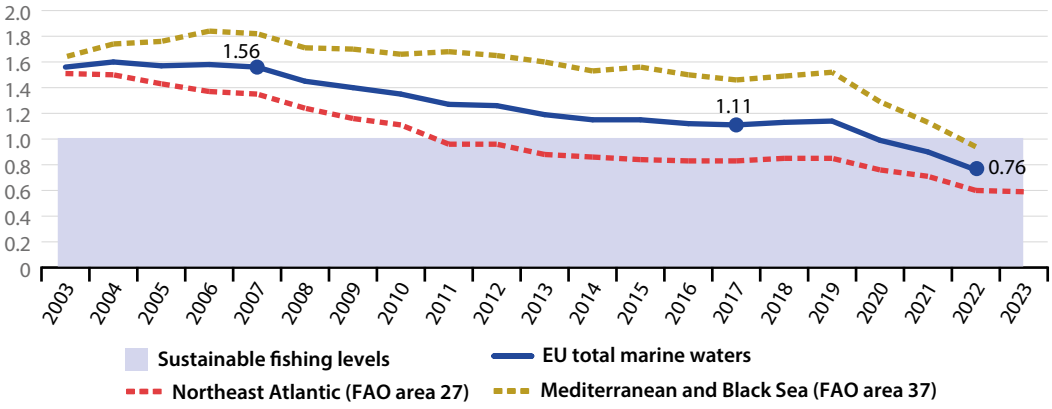
LONG TERM 2007–2022

SHORT TERM 2017–2022

FIGURE 14.9

Estimated trends in fishing pressure, by fishing area, 2003–2023

(model-based median value of fishing pressure (F/F_{MSY}))



Note: Data for Mediterranean and Black Sea (FAO area 37) are only available until 2022.

Source: Joint Research Centre (JRC) — Scientific, Technical and Economic Committee for Fisheries (STECF) (Eurostat online data code: sdg_14_30)

Notes

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(3) European Environment Agency (2017), *Climate change, impacts and vulnerability in Europe 2016 — An indicator-based report*, EEA Report No 1/2017, Copenhagen.

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(5) Addamo, A. M., Laroche, P., Hanke, G. (2017), *Top Marine Beach Litter Items in Europe*, Publications Office of the European Union, Luxembourg.

(6) European Environment Agency (2019), *Marine Messages II: navigating the course towards clean, healthy and productive seas through implementation of an ecosystembased approach*, EEA Report No 17/2019, Copenhagen.

(7) Article 5 of the *United Nations Convention on the Law of the Sea (UNCLOS)* defines the normal baseline as the low-water mark as marked on large scale-charts by the coastal State.

(8) European Commission (2021), *Assessment of the existing EU policy tools in the field of Sustainable Development Goal (SDG) 14 and other ocean-related Agenda 2030*.

(9) European Environment Agency (2015), *Marine protected areas in Europe's seas — An overview and perspectives for the future*, EEA Report No 3/2015, Copenhagen.

(10) European Climate, Infrastructure and Environment Executive Agency (2025), Mapping of Marine Protected Areas and their associated fishing activities: *Baltic and North Seas, Atlantic EU Western Waters and Outermost Regions (MAPAFISH)*, Final Report, Publications Office of the European Union, Luxembourg; and European Climate, Infrastructure and Environment Executive Agency (2025), Mapping of Marine Protected Areas and their associated fishing activities: *Mediterranean and Black Seas (MAPAFISH–MED)*, Final Report, Publications Office of the European Union, Luxembourg.

(11) European Climate, Infrastructure and Environment Executive Agency (2024), *Assessing spillover from marine protected areas to adjacent fisheries — Baltic and North Seas, Atlantic EU Western Waters and Outermost Regions*, Final report, Publications Office of the European Union, Luxembourg.

(12) Source: Eurostat (online data code: env_bio5).

(13) Macias, D., Bisselink, B., Carmona-Moreno, C., Druon, J.-N., Duteil, O., Garcia-Gorriz, E., Grizzetti, B., Guillen, J., Miladinova, S., Pistocchi, A., Piroddi, C., Polimene, L., Serpetti, N., Stips, A., Trichakis, I., Udias, A., & Vigiak, O. (2025), *The overlooked impacts of freshwater scarcity on oceans as evidenced by the Mediterranean Sea*, Nature Communications, 16: 998.

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Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

SDG 15 seeks to protect, restore and promote the conservation and sustainable use of terrestrial ecosystems. This includes efforts to sustainably manage forests and halt deforestation, combat desertification, restore degraded land and soil, halt biodiversity loss and protect threatened species.

SDG 15 is one of the key goals at the international level that addresses biodiversity and ecosystems. In the EU, this goal ensures that the health and functioning of terrestrial ecosystems and the delivery of ecosystem services remain a priority, especially in the face of global trends such as population growth, accelerating urbanisation and an increasing need for natural resources, as well as the impacts of climate change. Monitoring SDG 15 in an EU context focuses on alterations in ecosystem status, land degradation and biodiversity. Over the five-year period assessed, the EU has experienced a number of negative developments in the indicators analysed here, showing a movement away from the sustainable development objectives in SDG 15. While the EU's forest area has grown slightly and the biochemical oxygen demand in rivers has improved, phosphate pollution of EU rivers has worsened again. Land degradation continues, with increasing land take and drought impacts. Biodiversity indicators show a long-term and continued decline in common birds and grassland butterflies in the EU. Moreover, the designation of new terrestrial protected areas has stagnated, meaning that, at the current pace, the EU will not achieve the related 2030 target.

Indicators measuring progress towards SDG 15, EU

Indicator	Period	Annual growth rate	Assessment	More info
Ecosystem status				
Share of forest area	Time series too short for long-term assessment		✕	page 270
	2017–2022	0.2 %	↗	
Biochemical oxygen demand in rivers (*)	2007–2022	– 0.7 % (1)	↗	SDG 6, page 119
	2017–2022	– 1.3 % (1)	↑	
Phosphate in rivers (*)	2007–2022	– 1.6 % (2)	↑	SDG 6, page 121
	2017–2022	2.0 % (2)	↓	
Land degradation				
Area at risk of severe soil erosion by water	2000–2016	– 0.9 %	↗	page 271
	2010–2016	– 0.1 %	→	
Drought impact on ecosystems	2009–2023	3.1 % (3)	↓	page 272
	2018–2023	11.1 % (3)	↓	
Soil sealing index (*)	2006–2018	0.3 %	↘	SDG 11, page 208
	2015–2018	0.3 %	↘	
Biodiversity				
Terrestrial protected areas ◎	2011–2022	Observed: 0.7 % Required: 1.1 %	↘	page 273
	2017–2022	Observed: 0.5 % Required: 1.3 %	↘	
Common bird index	2008–2023	– 0.5 % (4)	↘	page 274
	2018–2023	– 0.5 % (4)	↘	
Grassland butterfly index	2008–2023	– 1.5 %	↓	page 275
	2018–2023	– 2.2 %	↓	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

(*) Multi-purpose indicator.

(1) Data refer to an EU aggregate based on 17 Member States.

(2) Data refer to an EU aggregate based on 15 Member States.

(3) Assessment based on a 10-year moving average.

(4) Data refer to an EU aggregate that changes over time depending on when countries joined the Pan-European Common Birds Monitoring Scheme.

Policy context

The EU Biodiversity Strategy for 2030 aims to put Europe's biodiversity on a path to recovery by 2030, by establishing a larger EU-wide network of protected areas on land and at sea, launching a nature restoration plan, and introducing measures to enable the necessary transformative change and to tackle the global biodiversity challenge.

The Nature Restoration Law entered into force in August 2024. It calls for legally binding targets to restore degraded ecosystems, in particular those that can best capture and store carbon as well as prevent and reduce the impact of natural disasters.

The Birds Directive protects all wild bird species and their habitats. The Habitats Directive covers more than 1 300 rare, threatened or endemic species of wild animals and plants and 233 natural habitat types. They aim to conserve protected habitats and species while ensuring their sustainable use and management.

The 'Kunming-Montreal Global Biodiversity Framework' sets four long-term goals for the 2050 vision for biodiversity, 23 global targets for 2030, and adopted a global monitoring framework. COP16 of the UN Biological Conference (2024, Cali), called for synergy between this framework and the Paris Agreement.

The EU Forest Strategy for 2030 aims to improve the quantity and quality of EU forests and strengthen their protection, restoration and resilience. It includes a roadmap outlining how to achieve the 3 billion additional trees commitment.

The EU Soil Strategy for 2030 sets out a framework and concrete measures for protecting and restoring soils and ensuring they are used sustainably. To ensure soil in the EU is protected in the same way as water, air and the marine environment, the Commission put forward a proposal for a Directive on Soil Monitoring and Resilience.

The Water Framework Directive restricts activities polluting and harming Europe's freshwater resources, complemented by the EU Drinking Water Directive and Nitrates Directive, which limit chemical and mineral levels.

The LIFE Programme is the EU's key funding instrument for environmental and nature conservation projects. It plays an important role in restoring and safeguarding the condition of terrestrial and freshwater ecosystems.

The Green transition Pillar of the Recovery and Resilience Facility supports reforms and investments to protect and restore biodiversity and ecosystems.

The Zero Pollution Action Plan for Air, Water and Soil maximises synergies with relevant EU policies, such as limiting soil sealing and urban sprawl.

The Common Agricultural Policy requires farms receiving income support to protect the climate and the environment. It sets standards to prevent soil erosion and to protect biodiversity and the landscape.

The 2025 update of the Bioeconomy Strategy will address gaps, enhance policy coherence, and respond to global developments.

The revised EU Initiative on Pollinators 2023 represents an integrated framework to tackle the causes of pollinator decline, improve knowledge and mobilise actors across society. Together with the Nature Restoration Law, it constitutes a game changer for pollinator conservation at EU level.

Overview and key trends

Ecosystem status

Humans benefit greatly from many ecosystem services, such as clean air, purified water and food provision. In addition, terrestrial ecosystems provide natural resources used in industrial processes and cultural services such as outdoor recreation. Other services that ecosystems offer include protection from natural disasters, such as flooding, and mitigation of the negative effects of climate change. Human activities that degrade ecosystems, including pollution and the overuse of resources, threaten animals and plants and, as a result, the provision of ecosystem services and their benefits to human well-being ([1]).

In 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) released a Global Assessment Report on Biodiversity and Ecosystem Services. The report's key findings indicate that negative trends in biodiversity and ecosystem services are expected to hinder progress towards the 2030 Agenda and its SDGs. As such, current global conservation and sustainability goals will not be met unless transformative change is implemented. In 2021, the European Commission published the report Accounting for ecosystems and their services in the European Union (INCA), which delivered an integrated system of ecosystem accounts for the EU. The report's key findings suggest that between 2000 and 2018, changes in the extent of most ecosystem types have been small in relative terms. However, urban ecosystems have seen a significant increase in their extent, indicating a continued expansion of urbanised areas at the expense of semi-natural ecosystems and farmland. The report also suggests that sites in the Natura 2000 network tend to have a higher degree of ecosystem stability than those outside the network ([2]).

Some types of terrestrial ecosystems (for example, wetlands, heathlands and scrub) and the pressures placed on them (such as invasive species, habitat fragmentation, and noise and light pollution) are not monitored in this report due to data shortcomings. It is therefore important to recognise the limitations in presenting a full and complete picture of Europe's terrestrial ecosystems, the status of which cannot be fully assessed with the long-term datasets that are currently available.

The share of forest area in the EU has been growing slowly

38.7%
of the EU area was covered by forests in 2022

Europe's forests provide multiple benefits, such as enhanced soil fertility and soil moisture conservation, carbon storage, and habitats for animals and plants. They also provide employment in rural areas and help mitigate climate change and regulate the microclimate. In 2022, forests covered 38.7% of the EU's total area. Between 2017 and 2022, the proportion increased only slightly, by 0.3 percentage points. It needs to be noted that these figures are not comparable with the data presented in previous editions of this report, which were based on a different methodology and included both forests and other wooded land (while the figures presented here refer to forests only).

Currently, forests are affected by pressures from habitat degradation and loss, invasive alien species, pollutants and excessive nutrient loads, as well as climate change ([3]), which has led to persistent droughts and heatwaves. This means that EU efforts to retain and sustainably manage its forested areas are increasingly important. According to the 2020 State of Nature in the EU assessment, forests covered by the Habitats Directive account for about 27% of the total forest area in the EU. Only 14% of these forests are in good conservation status, while the rest are in a poor or bad condition. Nevertheless, the report highlights that forest habitats show the highest

proportion of improving trends compared with the assessments of other habitat types.

Organic and phosphate pollution levels in EU rivers have decreased over the long term, even though short-term trends have been more mixed

The ecological status of European water bodies gives an important indication of how Europe's natural environment is faring in the face of pressures from human use. Two indicators monitor progress in this area: biochemical oxygen demand in rivers and phosphate in rivers. While these indicators paint a somewhat favourable picture of the EU's progress in making rivers cleaner over the past 20 years, the short-term developments have been less clear-cut.

Between 2017 and 2022, the biochemical oxygen demand in EU rivers fell by

6.2%

Biochemical oxygen demand (BOD) in rivers is an indicator of organic water pollution and the effectiveness of water treatment. When a high level of oxygen (O_2) is required for the microbiological decomposition of organic compounds in water, less O_2 is available for other river species. As such, biochemical oxygen demand provides an indication of a river system's overall health. Available data for 17 Member States show an overall decline in BOD in EU rivers, from 3.0 milligrams per litre (mg/L) in 2007 to 2.7 mg/L in 2022. The trend, however, has not been continuous. While BOD levels were showing a downward trend up to 2011, they had climbed back to 3.2 mg/L by 2015 before falling again. Since 2018, BOD levels have stabilised at around 2.7 mg/L. Overall, BOD levels in EU rivers have fallen by 9.9% since 2007 and by 6.2% since 2017. Between 2017 and 2022, 11 out of 17 reporting Member States saw reductions in BOD in their rivers. The overall decrease in BOD values is mainly linked to a general improvement in wastewater collection and treatment throughout Europe.

Phosphate (PO_4) in rivers can originate from agricultural production, urban wastewater and industrial discharges. Heavy loads of phosphate in rivers can harm the environment by causing biodiversity loss and water eutrophication. Data on phosphate concentrations in EU rivers are available for 15 Member States. They show a marked improvement between 2007 and 2011, after which, however, the trend levelled off and even started increasing again. Thus, while the phosphate concentration of 0.074 mg/L recorded in 2022 is considerably below the values reported in the early 2000s of around 0.093 mg/L, it is 10.4% higher than in 2017.

The overall positive long-term trend is to some extent the result of measures implemented under the Urban Waste Water Treatment Directive, especially the introduction of phosphate-free detergents ([4]). The recent turnaround may be related to the slower decrease in phosphorus emissions from the agricultural sector and increasing phosphorus fertiliser consumption at the EU level ([5]). Of all the reporting Member States, rivers in Sweden and Finland on average had the lowest phosphate concentrations between 2017 and 2022. This is likely to be a result of their low population densities and high levels of wastewater collection and treatment. In contrast, relatively high concentrations were found in some Member States with high population densities and/or intensive agriculture. The higher short-term values observed, particularly in Belgium, Spain, Lithuania and Bulgaria, may lead to freshwater eutrophication ([6]).

Between 2017 and 2022, the concentration of phosphates in EU rivers increased by

10.4%

Land degradation

Land degradation is linked to the long-term functionality and biological productivity of land or land-based ecosystems. It is a complex phenomenon bringing together several elements, including soil degradation and the capacity of land to sustain water resources, biodiversity and primary productivity ([7]). Soil degradation by

itself covers many aspects such as soil sealing and contamination, erosion by wind and water, loss of soil biodiversity, compaction and decline in organic matter, along with desertification, acidification and salination ([8]). Not all of these threats to soil quality can be covered in the EU SDG indicator set, so the analysis in this report has been limited to change in imperviousness, the area impacted by drought and the risk of soil erosion by water.

Land take continues to rise in the EU

In 2018, the area of sealed soil surface in the EU was

2.7%

Land take is described as the process of transforming agricultural, forest and other semi-natural and natural areas into artificial areas. It often means an increase in settlement area over time, usually at the expense of agricultural areas. Land take can be monitored using the Copernicus CORINE land cover datasets, which have been published every six years since 2000. Net land take includes the 'reverse land take process', which occurs when artificial areas are returned to non-artificial land categories through recultivation and renaturalisation. According to data from the European Environment Agency (EEA), net land take in the EU amounted to 11 845 square kilometres (km^2) between 2000 and 2018, equalling an average annual net land take of 658 km^2. Even though the rate of net land take fell by 60% over the three observation periods, there is still a long way to go to meet the 'no net land take' policy target for 2050.

In all three observation periods, EEA data show that agricultural areas were the most likely to be converted to artificial surfaces, reducing the amount of land available for food and feed production. This increases fragmentation and loss of natural habitats. Furthermore, artificial areas create plots that are isolated from functional ecosystems and can lead to greater flood risk and more frequent rapid surface runoff ([9]). Moreover, sealed lands cannot store carbon and thereby contribute to greenhouse gas emissions and climate change.

Soil sealing is the most intense form of land take and is essentially an irreversible process. It destroys or covers soils with layers of partly or completely impermeable artificial material such as asphalt and concrete ([10]). Increases in the area of sealed land can be used to estimate land-use change for human use or intensification. Between 2006 and 2018, the area of sealed soil in the EU grew by 3 605 km^2 or 3.4%. In 2018, 2.7% of the EU area was covered with impervious materials. Across Member States, the share of sealed soil area ranged from below 1% in Sweden and Finland to around 10% in Belgium and the Netherlands, and up to 18% in Malta.

The area at risk of severe soil erosion by water has decreased slightly in the EU

Between 2010 and 2016, the area at risk of severe soil erosion by water in the EU fell by

0.9%

Soil is a resource that provides multiple benefits to society, including the provision of raw materials, food production, storage, filtration and the transformation of many substances, including water, carbon and nitrogen. Maintaining soil health ensures the continued provision of these benefits. While soil erosion by water is the biggest threat to EU soils, other erosion processes, including erosion from tillage, wind and crop harvesting, also contribute to soil degradation simultaneously or subsequently. Co-occurring processes may enhance and trigger each other or lead to self-reinforcing feedback loops, thus enhancing the severity of soil degradation ([11]).

More than 5% of the EU's non-artificial erodible land area is estimated to be at risk of severe soil erosion by water (referring to soil loss of more than 10 tonnes per hectare per year). Overall, water erosion is the major cause of soil displacement, both quantitatively (51% of the total displacement) and spatially (57% of the total area) ([12]). Hotspots are found in particular in Mediterranean areas and

some Alpine regions, mainly due to a combination of steep topography and high rainfall erosivity ([13]). Modelling results show that water erosion could rise by up to 22.5 % by 2050 compared with today due to climate change and increased erosivity ([14]). Other erosion processes are tillage erosion (36 % of the total displacement), wind erosion (10 %) and crop harvesting (2.7 %) ([15]). These processes often occur almost unnoticed without leaving substantial geomorphic evidence but may act as a trigger and enhance soil degradation. Accordingly, evidence suggests that countries such as Denmark and the Netherlands, which are relatively unaffected by water erosion, are prone to wind erosion risks ([16]).

Efforts to address and mitigate soil erosion by water have helped to reduce the estimated EU land area at risk of severe soil erosion by water, from 198 607 square kilometres (km^2) in 2010 to 196 853 km^2 in 2016, equalling a decrease of 0.9 %. This represents a considerable slowdown compared with the period 2000 to 2010, when the estimated area at risk fell by 12.6 %.

Between 2010 and 2016, arable land experienced the greatest reduction in area at risk of soil erosion compared with other land types ([17]). Here, improvements due to the implementation of agri-environmental standards and measures under the Common Agricultural Policy (CAP) may have helped to reduce the mean rate of soil loss by water erosion. This includes the application of soil conservation practices such as reduced tillage, preservation of a minimum soil cover, reduction in the area of bare soils, contour farming along slopes, maintenance of terraces and stone walls, and extended use of grass margins ([18]). Nevertheless, the cost of lost agricultural productivity due to water erosion in the EU is estimated at around EUR 1.3 billion annually, and the cost of removing an estimated 135 million cubic metres (m^3) of accumulated sediment due to water erosion is estimated at roughly EUR 2.3 billion annually ([19]).

Drought impact eased in the EU in 2023, but the long-term trend remains worrying

Drought reduces nature's capacity to provide a wide range of environmental, social and economic benefits. It affects the EU's ability to achieve its climate change mitigation target through reduced carbon sequestration and has implications for adaptation and the implementation of biodiversity and soil strategies. Drought also hampers the ability to achieve CAP objectives and the goals of the European Green Deal, the Farm to Fork Strategy and the Biodiversity Strategy. Reducing the severity of drought impacts and strengthening the resilience of ecosystems to climate change-induced droughts is thus vital.

3.6%
of the EU area was affected by drought in 2023

The impact of drought on EU ecosystems eased in 2023, after the devastating effects experienced the previous year when the hottest summer and the second-warmest year were recorded. In 2023, 143 500 km^2, or 3.6 % of the total EU area was impacted by drought. This is still slightly larger than the 2000–2020 long-term average, which amounts to 141 225 km^2 or 3.5 % of the EU's area. Despite the annual recovery in 2023, the 10-year moving average shows a 69 % increase in the EU area affected by drought. A look at the underlying annual data shows strong fluctuations, with the area affected by drought almost tripling in some years. Between 2000 and 2022, there was an increasing trend in drought-impacted areas in the EU due to low precipitation, high evaporation and heatwaves. These conditions are exacerbated by climate change and contribute to worsening ecosystem conditions ([20]). Large variations between countries can also be seen. In 2023, the three Baltic countries — Lithuania, Estonia and Latvia — were impacted by drought on more than 10 % of their areas. This was a much larger area than has been affected in previous years. Poland was the next most impacted country in 2023, with 8 % of its area experiencing drought.

Biodiversity

Terrestrial ecosystems in the EU have been protected under the Birds and Habitats Directives since 1979 and 1992, respectively, forming the foundation for biodiversity and ecosystems conservation. These Directives require EU Member States to designate and manage Special Protection Areas (SPAs; Birds Directive) and Sites of Community Importance/Special Areas of Conservation (SCIs/SACs; Habitats Directive), collectively making up the Natura 2000 network that should enable protected habitats and species to reach favourable conservation status in the EU. The Natura 2000 network is complemented by nationally designated terrestrial protected areas that are established under each Member State's national framework. In addition, the EU Biodiversity Strategy for 2030 includes a target to protect at least 30 % of EU land. The ongoing restoration and protection efforts are further supported by the EU Nature Restoration Law, which aims to strengthen and accelerate ecosystem restoration across Europe. This law provides a vital framework for restoring degraded ecosystems and halting biodiversity decline, ensuring the achievement of the targets outlined in the EU Biodiversity Strategy for 2030 and contributing to sustaining quality of life in the EU.

The EU is not on track to reach its 2030 target for terrestrial protected areas

In 2022, the EU and its Member States protected 1 079 412 km^2 of terrestrial habitats, covering 26.1 % of the EU's land area. This is an increase of only 7.6 % compared with 2011, when 1 003 558 km^2 (equalling 24.3 % of the EU's area) were protected. The designation of new protected areas has furthermore slowed over the past five-year period, stalling at 26 % since 2019. This means the EU is currently not on track to achieve its 30 % target by 2030, and the rate of designation of protected areas would need to more than double by 2030 ([21]). The Member States with the largest protected areas relative to country size in 2022 included Bulgaria (41.0 %), Slovenia (40.5 %) and Poland (39.6 %). In contrast, the shares of protected areas were smallest in Finland (13.4 %) and Ireland (13.9 %).

26.1 %
of the EU land area were protected in 2022

The latest assessment of the State of Nature in the EU reveals that many species and habitats of European interest are still in unfavourable conservation status. The conservation status of habitats did not improve over the reporting period (2013–2018), but for species other than birds a slight improvement can be stated. Across the EU, about a quarter (27 %) of species assessments and 15 % of the habitat assessments show a good conservation status, compared with 23 % and 16 %, respectively, reported in the assessment for the period 2007–2012. The majority of the assessments considered, however, have a poor or bad conservation status at EU level (63 % for species and 81 % for habitats). Moreover, a look at the trends reveals that only 6 % of species assessments and 9 % of habitat assessments showed improving trends in the reporting period, while 35 % and 36 % indicated a deteriorating trend at EU level, respectively.

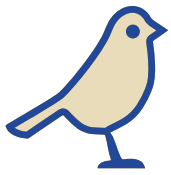
The State of Nature report also shows that fish and molluscs continue to have a particularly high proportion of species (around 30 % each) with a bad conservation status, while reptiles and vascular plant species have the highest proportion of good conservation status (36 % and 40 % respectively). Habitats in dunes, bogs, mires and fens have the highest share of assessments showing a bad conservation status (around 50 % each). Grasslands, which contain some species-rich habitats that are particularly suitable for pollinator species, also have one of the highest proportions of bad conservation status assessments (49 %).

Common birds have been in long-term decline in the EU

Birds are sensitive to both human-induced and natural environmental change, making them good indicators of wider ecosystem health. Their widespread and diverse habitats also make them ideal for monitoring the results of conservation efforts.

The EU common bird index tracks the population abundance and diversity of a selection of common bird species in the EU, further typified by common forest and common farmland bird species. The index shows a 14.9 % decline of all common birds and a dramatic 42.1 % fall in the abundance of common farmland birds between 1990 and 2023. Common forest birds have declined slightly, with their index falling 4.6 % over the whole period.

The decline in common farmland birds has largely been attributed to agricultural intensification, which has reduced natural nesting habitats such as hedges, wetlands, meadows and fallow fields. Agro-chemicals, such as pesticides, and changes in ploughing times for cereals have also affected common farmland birds, disrupting their breeding and reducing available food sources, in particular insect populations ([22]). Other factors hindering population recovery include habitat loss from land use change, fragmentation, intensive forestry, urbanisation, climate change, competition for land (for example, biofuels, renewables), and illegal killing ([23]).



Between 2008 and 2023, common bird populations in the EU declined by

7.8 %

Shorter-term trends show a continued decline for all common birds and common farmland bird populations. For all common birds there has been a 7.8 % decline since 2008 and a 2.6 % decline since 2018, while common farmland birds continued to show an even stronger decline, by 23.2 % since 2008 and 9.6 % since 2018.

Grassland butterfly populations have declined by more than 50 % since 1991

Butterflies, which are among the most common plant pollinators, are well suited to act as signals of environmental and habitat health. They occur in a wide range of habitat types and are sensitive to environmental change. The grassland butterfly index measures the population trends of 17 butterfly species within the national Butterfly Monitoring Schemes. According to estimates from these monitoring efforts, butterfly populations declined by 50.4 % between 1991 and 2023, signifying a dramatic loss of grassland biodiversity. Most of this decline took place in the period up to 2007, while the index has fallen at a slower pace since then. Nevertheless, grassland butterfly populations still declined by 20.1 % between 2008 and 2023 and by 10.5 % between 2018 and 2023.

Between 2008 and 2023, grassland butterfly populations in Europe shrank by

20.1 %

The main causes for this decline can be attributed to land use changes in rural areas, in particular stemming from intensification of agricultural grasslands, and deposition of nitrogen in protected areas, mainly in north-western Europe. In the rest of Europe, grassland abandonment is a threat ([24]). The increased duration, frequency and intensity of heatwaves and droughts because of climate change have also contributed to the decline of grassland butterflies over the past decade. While moderate climate warming aided a temporary increase in butterfly populations between 2002 and 2012, the increasing frequency of extreme temperature led to even stronger declines in the subsequent years ([25]).

While butterflies show a decline in non-urban areas, they have been stable within urban areas across Europe, suggesting that parks and other green parts of the urban environment are becoming increasingly suitable and are being managed in a butterfly-friendly way. However, the situation of butterflies in urban areas requires further research, as different studies offer contrasting findings ([26]).

Main indicators

Share of forest area

LONG TERM Time series too short

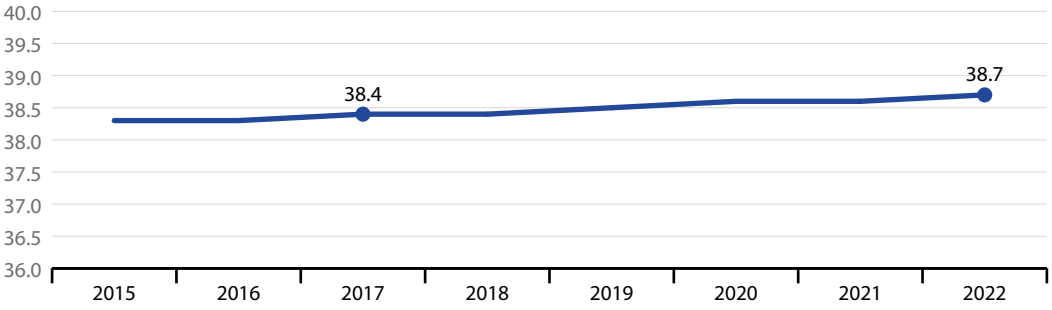
SHORT TERM 2017–2022

This indicator measures the proportion of forest areas in comparison to the total surface area of the country. The data used for this indicator originate from the European Forest Accounts (EFA) and are consistent with the FAO definition of forest.

FIGURE 15.1

Share of forest area, EU, 2015–2022

(% of total area)



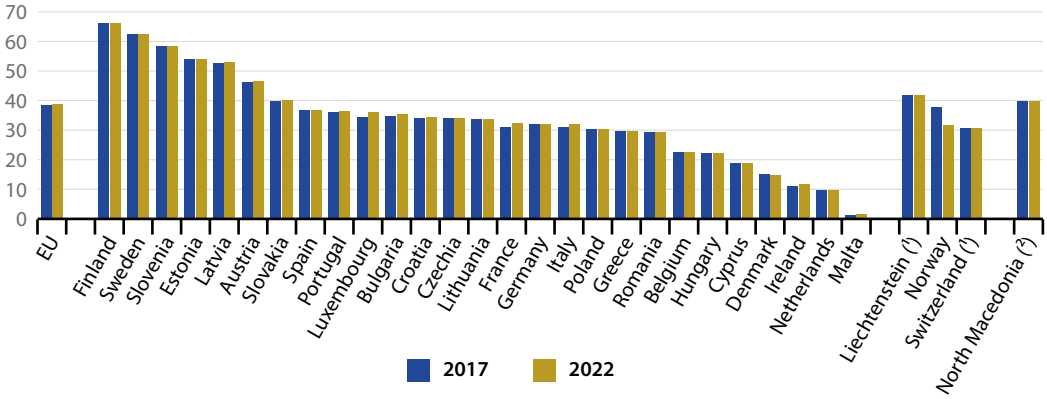
Note: Imputed data.

Source: Eurostat (online data code: sdg_15_11)

FIGURE 15.2

Share of forest area, by country, 2017 and 2022

(% of total area)



Note: Estimated, imputed and/or provisional data for most countries.

(1) 2020 data (instead of 2022).

(2) 2018 data (instead of 2017).

Source: Eurostat (online data code: sdg_15_11)

Area at risk of severe soil erosion by water

This indicator estimates the area at risk of severe erosion by water such as rain splash, sheet-wash and rills (soil loss greater than 10 tonnes per hectare and year). This area is expressed in square kilometres (km²) and as a percentage of the total non-artificial, erodible area in the country. The numbers are estimated using soil erosion susceptibility models. Data presented in this section stem from the JRC's soil erosion database.

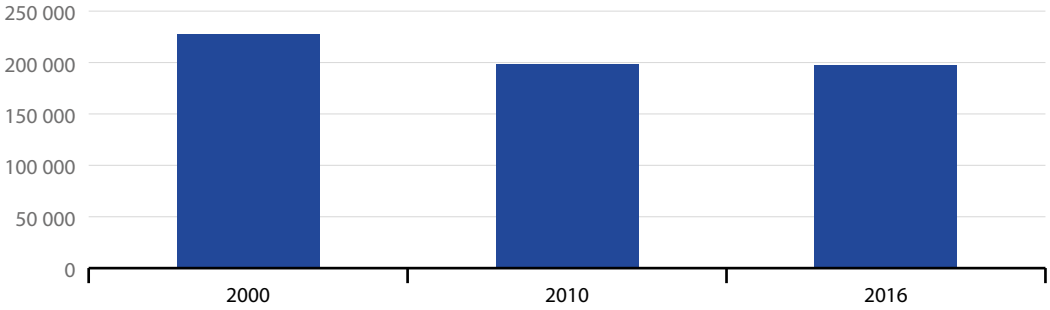
LONG TERM 2000–2016

SHORT TERM 2010–2016

FIGURE 15.3

Area at risk of severe soil erosion by water, EU, 2000, 2010 and 2016

(km²)

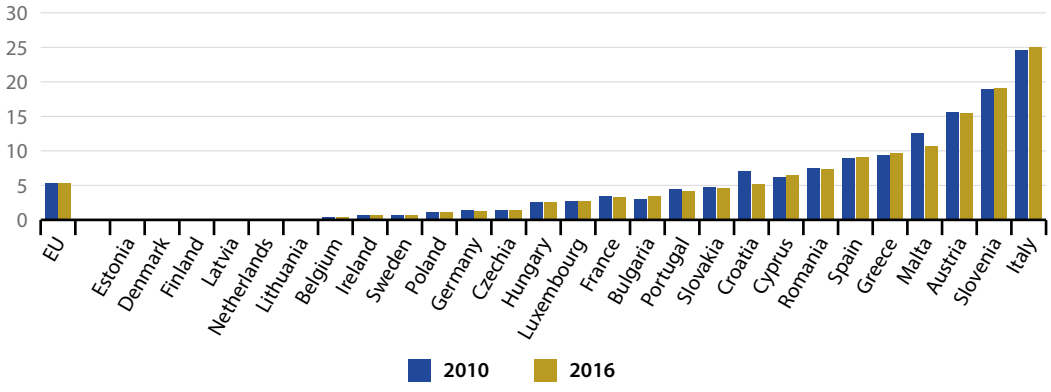


Source: Joint Research Centre (Eurostat online data code: sdg_15_50)

FIGURE 15.4

Area at risk of severe soil erosion by water, by country, 2010 and 2016

(% of the non-artificial erodible area)



Source: Joint Research Centre (Eurostat online data code: sdg_15_50)

Drought impact on ecosystems

LONG TERM 2009-2023

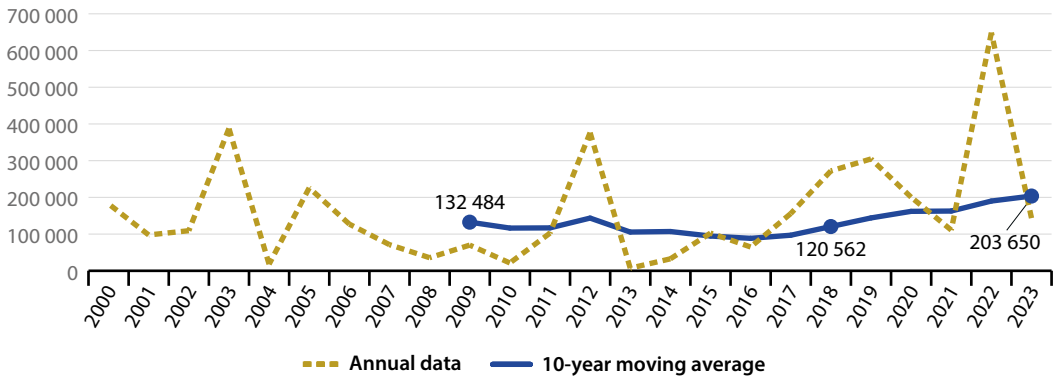
SHORT TERM 2018–2023

This indicator shows the area impacted by drought by monitoring negative anomalies in vegetation productivity in areas with a severe soil moisture deficit during the growing season (more than one standard deviation from the long-term average – observed through remote-sensing data collected at 500×500 meters resolution by the Copernicus EMS European Drought Observatory of the European Commission Joint Research Centre ([27])). The indicator covers only agricultural droughts with soil moisture deficits causing reduced vegetation productivity due to insufficient precipitation, as opposed to hydrological droughts, which occur when low water supplies become apparent in streams, reservoirs, and groundwater levels, usually after many months of meteorological drought.

FIGURE 15.5

Area impacted by drought, EU, 2000–2023

(km²)

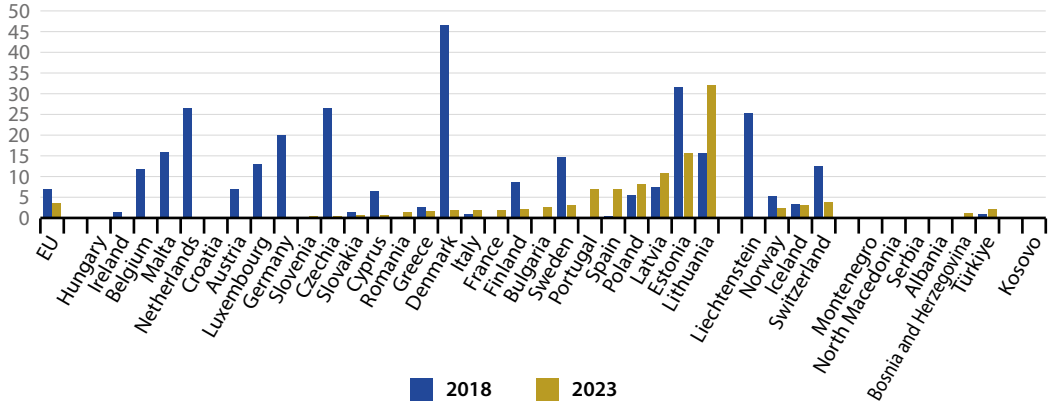


Note: The annual data points for the 10-year moving average refer to the average over the 10-year period up to these years.
Source: EEA (Eurostat online data code: sdg_15_42)

FIGURE 15.6

Area impacted by drought, by country, 2018 and 2023

(% of country area)



Source: EEA (Eurostat online data code: sdg_15_42)

Terrestrial protected areas

This indicator measures the extent of terrestrial protected areas, comprising nationally designated protected areas and Natura 2000 sites. A nationally designated area is an area protected by national legislation. The Natura 2000 network comprises both marine and terrestrial 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. The EU biodiversity strategy aims to protect at least 30 % of land and sea in Europe including both nationally designated sites and Natura 2000 sites. Data provided by the Member States to the European Commission — Directorate General for the Environment (Natura 2000) and the European Environment Agency (nationally designated areas) are consolidated at least yearly by the EEA.

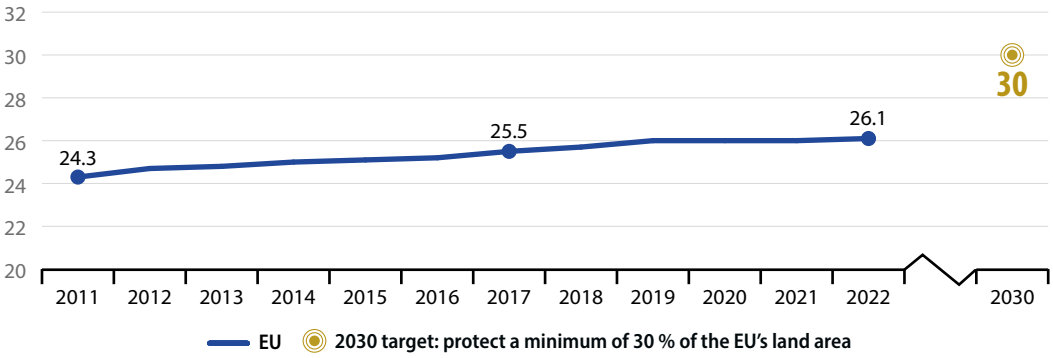
LONG TERM 2011–2022

SHORT TERM 2017–2022

FIGURE 15.7

Terrestrial protected areas, EU, 2011–2022

(% of total area)

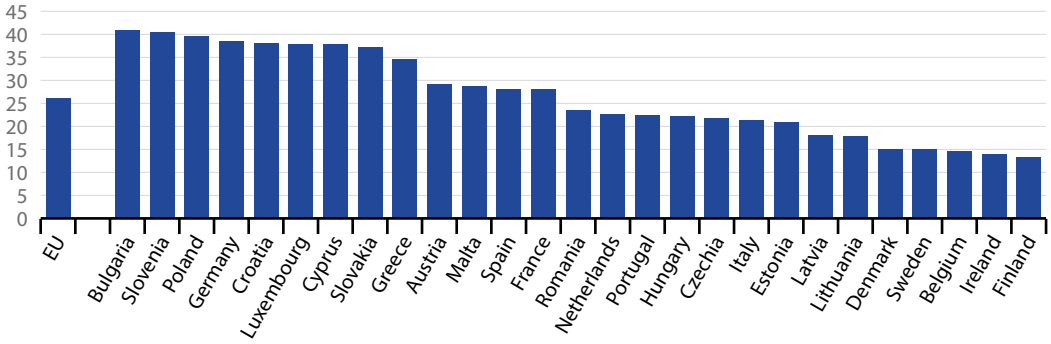


Source: EEA (Eurostat online data code: sdg_15_20)

FIGURE 15.8

Terrestrial protected areas, by country, 2022

(% of total area)



Source: EEA (Eurostat online data code: sdg_15_20)

Common bird index

LONG TERM
2008–2023

SHORT TERM
2018–2023

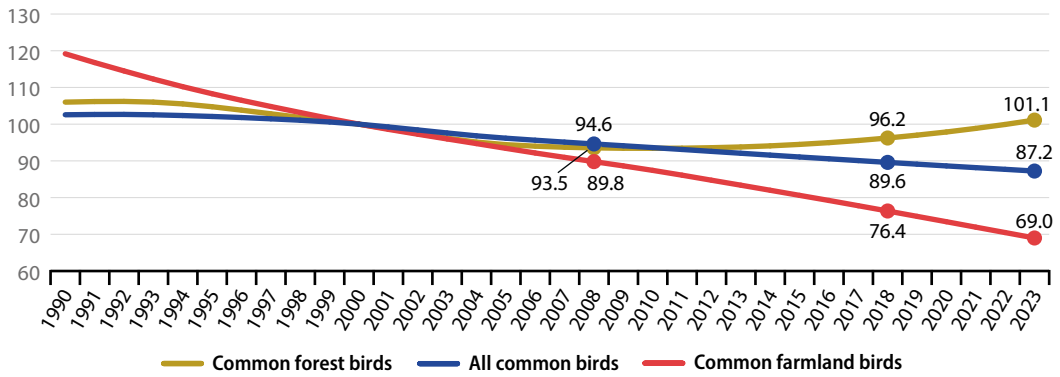
* All common birds
** Common farmland birds

This indicator is an index integrating the abundance and diversity of a selection of common bird species associated with specific habitats for feeding and nesting. Rare species are excluded, although some species common in certain Member States may be considered rare in others. Three groups of bird species are represented: common farmland species (39 species), common forest species (34 species) and all common bird species (168 species; including farmland species, forest species and common generalists' species). The indices are presented for EU-aggregates only and with smoothed values. The index draws from data produced by the European Bird Census Council and its Pan-European Common Bird Monitoring Scheme programme. Data coverage has increased from nine to 25 EU Member States over the period 1990 to 2014, with 26 countries covered as of the reference year 2015.

FIGURE 15.9

Common bird index, by type of species, EU, 1990–2023

(index 2000 = 100)



Note: The EU aggregate changes depending on when countries joined the Pan-European Common Birds Monitoring Scheme.

Source: European Bird Census Council (EBCC), National BirdLife organisations, Royal Society for the Protection of Birds (RSPB) and Czech Society for Ornithology (CSO) (Eurostat online data code: sdg_15_60)

Grassland butterfly index

The EU grassland butterfly index integrates the population trends of 17 butterfly species monitored across the EU. The index is presented as an EU-aggregate with smoothed values. The data are processed and provided by the Butterfly Conservation Europe, European Butterfly Monitoring Scheme partnership, EMBRACE project. For technical details see the European Grassland Butterfly Indicator 1990–2020 report.

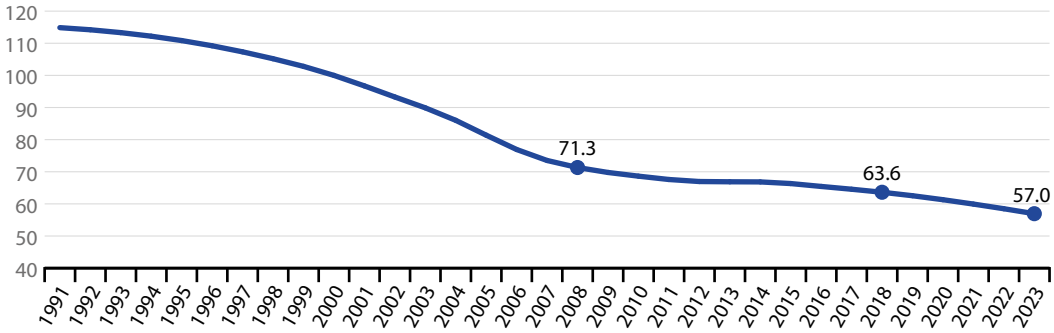
LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 15.10

Grassland butterfly index, EU, 1991–2023

(index 2000 = 100)



Source: Butterfly Conservation Europe, European Butterfly Monitoring Scheme partnership, EMBRACE project (Eurostat online data code: sdg_15_61)

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Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

SDG 16 calls for peaceful and inclusive societies based on respect for human rights, protection of the most vulnerable, the rule of law and good governance at all levels. It also envisions transparent, effective and accountable institutions.

Peace and security are prerequisites for sustainable development, in line with the integrated nature of the 2030 Agenda. Peace, security, democracy, the rule of law and respect for fundamental rights are also founding values of the EU. Monitoring SDG 16 in an EU context focuses on personal security, access to justice and trust in institutions within the EU. The EU's progress over the most recent five-year period of available data has been mixed in all these areas and has slowed compared with previous years. While deaths due to homicide or assault and the perceived occurrence of crime, violence and vandalism have fallen, the number of victims of trafficking in human beings in the EU has increased. Government expenditure on law courts has grown significantly and more than half of Europeans consider their justice system to be independent, although this share has declined over the past five years. The perceived level of corruption in the EU worsened slightly in 2024.

Indicators measuring progress towards SDG 16, EU

Indicator	Period	Annual growth rate	Assessment	More info
Peace and personal security				
Standardised death rate due to homicide	2007–2022	– 3.3 %		page 285
	2017–2022	– 0.6 %		
Population reporting crime, violence or vandalism in their area	2010–2023	– 2.1 %		page 286
	2018–2023	– 2.8 %		
Victims of trafficking in human beings	2008–2023	2.6 %		page 287
	2018–2023	8.6 %		
Access to justice				
General government total expenditure on law courts	2008–2023	2.9 %		page 288
	2018–2023	4.9 %		
Perceived independence of the justice system: very or fairly good	Time series too short for long-term assessment			page 289
	2019–2024	– 0.8 %		
Trust in institutions				
Corruption Perceptions Index	2012–2024	– 0.1 %		page 290
	2019–2024	– 0.6 %		

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

Policy context

Peace and personal security

In 2025, the European Commission adopted ProtectEU, a European Internal Security Strategy to better tackle security threats such as terrorism, organised crime, surging cybercrime and attacks against critical infrastructure. It includes actions to boost capabilities for law enforcement. The European Internal Security Strategy complements the Preparedness Union Strategy and the European Defence White Paper. Together with the forthcoming European Democracy Shield, they form a comprehensive framework for a safe, secure and resilient EU.

The EU Strategy on Combatting Trafficking in Human Beings (2021–2025) takes a comprehensive approach by covering prevention, reduction of demand, a reinforcement of investigations and criminal justice, protection and empowerment of the victims and the international dimension of combating this crime. The revised EU Anti-trafficking Directive, adopted in 2024, includes new rules reinforcing the fight against trafficking in human beings. These rules provide stronger tools for law enforcement and judicial authorities to investigate and prosecute new forms of exploitation, including those that take place online, and ensure a higher level of assistance and support to victims. Every two years, the European Commission adopts a report on the progress made in the fight against human trafficking.

Access to justice

Improving the effectiveness of justice systems in Member States has been identified as a key component for structural reforms in the European Semester. The Rule of Law Report assesses the situation of Member States' justice systems and the EU Justice Scoreboard complements it by monitoring the efficiency, quality and independence of Member States' justice systems.

The European Democracy Action Plan from 2020 aims to empower citizens and build more resilient democracies across the EU. The action plan was complemented by a Defence Democracy Package in 2023 to better protect EU decision-making processes from third-country influence, to promote free, fair and resilient elections and to foster the participation of citizens and civil society organisations in policy-making.

Trust in institutions

With the adoption of the Stockholm Programme, the Commission has been given a political mandate to measure efforts in the fight against corruption and to develop a comprehensive EU anti-corruption policy.

In EU legislation, the fight against corruption is covered by the 1997 Convention on fighting corruption involving officials of the EU or officials of Member States and the 2003 Framework Decision on combating corruption in the private sector.

Overview and key trends

Peace and personal security

Safety is a crucial aspect of a person's life. Insecurity is a common source of fear and worry, and negatively affects quality of life. Physical insecurity includes all the external factors that could potentially put an individual's physical integrity in danger. Crime is one of the most obvious causes of insecurity. Analyses of physical insecurity usually combine two aspects: the subjective perception of insecurity and the objective lack of safety. In this chapter, subjective perception of insecurity is monitored by perception of crime, while objective security is measured by two indicators: homicide death rate and victims of human trafficking.

The EU has become a safer place to live

In the EU, the rate of death due to homicide fell steadily between 2007 and 2022, reaching a rate of 0.7 deaths per 100 000 people. This corresponds to a reduction of 40 % over the assessed 15-year period. In the short-term period between 2017 and 2022, the rate of decline was more moderate, at 3 %, indicating stagnation at a low level. The long-term decrease in homicides in the EU has gone hand in hand with improvements in people's perception of crime, violence or vandalism. Since 2010, the share of people reporting the occurrence of such problems in their area has fallen in the EU. In 2023, 10.0 % of the population felt affected by these issues, which is 3.1 percentage points less than in 2010 and the lowest value recorded.

0.7
deaths per 100 000 people in the EU in 2022 were caused by homicides

The perception of being affected by crime, violence or vandalism differs across socio-demographic sub-groups of the EU population and by degrees of urbanisation. In 2023, 12.3 % of the population living in households with an equivalised disposable income below the poverty threshold — set at 60 % of the national median equivalised income — felt affected by such problems. However, this was the case for only 9.6 % of the population living in households above the poverty threshold in that year. Similarly, in 2023 the perceived occurrence of crime, violence or vandalism in cities (15.4 %) was more than three times higher than in rural areas (4.7 %) and almost twice as high as in towns and suburbs (7.8 %) ([1]).

Perceived exposure to crime does not always match observed crime rates

National figures show that the perceived exposure to crime, violence or vandalism in 2023 was 15 times higher in the most affected country (20.9 % of the population in Greece) than in the least affected country (1.4 % in Croatia). However, country differences in this subjective indicator need to be treated with caution. Research suggests that crime rates from police registers and the subjective exposure to crime may differ, as population groups with low victimisation rates may be particularly afraid of crime (the so-called 'fear of victimisation paradox') ([2]).

10.0 %
of the EU population reported crime, violence or vandalism in their area in 2023

Men and women face different risks of experiencing crime, depending on the type of crime

Deaths due to homicide in the EU show a significant gender gap. While death rates due to homicide have fallen for both sexes, they remain about twice as high for men (0.9 deaths per 100 000 persons in 2022, compared with 0.4 deaths per 100 000 persons for women) ([3]). A study by the United Nations Office on Drugs and

Crime (UNODC) and UN Women shows that the gap is even bigger worldwide since 80 % of all homicides were committed against men and boys in 2022 ([4]).

However, while men have a higher overall risk of being killed, women have a significantly higher risk of being killed by their intimate partner or family members. Globally, intimate partner- or family-related homicides accounted for 55 % of women who were killed in 2022, while this was only the case for 12 % of male homicides ([5]). At the EU level, women are about twice as likely as men to be victims of intentional homicide by family and relatives or their intimate partner. In 2022, 0.4 out of 100 000 women were victims of such homicide, compared with only 0.2 per 100 000 men ([6]). This is an issue of concern when considering the broader concept of violence against women, encompassing all forms of physical, sexual and psychological violence.

Data from Eurostat's official crime statistics on intentional homicide and sexual offences show that women are much more likely to be victims of sexual offences than men. In 2022, 64 out of 100 000 women were victims of sexual assault, and 38 out of 100 000 women were victims of rape. The rates were significantly lower for men, with 11 per 100 000 men for sexual assault and 4 out of 100 000 men for rape ([7]).

The prevalence of homicide and other types of violence varies greatly across the EU. However, cross-country comparisons of the crime statistics should be made with caution. Comparability is affected by different legal definitions concerning offenders and victims, different levels of police efficiency and the stigma associated with disclosing cases of violence against women ([8]) (see the chapter on SDG 5 'Gender equality' on page 91 for more information on gender-based violence).

The number of detected victims of trafficking in human beings has increased over the past five years

Human trafficking is a global crime that degrades people to commodities and exploits them for profit. It destroys individuals' lives by depriving people of their dignity, freedom and fundamental rights. Sexual and labour exploitation are the most common purposes of trafficking but forced begging, forced criminality and organ trafficking are also prevalent forms of exploitation ([9]). In the EU, the number of victims of human trafficking has increased by 51 % over the past five years, reaching 2.4 per 100 000 inhabitants in 2023 — the highest value on record. This corresponds to 10 793 registered victims in that year. The actual number is likely to be significantly higher because many victims remain undetected ([10]). The strongest increase in the number of victims of human trafficking happened in 2022, by 41 %, and can be attributed to armed conflicts, natural and man-made disasters, and displacement, which increase the number of victims of trafficking exploited within and outside crisis areas ([11]). Several Member States signalled that Russia's military aggression against Ukraine contributed to higher awareness of this crime, prompting the introduction of preventive measures which have led to a recent increase in the detection of victims ([12]).

2.4

per 100 000 people were victims of trafficking in human beings in the EU in 2023

Women in the EU are more likely to be victims of human trafficking than men, with a rate of 2.7 per 100 000 inhabitants, as opposed to 1.6 per 100 000 inhabitants for men in 2023. This gap has significantly narrowed over the years, as the rate for women has declined by 2.5 % since 2008, while for men it increased by 143.1 %. This is also in line with global figures that show that the share of women and girls in detected victims of human trafficking in the world decreased from 84 % in 2004 to 60 % in 2020 ([13]). In the EU, 63.3% of registered victims of trafficking in human beings were women or girls in 2023 ([14]).

In 2023, sexual exploitation remained the most common form of exploitation in the EU Member States, representing 43.8 % of all recorded cases of trafficking, although this share has fallen since 2008. Meanwhile, the share of labour exploitation

has been increasing over the years, reaching 36.0 % of cases in 2023. Other forms of exploitation, including organ removal, benefit fraud, criminal activities and forced begging, accounted for 20.2 % of cases in the same year ([15]).

Access to justice

Well-functioning justice systems are an important structural condition on which EU Member States base their sustainable growth and social stability policies. Whatever the model of the national justice system or the legal tradition in which it is anchored, quality, independence and efficiency are among the essential parameters of an 'effective justice system'. Because there is no single agreed way of measuring the quality of justice systems, the budget actually spent on courts is used here as a proxy for this topic. Moreover, judges need to be able to make decisions without interference or pressure from governments, politicians or economic actors, to ensure that individuals and businesses can fully enjoy their rights. The perceived independence of the justice system is used to monitor this aspect.

EU expenditure on law courts has grown over the past few years

In the EU, general government expenditure on law courts has risen by 54 % since 2008, reaching EUR 54.9 billion in 2023. In per capita terms, this corresponds to a 49 % increase from EUR 81.5 per inhabitant in 2008 to EUR 121.7 per inhabitant in 2023. However, when viewed as a share of total government expenditure, spending on law courts remained stable at 0.7 % between 2007 and 2019. In 2020, the share decreased to 0.6 % of total expenditure, largely due to increases in other government expenditure to mitigate the economic and social impact of the COVID-19 pandemic and remained at this level through 2021 and 2022. In 2023, it increased to 0.7 % again. In relation to GDP, expenditure on law courts has also been stable since 2008, at 0.3 % of GDP ([16]).

55
billion euro were spent by governments on law courts across the EU in 2023

Perceived independence of the justice system has slightly declined since 2019

In 2024, 52 % of EU inhabitants rated the independence of the courts and judges in their country as 'very good' or 'fairly good', two percentage points lower than in 2019. At the same time, the perception of 'very bad' or 'fairly bad' increased by two percentage points, from 35 % to 37 %. Interference or pressure from government and politicians was the reason most frequently given for a bad rating of perceived independence of courts and judges ([17]). The opinion about the independence of courts and judges varied significantly across Member States. While in Denmark, Finland and Austria, most respondents (83 %, 83 % and 82 %, respectively) rated the independence of their courts and judges as 'very good' or 'fairly good', this was only the case for 23 % of respondents in Croatia and 24 % in Bulgaria ([18]).

52 %
of the EU population rated the independence of courts and judges in their country as very or fairly good in 2024

Age, employment status, education and experience with the justice system seem to have a notable effect on the perception of the independence of the justice system. In 2024, 56 % of 15- to 24-year-old respondents in the EU gave a good rating, compared with 51 % of respondents aged 55 or over. Employees (58 %) were more likely to give a good rating than people who were not employed (50 %), self-employed people (47 %) or manual workers (44 %). The longer people remained in education, the more likely they were to rate the independence of courts and judges as good: 55 % of those who completed education aged 20 or above gave a good rating, compared with 46 % of those who completed education aged 15 or younger. Notably, respondents who had been involved in a dispute that had gone to court were more evenly split between those who

rated their system as good (44 %) or bad (49 %) than those who had not been to court (53 % good, 36 % bad) ([19]).

Trust in institutions

Effective justice systems are a prerequisite for the fight against corruption. Corruption causes social harm, especially when it is orchestrated by organised crime groups to commit other serious crimes, such as trafficking in drugs and humans. Corruption can undermine trust in democratic institutions and weaken the accountability of political leadership. It also inflicts financial damage by lowering investment levels, hampering the fair operation of the internal market and reducing public finances.

Perceptions of corruption increased across the EU in 2024

Because there is no meaningful way to assess absolute levels of corruption in countries or territories based on hard empirical evidence, capturing the perception of corruption of those in a position to make an assessment of public-sector corruption is currently the most reliable method of comparing relative corruption levels across countries. According to Transparency International's Corruption Perceptions Index (CPI), the EU countries scored on average 62 on a scale from 0 (highly corrupt) to 100 (very clean) in 2024. The corruption perception in the EU stagnated between 2016 and 2023, but decreased by two points in 2024, reaching the lowest value on record. This is the result of 17 EU Member States showing a decline in their corruption perception score in 2024 compared to the previous year.

62

out of 100 was the EU countries' average score in the Corruption Perception Index in 2024

Despite the decline in 2024, the EU's score was still 19 points above the world average score of 43. On a country level, EU countries continued to rank among the least-corrupt globally in 2024 and made up more than a half of the global top 10 least-corrupt countries. Within the EU, northern European countries achieved the best scores, with Denmark, Finland and Luxembourg leading the ranking. At the other end of the scale, Hungary, Bulgaria and Romania showed the highest levels of perceived corruption across the EU, ranking at positions 82, 76 and 65, respectively, on the global list (comprising 180 countries in total) ([20]).

Country rankings in the CPI largely align with similar responses collected in 2024 through a Eurobarometer survey ([21]). Although the CPI and the Eurobarometer survey are based on different methodologies and focus on different aspects of corruption, Finland, Denmark and Luxembourg stand out in both as countries where corruption is perceived to be rare. However, the Eurobarometer results present a more pessimistic view of corruption levels across the EU compared with the CPI. In all but four countries, at least half of respondents considered corruption to be a widespread national problem. For the EU as a whole, this translates into an average of 68 % of respondents sharing this perception in 2024. Nevertheless, this share remains 8 percentage points below the 2013 value. The proportion of the population who think corruption in their country is rare was 27 % in 2024.

There is a notable relationship between the CPI and the perceived independence of the justice system. Countries with a high CPI ranking, such as Denmark, Finland, Sweden or Luxembourg, also show a high share of the population rating the independence of the justice system as 'good' (see Figures 16.10 and 16.12). Conversely, countries with less optimistic ratings of the justice system's independence also tend to have lower CPI scores, for example Bulgaria and Croatia. As both indicators are based on people's perceptions, however, a causal relationship between the effectiveness of the justice system and the occurrence of corruption cannot be inferred based on these data. Effective justice systems are nevertheless considered to be a prerequisite for fighting corruption ([22]).

Trust in EU institutions has fluctuated over the past few years

Confidence in political institutions is key for effective democracies. On the one hand, citizens' confidence increases the probability that they will vote in democratic elections. On the other hand, it provides politicians and political parties with the necessary mandate to take decisions that are accepted in society.

Trust in three of the EU's main institutions — the European Parliament, the European Commission and the European Central Bank — has fluctuated over the past two decades. Following a decline in trust across all three institutions in 2020, data from autumn 2024 show a resurgence, with 53 % of the population expressing confidence in both the European Central Bank and European Parliament, and 51 % in the European Commission ([23]). Notably, this marks the first time since 2007 that more than half of Europeans have expressed trust in all three institutions. Throughout the years, the European Parliament has consistently been the most trusted of the three institutions surveyed.

The economic crisis may have played a role in the decline in trust in EU institutions observed between 2007 and 2015, while the COVID-19 pandemic might have influenced the drop in 2020. High inflation levels due to pressure on energy, food and other commodity prices because of Russia's aggression against Ukraine might have caused a slight decline in trust in the EU Institutions in 2022 and 2023. However, surveys show that citizens tend to only have a general idea about the EU and lack a deeper knowledge of the role and powers of the EU institutions, making confidence in the EU more dependent on contextual information than on actual governance ([24]).

Main indicators

Standardised death rate due to homicide

This indicator tracks deaths due to homicide and injuries inflicted by another person with the intent to injure or kill by any means, including 'late effects' from assault (International Classification of Diseases (ICD) codes X85 to Y09 and Y87.1). It does not include deaths due to legal interventions or war (ICD codes Y35 and Y36). The data are presented as standardised death rates, meaning they are adjusted to a standard age distribution to measure death rates independently of the population's age structure.

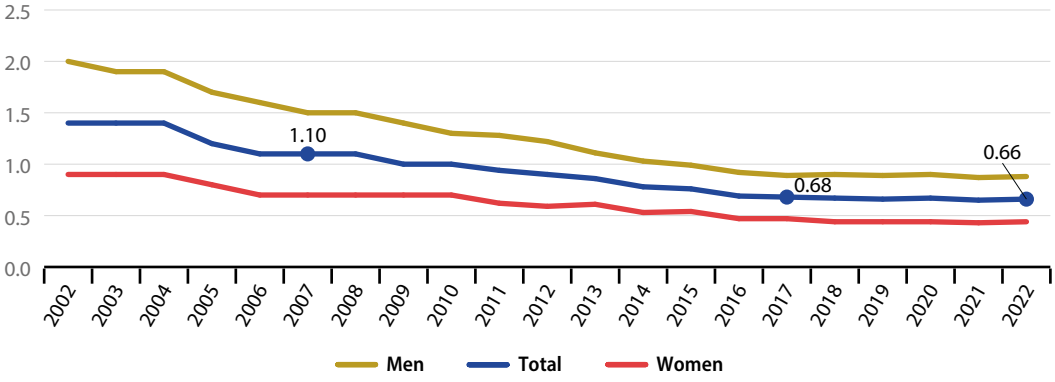
LONG TERM 2007–2022

SHORT TERM 2017–2022

FIGURE 16.1

Standardised death rate due to homicide, by sex, EU, 2002–2022

(number per 100 000 persons)



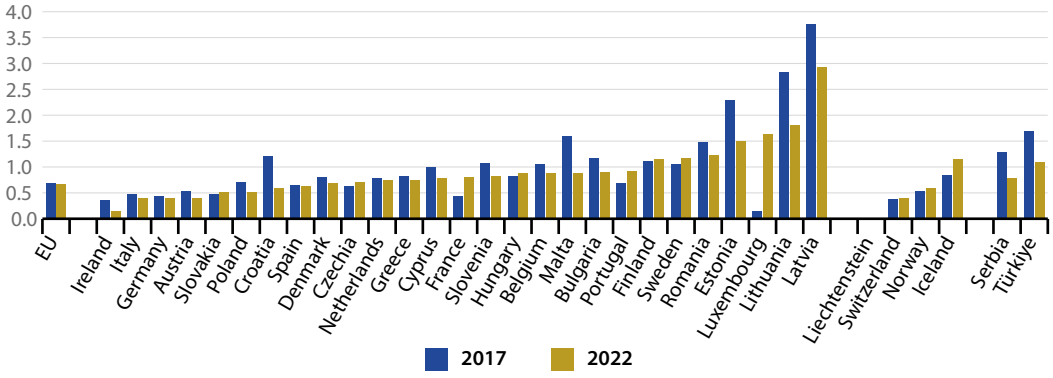
Note: Data for 2002–2010 are estimated.

Source: Eurostat (online data code: sdg_16_10)

FIGURE 16.2

Standardised death rate due to homicide, by country, 2017 and 2022

(number per 100 000 persons)



Source: Eurostat (online data code: sdg_16_10)

Population reporting crime, violence or vandalism in their area

LONG TERM 2010–2023

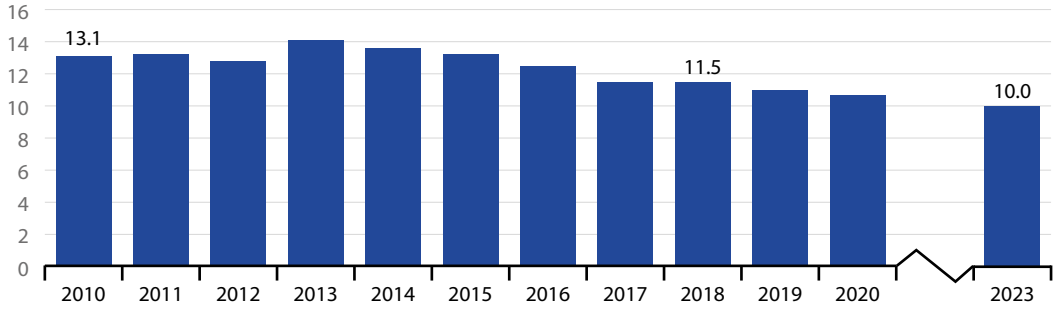
SHORT TERM 2018–2023

This indicator shows the share of the population who reported a problem with crime, violence or vandalism in their local area. This describes the situation where the respondent feels crime, violence or vandalism in the area to be a problem for the household, although this perception is not necessarily based on personal experience. The data stem from the EU Statistics on Income and Living Conditions (EU-SILC).

FIGURE 16.3

Population reporting occurrence of crime, violence or vandalism in their area, EU, 2010–2023

(% of population)

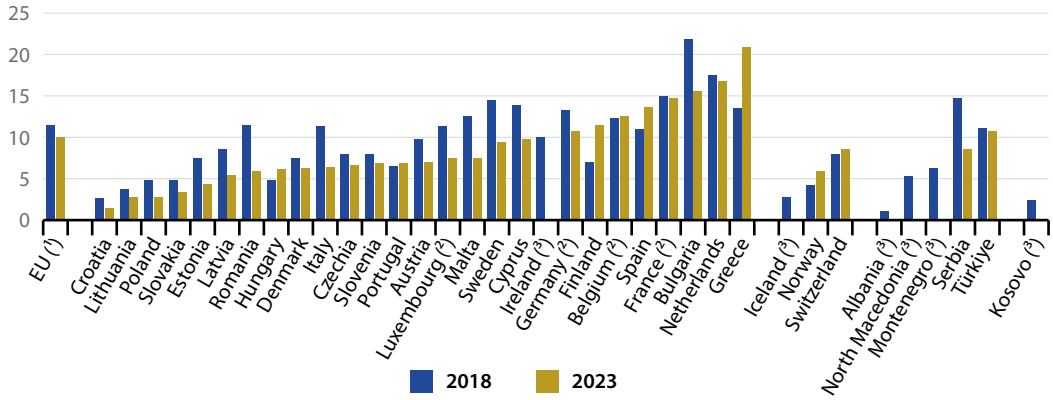


Note: Estimated data. Due to a change in the frequency of the data collection, no data were collected for 2021 and 2022.
Source: Eurostat (online data code: sdg_16_20)

FIGURE 16.4

Population reporting occurrence of crime, violence or vandalism in their area, by country, 2018 and 2023

(% of population)



(1) Estimated data.
(2) Break(s) in time series between the two years shown.
(3) No data for 2023.
Source: Eurostat (online data code: sdg_16_20)

Victims of trafficking in human beings

This indicator refers to victims of trafficking in human beings as defined under Article 2 of the Directive 2011/36/EU. A registered victim can be a person who has been formally identified as a victim of trafficking in human beings by the relevant formal authority in a Member State or a person who has met the criteria of the EU Directive but has not been formally identified by the relevant formal authority as a trafficking victim or who has declined to be formally or legally identified as trafficked.

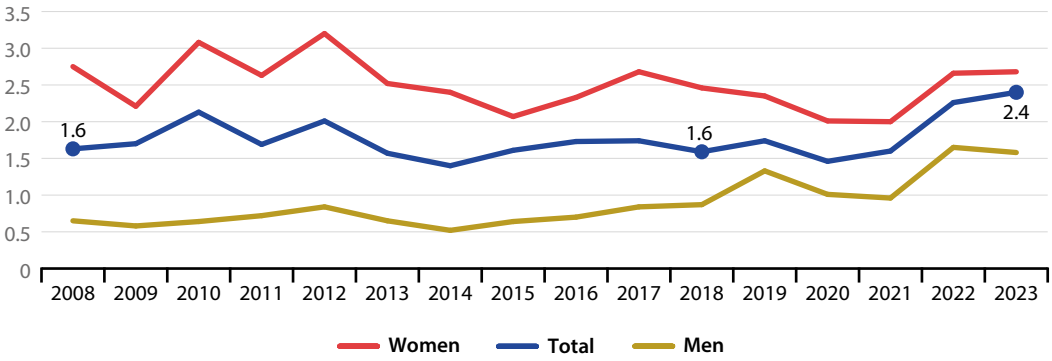
LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 16.5

Victims of trafficking in human beings, by sex, EU, 2008–2023

(number per 100 000 inhabitants)

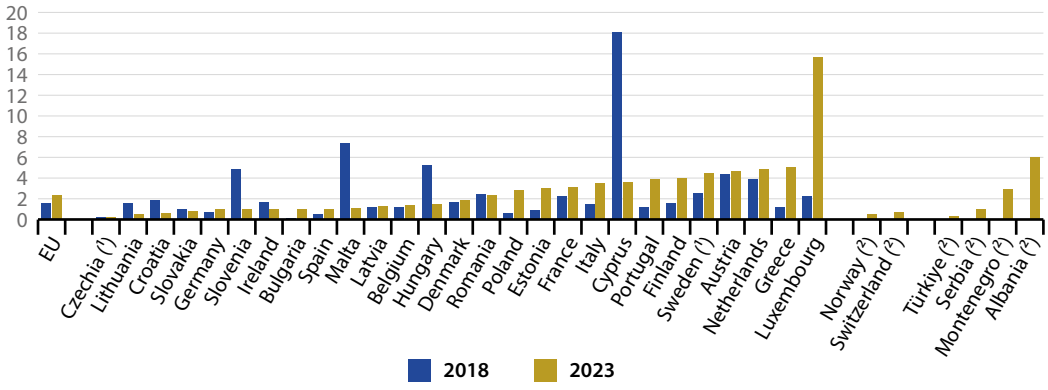


Note: The total is not always the average of men and women because not all countries provide data by sex.
Source: Eurostat (online data code: sdg_16_70)

FIGURE 16.6

Victims of trafficking in human beings, by country, 2018 and 2023

(number per 100 000 inhabitants)



(1) 2019 data (instead of 2018).
(2) No data for 2018.
Source: Eurostat (online data code: sdg_16_70)

General government total expenditure on law courts

LONG TERM 2008–2023

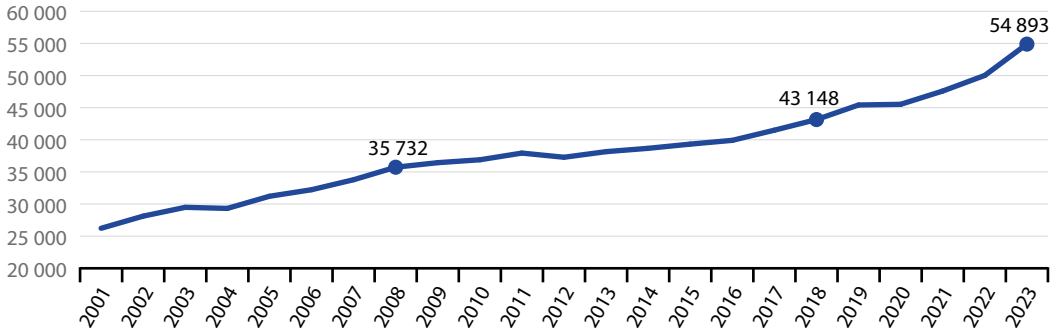
SHORT TERM 2018–2023

This indicator refers to the general government total expenditure on law courts. It includes expenditure on the administration, operation or support of civil and criminal law courts and the judicial system, including enforcement of fines and legal settlements imposed by the courts. The operation of parole and probation systems, legal representation and advice on behalf of government or others provided by government in cash or in services are also taken into account. Law courts include administrative tribunals, ombudsmen and the like, but excludes prison administrations.

FIGURE 16.7

General government total expenditure on law courts, EU, 2001–2023

(million EUR)

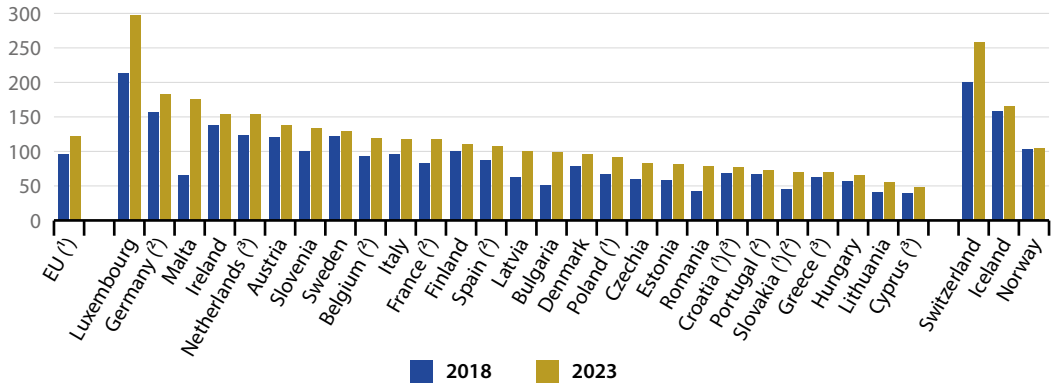


Source: Eurostat (online data code: sdg_16_30)

FIGURE 16.8

General government total expenditure on law courts, by country, 2018 and 2023

(EUR per inhabitant)



(1) Break(s) in population data time series between the two years shown.
(2) 2023 data are provisional and/or estimated.
(3) 2023 population data are provisional and/or estimated.
Source: Eurostat (online data code: sdg_16_30)

Perceived independence of the justice system: very or fairly good

This indicator is designed to explore respondents' perceptions about the independence of the judiciary across EU Member States, looking specifically at the perceived independence of the courts and judges in a country. Data on the perceived independence of the justice system stem from annual Flash Eurobarometer surveys, which started in 2016 on behalf of the European Commission's Directorate-General for Justice and Consumers.

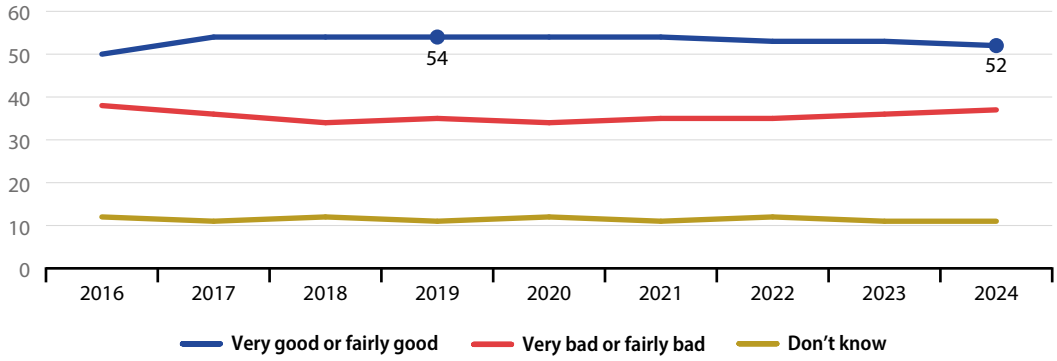
LONG TERM
Time series too short

SHORT TERM
2019–2024

FIGURE 16.9

Perceived independence of the justice system, EU, 2016–2024

(% of population)

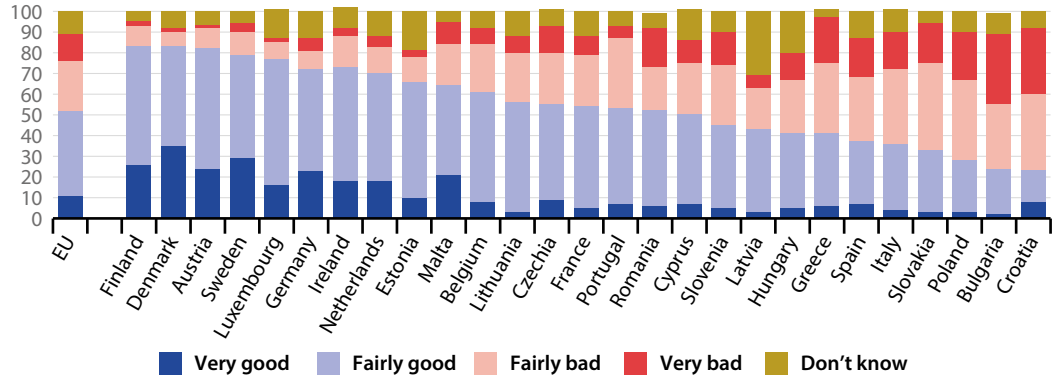


Note: 2016–2020 data are estimated; break in time series in 2021.
Source: European Commission services, Eurobarometer (Eurostat online data code: sdg_16_40)

FIGURE 16.10

Perceived independence of the justice system, by country, 2024

(% of population)



Source: European Commission services, Eurobarometer (Eurostat online data code: sdg_16_40)

Corruption Perceptions Index

LONG TERM
2012–2024

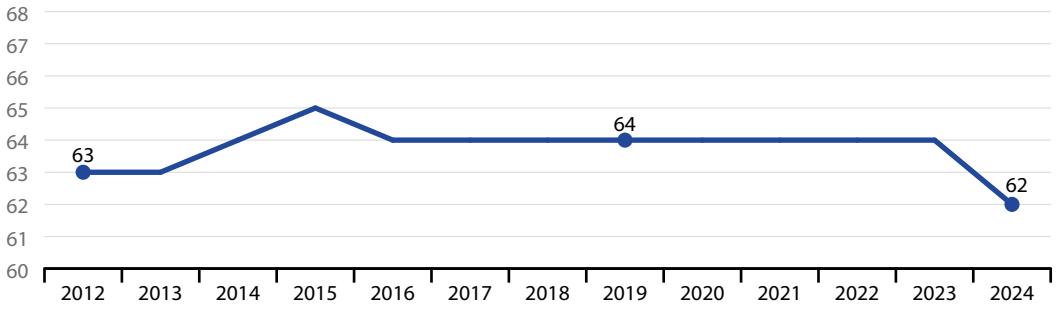
SHORT TERM
2019–2024

This indicator is a composite index based on a combination of surveys and assessments of corruption from 13 different sources and scores. It ranks countries based on how corrupt their public sector is perceived to be, with a score of 0 representing a very high level of corruption and 100 representing a very clean country. The sources of information used for the Corruption Perception Index (CPI) are based on data gathered in the 24 months preceding the publication of the index. The CPI includes only sources that provide a score for a set of countries or territories and that measure perceptions of corruption in the public sector. For a country or territory to be included in the ranking, it must be included in a minimum of three of the CPI's data sources. The CPI is published by Transparency International.

FIGURE 16.11

Corruption Perceptions Index, EU, 2012–2024

(score scale of 0 (highly corrupt) to 100 (very clean))

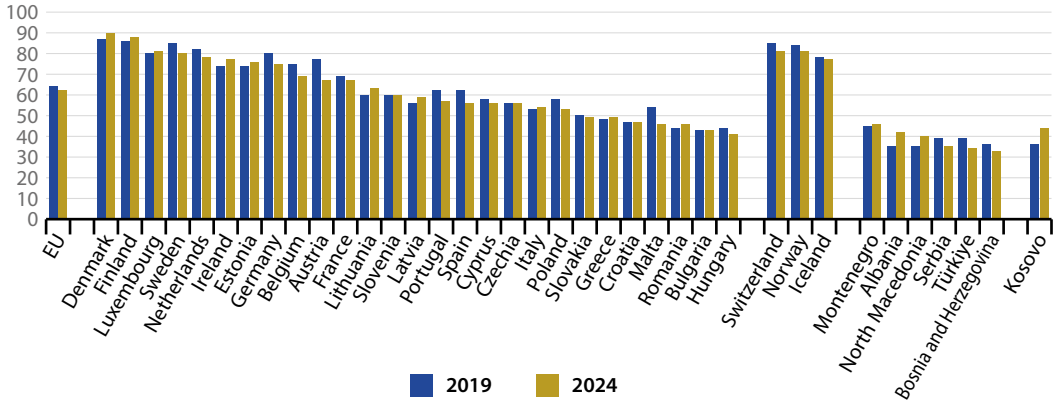


Source: Transparency International (Eurostat online data code: sdg_16_50)

FIGURE 16.12

Corruption Perceptions Index, by country, 2019 and 2024

(score scale of 0 (highly corrupt) to 100 (very clean))



Source: Transparency International (Eurostat online data code: sdg_16_50)

Notes

(1) *Source*: Eurostat (online data code: ilc_mdvdw06).

(2) See for example: Rader, N. (2017), *Fear of Crime*, Oxford Research Encyclopedia of Criminology.

(3) *Source*: Eurostat (online data code: sdg_16_10).

(4) UNODC and UN Women (2023), *Gender-related killings of women and girls (femicide/feminicide)*, United Nations Office on Drugs and Crime, p. 6.

(5) Ibid.

(6) *Source*: Eurostat (online data code: crim_hom_vrel).

(7) *Source*: Eurostat (online data code: crim_hom_soff).

(8) For more information see Eurostat metadata on Crime and criminal justice (crim) and European Union Agency for Fundamental Rights (2014), *Violence against women: an EU-wide survey. Main results*, Publications Office of the European Union, Luxembourg, pp. 25–26.

(9) UNODC, *Human Trafficking FAQs*.

(10) European Commission (2021), *EU Strategy on Combatting Trafficking in Human Beings*, COM(2021) 171 final.

(11) UNODC (2022), *Global Report on Trafficking in Persons 2022*, p. 38.

(12) Eurostat (2025), *Trafficking in human beings statistics*.

(13) UNODC (2022), *Global Report on Trafficking in Persons 2022*, p. xi.

(14) Eurostat (2025), *Trafficking in human beings statistics*.

(15) Calculations based on Eurostat (online data code: crim_thb_vexp).

(16) *Source:* Eurostat (online data code: gov_10a_exp).

(17) European Commission (2024), *Flash Eurobarometer 540, Perceived independence of the national justice systems in the EU among the general public*, p. 3.

(18) Ibid, p. 4.

(19) Ibid, p. 7.

(20) Transparency International (2025), *Corruption Perceptions Index 2024*.

(21) European Commission (2024), *Special Eurobarometer 548 on Citizens' attitudes towards corruption in the EU in 2024*, pp. 12–13.

(22) Also see European Commission (2017), *European Semester Thematic Factsheet on Effective Justice Systems*.

(23) European Commission (2024), *Standard Eurobarometer 102, Public Opinion in the European Union*, pp. 111–112.

(24) European Research Centre for Anti-Corruption and State-Building (ERCAS) & Hertie School of Governance (2015), *Public integrity and trust in Europe*, Berlin, p. 19; and Eurofound (2022), *Fifth round of the Living, working and COVID-19 e-survey: Living in a new era of uncertainty*, Publications Office of the European Union, Luxembourg.

Strengthen the means of implementation and revitalise the global partnership for sustainable development

SDG 17 calls for a global partnership for sustainable development. It emphasises the importance of macroeconomic stability and of mobilising financial resources for developing countries. It also stresses the importance of trade and equitable rules for governing it. The goal also emphasises the importance of access to science and technology, in particular internet-based information and communications technology.

Partnership is at the essence of the EU and an overarching principle to approach the SDGs within and beyond the EU boundaries. Monitoring SDG 17 in an EU context focuses on global partnership, financial governance and access to technology. Over the assessed five-year period, the EU made moderate progress in the area of global partnerships. EU financing to developing countries has grown slightly, and the support to Ukraine has helped move the EU closer to its official development assistance (ODA) target. Moreover, the share of imports from the least developed countries has increased. The picture is less favourable for financial governance within the EU, as exemplified by a falling share of environmental taxes in total tax revenues and high levels of general government gross debt. Meanwhile, access to technology in the EU progressed, with a significant increase in the share of households connected to high-speed internet.

Indicators measuring progress towards SDG 17, EU

Indicator	Period	Annual growth rate	Assessment	More info
Global partnership				
Official development assistance ◎	2008–2023	Observed: 1.9 % Required: 2.3 %	↗	page 301
	2018–2023	Observed: 5.4 % Required: 4.1 %	↑	
EU financing to developing countries	2008–2023	0.7 %	↗	page 303
	2018–2023	0.8 %	↗	
Share of imports from least developed countries	2009–2024	3.0 %	↑	page 304
	2019–2024	1.1 %	↑	
Financial governance within the EU				
General government gross debt	2009–2024	0.5 %	↘	page 305
	2019–2024	0.9 %	↘	
Share of environmental taxes in total tax revenues	2008–2023	– 1.2 %	↓	page 306
	2018–2023	– 4.5 %	↓	
Access to technology				
Share of households with high-speed internet connection ◎	Time series too short for long-term assessment		✕	page 307
	2019–2023	Observed: 11.9 % Required: 6.4 %	↑	

Note: See Annex II for a description of the methodology used for the compound annual growth rate calculation and the trend assessment. For indicators without a target, the growth rates observed over the specified periods are given. For indicators with a quantified EU target (marked with a target sign ◎), both the observed growth rates and the growth rates that would have been required in the specified periods for meeting the target are given. See Table A.1 in Annex I for the full list of EU policy targets considered for monitoring in this report.

Policy context

Global partnership

In its European Consensus on Development, the EU collectively committed to provide 0.7 % of gross national income (GNI) as official development assistance (ODA). To target resources to where the need is greatest, especially to least developed countries (LDCs) and countries in states of fragility and conflict, the EU also undertakes to meet collectively the target of 0.20 % of ODA/GNI to LDCs by 2030.

The Neighbourhood Development and International Cooperation Instrument NDICI-Global Europe, including the European Fund for Sustainable Development Plus (EFSD+), helps mobilise private-sector financing. Building on the Addis Ababa Action Agenda (AAAA), efforts are undertaken to align all streams of financing — public, private, domestic and international — with the SDGs in the context of the Financing for Development process (FFD). The Samoa agreement is the overarching framework for EU relations with African, Caribbean and Pacific countries.

The EU's 'Generalised Scheme of Preferences' allows developing countries to pay less or no duties on their exports to the EU. The Everything But Arms arrangement grants duty-free and quota-free access for all LDC products except arms and ammunition. The EU also provides significant amounts of 'aid for trade', with the aim of supporting trade, policy adjustments, trade-related infrastructure and building productive capacity.

Launched in 2021, Global Gateway is the EU strategy to support partner countries to boost smart, clean and secure links in digital, energy and transport sectors, and to strengthen health, education and research systems. Its implementation has strongly benefitted from the Team Europe approach, aimed at mobilising up to EUR 300 billion in investments by the end of the Multiannual Financial Framework (MFF) of 2021–2027.

In 2021, the EU renewed its Multilateralism Strategy to further the cooperation on global challenges such as peace and security, human rights and the rule of law, sustainable development, public health and climate change. The EU has been actively involved in the negotiation, adoption current implementation of the UN Pact for the Future.

Financial governance within the EU

The Treaty on the Functioning of the European Union (TFEU) requires a Member State's annual government deficit-to-GDP ratio to not exceed 3 %, and that government debt as a ratio of GDP should be limited to 60 %. In 2024, the ambitious reform of the EU's economic governance framework, aimed at strengthening Member States' debt sustainability and promoting sustainable and inclusive growth in all Member States, entered into force.

Access to technology

In the 2020 Digital Strategy, the EU committed to developing a Global Digital Cooperation Strategy that will reflect the SDGs. The 2030 Digital Compass presents a vision for Europe's digital transformation and sets the target of all European households to be covered by a gigabit network by 2030.

Overview and key trends

Global partnership

To achieve the SDGs, partnerships are necessary between governments, the private sector, civil society and other parties. Wealthier economies such as the EU can support the implementation of the 2030 Agenda in developing countries through public and private, domestic and international resources. These resources can be both financial and non-financial ([1]). This chapter focuses on the former. Overall, the global partnership indicators show a mixed picture for the EU over the past few years.

The EU supports country-led development through a range of financial support mechanisms

In 2015, in the Addis Ababa Action Agenda, all countries recognised that international public finance plays an important role in complementing countries' domestic efforts to mobilise public resources, especially in the poorest and most vulnerable countries. Official development assistance (ODA), other official flows (OOFs), private flows, such as foreign direct investment (FDI), grants by non-governmental organisations (NGOs) and officially supported export credits ([2]) are some of the financial flows from the EU and its Member States to developing countries.

126.4
billion EUR were spent by the EU on financing to developing countries in 2023

Regarding the total volume of financial flows from the EU to developing countries, the Organisation for Economic Co-operation and Development (OECD) estimates that total public and private EU financing to developing countries amounted to EUR 126.4 billion in 2023. When accounting for inflation, this is about the same level as the financial flows provided by the EU ten years earlier (in 2013) but is — in part substantially — lower than the amounts provided between 2014 and 2017. ODA has been the most reliable and steady financial flow from the EU to developing countries, while private flows have varied strongly over the years. The slight increase in EU financing to developing countries over the past five-year period is a result of a 32 % growth in ODA and an uptake of officially supported export credits, while private flows have fallen by 50 % since 2018.

Official development assistance: a long struggle to meet targets

The idea that donor countries should contribute 0.7 % of their gross national income (GNI) to ODA has been on the international agenda for half a century. The EU is collectively committed to providing 0.7 % of GNI as ODA within the timeframe of the 2030 Agenda, as affirmed in the New European Consensus on Development. Member States that joined the EU after 2002 have committed to providing 0.33 % of their GNI for ODA. As a whole, the EU spent 0.56 % of its GNI on ODA in 2023, which is significantly higher than the 0.49 % provided in 2021, but lower than the 0.59 % provided in 2022. The 2022 and 2023 figures include support to Ukraine, which has helped move the EU closer to its ODA target. However, only four EU countries — Luxembourg, Sweden, Germany and Denmark — achieved the 0.7 % target in 2023, meaning additional efforts will be needed to meet the collective EU target by 2030.

0.56 %
of the EU's gross national income was spent on ODA in 2023

The EU remains the world's biggest ODA donor

In 2023, the EU again maintained its position as the biggest ODA donor globally, providing about EUR 95.5 billion. This figure refers to the combined ODA provided by the 27 EU Member States and EU institutions. Moreover, with 0.56 % in 2023, the EU's overall ODA/GNI ratio was significantly higher than for most other Development Assistance Committee's (DAC) donors such as Canada, Japan and the United States.

The EU seeks to support least developed countries in particular

To direct resources where they are most needed — least developed countries (LDCs) and countries in states of fragility and conflict — the EU has a target to collectively provide 0.15–0.20 % of GNI to LDCs in the short term, reaching 0.20 % within the timeframe of the 2030 Agenda. In 2023, the EU's collective official development assistance to LDCs accounted for 0.12 % of GNI. The EU has thus not progressed towards its 0.20 % target over the past few years. In 2023, three Member States — Luxembourg, Sweden and Germany — already exceeded the 2030 target for the GNI ratio of ODA to LDCs.

ODA is only a part of several financing mechanisms

The EU seeks to ensure that developing countries can combine aid, investment and trade with domestic resources and policies to build capacity and become self-reliant. ODA, for example, can be used as a catalyst to mobilise other financial resources such as domestic tax revenues or resources from the private sector. Other innovative instruments have been developed, such as blending grants with loans, guarantees or equity from public and private financiers. Since 2019, a comprehensive view of the official flows from EU institutions to developing countries is available under the Total Official Support for Sustainable Development (TOSSD) framework, which also tracks support to international public goods. Between 2019 and 2022, the average annual TOSSD from EU institutions amounted to EUR 33.5 billion ([3]). EU financial support, combined with domestic and private revenues, can provide a basis for achieving the 2030 Agenda's goals, allowing for investment in social services, clean energy, infrastructure, transport and information and communications technologies. In the best case, developing countries could leapfrog some of the unsustainable modes of production and consumption that industrialised countries use.

Around 2 % of all extra-EU imports come from least developed countries

Trade's potential contribution to sustainable development has long been acknowledged. This is reflected in the EU's 2021 Trade Policy Review, along with the European Green Deal which stresses the contribution that trade policy can make to achieving the EU's ambition on sustainable development.

Exports can create domestic jobs and allow developing countries to obtain foreign currency, which they can use to import necessary goods. Better integration of developing countries into world markets may reduce the need for external public flows. Several of the SDGs refer to the importance of trade for sustainable development. However, it needs to be noted that the EU's trade-related indicators do not provide insights on whether the products in question are produced in an environmentally and socially sustainable manner.

2.1 %
of all extra-EU imports came from least developed countries in 2024

Between 2009 and 2024, the value of EU imports from developing countries (including China) increased strongly from EUR 504 billion to EUR 1 313 billion. Around 4 % of these imports came from the almost 50 countries classified as least developed by the UN. EU imports from these least developed countries more than tripled over the past 15 years, from EUR 15.8 billion in 2009 to EUR 50.3 billion in 2024. In relation to imports from all countries outside the EU, the share of imports from least

developed countries increased from 1.3 % in 2009 to 2.1 % in 2024. Since 2014, however, the share has stagnated, showing only small fluctuations around the 2 % level. This means that over the past 10 years imports from least developed countries have grown at a similar rate as all extra-EU imports.

Imports from all developing countries to the EU as a share of imports from all countries outside the EU increased from 42.3 % in 2009 to 54.0 % in 2024. Since 2021, developing countries (including China) have accounted for slightly more than half of all extra-EU imports. China (excluding Hong Kong) alone accounted for 21.3 % of EU imports in 2024. This is remarkably higher than the share of imports from the United States, which accounted for 13.7 % ([4]).

'Aid for trade' is a part of ODA that is targeted at trade-related projects and programmes. It aims to build trade capacity, supportive infrastructure and productive capacity in developing countries. The EU and its Member States were the leading global providers of aid for trade in 2022, providing EUR 22 billion, or 36 % of global aid for trade. Just three donors — the EU institutions as well as Germany and France — provided 91 % of this overall sum. The share of aid for trade to LDCs was 12 % of overall aid for trade commitments in 2022 ([5]).

Financial governance within the EU

To help other countries to advance their economies, the EU's own economies must also remain on a sustainable development path. Macroeconomic stability in the EU is therefore one pillar of the Union's contribution to implementing the SDGs. In addition, the EU seeks to make its economy greener. In a global context, where consumption patterns in one region can severely impact production patterns elsewhere, it is particularly important that prices reflect the real costs of consumption and production. They should include payments for negative externalities caused by polluting activities or other activities that damage human health and the environment. Moreover, the EU has pointed out that environmental taxes may offer opportunities to reduce taxes in other areas, for example on labour.

The EU's government debt-to-GDP ratio remains above pre-COVID levels

In 2024, general government gross debt in the EU as a ratio to GDP was

81.0 %

According to the Treaty on the Functioning of the European Union, government debt should not exceed 60 % of GDP in EU Member States. As a consequence of the COVID-19 crisis and related public spending, the EU's overall debt-to-GDP ratio rose sharply in 2020 to reach 89.5 %, which is a 12.1 percentage point increase compared with 2019. Since then, however, the EU's debt-to-GDP ratio has fallen again, reaching 81.0 % in 2024. This is 8.5 percentage points lower than the 2020 peak but still 3.6 percentage points higher than the 2019 value of 77.4 %. The 2024 value is also slightly above the 2023 ratio of 80.8 %, interrupting the downward trend visible since the 2020 peak.

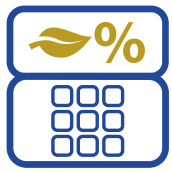
In 2024, Member States' debt-to-GDP ratios ranged from 23.6 % in Estonia to 153.6 % in Greece. Twelve EU countries exceeded the 60 % threshold in 2024 and five Member States had debt-to-GDP ratios above 100 %. Between 2019 and 2024, the strongest reductions in debt-to-GDP ratios were reported by Greece (– 29.6 percentage points), Cyprus (– 27.3 percentage points) and Portugal (– 21.2 percentage points). In contrast, the ratios rose strongest in Romania (+ 19.8 percentage points), Finland (+ 16.8 percentage points) and France (+ 14.8 percentage points).

'Greening' the taxation system remains a challenge

Environmental taxes help to provide the right price signals and incentives to producers, users and consumers to encourage less polluting consumption and to contribute to sustainable growth. They may also provide opportunities to reduce taxes in other areas, for example on labour, and if revenue for adequate social protection is

protected, they can offer a win–win option for addressing both environmental and employment issues, as laid out in the EU's Action Plan for Fair and Simple Taxation. Environmental taxes support the transition to a climate-neutral economy ([6]). As indicated in the Communication on Business taxation for the 21st century as regards the EU tax mix, behavioural taxes, such as environmental and health taxes, continue to be of growing importance for EU tax policies. Well-designed environmental taxes help to support the green transition by sending the right price signals, as well as implementing the polluter pays principle. They also generate revenue that could compensate some of the needed labour tax cuts.

In 2023, environmental taxes accounted for only 5.2 % of total tax revenues in the EU, which is the lowest share in the time series since 2000. In comparison, revenues from labour taxes were about ten times higher and accounted for 51.2 % in 2023 ([7]). Energy taxes constituted the main part of environmental taxes, accounting for 4.1 % of tax revenues in 2023, followed by transport taxes with a share of 0.9 %. In comparison, taxes on pollution and resources — the third component of environmental taxes — remained negligible, accounting for only 0.2 % of total tax revenues in 2023 ([8]). The share of total environmental taxes has fallen considerably since 2018, when they accounted for 6.5 % of tax revenues. Across Member States, the share of environmental taxes in total tax revenues ranged from 3.1 % in Luxembourg to 11.2 % in Bulgaria in 2023. Compared with 2018, their share has decreased in almost all EU countries. Only four countries — Bulgaria, Greece, Romania and Sweden — reported increases in the share of environmental taxes over this period.



In 2023, the share of environmental taxes in total tax revenues in the EU was

5.2 %

The ratio of labour to environmental taxes shows how much higher a country's share of labour tax revenues is than its share of environmental taxes. In 2023, this ratio ranged from 3.2 in Bulgaria to 15.8 in Luxembourg. The ratio has increased in most Member States since 2018, indicating a relative shift in taxation from environment to labour across the EU ([9]).

EU Member States spend around 2 % of their GDP to protect the natural environment

The decline in the prioritisation of environmental taxation is partly reflected in national environmental expenditures. National expenditure on environmental protection measures the amount of resources a country uses to protect the natural environment. It includes current expenditure on environmental protection activities, investments in these activities and net transfers to other parts of the world. At EU level, environmental protection expenditure amounted to EUR 355 billion in 2023, which corresponds to 2.1 % of GDP ([10]).

Access to technology

In today's economies and societies, digital connections are crucial. Instant communication between individuals, bank transfers, office work, public dissemination of information and data analysis are only some of the activities that depend on the internet. Regions without fast internet connections have serious social and economic disadvantages in a digitalised world. Therefore, the EU has the ambition to have all European households covered by high-speed internet by 2030.

Considerable progress has been made in rolling out high-speed internet coverage across the EU

The uptake of high-speed internet coverage — referring to fibre connections or other networks offering similar bandwidth — has improved considerably over the past few years across the EU. While just about half (50.3 %) of EU households enjoyed such connectivity in 2019, this share has risen considerably, reaching 78.8 % in 2023. The EU has thus made strong progress towards its target of 100 % coverage by 2030. Connectivity has also

improved in rural areas ([11]). Between 2019 and 2023, the share of rural households with a fixed high-speed internet connection increased from 21.0 % to 55.7 % across the EU.

At Member State level, Malta has already achieved a 100 % fixed high-speed internet connectivity for all households since 2019. In 2023, it was followed by the Netherlands (98.3 %), Denmark (97.2 %) and Spain (96.3 %). In contrast, fixed high-speed internet connections were the least widespread in Greece, with only 38.4 % of households enjoying such connectivity. All remaining Member States had connection to high-speed internet rates above 50 % in 2023, and in 24 of the 27 Member States more than two-thirds of households were covered.

78.8 %
of EU households had high-speed internet coverage in 2023

Main indicators

Official development assistance

LONG TERM 2008–2023

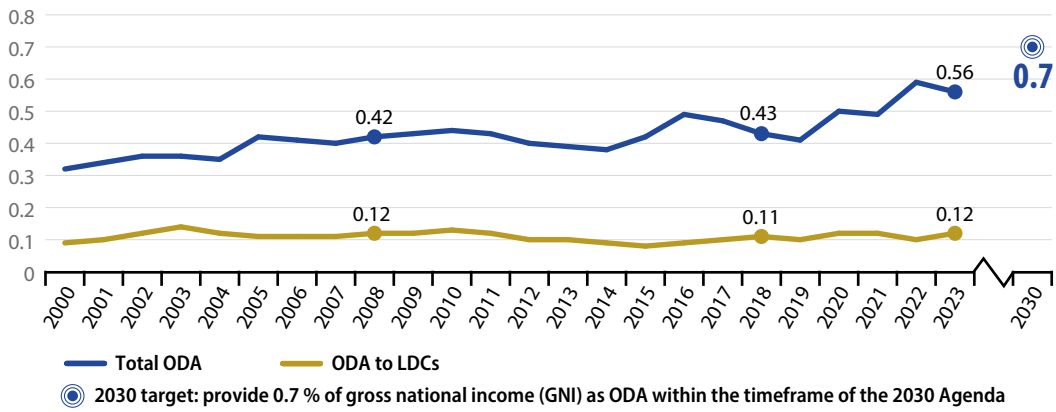
SHORT TERM 2018–2023

Official development assistance (ODA) is provided by governments and their executive agencies to support economic development and welfare in developing countries. ODA must be concessional in character, having a grant element that varies in proportion depending on the recipient. Eligible countries are included in the Organisation for Economic Cooperation and Development's (OECD) Development Assistance Committee (DAC) official list of ODA recipients. ODA disbursements and their purpose are reported by donors to the OECD. A new methodology to calculate the ODA value of concessional loans is applied from 2018 data onwards and affects the comparability of data with previous years. Additionally, a new methodology for calculating total ODA to LDCs is applied from 2020 data onwards, by including regional net ODA known to benefit LDCs (on top of the bilateral net ODA to LDCs and imputed multilateral ODA to LDCs). The EU collectively commits to achieving the target of providing 0.7 % of gross national income (GNI) for ODA within the time frame of the post-2015 agenda. The same target applies to Member States that joined the EU before 2002, taking into consideration budgetary circumstances. Member States that joined the EU after 2002 strive to increase their ODA/GNI to 0.33 %.

FIGURE 17.1

Official development assistance as share of gross national income, EU, 2000–2023

(% of GNI)



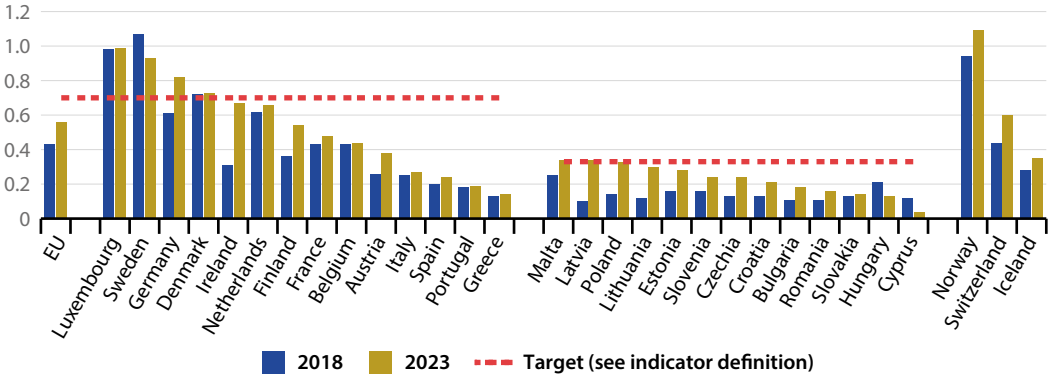
Note: Break in time series for total ODA in 2018 and for ODA to LDCs in 2020. Data for total ODA include the 27 Member States' ODA and EU institutions' ODA not imputed to Member States or other donors. Data for ODA to LDCs include the 27 Member States' ODA to LDCs and EU institutions' regional ODA known to benefit LDCs (excluding the component of the latter that could be imputed back to non-EU donors).

Source: European Commission services calculations based on OECD data (Eurostat online data code: sdg_17_10)

FIGURE 17.2

Official development assistance as share of gross national income, by country, 2018 and 2023

(% of GNI)



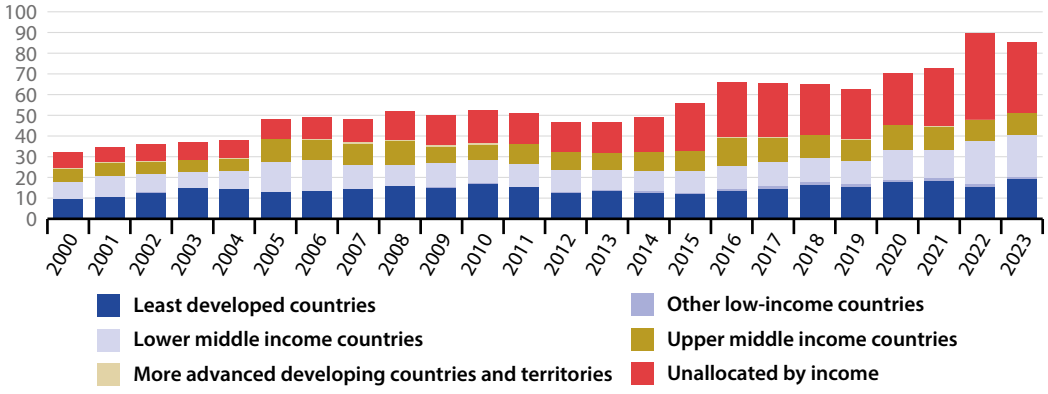
Note: Data for 'EU' include the 27 Member States' ODA and EU institutions' ODA not imputed to Member States or other donors.

Source: European Commission services calculations based on OECD data (Eurostat online data code: sdg_17_10)

FIGURE 17.3

Official development assistance, by recipient income group, EU, 2000–2023

(EUR billion, constant prices (2022))



Note: Break in time series for ODA to LDCs and to the unallocated category in 2020; data include the 27 Member States' bilateral net ODA and imputed multilateral ODA as well as, starting from 2020, Member States' and EU institutions' regional net ODA known to benefit LDCs (excluding the component of the latter that could be imputed back to non-EU donors), while deducting this regional amount from the unallocated category.

Source: European Commission services calculations based on OECD data.

EU financing to developing countries

EU financing to developing countries takes a number of forms. These, as documented by the OECD, include: official development assistance (ODA) (public grants or concessional loans with the aim of supporting economic development and welfare); other official flows (OOFs) (public flows that are not focused on development or with a grant element of less than 25 %); private flows (direct investment, bonds, export credits and multilateral flows); grants by non-governmental organisations (from funds raised for development assistance and disaster relief); and officially supported export credits. Data stem from the OECD (DAC).

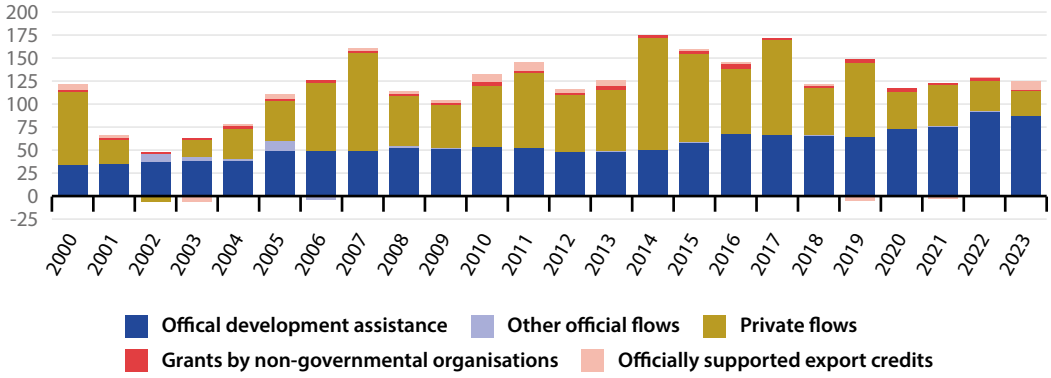
LONG TERM 2008–2023

SHORT TERM 2018–2023

FIGURE 17.4

EU financing to developing countries, by financing source, EU, 2000–2023

(EUR billion, constant prices (2022))



Source: OECD (Eurostat online data code: sdg_17_20)

Share of imports from least developed countries

LONG TERM 2009–2024

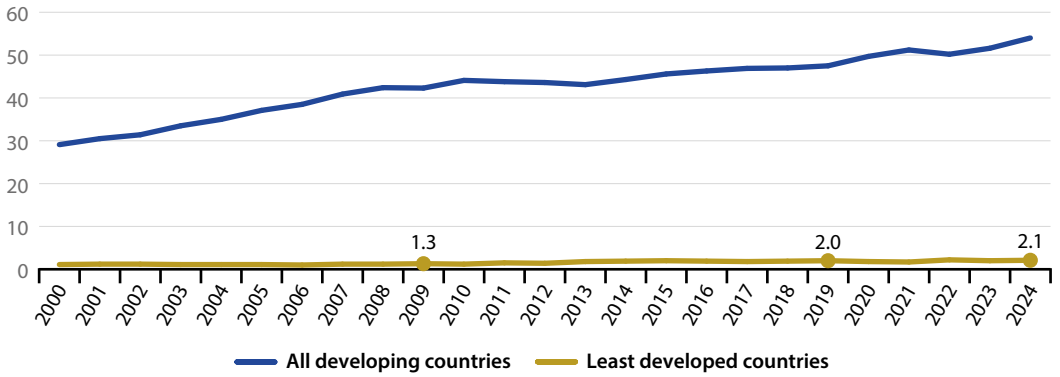
SHORT TERM 2019–2024

This indicator is defined as the share of all extra-EU imports coming from the countries classified by the UN as least developed. It indicates to what extent products from these countries access the EU market. Information for this indicator is provided by enterprises with a trade volume above a set threshold and is collected on the basis of customs declarations. This information is then adjusted by Member States to account for the impact of trade under this threshold.

FIGURE 17.5

Imports from developing countries, by country income group, EU, 2000–2024

(% of total extra-EU imports)

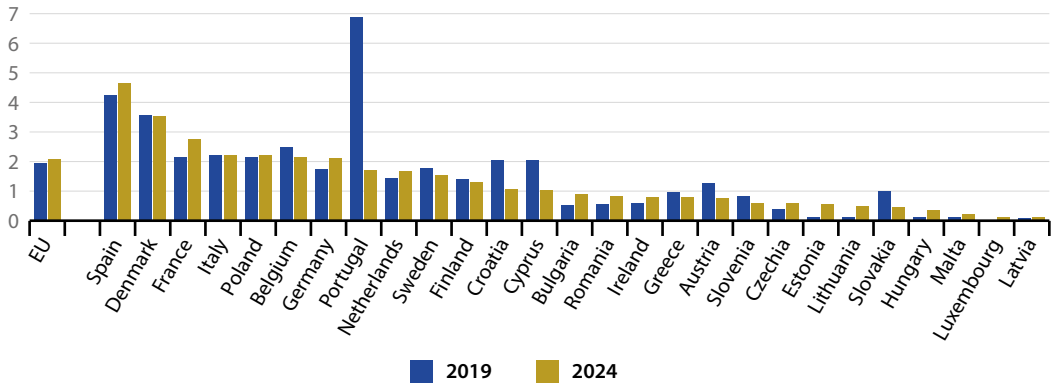


Source: Eurostat (online data code: sdg_17_31)

FIGURE 17.6

Imports from least developed countries, by country, 2019 and 2024

(% of total extra-EU imports)



Source: Eurostat (online data codes: sdg_17_31)

General government gross debt

The Treaty on the Functioning of the European Union (TFEU) defines this indicator as the ratio of general government gross debt at the end of the year to gross domestic product at current market prices. For this calculation, general government gross debt is defined as the total consolidated gross debt at nominal (face) value in the following categories of government liabilities, as defined in ESA 2010: currency and deposits, debt securities and loans. The general government sector comprises central government, state government, local government and social security funds. The TFEU states that a Member State's government debt-to-GDP ratio should be limited to 60 %.

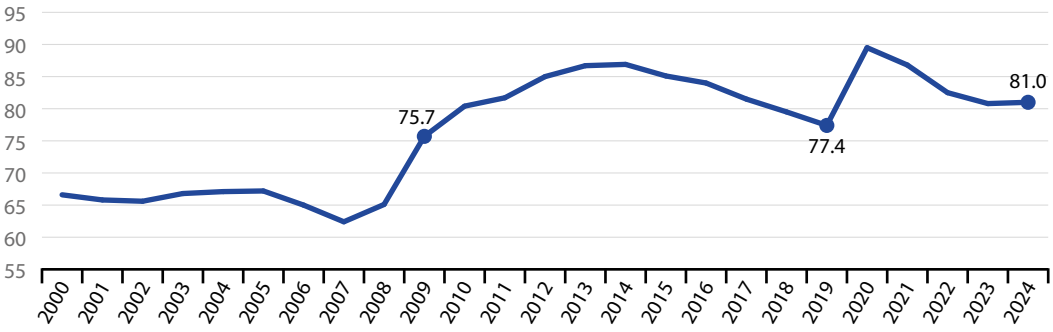
LONG TERM 2009–2024

SHORT TERM 2019–2024

FIGURE 17.7

General government gross debt, EU, 2000–2024

(% of GDP)

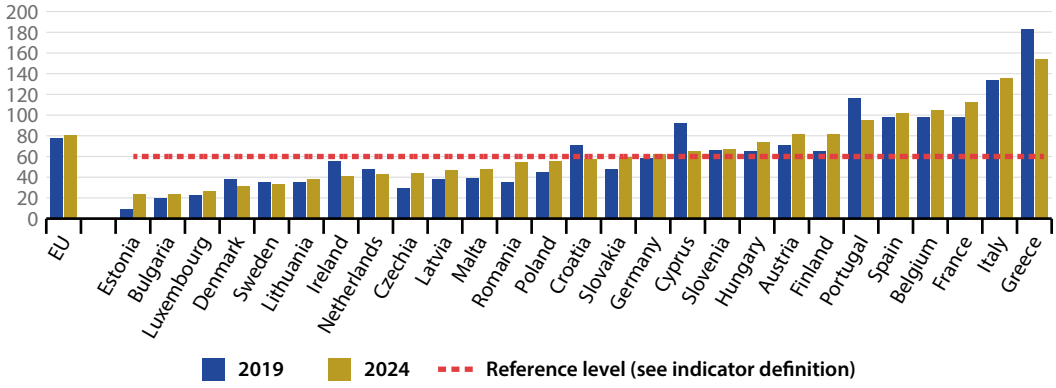


Source: Eurostat (online data code: sdg_17_40)

FIGURE 17.8

General government gross debt, by country, 2019 and 2024

(% of GDP)



Source: Eurostat (online data code: sdg_17_40)

Share of environmental taxes in total tax revenues

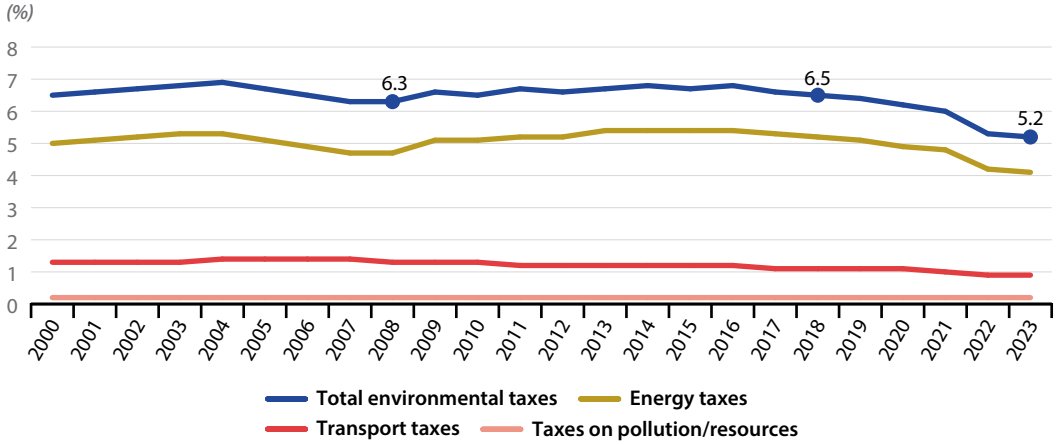
LONG TERM 2008–2023

SHORT TERM 2018–2023

Environmental taxes are defined as taxes based on a physical unit (or proxy of it) of something that has a proven, specific negative impact on the environment. There are four types of environmental taxes: energy taxes, transport taxes, and pollution taxes and resource taxes.

FIGURE 17.9

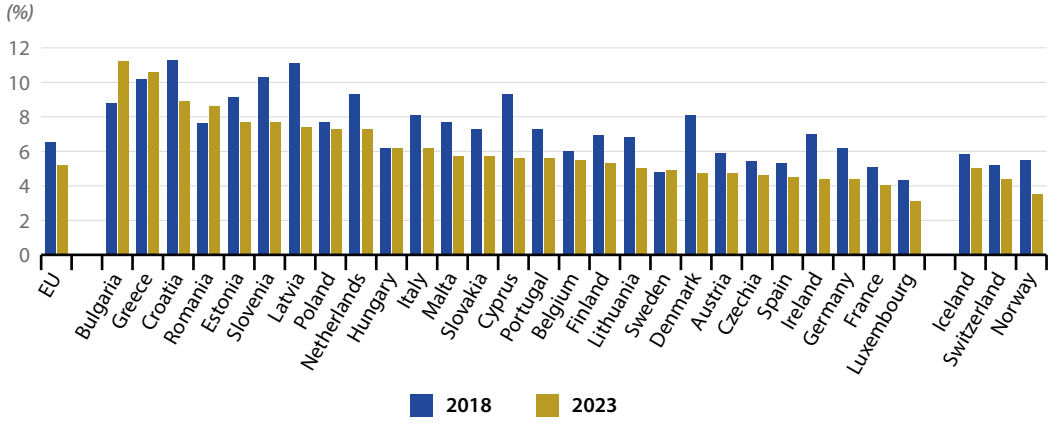
Share of environmental taxes in total tax revenues, EU, 2000–2023



Source: Eurostat (online data codes: sdg_17_50 and env_ac_tax)

FIGURE 17.10

Share of environmental taxes in total tax revenues, by country, 2018 and 2023



Source: Eurostat (online data code: sdg_17_50)

Share of households with high-speed internet connection

This indicator measures the share of households with a fixed very high capacity network (VHCN) connection. A VHCN is either an electronic communications network that consists entirely of optical fibre elements, at least up to the distribution point at the serving location; or an electronic communications network capable of delivering, under usual peak-time conditions, similar network performance in terms of available downlink and uplink bandwidth, resilience, error-related parameters, and latency and its variation. The data are collected for the Broadband Coverage in Europe studies published by the European Commission and refer to both fibre to the premises (FTTP) and Data Over Cable Service Interface Specification (DOCSIS) 3.1. DOCSIS allows adding high-bandwidth data transfer to existing cable television systems.

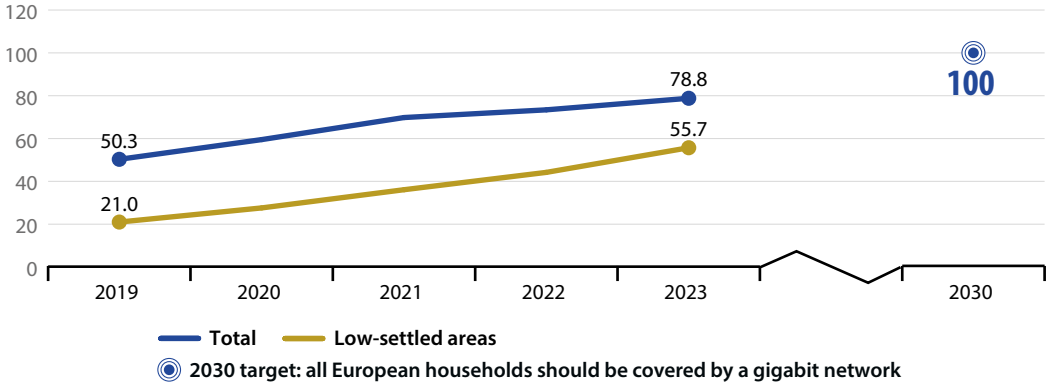
LONG TERM Time series too short

SHORT TERM 2019–2023

FIGURE 17.11

High-speed internet coverage, by type of area, EU, 2019–2023

(% of households)

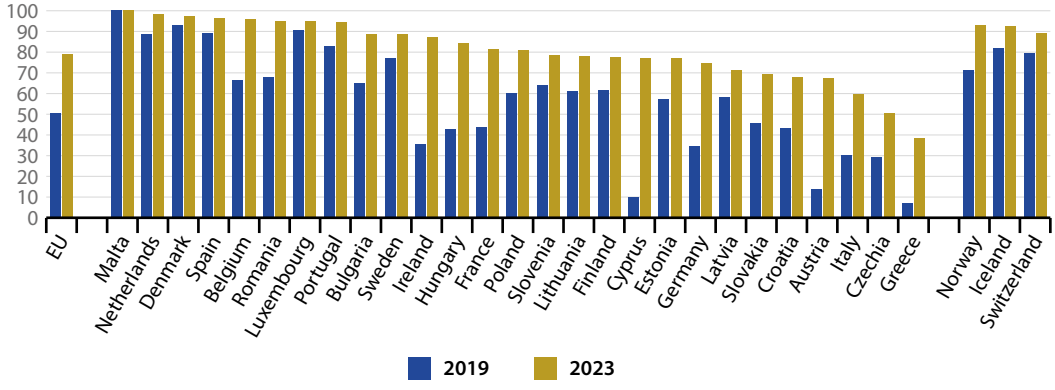


Source: European Commission services, Eurostat (online data code: sdg_17_60)

FIGURE 17.12

High-speed internet coverage, by country, 2019 and 2023

(% of households)



Source: European Commission services, Eurostat (online data code: sdg_17_60)

Notes

(1) Non-financial resources include domestic policy frameworks, effective institutions and support for good governance, democracy, rule of law, human rights, transparency and accountability; see also the Addis Ababa Action Agenda (AAAA).

(2) Governments provide officially supported export credits through export credit agencies (ECAs) in support of national exporters competing for overseas sales. ECAs can be government institutions or private companies that operate on behalf of governments. Such support can take the form either of 'official financing support', such as direct credits to foreign buyers, refinancing or interest-rate support, or of 'pure cover support', such as export credits insurance or guarantee to cover credits provided by private financial institutions. For further details see https://www.oecd.org/en/topics/export-credits.html.

(3) The annual average TOSSD from EU institutions is the sum of Pillar I and Pillar II for years 2019, 2020, 2021 and 2022, divided by 4. This figure best reflects EU TOSSD to date as data coverage has consistently expanded over the last four years.

(4) *Source*: Eurostat (online data code: ext_lt_maineu).

(5) European Commission (2025), *EU Aid for Trade Progress Report 2024*.

(6) European Environment Agency (2023), *The role of (environmental) taxation in supporting sustainability transitions*, Briefing.

(7) Taxes on labour are generally defined as all personal income taxes, payroll taxes and social contributions of employees and employers that are levied on labour income (both employed and non-employed). Data on labour taxes stem from the DG Taxation and Customs Union ('Data on Taxation' webpage).

(8) *Source*: Eurostat (online data code: env_ac_tax).

(9) *Source*: Calculations based on data from DG Taxation and Customs Union ('Data on Taxation' webpage) and Eurostat (online data code: env_ac_tax).

(10) *Source*: Eurostat (online data code: ten00135).

(11) In the context of the EU's digital agenda scoreboard indicators, rural areas are defined as those with less than 100 people per square kilometre.

EU sustainable development indicators at regional level

Leave no one behind is one of the core principles of the 2030 Agenda. It emphasises the need to reduce the various forms of inequalities that exist within and among countries. Inequalities undermine the potential of specific regions, population groups and individuals and their connection to the sustainable development goals (SDGs). Moreover, regions play a crucial role in delivering the SDGs because they can tailor the implementation actions to local needs, contexts and challenges.

This section takes an in-depth look at disparities across European regions for six selected indicators from the economic, social and environmental dimensions of sustainability. It does so by showcasing differences at NUTS 2 or NUTS 3 regional level ([1]). For some indicators, regional disparities are also assessed by calculating the ratio of the region with the highest or lowest value within a country to the country average. More detailed data and analyses at regional level can be found in Eurostat's regional yearbook, in the Regions in Europe interactive publication as well as in Eurostat's statistical atlas.

Employment rate

In 2024, the EU's employment rate was 75.8 %, which was already quite close to the 78 % target set for 2030. However, significant disparities in employment rates exist between Member States. Central and northern European countries showed the highest rates, while southern and eastern European countries had the lowest rates (see the analysis in the chapter on SDG 8 'Decent work and economic growth' on page 141).

More than 45 % of EU regions have employment rates above the 78 % EU target

At a regional level, the highest employment rate in 2024 was reported for Åland in Finland with 86.4 %, followed by the Polish capital region 'Warszawski stołeczny' with 86.2 % and the Slovak capital region 'Bratislavský kraj' with 85.4 %. Further regions with employment rates around 85 % were in Hungary ('Budapest'), the Netherlands ('Utrecht' and 'Zeeland'), Czechia ('Praha') and Germany ('Oberbayern', 'Schwaben', 'Mittelfranken', 'Trier'). More than 45 % of the EU regions had an employment rate above the EU target level of 78 %.

Italy, France and Spain showed considerable within-country disparities across NUTS 2 regions (see Figure II.1). For France and Spain, this is mainly due to the French overseas regions and the two Spanish enclaves in Africa, which had considerably lower employment rates than the rest of the country. For Italy, the large disparity is due to its southern regions 'Campania', 'Calabria' and 'Sicilia', which had employment rates around 50 % in 2024. These three countries consequently also had the largest differences between the region with the lowest employment rate and the national average. In 2024, this ratio amounted to around 1.5 for France, 1.4 for Italy and 1.3 for Spain. In all other Member States, this ratio was close to 1.1 or lower.

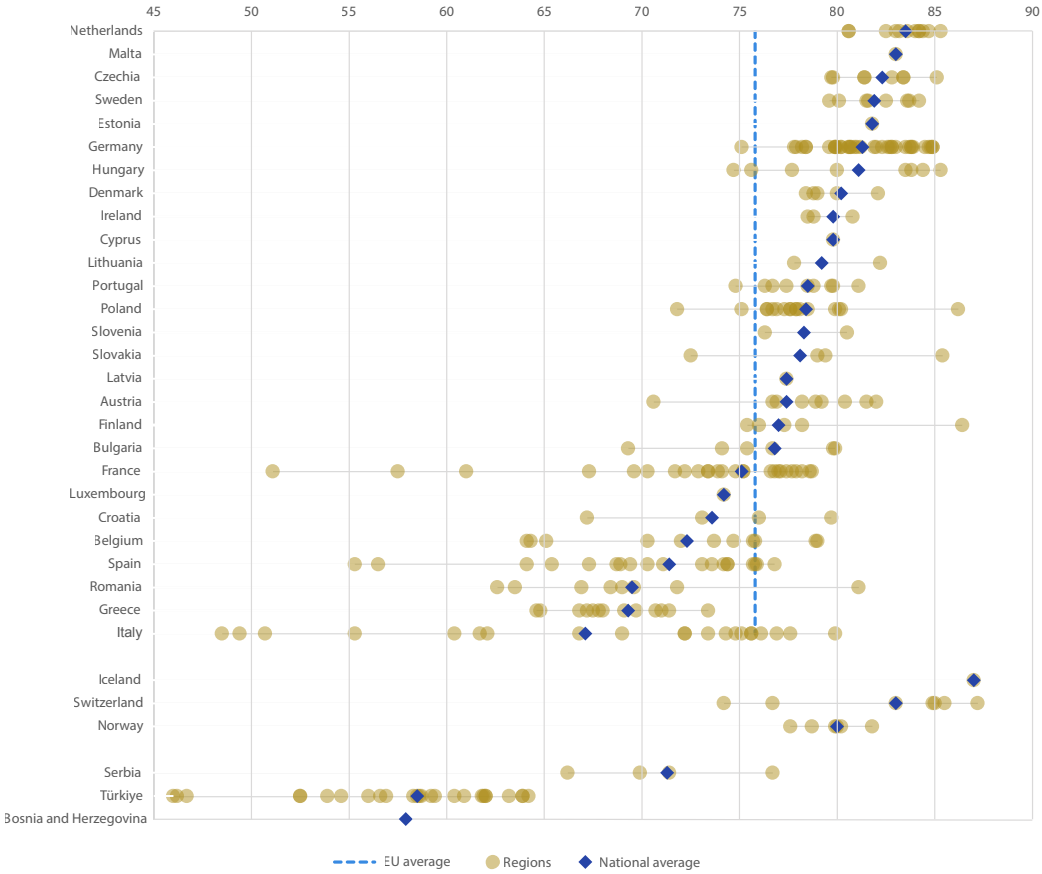
The employment rate was up in almost all EU regions during the last five years

Between 2019 and 2024, the EU's employment rate increased by 2.7 percentage points, making good progress towards the 78 % target (see the analysis in the chapter on SDG 8 'Decent work and economic growth' on page 141). As shown in Map II.1, this is the result of increasing employment levels in almost all EU regions. Only 23 out of 243 regions with available data experienced a reduction in their employment rate, most of which were located in Germany (eight regions), Romania (five regions) and Sweden (three regions). The reduction was strongest in the Romanian

FIGURE II.1

Employment rate, by NUTS 2 region, 2024

(% of population aged 20 to 64)



Source: Eurostat (online data code: lfst_r_lfe2emprt)

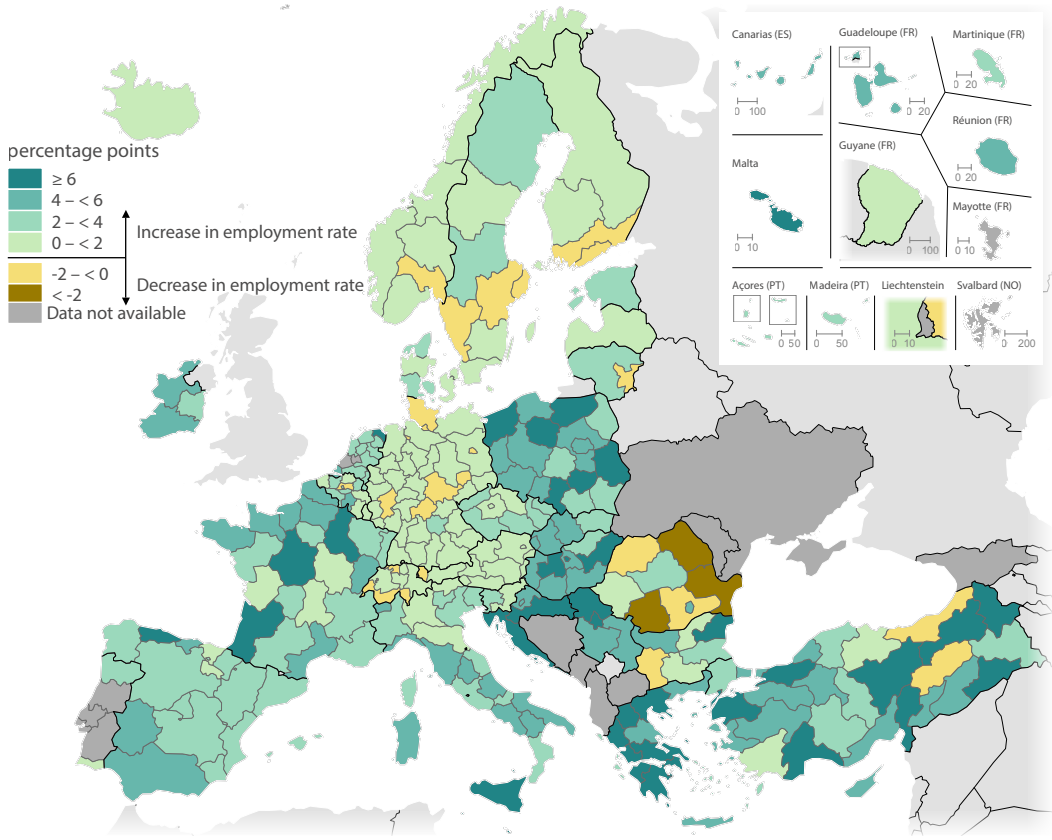
regions 'Nord-Est', 'Sud-Vest Oltenia' and 'Sud-Est', with employment rates falling by 9.9 percentage points (pp), 5.5 pp, and 2.8 pp, respectively. In all other regions experiencing a reduction in their employment rate during this period, the decrease amounted to 2.0 pp or less. In contrast, the employment rates in regions in Greece, Croatia and Poland increased most over this period. The Greek regions 'Dytiki Elláda', 'Kentriki Makedonia' and 'Attiki' reported the strongest increases, with 13.6 pp, 9.6 pp and 9.1 pp, respectively.

With respect to the reduction of within-country disparities, the Italian, French and Spanish regions with the lowest employment rates generally increased their rates between 2019 and 2024 (with the exception of 'Ciudad de Melilla'), but their improvements were not always higher than in other regions in these countries. Therefore, further efforts will be necessary to meet the 2030 Agenda's principle to leave no one behind.

MAP II.1

Change in employment rate, by NUTS 2 region, 2019-2024

(percentage points; population aged 20 to 64)



Administrative boundaries: © EuroGeographics © OpenStreetMap
Cartography: Eurostat – IMAGE, 05/2025

Source: Eurostat (online data code: lfst_r_lfe2emprt)

Risk of poverty or social exclusion

The 2030 Agenda calls for poverty in all its dimensions to be halved by 2030. In line with this target, the EU uses a multidimensional measure of poverty and social exclusion, covering monetary poverty (at-risk-of-poverty rate), severe material and social deprivation, and very low work intensity. In 2023, more than a fifth (21.3 %) of the EU population was affected by at least one of these dimensions and thus considered at risk of poverty or social exclusion (see the analysis in the chapter on SDG 1 'No poverty' on page 21). At Member State level, this rate ranged from 12 % in Czechia to more than 30 % in Bulgaria and Romania.

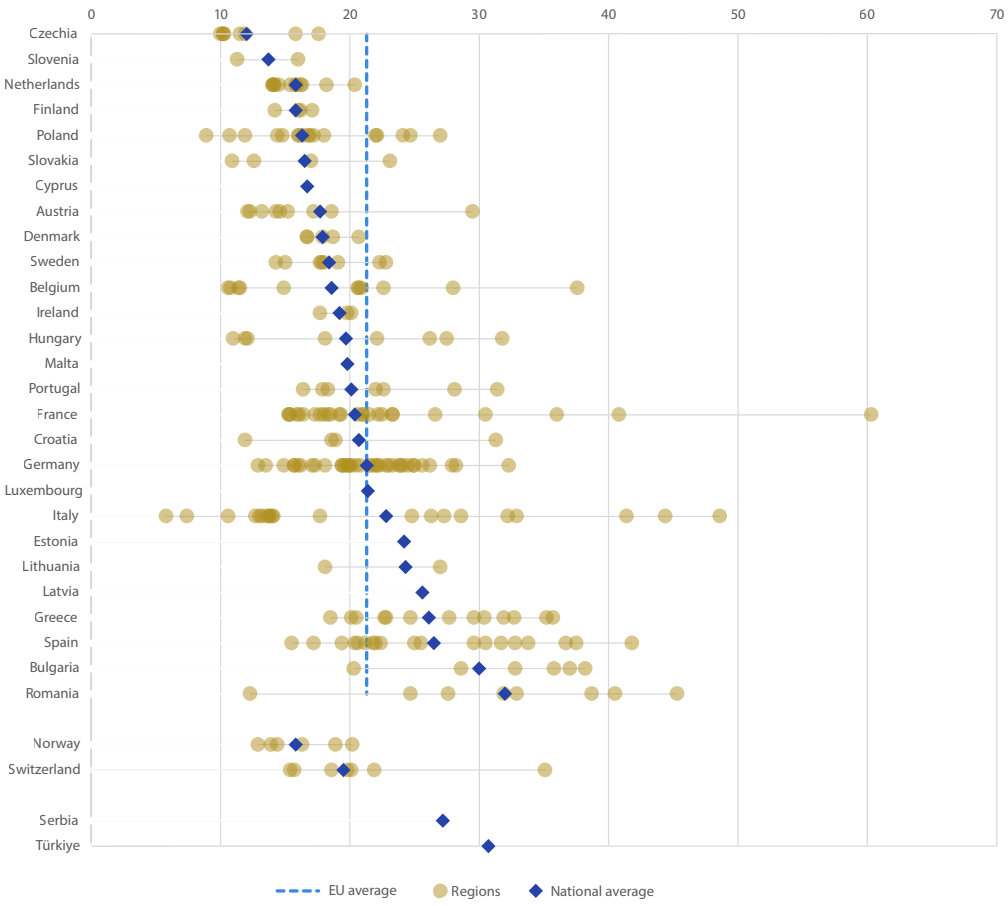
The risk of poverty or social exclusion was highest in regions in south-eastern Europe

The regions with the lowest employment rates across the EU (see above) also tend to have the highest rates of poverty or social exclusion. In 2023, the French overseas regions 'Guyane' and 'La Réunion', the south Italian regions 'Campania', 'Calabria' and 'Sicilia' and the Spanish enclave 'Ciudad de Ceuta' were all among the regions

FIGURE II.2

Persons at risk of poverty or social exclusion, by NUTS 2 region, 2023

(% of population)



Note: Länsi-Suomi (FI19) and Åland (FI20) are aggregated (same value for both regions), 2022 data for Slovakia.
Source: Eurostat (online data code: ilc_peps11n)

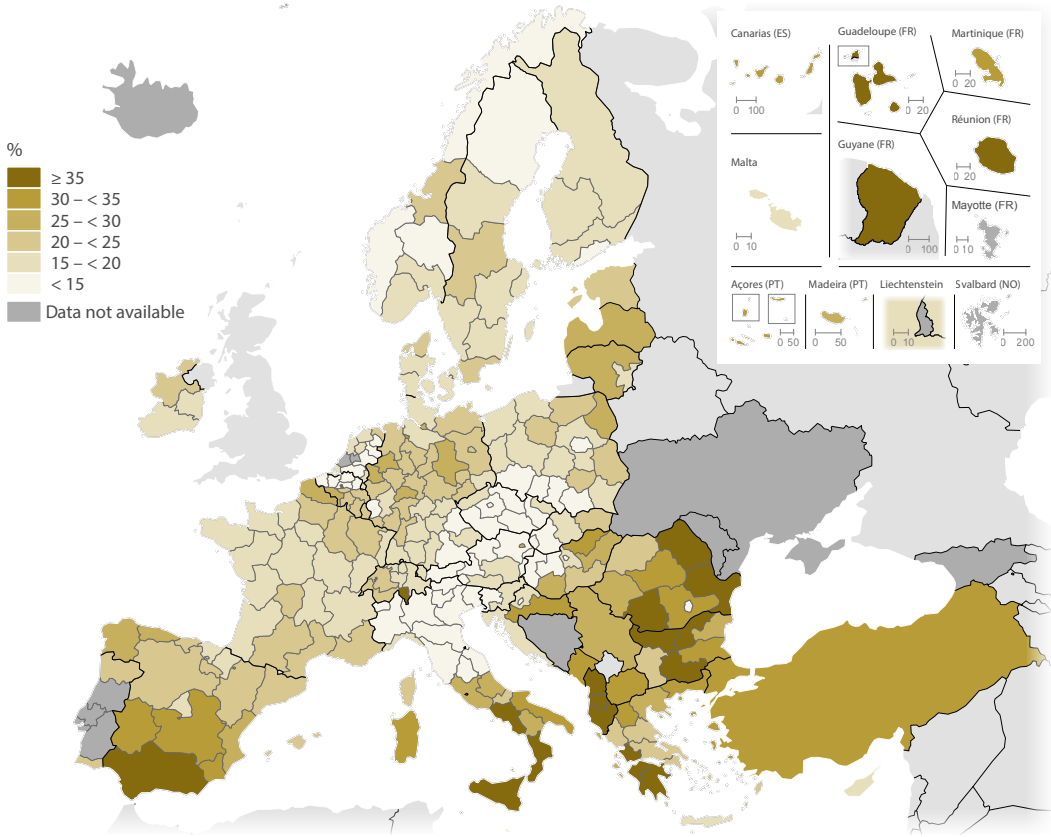
with the highest at-risk rates of more than 40 %. 'Guyane' had the highest rate, with 60.3 % of the population being at risk, followed by 'Calabria' in Italy with 48.6 % and 'Sud-Est' in Romania with 45.3 %. In 19 EU regions more than a third of the population was at risk of poverty or social exclusion in 2023 (see Figure II.2); these regions were mainly located in Spain (4 regions) as well as in Bulgaria, France, Italy and Romania (three regions each). Notably, this also includes the Belgian capital region 'Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest', where 37.6 % of the population was at risk.

A look at the EU regions with the lowest rates of poverty or social exclusion confirms the strong within-country disparity in Italy already seen for employment. In 2023, only 5.8 % of the population in 'Provincia Autonoma di Bolzano/Bozen' was at risk of poverty or social exclusion, followed by 'Emilia-Romagna' with 7.4 %. Overall, there were 50 regions in the EU where less than 15 % of the population was at risk in 2023 (see Map II.2). These regions were

MAP II.2

Persons at risk of poverty or social exclusion, by NUTS 2 region, 2023

(% of population)



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Cartography: Eurostat – IMAGE, 05/2025

Note: Länsi-Suomi (FI19) and Åland (FI20) are aggregated (same value for both regions), 2022 data for Slovakia and Montenegro, 2021 data for Albania, 2020 data for North Macedonia, national data for Serbia and Türkiye.

Source: Eurostat (online data code: ilc_peps11n)

mainly located in central Europe, covering northern Italy, Austria, Czechia, the western parts of Slovakia and Hungary and southern Poland. A second cluster of regions with low at-risk rates covered the Netherlands and the north of Belgium (excluding the capital region of Brussels).

Research and development intensity

Research and development (R&D) intensity measures gross domestic expenditure on R&D as a share of gross domestic product (GDP). In 2021, the EU's R&D intensity amounted to 2.24 %, which is only slightly above the values recorded in earlier years and far from the long-standing EU target to increase R&D intensity to 3 % (see the analysis in the chapter on SDG 9 'Industry, innovation and infrastructure' on page 157).

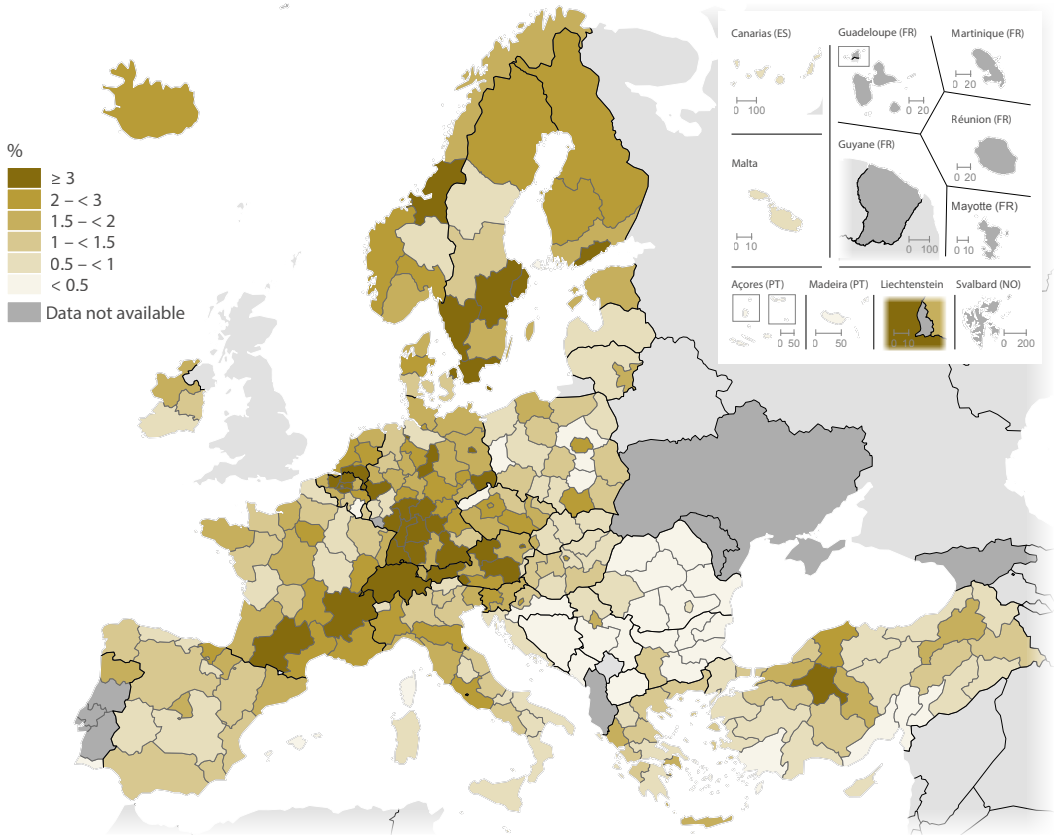
Large differences in R&D intensity exist between EU regions

The pattern of R&D intensity at regional level (see Map II.3) reveals a skewed picture, as R&D activities tend to be concentrated in clusters. Research-intensive regions are often situated

MAP II.3

R&D intensity, by NUTS 2 region, 2021

(% of GDP)



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Administrative boundaries: © EuroGeographics © OpenStreetMap
Cartography: Eurostat – IMAGE, 05/2025

Note: 2019 data for Denmark and Montenegro, 2020 data for Norway and North Macedonia, NUTS 1 data for the Netherlands, national data for Switzerland and Bosnia and Herzegovina.

Source: Eurostat (online data code: rd_e_gerdreg)

around academic institutions, science parks, high-technology industrial activities and/or knowledge-based services. The concentration of competitive and cooperative enterprises in related activities attracts start-ups, other market players and highly qualified personnel, which, in turn, drives the creation of new technologies and innovative output. Conversely, R&D activities tend to be lowest in predominantly rural regions and small islands.

In 2021, the highest R&D intensity across the EU was reported by the Belgian region 'Prov. Brabant Wallon', with 11.39 %, followed by the German regions 'Stuttgart', 'Braunschweig' and 'Tübingen' with 6.81 %, 6.09 % and 5.47 %, respectively. Less than a quarter of the regions for which data are available (54 out of 232 regions) reported an R&D intensity above the EU level of 2.24 %. Only 30 regions exceeded the 3 % target, most of which were in Germany (14 regions) and in Austria, Belgium and Sweden (four regions each). In contrast, R&D intensity was lowest in regions in eastern Europe, mainly in Romania, Bulgaria and Poland.

Gross domestic product

In 2023, the EU's GDP amounted to 38 100 purchasing power standards (PPS) ([2]) per inhabitant. At Member State level, Luxembourg and Ireland by far exceeded the per capita GDP levels of all other EU countries, with values of 90 300 PPS and 81 200 PPS, respectively. At the other end of the scale were Latvia, Greece and Bulgaria, with values below 27 000 PPS per inhabitant.

Largest regional disparities in GDP per inhabitant were in France and Ireland

At regional (NUTS 2) level, the two Irish regions 'Eastern and Midland' and 'Southern', followed by the Czech capital region 'Praha' reported the highest per capita GDP levels (see Figure II.3). In contrast, the French overseas region 'Mayotte' had the lowest GDP per inhabitant across the EU. When excluding the EU's outermost regions, the lowest levels were generally found in south-eastern Europe, especially in Bulgaria and Greece. Capital regions usually had the highest GDP levels, even though this pattern is not true for all countries (for example, in Germany, Italy and Austria).

France had the largest difference between the national average and the region with the lowest GDP per inhabitant ('Mayotte'), with a ratio of 3.6. In Ireland, the ratio of the national average to the lowest region was 2.1, while this ratio was below 2 in all other Member States.

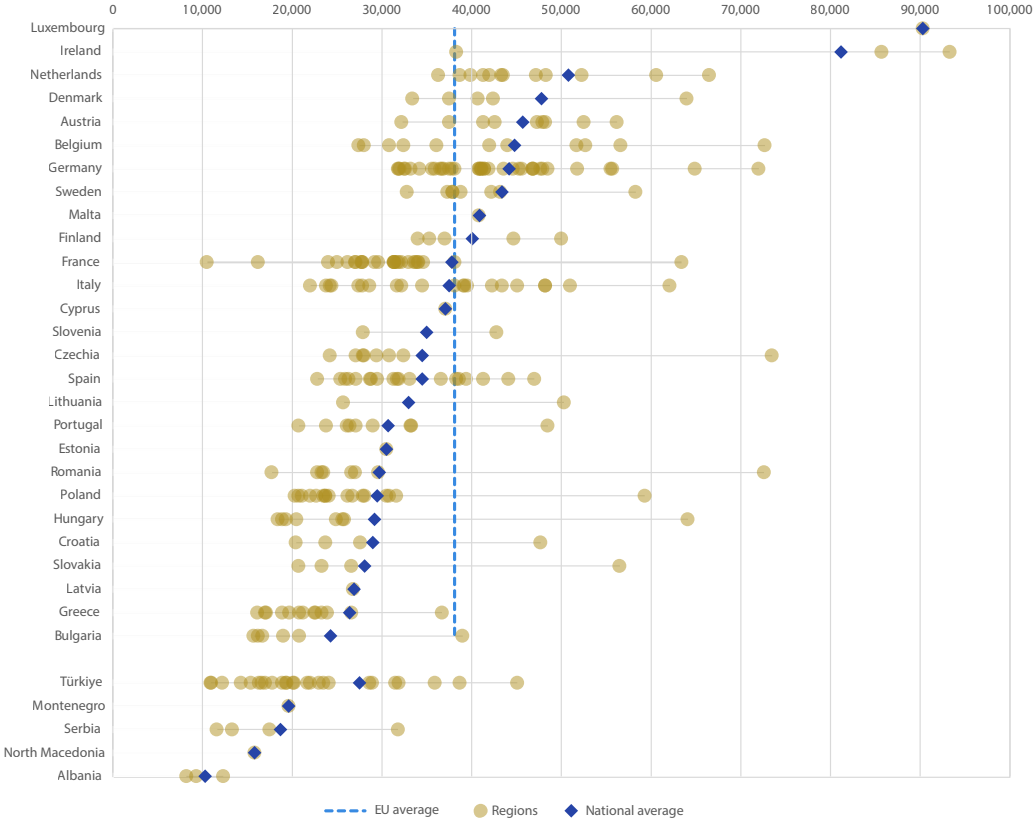
Several poorer regions caught up between 2018 and 2023

Between 2018 and 2023, the EU economy grew by 6.3 % in real terms (meaning the effects of inflation have been removed). As shown in Map II.4, this is the result of economic growth in most EU regions. The strongest GDP growth took place in the French overseas region 'Mayotte', with 58.5 %, followed by the Romanian capital region 'Bucureşti-Ilfov' with 43.7 % and the Irish 'Northern and Western' region with 43.2 %. In contrast, several regions in Germany and France experienced a decrease in GDP between 2018 and 2023. GDP declined most in the French overseas region 'Guadeloupe', by 21.6 %, followed by 'Dytiki Makedonia' (Greece) and 'Groningen' (Netherlands) with decreases of 15.0 % and 12.6 %, respectively. Overall, regions in south-eastern Europe — which had the lowest GDP per inhabitant levels across the EU — and in Ireland have experienced the strongest growth across the EU since 2018. This suggests that economic disparities across EU regions have been narrowing (at least in part) in recent years (also see the analysis of disparities in GDP per capita in the chapter on SDG 10 'Reduced inequalities' on page 175).

FIGURE II.3

GDP per inhabitant, by NUTS 2 region, 2023

(PPS)



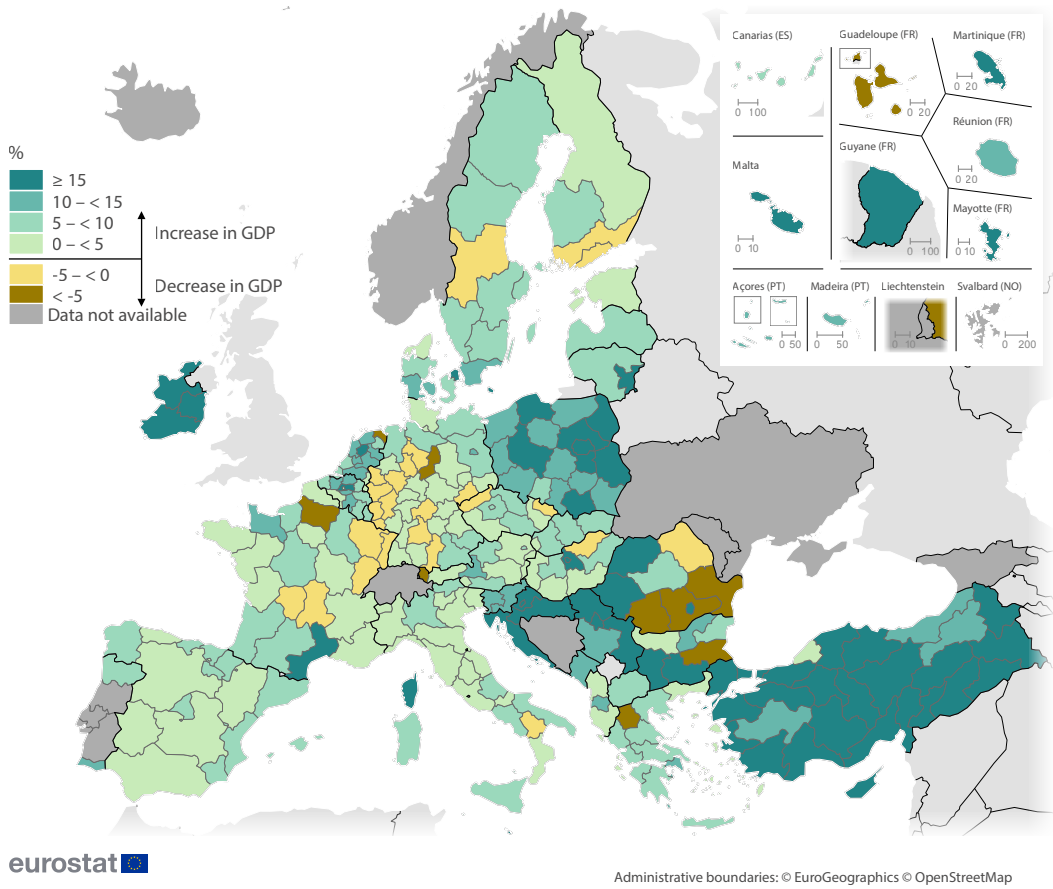
Note: 2021 data for Albania.

Source: Eurostat (online data code: nama_10r_2gdp)

MAP II.4

Change in real GDP, by NUTS 2 region, 2018-2023

(%-change)



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Note: Change 2018–2021 for Albania.
Source: Eurostat (online data code: nama_10r_2gvagr)

Premature deaths due to air pollution

According to the World Health Organization (WHO), air pollution is a major cause of mortality and disease and the largest single environmental health risk in Europe. Fine particulate matter ($PM_{2.5}$) is the most harmful air pollutant from a health perspective. $PM_{2.5}$ refers to particulates less than 2.5 micrometres in diameter. These can be carried deep into the lungs where they can cause inflammation and exacerbate the condition of people already suffering from heart and lung diseases. $PM_{2.5}$ is emitted mainly from the combustion of solid fuels for domestic heating, industrial activities and road transport, but it can also come from natural sources and can form in the atmosphere. The EU aims to reduce the number of premature deaths — meaning

deaths that occur before the expected age of death — caused by air pollution by 55 % by 2030, compared with 2005 (see the analyses in the chapters on SDG 3 'Good health and well-being' on page 55 and on SDG 11 'Sustainable cities and communities' on page 195) ([3]).

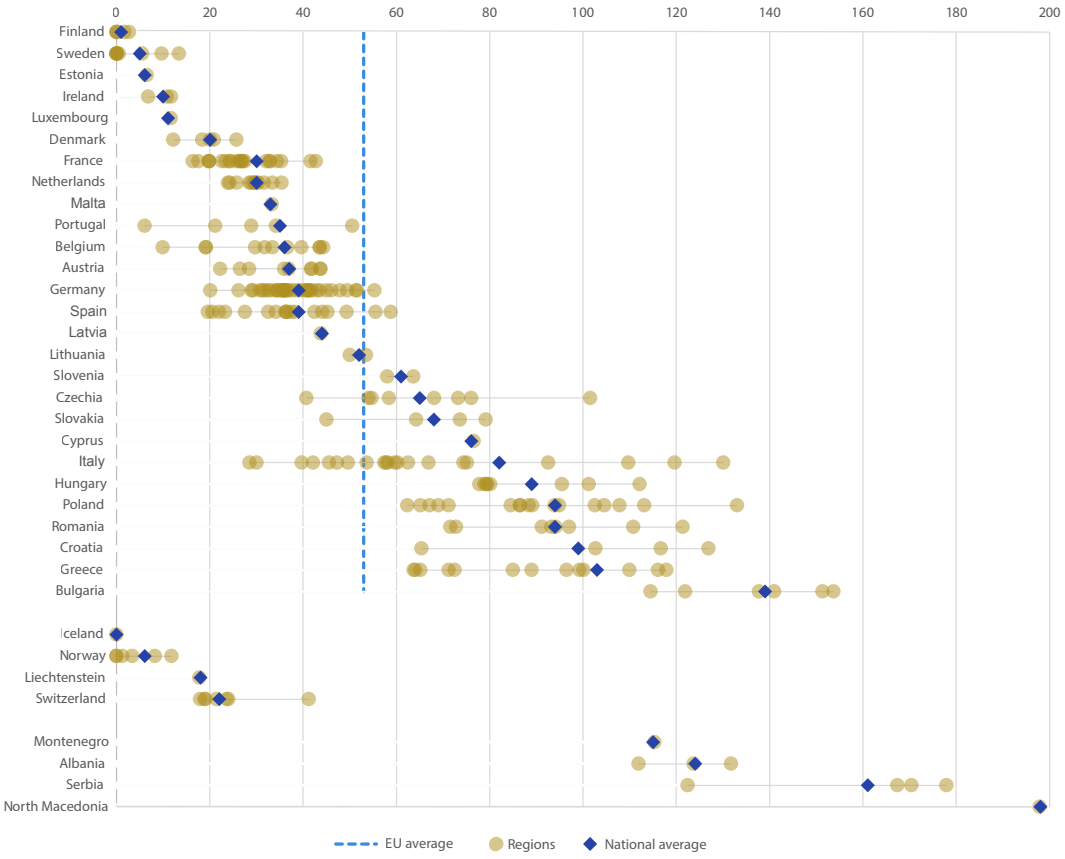
Premature deaths due to air pollution were highest in southern and eastern Europe

In 2022, long-term exposure to fine particulate matter led to around 239 000 premature deaths in the EU, which equals a rate of 53 deaths per 100 000 inhabitants. As shown in Figure II.4 and Map II.5, differences between countries tend to be more pronounced than the regional spread within countries. The lowest number of premature deaths due to $PM_{2.5}$ exposure are reported in northern European countries, especially in Finland, Sweden and Estonia. Some regions in Finland and Sweden had premature death rates close to zero in 2022. In contrast, countries in southern and eastern Europe — especially Bulgaria, Greece, Croatia, Romania and Poland — experienced the highest numbers of premature deaths.

FIGURE II.4

Premature deaths due to exposure to fine particulate matter ($PM_{2.5}$), by NUTS 2 region, 2022

(number per 100 000 inhabitants)



Source: European Environment Agency (calculation of 'per 100 000 inhabitants' data based on population data from Eurostat, online data code: demo_r_gind3)

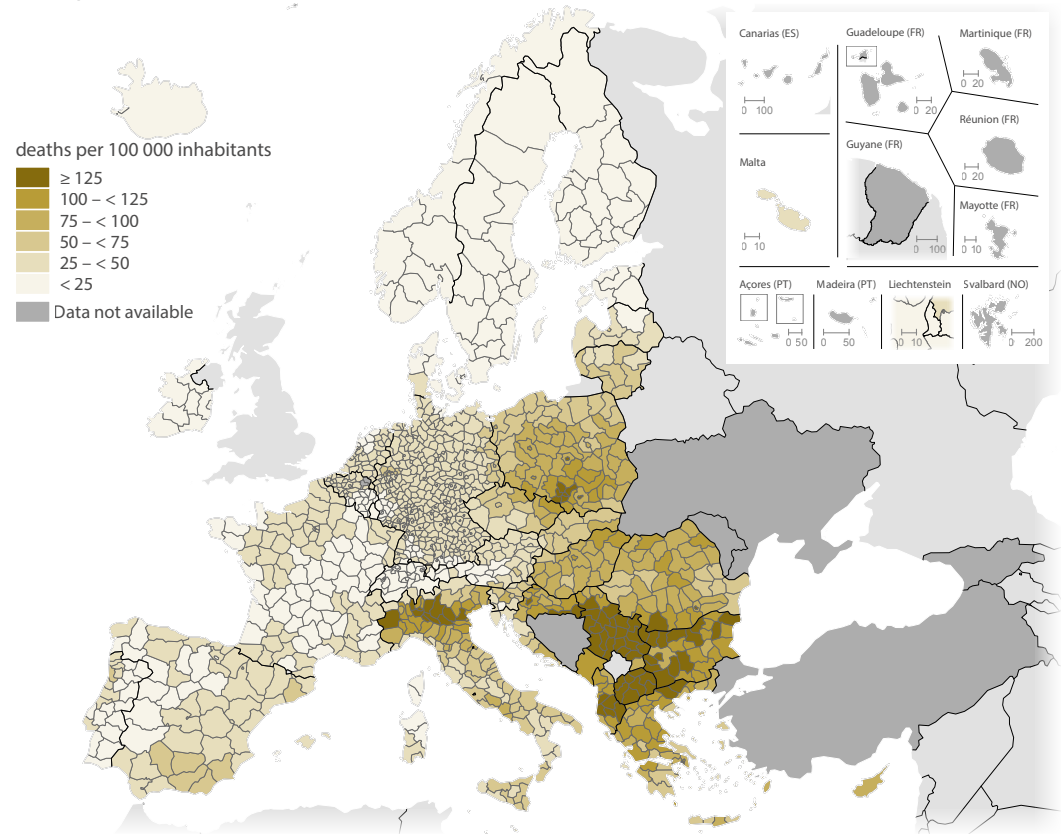
At regional NUTS 2 level (see Figure II.4), the rates of premature deaths were highest in the Bulgarian regions 'Severozapaden' and 'Yugozapaden', with more than 150 per 100 000 inhabitants. Another hotspot was northern Italy, with 'Lombardia', 'Veneto' and 'Piemonte' having rates between 110 and 130 premature deaths in 2022. At NUTS 3 level (see Map II.5), the Bulgarian region 'Vidin' reported the highest rate, with 217 premature deaths per 100 000 inhabitants, more than four times the EU average. Of the 10 regions (at NUTS 3 level) with the highest rates of premature deaths in 2022, six were in Bulgaria and the remaining four were in Poland (two regions), Italy and Croatia ([4]).

According to a 2025 analysis on Europe's air quality status by the EEA, the use of solid fuels, such as coal and wood, and an older vehicle fleet are the main reasons for the unfavourable situation in eastern Europe. In northern Italy, air pollution by $PM_{2.5}$ results from the combination of a high density of anthropogenic emissions and meteorological and geographical conditions that favour the accumulation of air pollutants in the atmosphere and the formation of secondary particles.

MAP II.5

Premature deaths due to exposure to fine particulate matter ($PM_{2.5}$), by NUTS 3 region, 2022

(number per 100 000 inhabitants)



Source: European Environment Agency (calculation of 'per 100 000 inhabitants' data based on population data from Eurostat, online data code: demo_r_gind3)

Drought impact on ecosystems

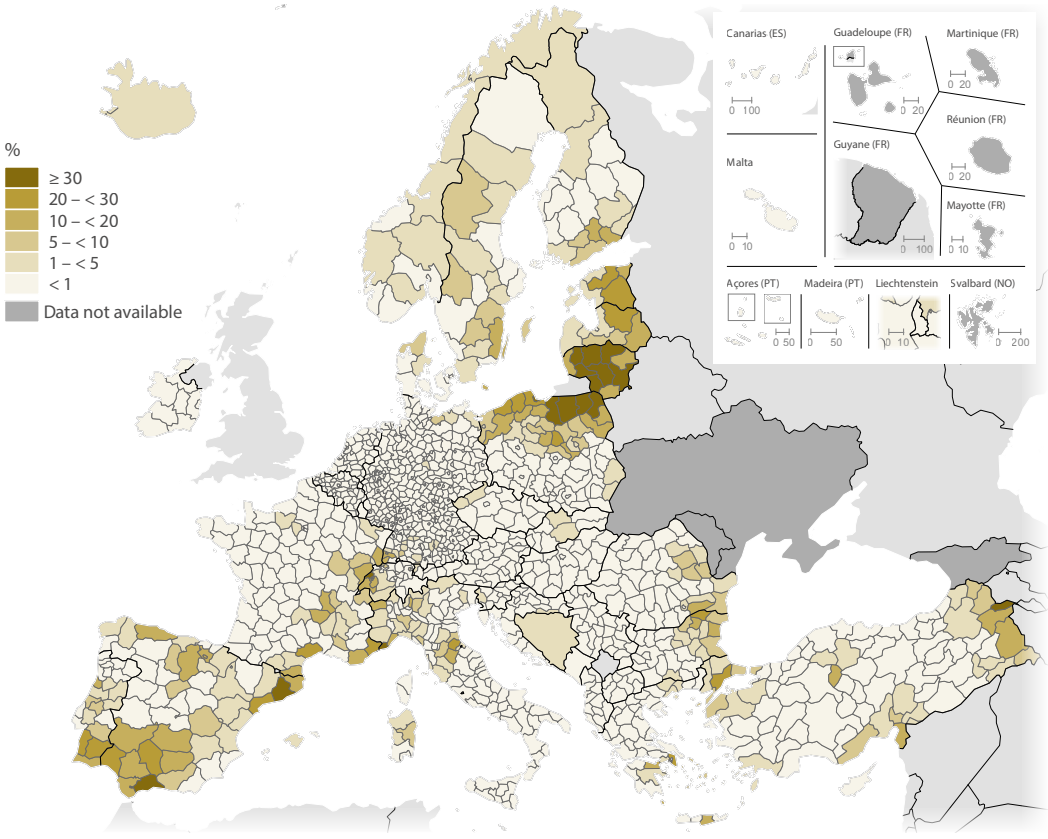
Severe and frequent droughts can increase the risks of water scarcity with detrimental effects on water supply for households, agriculture, energy and industry, as well as on ecosystems and biodiversity. In this report, drought impact is analysed by monitoring anomalies in vegetation productivity in areas with a soil moisture deficit during the growing season (see the analyses in the chapters on SDG 15 'Life on land' on page 261 and on SDG 6 'Clean water and sanitation' on page 109).

In 2023, Europe experienced its second warmest year on record ([5]). Furthermore, more than 143 000 square kilometres or 3.6 % of the EU area was affected by drought. As shown in Map II.6, these areas were mainly located in north-eastern Europe — spanning from northern Poland over the Baltic countries to Finland and Sweden — and in the southern parts of France, Spain and Portugal. At Member State level, Lithuania was hit hardest, with almost a third of the country area affected by drought in 2023, followed by Estonia with 16 % and Latvia with 11 %.

MAP II.6

Drought impact on ecosystems, by NUTS 3 region, 2023

(% of area)



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Administrative boundaries: © EuroGeographics © UN–FAO © Turkstat
Cartography: Eurostat – IMAGE, 05/2025

Source: European Environment Agency, Copernicus Land Monitoring Service, Copernicus Emergency Management Service

The extent of drought varies strongly between European regions

At regional NUTS 3 level, 15 out of the 1 161 regions for which data are available had more than 30 % of their area affected by drought in 2023 (see Map II.6). These regions were mainly located in Lithuania (seven regions), Poland (five regions), Spain (two regions) and Italy (one region). Across the EU, the Italian region 'Imperia' was by far hit the hardest, with almost 60 % if its area impacted in 2023. In contrast, 924 regions (80 % of all EU regions with available data) reported less than 1 % of their area being affected by drought in that year.

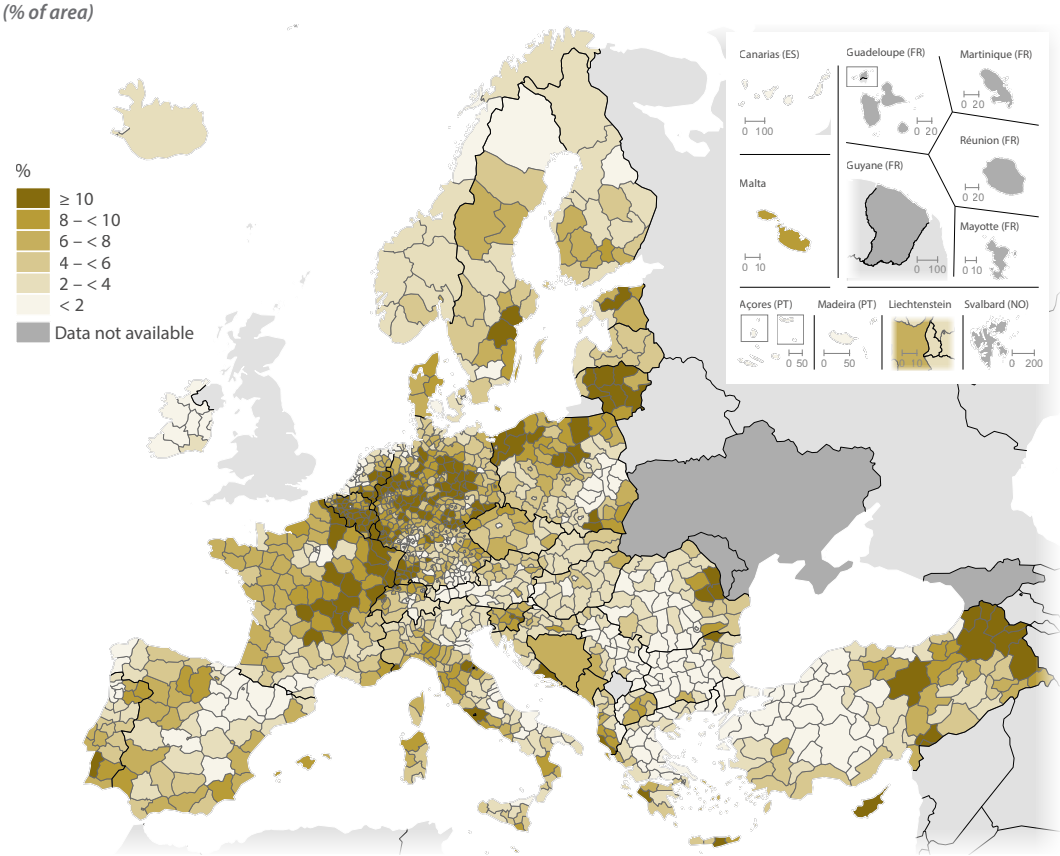
As the occurrence of drought fluctuates strongly from year to year, a look at the average over several years can provide a better understanding.

Map II.7 shows how European regions were on average affected by drought over the period from 2014 to 2023. The northern parts of central Europe — spanning from northern France over northern Germany, northern Poland and the Baltic countries — were generally more concerned. Over these 10 years, 23 regions had on average more than 15 % of their area affected by drought. These were mainly located in Germany (11 regions), Belgium (eight regions), the Netherlands (three regions) and Luxembourg. The Belgian region 'Arr. Namur' was hit hardest, with on average a quarter of its area affected. In contrast, around 20 % of all EU regions (218 of the 1 161 regions with available data) had on average less than 2 % of their area affected by drought over the same period.

MAP II.7

Drought impact on ecosystems, by NUTS 3 region, 2014-2023 average

(% of area)



eurostat

Administrative boundaries: © EuroGeographics © UN–FAO © Turkstat
Cartography: Eurostat – IMAGE, 05/2025

Source: European Environment Agency, Copernicus Land Monitoring Service, Copernicus Emergency Management Service

Notes

(1) NUTS (nomenclature of territorial units for statistics) is a geographical nomenclature dividing countries into regions at three different levels (NUTS 1, 2 and 3 respectively, moving from larger to smaller territorial units in terms of population). For more information about the NUTS classification, see the respective metadata.

(2) PPS is an artificial currency unit that allows comparing countries and regions by adjusting for price level differences, so that — theoretically — one PPS can buy the same amount of goods and services in each country. For the EU average, values in PPS equal values in EUR, meaning the EU's GDP was EUR 38 100 per inhabitant in 2023.

(3) Further data on main environmental pollution indicators addressing health, ecosystem protection and biodiversity, as well as production and consumption, are available in a new Zero Pollution Dashboard.

(4) Further data on concentrations and health risks related to exposure to main pollutants at NUTS 3, country and city level are available in the EEA geospatial data catalogue 'Air Quality Health Risk Assessments'.

(5) Copernicus Programme (2024), ESOTC 2023 | Europe | Temperature and thermal stress.

The EU in the world and spillover effects of EU consumption

The EU in the world: a focus on selected SDG indicators

To end poverty, protect the planet and ensure that by 2030 all people enjoy peace and prosperity, it is not enough that the EU countries alone meet the SDGs. Instead, achieving the goals of the 2030 Agenda requires a collective effort from the international community. The 2024 UN SDG progress report reveals that globally only 17 % of the SDG targets are on track to be achieved by 2030, nearly half of the goals show minimal or moderate progress, and for more than one-third progress has stalled or even regressed.

This section shows developments in the EU and other major world economies, based on six indicators from the EU SDG indicator set. Table III.1 lists the countries selected for the comparison and illustrates their shares in global GDP, population and land area. Together, these economies accounted for 80 % of global GDP, 61 % of the global population, and 60 % of the global land area in 2023. The indicators are presented according to three dimensions of sustainability: social, economic and environmental. The graphs include those countries for which data are available.

TABLE III.1

GDP, population and land area of selected countries, 2023

(global share in %)

	GDP	Population	Land area (1)
EU	**14.4 %**	**5.5 %**	**3.1 %**
Argentina	0.7 %	0.6 %	2.1 %
Australia	1.0 %	0.3 %	5.9 %
Brazil	2.4 %	2.6 %	6.4 %
Canada	1.4 %	0.5 %	6.8 %
China	18.8 %	17.6 %	7.2 %
India	7.9 %	17.8 %	2.3 %
Indonesia	2.4 %	3.5 %	1.5 %
Japan	3.4 %	1.5 %	0.3 %
Mexico	1.7 %	1.6 %	1.5 %
Russia	3.5 %	1.8 %	12.6 %
Saudi Arabia	1.1 %	0.4 %	1.7 %
South Africa	0.5 %	0.8 %	0.9 %
South Korea	1.5 %	0.6 %	0.1 %
Türkiye	2.0 %	1.1 %	0.6 %
United Kingdom	2.2 %	0.8 %	0.2 %
United States	15.1 %	4.2 %	7.0 %
Total	**79.9 %**	**61.3 %**	**60.1 %**

(1) 2022 data.

Source: World Bank ('GDP, purchasing power parity (PPP), current international $'), Eurostat (online data code: demo_gind), United Nations, Department of Economic and Social Affairs, Population Division ('Total population by sex') and FAOSTAT, Land use ('Land area').

Monetary poverty (SDG 1)

Thanks to a wide range of policy measures employed to reduce poverty, such as unemployment benefits, sickness benefits, progressive taxation, social and employment services, the at-risk-of-poverty rate after social transfers in the EU was the lowest among the major world economies, at 16.2 % in the income year 2022 ([1]), which was 0.6 percentage points lower than in the 2017 income year. For comparison, the United States' at-risk-of-poverty rate was 24.6 % in 2022, meaning that almost a quarter of the country's population was at risk of poverty. The rates were even higher in countries such as Mexico, Brazil and South Africa (see Figure III.1). Most other major world economies with available data managed to decrease their at-risk-of-poverty rate between 2017 and 2022, albeit not significantly.

Employment (SDG 8)

While the employment rate is mainly monitored for people aged 20 to 64 years in the EU, global data for this indicator are only available for the 15 to 64-year age group ([2]). In 2023, the EU's employment rate for this age group was 70.4 %, which is higher than in many major economies of the world, such as South Korea, Indonesia or Argentina, but lower than in Japan (78.9 %), Canada (75.8 %) or the United States (72.0 %) (see Figure III.2). All economies shown in Figure III.2 saw an increase in their employment rate between 2018 and 2023, except the United Kingdom and South Africa, the latter of which also had the lowest employment rate in 2023.

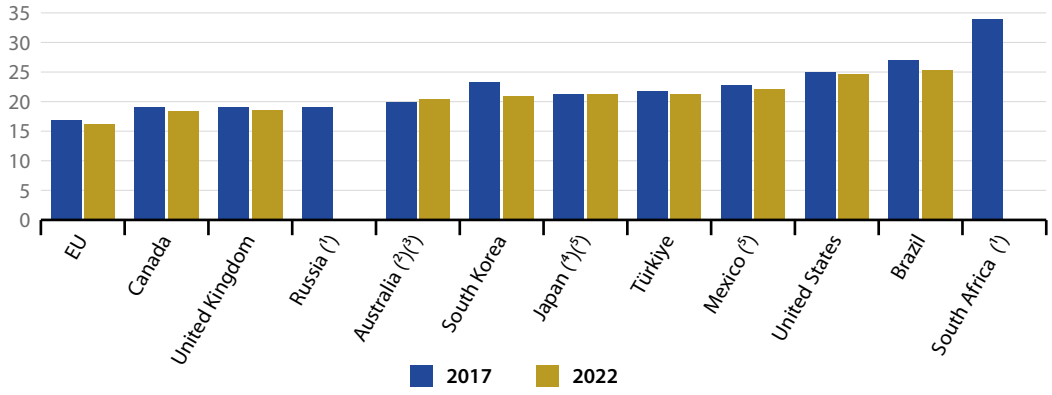
Research and development intensity (SDG 9)

Research and development (R&D) intensity measures gross domestic expenditure on R&D as a share of GDP. In 2022, the EU spent 2.21 % of its GDP on R&D. This is lower than several other high-income countries such as South Korea (5.21 %), the United States (3.59 %) and Japan (3.41 %) (see Figure III.3). In the same year, China, an upper-middle income country ([3]), also surpassed

FIGURE III.1

Persons at risk of monetary poverty after social transfers, 2017 and 2022

(% of population)



Note: The years specified are the income years referred to in the surveys for collecting the data and not the years in which the surveys were conducted.

([1]) No data for 2022.
([2]) 2020 data instead of 2022.
([3]) 2016 data instead of 2017.
([4]) 2021 data instead of 2022.
([5]) 2018 data instead of 2017.

Source: Eurostat (online data code: sdg_01_20; also see page 32) and OECD ('Poverty rate based on disposable income, 60% of the national median disposable income')

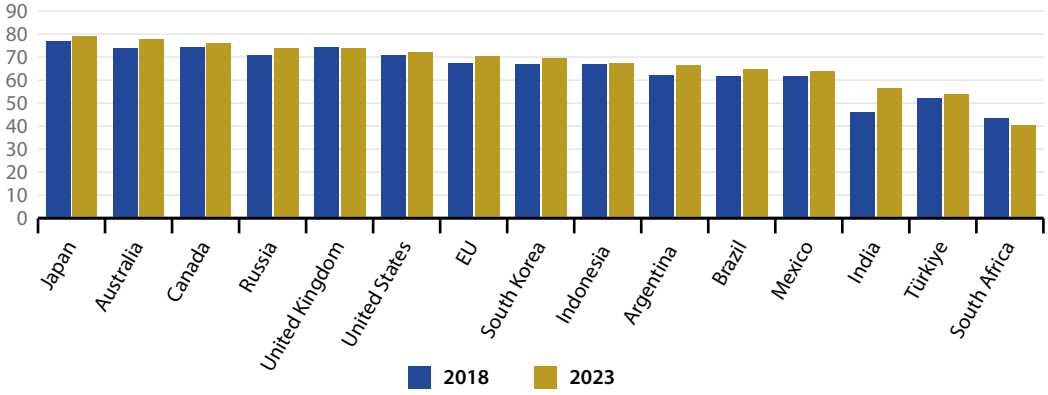
the EU in its R&D intensity, by spending 2.56 % of its GDP on R&D. However, the EU had a higher R&D intensity than high-income countries such as Canada and Australia. The EU's R&D intensity was also higher than the world average (1.95 % in 2022), but lower than in some regions of the world, such as Eastern Asia (2.83 %) and Northern America (3.42 %), and also below the average of all high-income countries (2.66 %).

Between 2017 and 2022, the EU increased its R&D intensity by only 0.07 percentage points, whereas some other major economies saw much larger increases. For example, South Korea raised its R&D expenditure by 0.92 percentage points in the same period, the United States by 0.70, and the United Kingdom by 0.57 percentage points. Meanwhile, six of the countries shown in Figure III.3 reduced their R&D expenditure over this period.

FIGURE III.2

Employment rate, 2018 and 2023

(% of population aged 15 to 64)

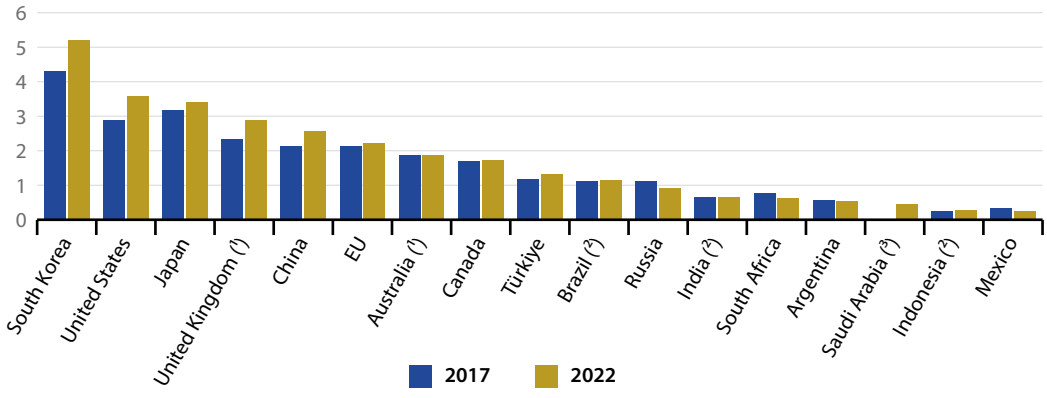


Source: Eurostat (online data code: lfsi_emp_a; also see page 151) and ILOSTAT ('Employment-to-population ratio by sex and age (%)')

FIGURE III.3

Gross domestic expenditure on R&D, 2017 and 2022

(% of GDP)



(1) 2021 data instead of 2022.
(2) 2020 data instead of 2022.
(3) No data for 2017.

Source: Eurostat (online data code: sdg_09_10; also see page 165) and UNESCO Institute for Statistics ('GERD as a percentage of GDP')

Zero emission vehicles (SDG 12 and SDG 13)

In 2023, sales of zero emission vehicles — including both battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV) — accounted for 14 % of all car sales in the EU. This marks an increase of 13 percentage points since 2018, when their share was just 1 %. Among major global economies, only China and the United Kingdom surpassed the EU's sales share of zero emission vehicles in 2023, reaching 25 % and 17 %, respectively. Over the past five years, the share of zero emission car sales rose significantly in almost all major world economies for which data are available (see Figure III.4). Globally, nearly 10 million new zero emission vehicles were registered in 2023, representing 12 % of all new cars sold that year ([4]).

Greenhouse gas emissions (SDG 13)

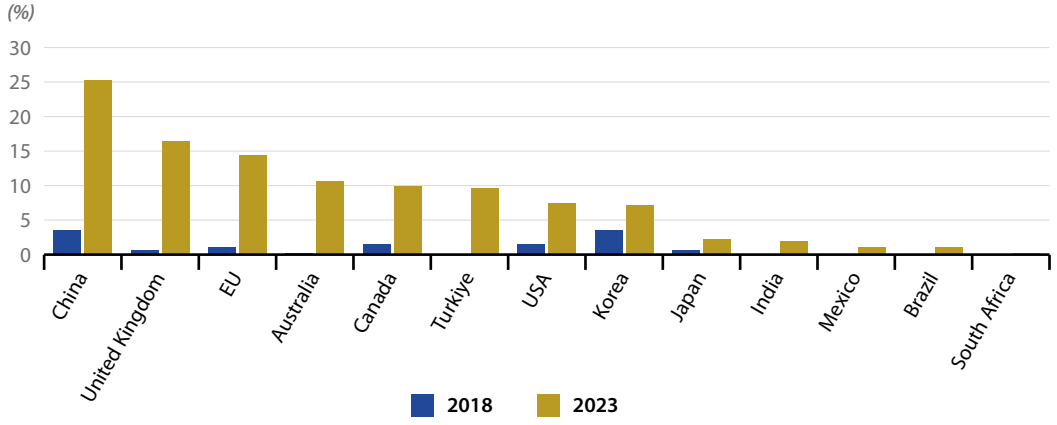
Countries with higher GDP per capita generally cause higher greenhouse gas (GHG) emissions per capita (see Figure III.5). The EU (7.7 tonnes per capita) and the United Kingdom (6.3 tonnes per capita) were the lowest per-capita emitters among high-income economies in 2022 ([5]), showing that economic growth can be decoupled from GHG emissions to a certain extent. The EU's per-capita emissions were around two and a half times less than in Saudi Arabia (20.4 tonnes per capita), Australia (20.1 tonnes per capita), or the USA (19.2 tonnes per capita). Nevertheless, the EU's emissions per capita were higher than in several other major economies, such as India, Indonesia and Mexico. The EU's emissions were also higher than the world average (6.2 tonnes per capita).

When comparing GHG emissions in absolute terms, China's emissions were by far the highest in 2022, with 14.4 gigatonnes (Gt), followed by the USA (6.4 Gt), India (3.5 Gt) and the EU (3.4 Gt).

Between 2017 and 2022, many major economies reduced their emissions per-capita, as shown in Figure III.6. The United Kingdom recorded the largest decrease at 12.3 %, followed by the EU (10.4 %) and Australia (10.2 %). In contrast, Indonesia increased its per-capita emissions by 21.3 % and China by 12.1 %. Emissions also increased in India and Mexico, by 6.9 % and 4.9 %, respectively.

FIGURE III.4

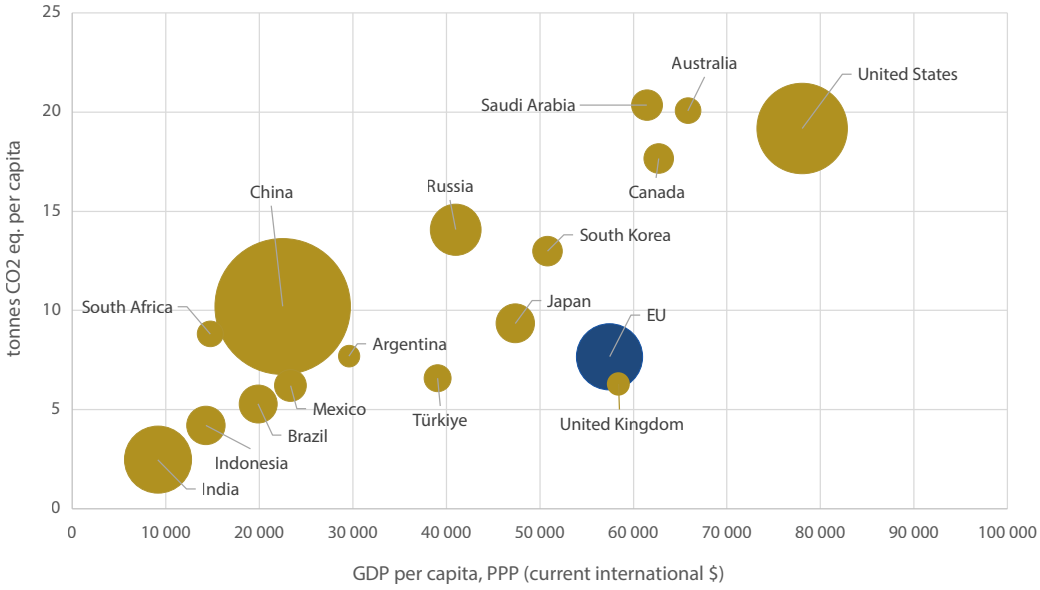
Zero emission vehicles sales share, cars, 2018 and 2023



Note: The data include battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV).
Source: International Energy Agency

FIGURE III.5

Greenhouse gas emissions per capita and GDP per capita, 2022



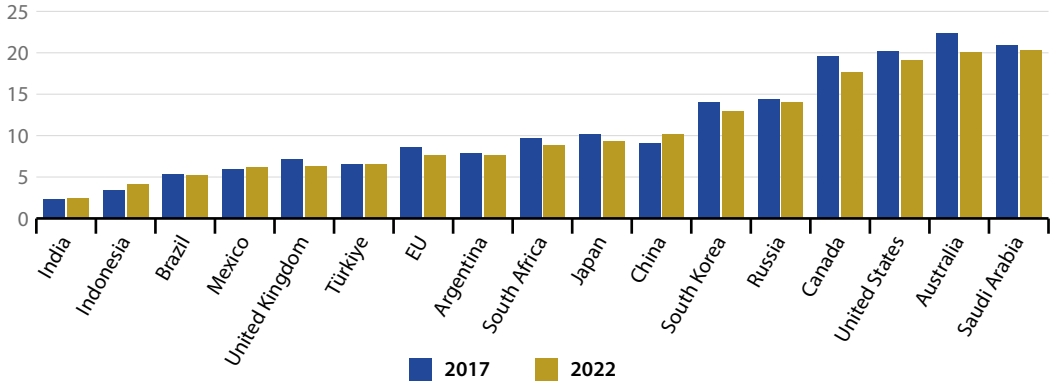
Note: The size of the bubbles corresponds to the total GHG emissions of each country in thousand tonnes of CO_2 equivalents in 2022. Emissions from land-use and forestry (LULUCF) and from international aviation and shipping are not included in the data.

Source: Climate watch ('PIK-PRIMAP historical emissions' ([6]); World Bank ('GDP per capita, purchasing power parity (PPP), current international $') also see page 235.

FIGURE III.6

Greenhouse gas emissions per capita, 2022

(tonnes of CO_2 equivalent per capita)



Note: Emissions from land-use and forestry (LULUCF) and from international aviation and shipping are not included in the data.

Source: Climate watch ('PIK-PRIMAP historical emissions' ([7]))

Share of forest area (SDG 15)

According to FAO data, the share of EU land covered by forests was 39.9 % of total land area in 2022 ([8]). This was higher than in many other major economies of the world, such as the United States, Mexico, Australia or India (see Figure III.7). Among other major world economies, Japan had the largest proportion of forest area, at 68.4 %, followed by South Korea at 64.2 %. Saudi Arabia, which is mostly covered by desert, only had forest on 0.5 % of its territory. Between 2017 and 2022, the share of forest area remained stable or decreased slightly in most of the world's major economies. The EU increased its share of forest area by 0.2 percentage points over this period.

Globally, 31.1 % of land area was covered by forest in 2022. Among the regions, South America had the highest share of forest area, at 48.1 %, followed by South-eastern Asia at 46.4 %. In contrast, only 3.3 % of land in Central Asia was covered by forest. It should be noted that a country's share of forest area depends not only on land management but also on natural factors such as climate, soil and topography.

Estimating spillover effects of EU consumption

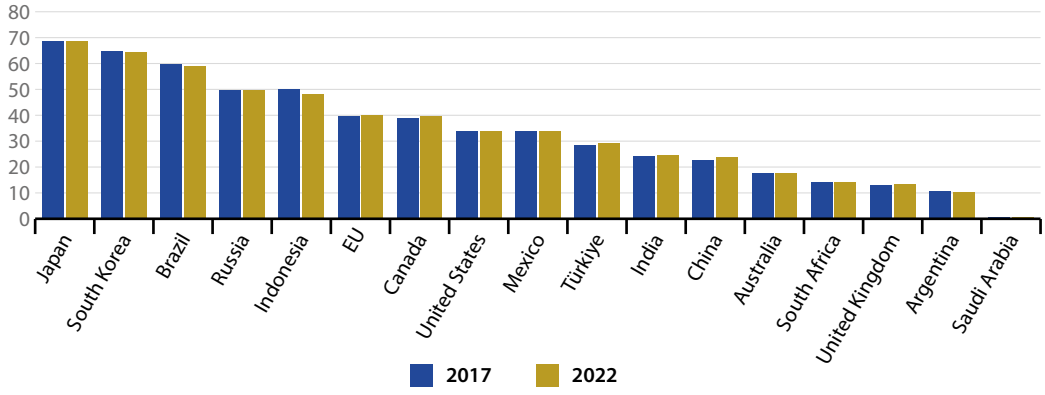
In a globalised world, countries' actions towards sustainable development may positively or negatively influence other countries and their capacity to achieve their SDGs. Therefore, governments and societies need to consider the impact their domestic policies and behaviour may have beyond national borders. The impacts that activities in one sector, region or country have on other sectors, regions or countries are called spillover effects (or simply 'spillovers').

This chapter measures spillover effects with four indicators: gross value added (GVA), greenhouse gas (GHG) footprint, material footprint, and land use footprint. These indicators differ from those analysed in the 17 SDG chapters of this report by following a consumption-based perspective ([9]), although the material footprint is also used for SDG 12. The consumption-based approach attributes impacts (such as GHG emissions) to the countries that consume the goods and services. Those consumer countries are not necessarily the

FIGURE III.7

Share of forest area, 2017 and 2022

(%)



Source: FOA Land Use data; also see page 270.

Policy context

The EU's trade policy review emphasises that trade should be compatible with the sustainable growth model as defined by the European Green Deal. One of the objectives is to make supply chains more sustainable by addressing the impacts of the EU's consumption and trade on the rest of the world, in particular by promoting sustainability standards.

The carbon border adjustment mechanism (CBAM) applies in its transitional phase since October 2023. It addresses the risk of carbon leakage, which occurs when industries transfer polluting production to other countries with less stringent climate policies, or when EU products are replaced by more carbon-intensive imports. The CBAM requires importers to buy certificates to account for embodied emissions in certain carbon-intensive products, mirroring the EU Emissions Trading System (EU ETS).

The Directive on corporate sustainability due diligence, adopted in 2024, aims to foster sustainable and responsible corporate behaviour in companies' operations and across their global value chains. The new rules will ensure businesses address any adverse human rights and environmental impacts of their actions, inside and outside Europe.

The Regulation on deforestation-free products entered into force in 2023. The new rules promote the consumption of 'deforestation-free' products to decrease the EU's impact on global deforestation embodied in imported agricultural products. It is intended to reduce greenhouse gas emissions and biodiversity loss.

countries where impacts occur during production. Estimating such footprints requires modelling approaches ([10]). For more information on the methodology behind the indicators presented here, please see the explanatory note on the Eurostat website.

To understand how much the EU's consumption patterns affect other parts of the world, it helps to compare the EU's footprints with its global population share (see Table III.2). In 2022, the EU's was home to 5.6 % of the world population ([11]). The table shows that the EU's footprints were disproportionally higher, as the EU accounted for 15.9 % of global GVA, 9.3 % of global GHG emissions, 6.7 % of the global material footprint and around 8.5 % of the global cropland footprint. Despite the slight increase in the EU population over the past five years, the EU's GHG footprint decreased over the same period.

TABLE III.2

EU's population and footprints, 2017 and 2022

	2017	2022	Change 2017–2022 (%)	EU global share in 2022
Population	445.0 million	446.8 million	0.4 %	5.6 %
GVA	11 260 billion EUR	14 121 billion EUR	25.4 %	15.9 %
GHG footprint	4.9 Gt	4.8 Gt	– 1.8 %	9.3 %
Material footprint	6.4 Gt	6.7 Gt	3.9 %	6.7 %
Cropland footprint ([1])	123 million ha	124 million ha	1.3 %	8.5 %

([1]) The data refer to 'harvested area for primary crops'.

Gross value added (GVA)

GVA measures the economic value created in a country and constitutes the main part of the gross domestic product (GDP). It is calculated as the total value of all goods and services produced minus the cost of materials and services used in production (excluding taxes and subsidies on products). Since GVA is a widely available indicator, it can show how much economic value is generated both inside and outside the EU by EU consumption. Apart from economic value-added, EU consumption can also generate other positive social effects outside the EU's borders, such as job opportunities.

GVA generated by EU consumption increased by 45 % between 2010 and 2022

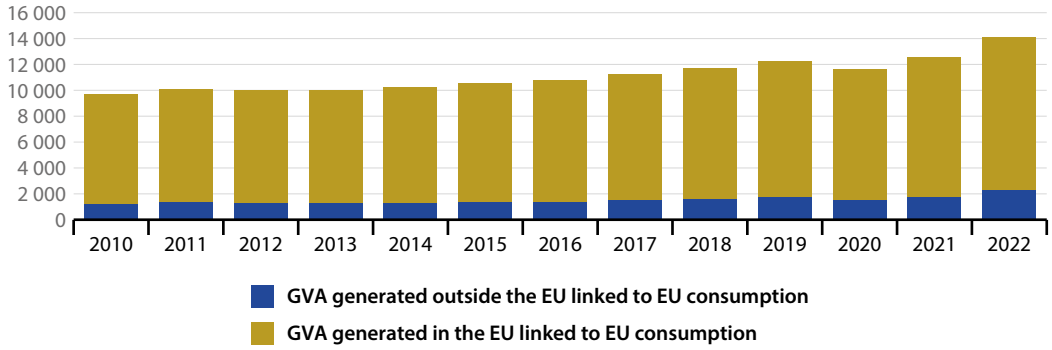
Between 2010 and 2022, GVA generated by EU consumption ([12]) grew by 45 %, rising from EUR 9 744 billion to EUR 14 121 billion. This includes GVA generated both within and outside the EU. The GVA generated within the EU increased by 39 % during this period, making up the largest share (EUR 11 873 billion in 2022). Meanwhile, the GVA generated outside the EU as a result of EU consumption rose by 90 %, from EUR 1 184 billion in 2010 to EUR 2 248 billion in 2022.

For comparison, consumption outside the EU generated EUR 2 431 billion in value added

FIGURE III.8

Gross value added as a result of EU consumption, 2010–2022

(EUR billion)

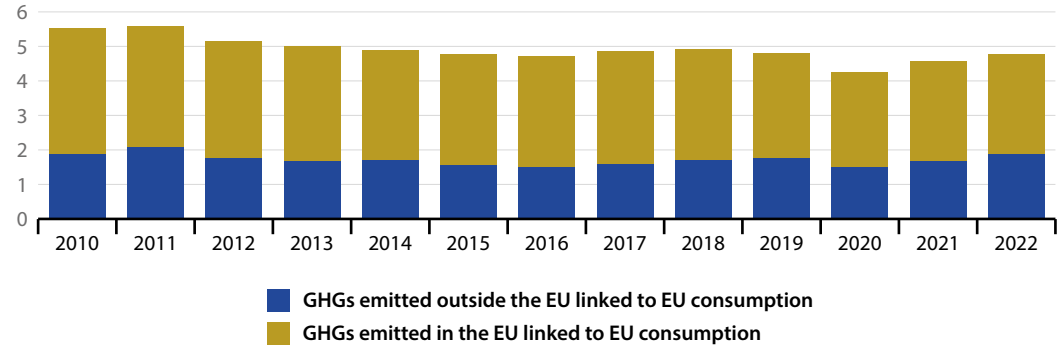


Source: Eurostat, JRC (estimates based on FIGARO data)

FIGURE III.9

Greenhouse gas emission footprint, EU, 2010–2022

(billion tonnes of CO_2 equivalents)



Source: Eurostat, JRC (estimates based on FIGARO data)

within the EU. This was 8 % more than what EU consumption generated abroad, reflecting the trade surplus of the EU economy. In total, almost 16 % of the global GVA is linked to the EU's consumption, which is almost three times the EU's share of the global population.

Greenhouse gas emissions footprint

While the previous section shows that the EU consumption generates positive external economic effects, it also causes emissions within and outside the EU. The greenhouse gas (GHG) emissions footprint estimates the emissions associated with the final demand of goods and services in the EU. It includes all emissions generated at any stage of a product's life cycle before its final use, regardless of whether the greenhouse gases are emitted within or outside the EU borders.

The EU's greenhouse gas emissions footprint decreased by 13.7 % between 2010 and 2022

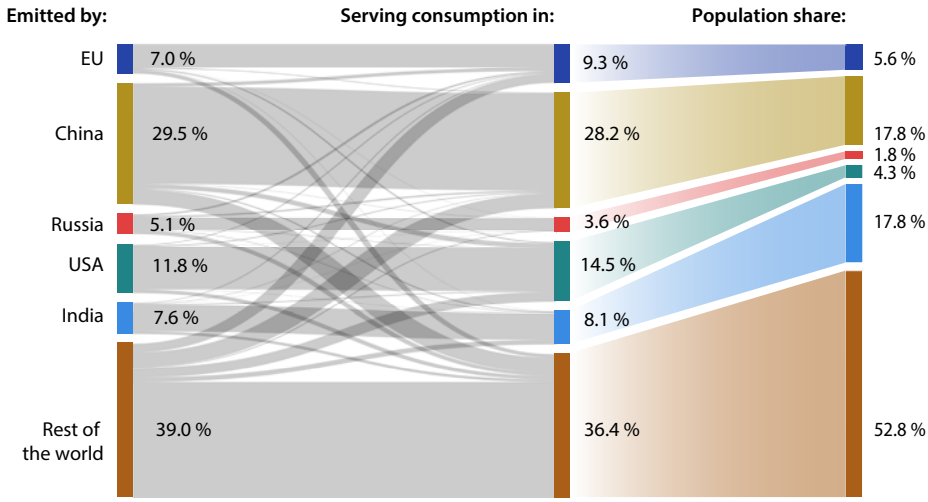
As shown in Figure III.9, the EU's GHG emissions footprint decreased by 13.7 % between 2010 and 2022, reaching 4.8 billion tonnes of carbon dioxide (CO_2) equivalents in 2022. Compared with 2017, the footprint in 2022 was 1.8 % smaller. However, the pandemic-related low in 2020 could not be sustained, and the EU's GHG footprint increased by 11.8 % between 2020 and 2022.

In 2022, 2.9 billion tonnes of GHG emissions — equivalent to 61 % of the total emissions serving the EU's consumption — were generated in the EU. The remaining 1.9 billion tonnes of GHGs (39 %) were emitted in non-EU countries. Among these, China had the largest share with 0.4 billion tonnes or around 22 % of the non-EU total. This reflects that China is one of the EU's main trading partners, with 20.9 % of the EU's total imports (in value) originating from China in 2022 ([13]).

In 2022, Russia accounted for 0.20 Gt GHG emissions serving the EU's consumption ([14]), followed by the United States (0.10 Gt) and India (0.09 Gt). In contrast, the share in value of US imports in total EU imports was higher (11.9 %) than from Russia (6.7 %) ([15]). This might be explained by the fact that a substantial part of imports from Russia were semi-manufactured low-value products such as steel ([16]), which generate relatively high CO_2 emissions during their production.

FIGURE III.10

Comparison of GHG emissions from a production and consumption perspective with world population, 2022



Source: Eurostat, JRC (estimates based on FIGARO data as well as demo_gind and https://population.un.org/wpp/)

In 2022, 9.3 % of the global GHG emissions were linked to EU consumption

Figure III.10 presents the shares of GHG emissions both produced and consumed by several major world economies, alongside their respective shares of the global population. The left side of the diagram illustrates GHG emissions from the production perspective, showing the share of global emissions generated within the selected countries. The middle section depicts emissions from a consumption perspective, indicating the origins of the emissions associated with consumption in these countries. The right side of the diagram represents each country's share of the global population, showing whether their contribution to the global GHG footprint is proportional to their population size.

Figure III.10 shows that in 2022, 7.0 % of the global GHG emissions (in CO_2 equivalents) were emitted in the EU. The same year, 9.3 % of the global GHG emissions could be traced back to the EU's consumption. This indicates that EU consumption generated a disproportionally high share of the world's emissions when compared with its share of the global population (5.6 %). However, other main economies of the world share the same pattern. With a population of 1.43 billion, China's share of the world population was 17.8 % in 2022, while its consumption accounted for more than a quarter (28.2 %) of the world's GHG emissions in that year. The United States of America (USA) had an even larger discrepancy between the share in population and the share in consumption-linked GHG emissions. While the country was home to 4.3 % of the world's population, its share in global emissions was more than three times higher, at 14.5 %. India, on the other hand, hosted 17.8 % of the global population, but its consumption caused only 8.1 % of global GHG emissions. The rest of the world (excluding China, EU, the USA, India and Russia) accounted for more than half (52.8 %) of the world population, while only 36.4 % of global GHG emissions could be attributed to consumption in these countries in 2022.

Material footprint

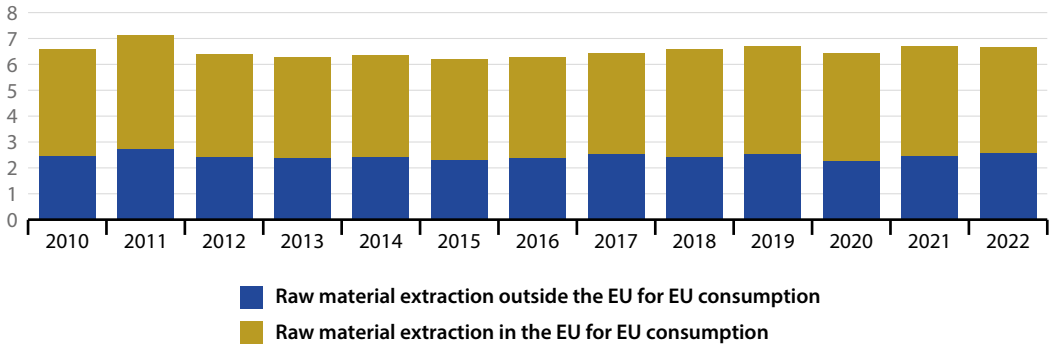
The material footprint, also referred to as raw material consumption, shows the amount of materials required along the supply chains of the goods and services finally consumed in a country. These materials refer to the broad categories of biomass, metal ores, non-metallic minerals and fossil energy carriers. Eurostat estimates the material footprint by converting the actual weight of the goods traded internationally into the weight of materials extracted to produce these goods — the so-called raw material equivalents of imports and exports. These raw material equivalents can be several times larger than the weight of the imported or exported goods.

The material footprint highlights the increasing spatial separation of production and consumption

FIGURE III.11

Material footprint, EU, 2010–2022

(billion tonnes)

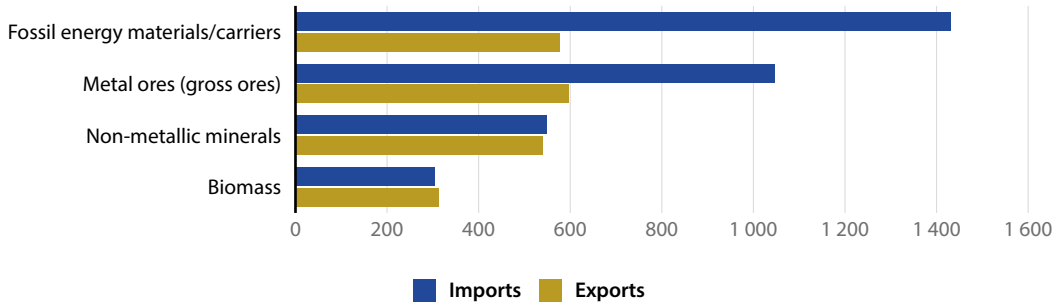


Source: Eurostat (online data code: env_ac_rme) and materialflows.net

FIGURE III.12

EU imports and exports in raw material equivalents, 2022

(million tonnes)



Source: Eurostat (online data code: env_ac_rme)

and the relocation of environmental impacts associated with material extraction. All raw materials extracted and used worldwide are allocated to domestic final consumption.

The EU's material footprint increased by 3.9 % between 2017 and 2022

In the past 12 years, the EU's material footprint experienced ups and downs, fluctuating between 6.2 billion tonnes (recorded in 2015) and 7.1 billion tonnes (recorded in 2011). The EU's material footprint has grown by 1.6 % since 2010 and 3.9 % since 2017, reaching 6.7 billion tonnes in 2022. This corresponds to 6.7 % of the raw materials consumed globally. The EU's share of global raw material consumption was thus around 1 percentage point above its population share. Of all the raw materials serving the EU's consumption, 4.1 billion tonnes or around 62 % were extracted in the EU, while 2.6 billion tonnes were extracted outside the EU's borders. This means that more than one-third of the raw materials needed for EU consumption were imported.

In 2022, the EU remained a net importer of raw materials

In 2022, the EU imported about 2.5 times more fossil energy materials and over 1.5 times more metal ores than it exported, as Figure III.12 illustrates. The large difference between imports and exports of fossil energy materials highlights the EU's strong dependency on other countries in this sector. The amounts of imported and exported non-metallic minerals, as well as biomass, were comparable in magnitude. Overall, the EU imported more goods (in raw material equivalents) than it exported.

Land use footprint

The land use footprint considers the estimated amount of land needed to produce one unit of a given final product, such as, for example, the land area required to produce a litre of vegetable oil. Land use footprints highlight the EU's dependency on foreign land as a result of EU consumption. While land use itself does not show concrete and direct environmental impacts, it is a proxy for the pressure on ecosystems and biodiversity stemming from production and consumption systems. This chapter focuses on land that is used to cultivate crops. The data are modelled based on land use coefficients of traded agricultural products.

The EU's cropland footprint increased by 1.2 % between 2014 and 2022

Between 2014 and 2022, the EU's cropland footprint increased by 1.2 %. As Figure III.13 illustrates, this increase resulted from a 7.6 % growth in crops produced outside the EU for EU

consumption, while crops produced within the EU for EU consumption declined by 3.4 %.

In 2022, the EU consumed crops cultivated on approximately 124 million hectares (ha) of cropland located both inside and outside the EU, representing about 8.5 % of the world's cropland. This indicates that the EU's consumption used a disproportionally high share of the global cropland, compared with its share of the world's population (5.6 %).

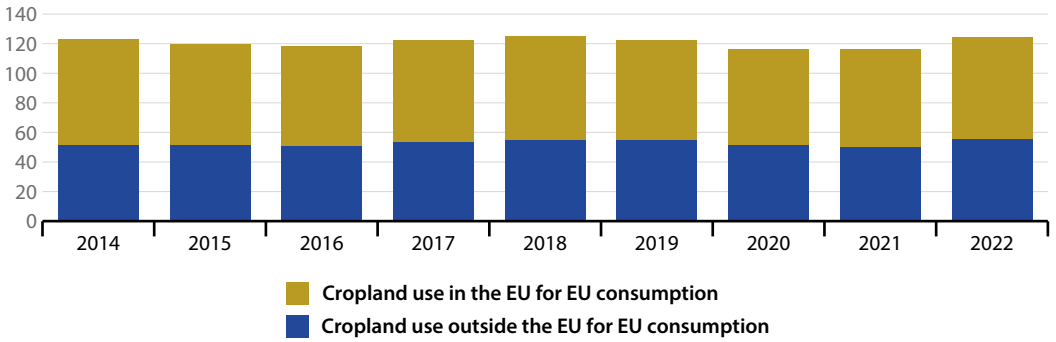
Out of the 124 million ha of the cropland footprint, 69 million ha of land were located within the EU and 55 million ha outside the EU.

The main countries in which cropland served EU consumption were Argentina, Brazil and Ukraine. The main traded goods produced on these croplands were vegetable oils, oil seed crops, and residues of food industries (such as oilcakes, mostly used as animal feed) ([17]). At the same time, 25 million ha of EU cropland served consumption abroad. The main exported products were cereals, followed by meat of ruminant livestock and vegetable oils ([18]). In total, the EU used around 30 million ha of foreign cropland for its consumption in 2022, which is over a quarter of the total EU's cropland ([19]).

FIGURE III.13

Cropland footprint, EU, 2014–2022

(million ha)



Source: JRC, Eurostat, FAOSTAT (Land use)

Notes

(1) The term 'income year' is used to emphasise that the data refer to the year for which survey respondents provide their income data, which might differ from the year in which the data are collected. For the EU, data are collected through the survey on European Union Statistics on Income and Living Conditions (EU-SILC) and are labelled according to the year of the data collection, meaning that data labelled as 2023 refer to people's incomes in 2022.

(2) Setting a lower boundary for the age group at 15 years results in higher employment rates in countries where compulsory education for young people ends at 15 years or earlier. This is the case for Brazil, Japan, Russia, South Africa South Korea and for 7 out of the 27 Members States in the EU; see European Education and Culture Executive Agency (2023), *Compulsory education in Europe 2023/2024*.

(3) The World Bank divides economies into four income groups, based on their gross national income (GNI) per capita: low, lower-middle, upper-middle, and high income. For more details see the World Bank's website.

(4) *Source*: calculations based on data from IEA (2024), Global EV Data Explorer.

(5) Emissions from land-use and forestry (LULUCF) and from international aviation and shipping are not included in the data.

(6) Gütschow, J., Jeffery, M. L., Gieseke, R., Gebel, R., Stevens, D., Krapp, M., and Rocha, M. (2016), *The PRIMAP-hist national historical emissions time series*, Earth Syst. Sci. Data, 8, 571–603.

(7) Ibid.

(8) The data presented here are sourced from the FAO and are thus not comparable with the data on forest area presented in the chapter on SDG 15 'Life on land', which are derived from Eurostat's Land Use and Cover Area frame Survey (LUCAS).

(9) 'Production-based' means, for example, direct observation of GHG emissions as they are generated, while 'consumption-based' refers to, for example, GHG emissions that are generated throughout the supply chain and are hence 'embodied' in the products and services consumed. These GHG emissions are generated before the products are consumed, in different locations, and scattered across supply chains that may involve many countries. To get the full picture of the net balance of a country or region in terms of inward and outward spillover effects, a combination of both approaches is needed.

(10) In this case, the FIGARO multi-regional input–output model has been used. FIGARO stands for 'Full International and Global Accounts for Research in input–Output analysis' and comprises the EU inter-country supply, use and input–output tables (EU IC-SUIOTs). FIGARO tables are a new statistical product for economic modelling. Since 2021, they are produced annually, linking national accounts with data on business, trade and jobs for EU Member States and 18 main EU trading partners; a 'rest of the world' region completes the FIGARO tables. For more information on FIGARO, see European Commission, FIGARO tables: EU inter-country supply, use and input–output tables.

(11) *Source*: calculations based on Eurostat (online data code: demo_gind) and https://population.un.org/wpp/.

(12) In the context of GVA, consumption also includes investment in goods produced in other countries.

(13) *Source*: Eurostat (online data code: ext_lt_maineu).

(14) GHG contained in energy carriers such as crude oil or gas and imported into the EU is not included in the exporting country emission account, but will show up in the importing country's balance when combusted for power generation. The exporting country's emission account in that case only shows emissions incurred during the extraction and transport process of energy carriers.

(15) *Source*: Eurostat (online data code: ext_lt_maineu).

(16) *Source*: Eurostat (online data code: ds-059331).

(17) European Commission (2024), EU Science Hub, EU land use footprint: modelling the land needed for EU consumption.

(18) De Laurentiis, V., Orza, V. and Sala, S., (2024), Modelling the land footprint of EU consumption, Publications Office of the European Union, Luxembourg.

(19) *Source*: FAOSTAT, Land use.

Annexes

Annex I: Policy targets

Eurostat's SDG monitoring provides an assessment vis-à-vis SDG-related EU policy targets (see Annex II for a detailed description of the assessment approach). In 2025, 26 policy targets have been used. Of these targets, 14 refer to socio-economic objectives such as reducing poverty and increasing education and labour market participation. The other 12 targets are linked to environmental objectives in areas such as climate and energy. Table A.1 lists the targets together with the EU policy documents in which these targets were set. In the tables at the beginning of each of the 17 thematic chapters of this report, the indicators assessed against an EU policy target are marked with a 'target' symbol (◎).

TABLE A.1

EU policy targets used for the indicator assessment

Indicator	Target	Policy reference
People at risk of poverty or social exclusion (SDG 1)	Reduce the number of people at risk of poverty or social exclusion by 15 million by 2030 relative to 2019, including at least 5 million children	European Pillar of Social Rights Action Plan
Area under organic farming (SDG 2)	At least 25 % of the EU's agricultural land should be under organic farming by 2030	EU Biodiversity Strategy for 2030
Use and risk of chemical pesticides (SDG 2)	Reduce the use and risk of chemical pesticides by 50 % by 2030 compared to a three-year baseline (average for the period 2015 to 2017)	Zero Pollution Action Plan
Premature deaths due to exposure to fine particulate matter ($PM_{2.5}$) (SDG 3, SDG 11)	Reduce the health impacts of air pollution by at least 55 % by 2030 compared to 2005	Zero Pollution Action Plan
Road traffic deaths (SDG 3, SDG 11)	Halving the overall number of road deaths in the EU by 2030 compared with 2019	EU road safety policy framework 2021–2030
Consumption of antibiotics in the community and hospital sectors (SDG 3)	Reduce the total consumption of antibiotics in humans by 20 % by 2030 compared with the baseline year 2019	Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach
Low achievers in reading, mathematics and science (SDG 4)	The share of low-achieving 15-year-olds in reading, mathematics and science should be less than 15 % by 2030	European Education Area
Participation in early childhood education (SDG 4)	At least 96 % of children between 3 years old and the starting age for compulsory primary education should participate in early childhood education and care by 2030	European Education Area
Early leavers from education and training (SDG 4)	The share of early leavers from education and training should be less than 9 % by 2030	European Education Area
Tertiary educational attainment (SDG 4, SDG 9)	The share of 25- to 34-year-olds with tertiary educational attainment should be at least 45 % by 2030	European Education Area
Gender employment gap (SDG 5)	Halve the gender employment gap by 2030 compared with 2019	European Pillar of Social Rights Action Plan
Positions held by women in senior management (SDG 5)	At least 33 % of all director positions (executive and non-executive) or at least 40 % of non-executive director positions on boards of listed companies should be held by members of the underrepresented sex by 2026	Directive (EU) 2022/2381
Primary and final energy consumption (SDG 7)	Reduction of energy consumption of at least 11.7 % in 2030 compared with the projections of the 2020 EU Reference Scenario, so that the EU's final and primary energy consumption amount to no more than 763 Mtoe and 992.5 Mtoe in 2030	Directive (EU) 2023/1791

Indicator	Target	Policy reference
Share of renewable energy in gross final energy consumption (SDG 7, SDG 13)	Raise the share of renewable sources in the EU's gross final consumption of energy to at least 42.5 % by 2030	Directive (EU) 2023/2413
Young people neither in employment nor in education and training (NEET) (SDG 8)	Decrease the rate of young people neither in employment, nor in education or training (NEETs) aged 15 to 29 to 9 % by 2030	European Pillar of Social Rights Action Plan
Employment rate (SDG 8)	At least 78 % of the population aged 20 to 64 should be in employment by 2030	European Pillar of Social Rights Action Plan
Gross domestic expenditure on R&D (SDG 9)	Increasing combined public and private investment in R&D to 3 % of GDP	Council Recommendation on a Pact for Research and Innovation in Europe
Share of households with high-speed internet connection (SDG 9, SDG 17)	By 2030, all European households should be covered by a gigabit network	2030 Digital Compass
Recycling rate of municipal waste (SDG 11)	Increase the share of municipal waste that is recycled or prepared for re-use to at least 60 % (by weight) by 2030	Directive (EU) 2018/851
Average CO_2 emissions per km from new passenger cars (SDG 12, SDG 13)	Reduce average CO_2 emissions from new passenger cars to 49.5 g CO_2/km by 2030	Commission Implementing Decision (EU) 2023/1623
Circular material use rate (SDG 12)	Double the EU's circular material use rate by 2030 (relative to 2020)	Circular Economy Action Plan
Net greenhouse gas emissions (SDG 13)	Reduce net greenhouse gas emissions by 55 % by 2030 compared to 1990	European Climate Law
Net greenhouse gas emissions from land use, land use change and forestry (LULUFC) (SDG 13)	Net greenhouse gas removals in the LULUCF sector should reach 310 million tonnes of CO_2 equivalent by 2030	Fit for 55 package
Marine protected areas (SDG 14)	Protect a minimum of 30 % of the EU's sea area by 2030	EU Biodiversity Strategy for 2030
Terrestrial protected areas (SDG 15)	Protect a minimum of 30 % of the EU's land area by 2030	EU Biodiversity Strategy for 2030
Official development assistance (SDG 17)	Provide 0.7 % of gross national income (GNI) as ODA by 2030	The new European Consensus on Development

How has the EU progressed towards its policy targets?

During the most recent five-year period assessed, the EU has been on track towards nine out of the 26 targets, meaning these targets will be achieved if the pace of progress observed over the recent five-year period is maintained. For further six indicators, progress needs to accelerate to reach the targets by 2030. For a further nine indicators with quantitative targets, the EU has made only slow progress, and the pace of progress needs to speed up considerably to meet these targets by 2030. A movement away from the EU target has been observed for two indicators. Overall, the EU has made more progress towards the socio-economic targets of the EU SDG indicator set than towards the environmental targets, many of which require additional efforts.

TABLE A.2

Progress towards EU policy targets

Assessment ([1])	Socio-economic targets	Environmental targets
On track to reach the EU target 	Participation in early childhood education (SDG 4) Early leavers from education and training (SDG 4) Tertiary educational attainment (SDG 4, SDG 9) Positions held by women in senior management (SDG 5) Employment rate (SDG 8) Share of households with high-speed internet connection (SDG 9, SDG 17) Official development assistance (SDG 17)	Use and risk of chemical pesticides (SDG 2) Premature deaths due to exposure to fine particulate matter ($PM_{2.5}$) (SDG 3, SDG 11)
Moderate progress towards the EU target 	Young people neither in employment nor in education and training (NEET) (SDG 8)	Area under organic farming (SDG 2) Primary and final energy consumption (SDG 7) Share of renewable energy in gross final energy consumption (SDG 7, SDG 13) Average CO_2 emissions per km from new passenger cars (SDG 12, SDG 13) Net greenhouse gas emissions (SDG 13)

Assessment [1]	Socio-economic targets	Environmental targets
Insufficient progress towards the EU target 	People at risk of poverty or social exclusion (SDG 1) Road traffic deaths (SDG 3, SDG 11) Consumption of antibiotics in the community and hospital sectors (SDG 3) Gender employment gap (SDG 5) Gross domestic expenditure on R&D (SDG 9)	Recycling rate of municipal waste (SDG 11) Circular material use rate (SDG 12) Marine protected areas (SDG 14) Terrestrial protected areas (SDG 15)
Movement away from EU target 	Low achievers in reading, mathematics and science (SDG 4)	Net greenhouse gas emissions from land use, land use change and forestry (LULUFC) (SDG 13)

Annex II: Methodological notes

Data coverage and sources

Data in this report are mainly presented for the EU and its 27 Member States (see Annex III). In addition, data for the EU candidate countries and potential candidates as well as the countries of the European Free Trade Association (EFTA) are included in the country-level comparisons throughout the report when available, complementing the EU-level analysis. In some cases, global comparisons of the EU with other large economies in the world (such as the United States, Japan and China) are also presented.

To reflect the 2030 Agenda's 15-year scope, the analysis of trends is, as far as possible, based on data for the past 15 years. However, for several indicators, in particular those based on the EU Statistics on Income and Living Conditions (EU-SILC), data are only available from 2010 or 2015 onwards.

The data presented in this report were extracted in late April 2025. Most of the data used to compile the indicators stem from the standard Eurostat collection of statistics through the European Statistical System (ESS), but a number of other data sources have also been used, including other European Commission services, the European Environment Agency (EEA), the European Institute for Gender Equality (EIGE) and the OECD.

The Eurostat website contains a section dedicated to the EU SDG monitoring, which features the full SDG indicators database and provides useful information on the data. The data codes given below the graphs in this report, such as sdg_01_10, allow easy access to the most recent data and metadata on the Eurostat website ([2]). Explanatory notes on the assessment of EU Member State data and the measurement of spillover effects are available in a methodology section.

Treatment of breaks in time series

Breaks in time series occur when the underlying methodology of the data collection changes. Depending on the change, such breaks can be negligible or they can significantly affect the continuity and consistency of data over time. A case-by-case assessment has been conducted to determine the extent to which a break affects the assessment of an indicator over time. In cases where a break has been considered significant enough to affect the assessment, the length of the assessed time series has been adjusted to exclude the break. If such adjustment has not been possible, the indicator is not assessed at all. Breaks in times series are indicated throughout the report in footnotes below the graphs.

Indicator assessment

This publication provides an assessment of how indicators developed over time and against SDG-related EU objectives and targets. The assessment method considers whether an indicator has moved towards or away from the sustainable development objective, as well as the speed of this movement. The method focuses on developments over time and not on the 'sustainability' of the status ([3]).

Ideally, the development observed for each indicator would be compared against the progress needed to reach either a quantitative target set within the political process or a scientifically established and accepted threshold. However, this approach is only possible for a limited number of indicators, where an explicit quantified and measurable target exists for the EU (see Table A.1). In the remaining cases, a transparent and simple approach across the indicators is applied to avoid ad hoc and subjective value judgments. The two approaches are explained in more detail below.

The assessment results are visualised in the form of coloured arrows (see Table A.3). The direction of the arrows shows whether the indicators are moving in a sustainable direction or not. This direction does not necessarily correspond to the direction in which an indicator is moving. For example, a reduction in the long-term unemployment rate, or the amonia emissions from agriculture, would be represented with a green upward arrow, as reductions in these areas mean progress towards the sustainable development objectives.

Depending on whether there is a quantitative EU policy target, two cases are distinguished: For indicators with a quantitative target, the arrows show if, based on past progress, the EU is on track to reach the target (see Table A.3). For indicators without a quantitative target, the arrows show whether the indicator has moved towards or away from the sustainable development objective, and the speed of this movement (see Table A.4). The assessment method therefore differs slightly for these two types of indicators, as explained further below.

TABLE A.3

Assessment categories and associated symbols

Symbol	With quantitative target	Without quantitative target
↑	On track to reach the EU target	Significant progress towards SD objectives
↗	Moderate progress towards the EU target	Moderate progress towards SD objectives
→	[Category not applicable]	No progress towards nor movement away from SD objectives
↘	Insufficient progress towards the EU target	Moderate movement away from SD objectives
↓	Movement away from the EU target	Significant movement away from SD objectives
×	Assessment not possible (for example, time series too short or break in time series)	

As far as possible, indicators are assessed over two periods:

- **Long term**, which is based on the evolution of the indicator over the past 15-year period (usually 2008 to 2023 or 2009 to 2024), if available. If not available, a period of at least 10 years is used. In exceptional cases, for example when data are not available in an annual time series, longer periods are used (see for example the long-term assessment for soil erosion).
- **Short term**, which is based on the evolution of the indicator over the past five-year period (usually 2018 to 2023 or 2019 to 2024). In a few exceptional cases, the short-term trend is calculated for shorter time periods, as long as the available data cover a period of at least three years.

Two arrows — one for the long-term and one for the short-term assessment — are therefore usually shown for each indicator, providing an indication of whether the underlying trend has been persistent or has shown a turnaround at a certain point in time.

Method 1: Indicators without quantitative targets

In case there is no quantified target, it is only possible to assess whether the indicator develops in the desired direction. An indicator is making progress towards the SD objectives if it moves in the desired direction. It is moving away from the SD objectives if it develops in the opposite direction. The assessment is based on the 'compound annual growth rate' (CAGR) formula, which assesses the pace and direction of an indicator. The CAGR formula uses the data from the first and the last years of the analysed time span and calculates the annualised rate of growth of an indicator (given in % per year) between these two data points:

$$(1)\quad CAGR = \left(\frac{y_t}{y_{t_0}} \right)^{\frac{1}{t-t_0}} - 1$$

where: t_0 = base year, t = most recent year, y_{t0} = indicator value in base year, y_t = indicator value in most recent year.

To ensure a consistent approach throughout the report, the CAGR formula is applied to all indicators irrespective of their unit, meaning that it is also used for indicators already given as percentages (such as employment or poverty rates). The assessment is based on comparing the calculated growth rate of an indicator (rounded to one decimal) with a certain threshold, which is set at 1 % growth per year. The 1 % threshold is easy to communicate, and Eurostat has used it in its monitoring reports for more than 10 years. It is discerning enough to ensure there is a significant movement in the desired direction. Furthermore, it allows a nuanced picture to be presented, with a sufficient number of indicators falling into all categories ([4]). The threshold should not be confused with the level of EU ambition on a given topic. It should also be noted that for some indicators, such as loss of biodiversity, any movement away from the SD objectives might be irreversible. The development of indicators with growth rates between 0.1 % and – 0.1 % (after rounding) is considered neutral and depicted with a dark gold arrow symbol. Table A.4 shows the applied thresholds and the associated symbols.

TABLE A.4:

Thresholds for assessing indicators without quantitative targets

Growth rate (CAGR) in relation to desired direction	Symbol
≥ 1 %	↑
< 1 % and > 0.1 %	↗
≤ 0.1 % and ≥ – 0.1 %	→
< – 0.1 % and > – 1 %	↘
≤ – 1 %	↓

Method 2: Indicators with quantitative targets

The assessment for indicators with targets is based on the CAGR described above and takes into account concrete targets set in relevant EU policies and strategies (see Table A.1). In this case, the observed growth rate is compared with the (theoretical) growth rate that would have been required up to the most recent year for which data are available to meet the target in the target year. This comparison is done for both the long-term (past 15 years) and short-term (past 5 years) periods and does not take into account projections of possible future developments of an indicator. The calculation of observed and required growth rates is based on the CAGR formula and includes the following three steps:

Observed growth rate:

$$\text{(2a)}\quad CAGR_a = \left(\frac{y_t}{y_{t_0}}\right)^{\frac{1}{t-t_0}} - 1$$

where: t_0 = base year, t = most recent year, y_{t0} = indicator value in base year, y_t = indicator value in most recent year.

Required (theoretical) growth rate to meet the target:

$$\text{(2b)}\quad CAGR_r = \left(\frac{x_{t_1}}{y_{t_0}}\right)^{\frac{1}{t_1-t_0}} - 1$$

where: t_0 = base year, t_1 = target year, y_{t0} = indicator value in base year, x_{t1} = target value in target year.

Ratio of observed and required growth rate:

$$(2c)\ R_{a/r} = \frac{CAGR_a}{CAGR_r}$$

Table A.5 shows the thresholds applied for the $R_{a/r}$ ratio and the resulting symbols. As the assessment is based on the comparison of the observed to the required growth rate, a neutral category (as included in Table A.4 above) is not applicable in this case.

TABLE A.5

Thresholds for assessing indicators with quantitative targets

Ratio of observed to required growth rate	Symbol
≥ 95 %	↑
< 95 % and ≥ 60 %	↗
< 60 % and ≥ 0 %	↘
< 0 %	↓

The growth rates (CAGR) upon which the arrow symbols are based are provided in the overview tables at the beginning of each chapter. For indicators with quantitative targets, the table gives the compound annual growth rates observed for the two assessment periods as well as the growth rates that would have been required to meet the target in the target year. For indicators without quantitative targets, only the observed compound annual growth rates are given.

Method for calculating average scores at the goal level

In the synopsis chapter of this report, average scores of the indicators are used to rank the 17 SDGs according to their level of progress over the short-term period (past 5 years). The calculation of average scores at the goal level is based on the calculations described above for the indicators that have been selected to monitor the respective SDG. For indicators without quantitative targets, the CAGR (see formula (1) above) is used. For indicators with quantitative targets, the ratio of observed to required growth (see formula (2c) above) is used.

To account for the variability of growth rates within the assessment categories used in this report (see Tables A.3 and A.4 above), the calculation of average scores at the goal-level is based on transforming the individual indicator assessments (which

represent categorical data) into numerical data. To this end, the growth rates and ratios calculated according to the formulas described above are inserted into a scoring function to calculate a score ranging from + 5 (best score) to – 5 (worst score) for each indicator. The average scores on the goal level are then calculated as the arithmetic mean of the individual scores of the indicators selected for monitoring the respective goal (including both main and multipurpose indicators). Consequently, these goal-level scores can also range from + 5 (best score) to – 5 (worst score).

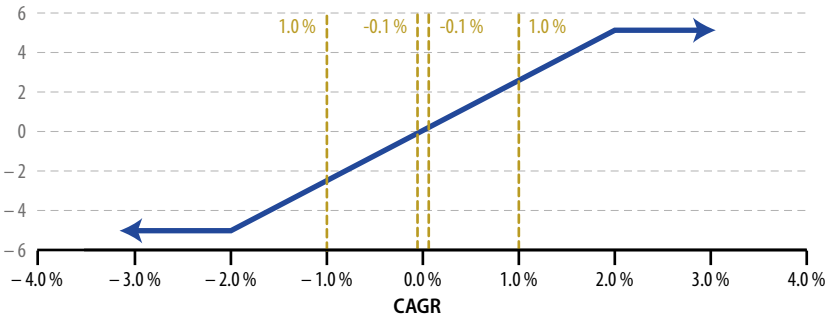
Even though the scoring functions differ for indicators with and without quantitative target, the scores at the threshold points in Tables A.3 and A.4 are harmonised to ensure that indicators with and without quantitative targets have the same 'weight' when calculating the average score at the goal level. As such, the threshold values shown in Tables A.3 and A.4 result in scores of + 2.5, 0 and – 2.5, respectively. Indicators for which trends cannot be assessed (for example due to insufficient time series) are not considered for the average score on the goal level. Note that the scoring functions use broader cut-off points than the thresholds shown in Tables A.3 and A.4 in order to allow for larger variability in the scores (an indicator with a CAGR of, for example, 1.1 % per year receives a different score than an indicator with a CAGR of, for example, 5.0 % per year, although they both fall into the same assessment category of Table A.4).

Scoring function for indicators without quantitative targets

Figure A.1 below shows the scoring function for indicators without quantitative targets. In this case, the scoring function is a linear transformation, with cut-off points set at growth rates (CAGR) of 2.0 % and – 2.0 %. Indicators with a growth rate of exactly 0.0 % receive a score of 0. Indicators with growth rates of 2.0 % or above in the desired direction receive a score of + 5, indicators with growth rates of 2.0 % or above in the wrong direction receive a score of – 5.

FIGURE A.1

Scoring function for indicators without quantitative target



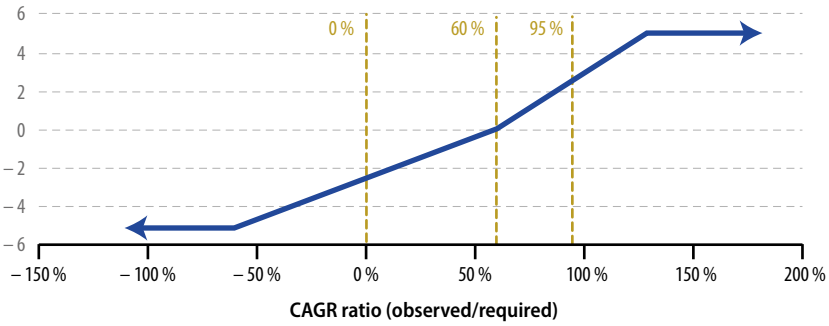
Note: The gold dotted lines represent the thresholds used for defining the assessment category of the indicator, as shown in Table A.4. The resulting scores are harmonised between indicators with and without targets (see Figure A.2).

Scoring function for indicators with quantitative targets

Figure A.2 below shows the scoring function for indicators with quantitative targets. The scoring function is not linear in this case, with cut-off points set at CAGR ratios (observed to required growth) of 130 % and – 60 % (ratios below zero indicate a movement away from the target). Indicators with a CAGR ratio of 60 % receive a score of 0. Indicators with CAGR ratios of 130 % or above receive a score of + 5, indicators with CAGR ratios of – 60 % or below receive a score of – 5. The nonlinear slope of the scoring function for indicators with targets is a result of the harmonisation of the two scoring functions with respect to the threshold levels shown in Tables A.3 and A.4, which has been done to ensure that indicators with and without quantitative targets have the same 'weight' when calculating the average score at the goal level.

FIGURE A.2

Scoring function for indicators with quantitative target



Note: The gold dotted lines represent the thresholds used for defining the assessment category of the indicator, as shown in Table A.5. The resulting scores are harmonised between indicators with and without targets (see Figure A.1).

Annex III: Geographical aggregates and countries

Geographical aggregates

EU	The 27 Member States of the European Union (see below). Unless specified otherwise, the EU time series presented in this report are consistently based on the 27 Member States ([5]).

Countries

European Union Member States

Belgium, Bulgaria, Czechia, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden

European Free Trade Association (EFTA)

Iceland, Liechtenstein, Norway, Switzerland

EU candidate countries

Bosnia and Herzegovina, Montenegro, Moldova, North Macedonia, Georgia, Albania, Serbia, Türkiye, Ukraine

Potential candidates

Kosovo ([6])

Notes

(1) This report provides a snapshot of the EU's pace of progress towards its targets over the five-year period assessed, while it does not gauge the likelihood of whether the targets can or will be met by 2030. The assessment is only based on past progress and does not take into account projections or planned policy actions. Likewise, it does not consider whether the observed pace of progress can be maintained as the EU moves closer to a target.

(2) Alternatively, the data can be accessed by entering the data code in the search field on the Eurostat website. The indicator table also contains a link to the source dataset, which generally presents more dimensions and longer time series.

(3) The following study discusses and analyses the differences in assessment methods of status (in a given year) and progress (change over time) for the EU Member States: Hametner, M., Kostetckaia, M. (2020), *Frontrunners and laggards: How fast are the EU member states progressing towards the sustainable development goals?*, Ecological Economics 177.

(4) Higher thresholds (for example, 2 %) have been tested and finally rejected, since they make the overall picture less telling, as a vast majority of indicators would fall in the two 'moderate' categories.

(5) Note that EU aggregates are back-calculated and therefore do not necessarily represent the composition of the EU in a given year.

(6) 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.

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Sustainable development in the European Union

Monitoring report on progress towards the SDGs in an EU context

2025 edition

The EU is fully committed to the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), adopted by the United Nations in September 2015. Eurostat monitors the EU's progress towards the SDGs along a set of 102 indicators. The EU indicator set has been carefully selected in cooperation with a large number of stakeholders based on criteria of statistical quality and relevance in an EU policy context. The indicators are assessed annually over a short-term (past five years of available data) and over a long-term (15 years) period. This report is the ninth in the series. It includes a section on the EU in the world and spillover effects of EU consumption. In addition, the report also covers regional differences within countries for selected SDG indicators.

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