

# Sustainable development in the European Union

## Key messages



2015 edition



# **Sustainable development in the European Union**

**Key messages**

**2015 edition**

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## Foreword of First Vice-President of the European Commission

‘You cannot manage what you don’t measure’, which is why I attach a lot of importance to this report. We must monitor the progress that Europe makes on sustainable development in an integrated way. We are, after all, pursuing economic growth as well as protecting our natural capital and promoting social justice. Measuring all these elements helps us to define, adapt and improve our policies.

The findings of the 2015 report show success and give us reasons for optimism in some areas, but also illustrate that much more needs to be done.

As First Vice-President with the overall responsibility for sustainable development within the Commission, I am strongly committed to working towards a more sustainable Union. At the global level, 2015 is a defining year for sustainable development. The September UN Summit will adopt an ambitious set of global Sustainable Development Goals. The European Union must continue to lead the way in implementing these pledges. Sustainable development has long been at the heart of the European project. It is anchored in our Treaties and in our policies.

Our long-term policy agenda must bring about a systemic change in which economic growth, social cohesion and environmental protection go hand in hand and are mutually reinforcing. This vision will define our social agenda and growth strategy, our energy and climate goals, our environmental ambitions and our research and innovation programmes. We will make sure that each of them balances social, economic and environmental considerations and contributes to a good standard of life for all Europeans, within the limits of our planet.

New developments in Europe and at international level are likely to influence the future versions of this report. The global Sustainable Development Goals will help to shape the agenda ahead, and how we measure and report on progress. This is a unifying global project: we all live on the same planet, we all breathe the same air and we all cherish our children’s future.

**Frans Timmermans**

First Vice-President of the European Commission  
and responsible for sustainable development





## Foreword of Eurostat's Director-General

The year 2015 marks an important milestone in the progress towards sustainable development, with the adoption of the Sustainable Development Goals (SDGs) and targets by the United Nations Summit of 25–27 September 2015. Following up on the Millennium Development Goals, the SDGs constitute a new global agenda for development up to 2030, striving to reconcile the objectives of economic progress while safeguarding the natural environment and promoting social justice.



Sustainable development has long been on the political agenda of the European Union. The EU sustainable development strategy (EU SDS) brings together the many strands of economic, social and environmental policy under one overarching objective — to continually improve the quality of life and well-being for present and future generations. The Eurostat monitoring report, based on the EU set of sustainable development indicators and published every two years, provides an objective, statistical picture of progress towards the goals and objectives of the EU SDS.

In the rather busy time we live in, there is an increasing need for presenting complex information in a concise way. The 'lite' version of the 2015 monitoring report therefore makes use of the universal language of visuals, offering a shortcut to the essence of the messages delivered through the full version of the monitoring report.

I hope that this publication provides you with a useful snapshot of the key trends related to the sustainable development in the European Union. For a more comprehensive picture, I invite you to read the complete 2015 edition of the monitoring report <sup>(1)</sup> available on the Eurostat website.

**Walter Radermacher**  
Director-General, Eurostat

<sup>(1)</sup> See Eurostat (2015), *Sustainable development in the European Union — 2015 monitoring report of the EU Sustainable Development Strategy*, Publications Office of the European Union, Luxembourg.



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**Data coverage and direct links to Eurostat's database:**

The data presented in this publication refer to the data available on Eurostat's website in early July 2015.

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:

<http://ec.europa.eu/eurostat/data/database>

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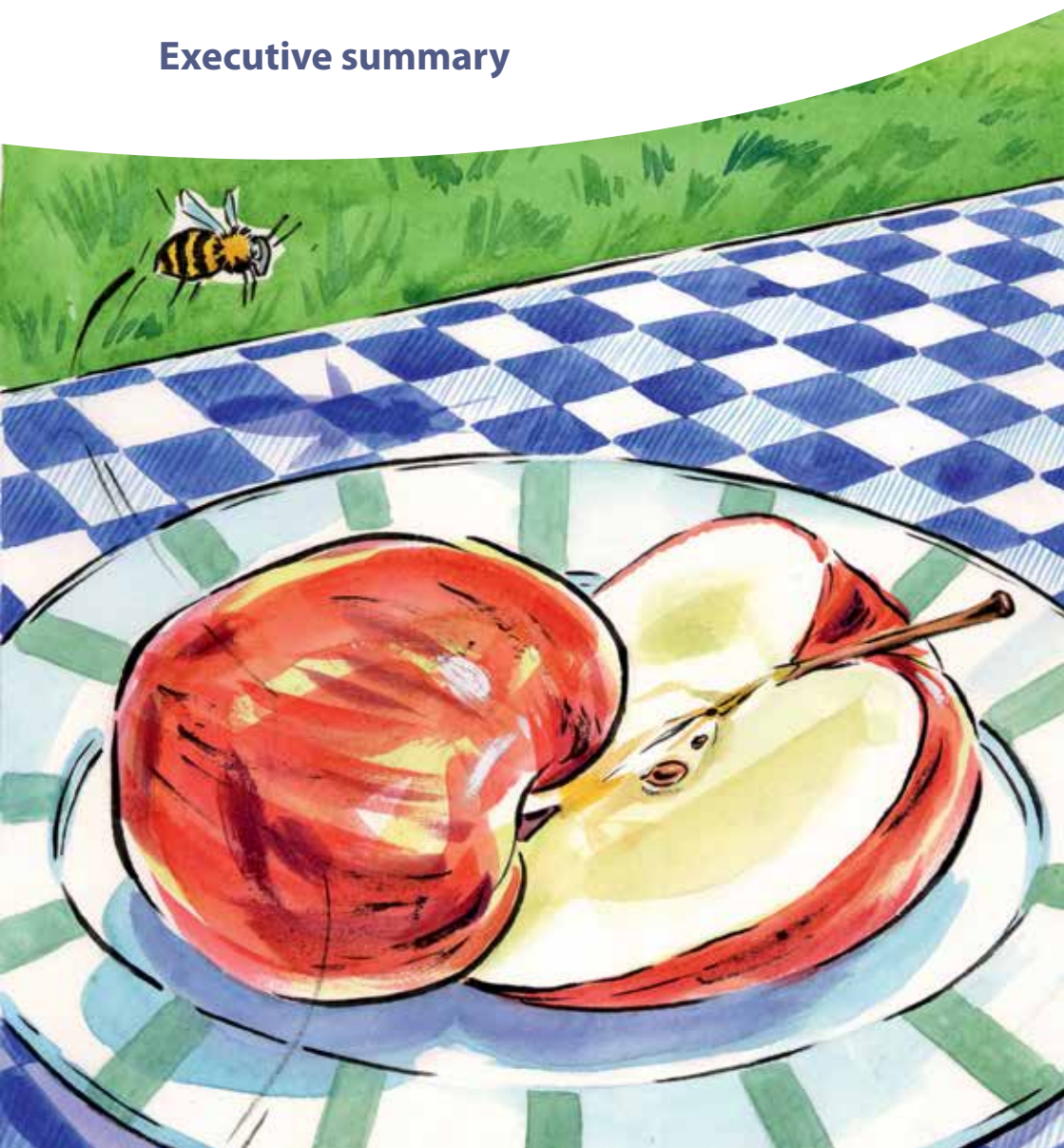
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## Executive summary





## Executive summary

Sustainable development policy aims to achieve a continuous improvement in citizens' quality of life and well-being. This involves the pursuit of economic progress while safeguarding the natural environment and promoting social justice. The economic, environmental and social dimensions are all part of the EU Sustainable Development Strategy (EU SDS) adopted in 2001 and renewed in 2006 <sup>(1)</sup>. The EU SDS also includes an institutional and a global dimension, involving the adoption of good governance practices in the EU and the promotion of a global partnership for worldwide sustainable development. In view of these five dimensions, the EU SDS defines objectives and targets aimed at putting the EU on a path to sustainable development. This monitoring report provides a quantitative assessment of whether the EU is moving in the right direction.

Progress towards the EU SDS objectives is evaluated using a set of sustainable development indicators (SDIs) grouped into ten thematic areas. More than 100 indicators structured around the ten themes are presented in this report. Each theme has a headline indicator that shows whether the EU has made overall progress towards EU SDS objectives and targets. One development that may affect future versions of this monitoring report will be the adoption of Sustainable Development Goals (SDGs) by UN Member States in September 2015. These goals will shape the global agenda for sustainable development for the coming decades.

This monitoring report evaluates progress over two periods: the long term, accounting for progress since the year 2000; and the short term, looking at the trends over the past five years. This summary focuses on the long-term trends of the headline indicators. Some short-term trends are also analysed in cases where they deviate substantially from the respective long-term trends.

### Is the EU moving towards sustainable development?

As illustrated in Table A.1, the overall picture is rather mixed across indicators and over time for the ten thematic areas covered by the EU SDI set. Progress towards sustainable development is summarised below, organised by the five dimensions of the EU SDS.

#### **Economic development: real GDP per capita and resource productivity in the EU have improved over the long term**

In terms of the economic dimension of sustainable development, the headline indicators depict an overall favourable picture for the EU. Moderately favourable changes have been observed in **real GDP per capita**, the headline indicator of the 'socioeconomic development' theme. The indicator increased by more than 13% between 2000 and 2014. The upward trend was continuous prior to the economic

<sup>(1)</sup> Council of the European Union (2006), *Review of the Sustainable Development Strategy (EU SDS) — Renewed Strategy*, 10917/06.

**Table A.1:** Evaluation of changes in the headline indicators of the SDI set, EU-28 <sup>(1)</sup>

SDI theme	Headline indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
<b>Socioeconomic development</b>	Real GDP per capita		
<b>Sustainable consumption and production</b>	Resource productivity	<sup>(2)</sup>	
<b>Social inclusion</b>	People at risk of poverty or social exclusion	<sup>(3)(4)</sup>	<sup>(4)</sup>
<b>Demographic changes</b>	Employment rate of older workers	<sup>(2)</sup>	
<b>Public health</b>	Life expectancy and healthy life years	<sup>(2)</sup>	
<b>Climate change and energy</b>	Greenhouse gas emissions		
	Primary energy consumption		
<b>Sustainable transport</b>	Energy consumption of transport relative to GDP		
<b>Natural resources</b>	Common bird index	<sup>(5)</sup>	<sup>(5)</sup>
<b>Global partnership</b>	Official development assistance	<sup>(2)</sup>	
<b>Good governance</b>	[No headline indicator]	:	:

<sup>(1)</sup> An explanation of the evaluation method and the meaning of the weather symbols is provided in the Introduction.

<sup>(2)</sup> From 2002.

<sup>(3)</sup> From 2005.

<sup>(4)</sup> Evaluation based on EU-27.

<sup>(5)</sup> From 2004.

<sup>(6)</sup> EU aggregate with changing composition.



crisis, but was interrupted in 2008 as the financial market turmoil spilled over into the real economy. Following a modest recovery in 2010 and 2011 and another, less pronounced contraction in 2012 and 2013, real gross domestic product (GDP) per capita grew again in 2014.

The headline indicator of the ‘sustainable consumption and production’ theme has developed even more favourably in the long term. **Resource productivity** (the ratio between GDP and the total amount of materials directly used to produce it) has improved substantially since 2002 thanks to an overall reduction in material consumption and an increase in GDP. This means the EU has been able to generate higher economic value for each unit of material used. However, the most pronounced reduction in material consumption occurred at the height of the economic crisis, between 2008 and 2009. During this period, the drop in material consumption outstripped the fall in GDP. Therefore, it is possible that the observed improvement in resource productivity does not represent a major turnaround in resource use patterns, but is rather a result of the recent economic slump and its negative effect on resource-intensive industries, such as construction.

### **Social development: improvements in public health and demographic change are evident, but poverty increased sharply since the start of the economic crisis**

Progress towards the social dimension of sustainable development has been uneven. Indicators that are strongly linked to economic activity have moved in a clearly unfavourable direction since the start of the economic crisis. This is particularly true in the area of ‘social inclusion’. In other areas, however, some progress is evident. The headline indicators of the ‘demographic change’ and ‘public health’ themes reveal a favourable picture.

The headline indicator of the ‘social inclusion’ theme has developed in a moderately unfavourable way over the long-term period. Between 2005 and 2013, 2.7 million people were lifted out of the **risk of poverty or social exclusion**, but this was not enough to keep the EU on track towards the Europe 2020 poverty reduction target. The number of people affected by one or more forms of poverty increased sharply with the start of the economic crisis in late 2008, which offset some progress in the previous years. It peaked at 123 million people in 2012 before falling slightly in 2013. Almost one in four people in the EU were at risk of poverty or social exclusion in 2013. As a result, the indicator’s short-term trend has been clearly unfavourable.

The EU has progressed in a more favourable direction for other social objectives. The **employment rate of older workers**, the headline indicator of the ‘demographic changes’ theme, has increased continuously since 2002. In 2013, the EU finally met its 50 % employment target for older workers, which was originally set for 2010. Although the trend has been positive for both men and women, the increase in the employment rate of older men slowed down in recent years. This has led to a narrowing of the gender employment gap among older workers. Compared with



prime-aged and younger workers, older people enjoyed more secure job positions during the economic crisis.

**Life expectancy** increased moderately in the long run, reflecting some positive developments in the ‘public health’ theme. A girl born in the EU in 2013 can expect to live on average 83.3 years and a boy 77.8 years. This constitutes an increase of 1.8 years for females and 2.6 years for males since 2004. Despite these longer life spans, the time men and women can expect to live in good health has not increased. Therefore, people on average are not expected to spend all the years of life gained in good health, but will have to live with some kind of disability or disease.

### **Environmental development: weak economic activity in the short term has reduced some pressure on the environment, but overall progress is mixed**

Regarding the environmental dimension of sustainable development, the headline indicators show mixed results. Environmental indicators linked to economic performance have developed favourably in the short term, but this is mainly due to reduced economic activity. This is evident in the reduction of greenhouse gas emissions and energy consumption. However, some setbacks can be expected with the recent economic recovery. Despite some mildly positive long-term developments, the pressure on natural resources has increased in the short term.

Clearly favourable developments have been observed for one of the two headline indicators of the ‘climate change and energy’ theme. **Greenhouse gas (GHG) emissions** have steadily decreased in the long run. If this trend continues, the EU is likely to surpass its Europe 2020 target of reducing emissions by 20 % compared with 1990 levels. In 2012, the EU was only two percentage points away from its target. This favourable trend has been largely driven by a transformation of the energy sector, in particular by gains in energy efficiency and a switch from oil and coal to natural gas and renewable sources. However, the recent economic downturn and the associated decline in production and energy use have also contributed to this trend. The economic recovery could therefore increase GHG emissions in the coming years.

**Primary energy consumption**, the second headline indicator of the ‘climate change and energy’ theme, has developed in an unfavourable direction over the long term. This is largely due to a substantial increase in the consumption of primary energy in the early 2000s. The situation has changed considerably in the most recent period. Since 2008, primary energy consumption has declined more or less continuously as a result of effective energy efficiency policies and weak economic performance in the EU. The reduction has been sufficient to place the EU back on track to meet its Europe 2020 target of improving energy efficiency by 20 % by 2020.

Similar trends can be observed for the headline indicator of the ‘sustainable transport’ theme. **Energy consumption of transport relative to GDP** has followed a moderately unfavourable long-term trend but a clearly favourable short-term trend. The indicator has fallen more or less continuously since 2000, which does not necessarily





reflect better environmental outcomes. In fact, between 2000 and 2007, transport energy use increased, although less than the increase in GDP. However, the situation has changed in the short term. Since the start of the economic crisis in 2008, the demand for energy has dropped, while GDP has declined at a slower pace. It is unclear whether this favourable short-term trend will continue with the economic recovery.

The population status of **common birds**, the headline indicator in the ‘natural resources’ theme, has deteriorated in the long term. Short-term developments have been even more aggravated as a result of the substantial decline in the abundance of farmland birds. Overall, biodiversity within the EU has been under continuous pressure by the transformation of land, which is increasingly used for agriculture, infrastructure and human settlements. Although biodiversity concerns are increasingly being integrated into EU policies, further efforts may be required to reverse the negative trend.

### **Global partnership: the EU is not on track to meet its target on official development assistance, but shows clear progress in other areas**

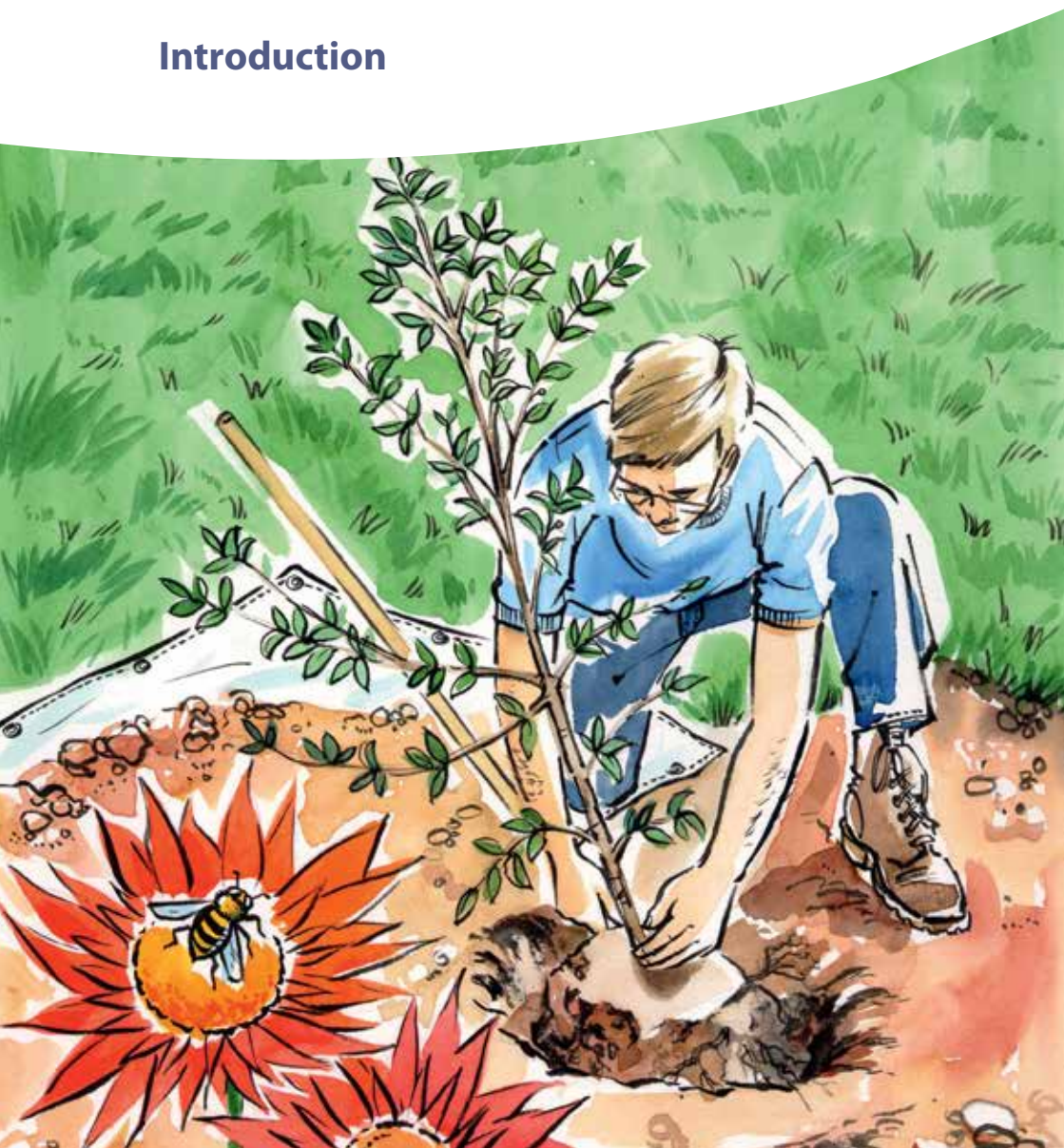
Regarding commitments in the area of ‘global partnership’, the share of gross national income (GNI) spent by the EU on **official development assistance** (ODA) has increased only marginally since 2004. The increase has been too slow to place the EU on track to meet its long-standing target of dedicating 0.7% of GNI to ODA in 2015. To some extent, this is linked to the EU’s weakened economic situation since the start of the economic and financial crisis in 2008. Nonetheless, the EU remains the world’s largest donor and its share of ODA to low-income countries has increased more markedly over the long term. It should also be noted that most indicators in the ‘global partnership’ theme display favourable trends.

### **Good governance: no headline indicator**

The theme ‘good governance’ has no headline indicator because no indicator is considered to be sufficiently robust and policy-relevant to provide a comprehensive overview of the good governance concept.



## Introduction





## Introduction

Sustainable development is a fundamental and overarching objective of the European Union, enshrined in the Treaty <sup>(1)</sup>. Measuring progress towards sustainable development is an integral part of the EU Sustainable Development Strategy (EU SDS), and it is Eurostat's task to produce a monitoring report every two years based on the EU set of sustainable development indicators (SDIs). This 2015 edition of the monitoring report is the sixth quantitative assessment of progress of the EU towards its sustainable development objectives <sup>(2)</sup>.

### The EU set of sustainable development indicators (SDIs)

#### Background

The first steps of Eurostat towards measuring sustainable development (SD) go back to the 1990s. Following the United Nations (UN) Conference on Environment and Development held in Rio de Janeiro in 1992 (also known as 'Rio Earth Summit'), Eurostat started working closely with the UN Commission on Sustainable Development (UNCSD) on global indicators of sustainable development, and published indicator compilations in 1997 <sup>(3)</sup> and in 2001 <sup>(4)</sup>.

A first EU SDI set was proposed following the adoption of the first EU SDS in 2001 <sup>(5)</sup> and was endorsed by the Commission in 2005 <sup>(6)</sup>. The set was slightly revised after the review of the first EU SDS <sup>(7)</sup> that led to an adoption of a renewed strategy in 2006 <sup>(8)</sup>. Since then, several reviews of the SDI set have been carried out by the Commission with the assistance of the working group on SDIs, which is composed of statisticians and policy representatives at national and EU level. Nevertheless, the current set of SDIs, as presented in this report, is still close to that endorsed in 2005.

#### The thematic framework

The EU SDI set is organised in a theme-oriented framework, which provides a clear and easily communicable structure relevant for political decision-making. The framework is based on current priority policy issues, but can be adjusted to possible changes in these priorities and objectives which may emerge over time.

<sup>(1)</sup> Article 3 of the Treaty on European Union.

<sup>(2)</sup> For previous assessments based on the EU SDIs, see <http://ec.europa.eu/eurostat/web/sdi/publications>.

<sup>(3)</sup> Eurostat (1997), *Indicators of sustainable development: A pilot study following the methodology of the United Nations Commission on Sustainable Development*, Luxembourg, Office for Official Publications of the European Union.

<sup>(4)</sup> Eurostat (2001), *Measuring progress towards a more sustainable Europe: Proposed indicators for sustainable development*, Luxembourg, Office for Official Publications of the European Union.

<sup>(5)</sup> Göteborg European Council (2001), *Presidency conclusions*, 15 and 16 June 2001.

<sup>(6)</sup> Communication from Mr Almunia (2005), *Sustainable development indicators to monitor the implementation of the EU Sustainable Development Strategy*, SEC(2005) 161.

<sup>(7)</sup> Commission Communication (2005), *On the review of the Sustainable Development Strategy — A platform for action*, COM(2005) 658.

<sup>(8)</sup> Council of the European Union (2006), *Review of the EU Sustainable Development Strategy (EU SDS) — Renewed Strategy*, 10917/06.



The SDI framework covers ten thematic areas belonging to the economic, the social, the environmental, the global and the institutional dimensions:

- socioeconomic development,
- sustainable consumption and production,
- social inclusion,
- demographic changes,
- public health,
- climate change and energy,
- sustainable transport,
- natural resources,
- global partnership,
- good governance.

Each theme is further divided into subthemes and includes three different levels of indicators (see the following section on the different kinds of indicators included in the set).

The main body of the current EU SDS, essentially unchanged since 2006, is built around seven key challenges, with corresponding operational objectives and targets as well as associated actions and measures <sup>(9)</sup>. In addition, a number of key objectives and policy guiding principles serve as a basis for the strategy. The SDI framework additionally includes a theme on ‘socioeconomic development’ which focuses on the key objective of economic prosperity, and a theme on ‘good governance’ related to the guiding principles of the EU SDS and other cross-cutting issues.

The most recent changes to the indicator set followed the adoption of the Europe 2020 strategy <sup>(10)</sup> and its eight headline indicators, which have been integrated into the SDI framework in the themes ‘socioeconomic development’, ‘social inclusion’ and ‘climate change and energy’.

Over the course of several revisions — the latest dating from an online discussion held with the members of the SDI working group in late 2014 — some changes have been made to reflect trends in EU policies related to sustainable development and to adjust to data availability. The overall framework has, however, proved sufficiently robust to remain unchanged.

<sup>(9)</sup> The topics ‘social inclusion, demography and migration’ are considered together in one EU SDS key challenge, but are represented by two separate themes (‘social inclusion’ and ‘demographic changes’) in the SDI framework. This division reflects the different nature of these two issues.

<sup>(10)</sup> European Commission (2010), *Europe 2020 — A strategy for smart, sustainable and inclusive growth*, COM(2010) 2020 final.

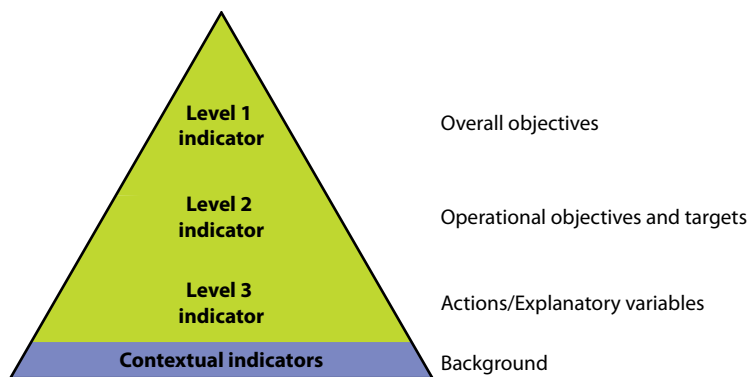


## The different kinds of indicators

The EU SDI set is structured as a three-storey pyramid, distinguishing between three levels of indicators. This approach not only reflects the structure of the EU SDS (overall objectives, operational objectives, actions), but also responds to different kinds of user needs. The three-level pyramid is complemented with contextual indicators, as illustrated below:

- At the top (**first level**) of the pyramid are the headline indicators, monitoring the ‘overall objectives’ related to the seven key challenges of the EU SDS. On the whole they are widely used indicators with a high communicative and educational value. They are robust and available for most EU Member States, generally for a period of at least five years.
- The **second level** of the pyramid consists in most cases of indicators related to the ‘operational objectives’ of the Strategy. They are the lead indicators in their respective subthemes. They are robust and available for most EU Member States for a period of at least three years.
- The **third level** consists of indicators related to actions described in the Strategy or to other issues which are useful for analysing progress towards the Strategy’s objectives. Breakdowns of higher level indicators, for example, by gender or income group, are in some cases also found at level 3.
- **Contextual indicators** are part of the SDI set, but they either do not directly monitor a particular SDS objective, or they are not policy responsive. Generally, they are difficult to interpret in a normative way. They are included in the set because they provide valuable background information on issues having direct relevance for sustainable development policies and are helpful to an understanding of the topic.

**Figure B.1:** The indicator pyramid of the EU SDI framework





## Data coverage and sources

The SDI framework contains more than 100 indicators, divided into ten themes as described above. The complete set of indicators is available on the Eurostat website at <http://ec.europa.eu/eurostat/sustainabledevelopment>. For the purpose of the monitoring report it was necessary to focus the analysis on a meaningful sub-set, by selecting those indicators that are considered most important for illustrating the overall EU progress towards sustainable development. This means that, for example, some third-level indicators and contextual indicators are not included in the analysis. The sub-set of indicators selected for this 2015 edition of the monitoring report is presented in Annex II of this publication.

Data are mainly presented for the aggregated EU-28 level. In the cases when EU-28 aggregated data are not available, EU-27 data are presented instead, referring to the situation of the 27 EU Member States before the accession of Croatia to the EU in July 2013. Also, whenever EU-28 data are only available for a very short time period, the EU-27 data are presented in addition to the EU-28. In a few cases (in particular for indicators on ‘global partnership’) data are shown for the EU-15 aggregate level, referring to the EU before the enlargement of 2004.

In addition to the 28 EU Member States, data for EU candidate countries and 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.

Additionally, global comparisons of the EU with other major economies in the world (for example, the United States, Japan and China) are included, mainly for the SDI headline indicators and the Europe 2020 indicators.

The data presented in this report were mainly extracted in early July 2015. 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, notably other European Commission services, the European Environment Agency (EEA), the OECD and the World Bank.

The Eurostat website contains a section dedicated to the SDIs in the ten thematic areas of the EU SDS <sup>(1)</sup>. Eurostat online data codes, such as `tsdec100` and `nama_10_gdp` <sup>(2)</sup>, allow easy access to the most recent data on Eurostat’s website. In this report, these online data codes are given as part of the source below each table and figure. The reader is led directly to the most recent data when clicking on the online data code. Online data codes lead to an open dataset which generally contains more dimensions and longer time series using the Data Explorer interface. Alternatively, data can be accessed by entering the data code into the search field on the Eurostat’s website.

<sup>(1)</sup> See <http://ec.europa.eu/eurostat/web/sdi/indicators>

<sup>(2)</sup> There are two types of online data codes: tables have eight-character codes the first of which is the letter ‘t’ — for example `tps00001` and `tsdph220`, while databases have codes that use an underscore ‘\_’ within the syntax of the code, for example `nama_gdp_c` or `demo_pjan`.





Eurostat's website also includes a section called 'Statistics Explained', accessible at [http://ec.europa.eu/eurostat/statistics-explained/index.php/Main\\_Page](http://ec.europa.eu/eurostat/statistics-explained/index.php/Main_Page). This is an official Eurostat website presenting the full range of statistical subjects covered by Eurostat, including the EU SDS, in an easily understandable way. It works in a similar way to Wikipedia. Together, the articles make up an encyclopaedia of European statistics for everyone, completed by a [statistical glossary](#) clarifying all terms used and by numerous links to further information and the latest data and metadata, a portal for occasional and regular users.

## Treatment of breaks in time series

Breaks in time series occur when the data collected in a specific year are not completely comparable with the data from previous years. This could be caused by a change in the classification used, the definition of the variable, the data coverage and/or other reasons. Breaks in time series could affect the continuity and consistency of data over time. However, it should be noted that such breaks do not necessarily undermine the reliability of time series. There are certain techniques applied by Eurostat and other statistical agencies to ensure the continuity of time series in the presence of breaks.

In the course of preparing this 2015 edition of the monitoring report, a case-by-case assessment of breaks in times series has been conducted to determine the extent to which a break would affect the assessment of an indicator. In cases where a break was considered significant enough to affect the evaluation of an indicator or the comparability between countries, the analysis of the indicator was adjusted accordingly.

Breaks in times series are indicated throughout the report in footnotes below the graphs.

## Evaluation of indicators

### What is evaluated?

The main purpose of this publication is to assess progress towards sustainable development based on the objectives and targets set out in the EU SDS and other relevant policy initiatives such as the Europe 2020 strategy. The object of the evaluation is the relative direction and rate of change in the light of sustainable development objectives, not the 'sustainability' <sup>(13)</sup> of the situation at any point in time. It is therefore a relative, not an absolute assessment.

Ideally, each indicator would be evaluated against either a quantitative target set within the political process or a scientifically established threshold. However, many

<sup>(13)</sup> The concept of sustainable development should be distinguished from that of sustainability. 'Sustainability' is a property of a system, whereby it is maintained in a particular state through time. The concept of sustainable development refers to a process involving change or development. The strategy aims to 'achieve continuous improvement of quality of life', and the focus is therefore on sustaining the process of improving human well-being. Rather than seeking a stable equilibrium, sustainable development is a dynamic concept, recognising that changes are inherent to human societies.







of the objectives of the EU SDS lack an explicit quantified and measurable target. In these cases, the indicator is evaluated according to a set of common and objective rules to ensure a consistent approach across indicators and to avoid ad hoc value judgments. These rules, although imperfect, provide a simple, transparent, consistent and easily understandable approach across the report.

There are certain limitations of the evaluation method applied in this publication, in particular regarding the evaluation of the direction and magnitude of change of some indicators. For some indicators, such as household saving, it is difficult to determine the desired direction of change; for example, while reducing household saving could be beneficial in the short term, it could be economically detrimental in the long term. Evaluating the magnitude of change could also be difficult for some indicators. In particular, environmental trends tend to be irreversible, therefore even a small change in the indicator could be considered strictly unfavourable. For consistency purposes, the same assessment categories are used for all indicators evaluated in the report.

## How is an indicator evaluated?

The report evaluates progress by means of four categories depending on how favourable or unfavourable the developments have been over the assessment period. The four categories are represented visually by means of weather symbols, as shown in Table B.1.

**Table B.1:** Categories and associated weather symbols for the evaluation of the indicators

Evaluation category	Symbol
Changes are <b>clearly favourable</b> in relation to SD objectives	
<b>No or moderately favourable</b> changes in relation to SD objectives	
Changes are <b>moderately unfavourable</b> in relation to SD objectives	
Changes are <b>clearly unfavourable</b> in relation to SD objectives	
Contextual indicator or not enough data available for an evaluation	:

It is important to note that the evaluation presented in this report is based only on the development of the EU and does not take into account international comparisons. As a result, the evaluation of certain indicators might disregard some important aspects and present a different picture than expected. For example, looking at





labour productivity, the evaluation could come to a different conclusion if considering the productivity growth gap between the EU and the US. However, for consistency purposes such international comparisons are not taken into account for the evaluation of the indicators.

This publication assesses progress for the EU as a whole since the adoption of the EU SDS <sup>(14)</sup>. Since this constitutes a rather long time period (over ten years for most indicators), it is important to consider whether a trend has been continuous over time or whether there has been a turnaround in the development over the years. In order to account for such recent fluctuations, the evaluation of each indicator in this publication is carried out over two time periods:

- A **long-term evaluation** is based as far as possible on the evolution of the indicator between 2000 and the latest year of data available for the EU-28 <sup>(15)</sup>. If data are only available for five consecutive years or less, no long-term evaluation is made <sup>(16)</sup>. Previous editions of the report only monitored long-term trends of the indicators. Since the evaluation method itself has not changed, the results of the long-term evaluation in this edition are comparable with the evaluation results in previous editions.
- The long-term evaluation is complemented by a **short-term evaluation** based on the indicator evolution during the latest five-year period <sup>(17)</sup>. This new component of the monitoring report allows comparing the results of the short-term and long-term evaluation in order to reveal whether a trend has been continuous over the years or whether the indicator has deviated from its long-term path at a certain point in time.

Both the long- and the short-term evaluations are based on the ‘compound annual growth rate’ (CAGR) formula, which assesses the pace and direction of the evolution of an indicator. This method uses the data from the first and the last years of the evaluated time span and calculates the average annual rate of change of the indicator (in %) between these two data points. Usually, the long-term evaluation uses the year 2000 as a base, while the short-term evaluation uses the year 2007, 2008 or 2009, depending on whether the latest available data are for 2012, 2013 or 2014 respectively. It is important to note that the short-term evaluation considers five year-on-year changes, which consequently involve six consecutive years.

<sup>(14)</sup> Although it could be argued that longer time periods are needed to monitor sustainable development, it is the purpose of this publication to assess progress since commitments were taken on the various issues monitored. Year 2000 is used as reference as it is the last year before the adoption of the EU SDS in 2001.

<sup>(15)</sup> EU aggregates are back-calculated when sufficient information is available. For example, the EU-28 aggregate is often presented for periods prior to the accession of Croatia in 2014 and the accession of Bulgaria and Romania in 2007, as if all 28 Member States had always been members of the EU. The label is changed if the data refer to another aggregate (EU-27 or EU-25) or a note is added if the data refer to a partial aggregate created from an incomplete set of country information (no data for certain Member States or reference years).

<sup>(16)</sup> In the case when data for the EU-28 are available for a rather short time period and the trend is not in line with the long-term trend observable for the EU-27, data for the EU-27 are used for the long-term evaluation instead.

<sup>(17)</sup> The short-term evaluation is based on data from at least three consecutive years. If these are not available for the EU-28, data for the EU-27 are instead used for the evaluation if available.





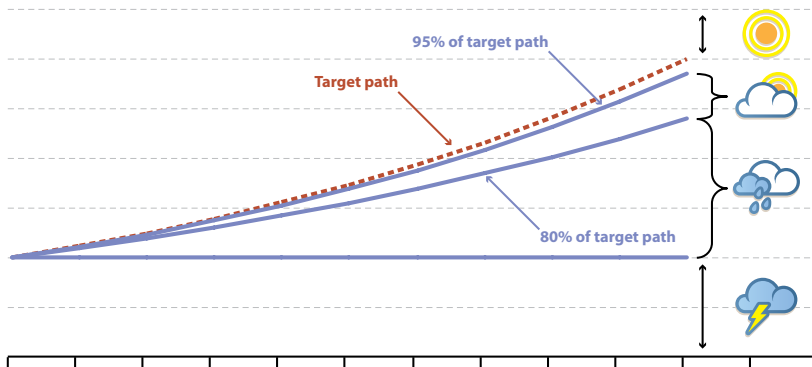
Depending on the type of indicator and the presence or absence of a quantitative target, two different calculation methods have been applied:

### 1. Indicators with quantitative targets:

Whenever possible, the evaluation of indicators takes into account concrete targets set in relevant EU policies and strategies. Most of the targets included in the EU SDS from 2006 (with a time horizon until 2010) have already been replaced by newer targets (with a time horizon up to 2020 and beyond) in more recent policy initiatives. As a consequence, most of the targets used for the monitoring of the progress in this 2015 edition actually stem from the Europe 2020 strategy and other relevant initiatives.

In the presence of a quantified political target (such as for greenhouse gas emissions or employment), the actual rate of change of the indicator (based on) is compared with the theoretical rate of change that would be required to meet the target in the target year. If the actual rate is 95 % or more of the required rate, the indicator is evaluated as clearly favourable ('on target path'). Between 80 % and 95 %, it is evaluated as moderately favourable ('close to target path'), and between 0 % and 80 %, it is evaluated as moderately unfavourable ('far from the target path'). The evaluation is clearly unfavourable if the actual trend is pointing in the wrong direction — away from the target path. Figure B.2 shows an example for an indicator for which an increase constitutes the desired direction in terms of SD objectives, such as 'share of renewable energies'.

**Figure B.2:** Schematic representation of the evaluation of indicators with quantitative targets



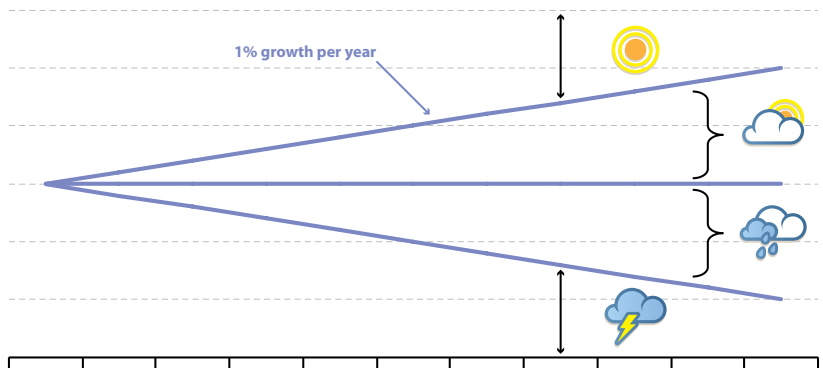


## 2. Indicators without quantitative targets:

In the absence of a quantified target, the evaluation of an indicator is entirely based on the calculation of the observed rate of change of the indicator (based on the CAGR) and using the following thresholds: A change of more than 1 % per year is considered clearly favourable or unfavourable (depending on the direction of the change in relation to SD objectives). A favourable annual change of more than 1 % corresponds to the ‘sun’ symbol in Table B.2, whereas an unfavourable change of similar magnitude corresponds to the ‘thunderstorm’ symbol. A change between 0 % and 1 % per year is considered moderately favourable or unfavourable, again depending on the direction of the change, thus corresponding to the ‘sun/cloud’ and ‘rain’ symbols in Table B.2 respectively.

Figure B.3 shows an example of an indicator for which an increase constitutes the desired direction in terms of SD, such as ‘organic farming’.

**Figure B.3:** Schematic representation of the evaluation of indicators without quantitative targets



### *Decoupling indicators as a special case:*

For some of the indicators the issue of interest is not the change in one single trend but in the relationship of two trends. One of these two trends is usually an economic variable (such as GDP), and the other one an environmental variable that shows the environmental pressures exerted by the economic activity. For example, this is the case when analysing trends in resource productivity, where the focus is put on the relationship between the trends in GDP and material consumption.

These are called ‘decoupling’ indicators because they show the strength of the link (or the ‘coupling’) between the economic and the environmental variable. In relation to sustainable development, the aim is to achieve a ‘decoupling’ of these two variables, so that continued economic growth does not lead to a further increase in environmental degradation.



It is important to note that the evaluation method used for this monitoring report does not look at the correlation of the two underlying indicators (pressure and driving force) but at the development of the pressure variable in relation to the development of the driving force variable<sup>(18)</sup>. Overall, the evaluation is considered favourable if the (environmental) pressure variable is decreasing and unfavourable if it is increasing. Depending on the direction and magnitude of change in the pressure variable in relation to the driving force, there are four different degrees of decoupling and thus four evaluation categories:

- *Absolute decoupling*: The situation when the pressure on the environment decreases while the (economic) driving force increases is considered to be ‘clearly favourable’. This is also the case when the driving force is decreasing but at a slower pace than the decrease in the pressure variable. These situations represent ‘absolute decoupling’ between the driving force (economic) variable and the pressure (environmental) variable.
- *Favourable relative decoupling*: When the pressure on the environment decreases but at a slower pace than the decrease in the economic variable, the situation is referred to as ‘favourable relative decoupling’ and is evaluated as ‘moderately favourable’.
- *Unfavourable relative decoupling*: When the environmental pressure increases but at a slower pace than the increase in the driving force, the situation is referred to as ‘unfavourable relative decoupling’. It is evaluated as ‘moderately unfavourable’ because of the increase in the environmental impacts.
- *No decoupling*: When the pressure on the environment increases at the same or higher rate than the growth of the economic variable, or if the pressure on the environment increases while the economic variable regresses, it is referred to as a situation of ‘no decoupling’ and is evaluated as ‘clearly unfavourable’.

## Graphical representation of indicators with quantitative targets

For each indicator with a quantitative target, the graph on the indicator page shows a ‘target path’ — a dashed line which is in a different colour from the observed path of the indicator. It represents a theoretical path which starts in the year in which the target has been set in a policy process or which has been defined as a base year for the target. The target path finishes at the target year by which the desired (target) value of the indicator would ideally be reached. The slope of the target path is calculated using the CAGR formula described above, thus it has an exponential form<sup>(19)</sup>. Figure B.4 shows as an example both the observed and the target paths of the ‘total employment rate’ indicator. Most targets presented in the report apply to all 28 EU

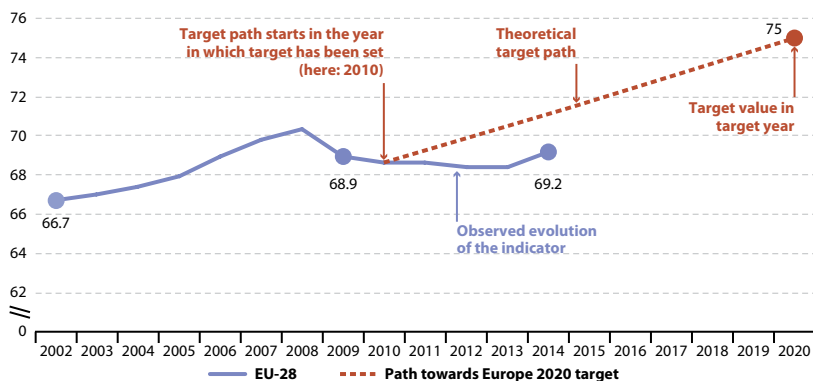
<sup>(18)</sup> For more information and specific examples of decoupling indicators see: <http://europa.eu/!Bd93tk>

<sup>(19)</sup> Although the target path has an exponential form, it may appear linear due to the rather short period shown in the graph.



Member States, therefore the target path refers to the desired speed and direction of change for the EU-28 as a whole. However, for some indicators EU-28 data are only available for a short period or not at all. In these cases EU-27 data are also presented in the graph.

**Figure B.4:** Graphical representation of an indicator with a quantitative target



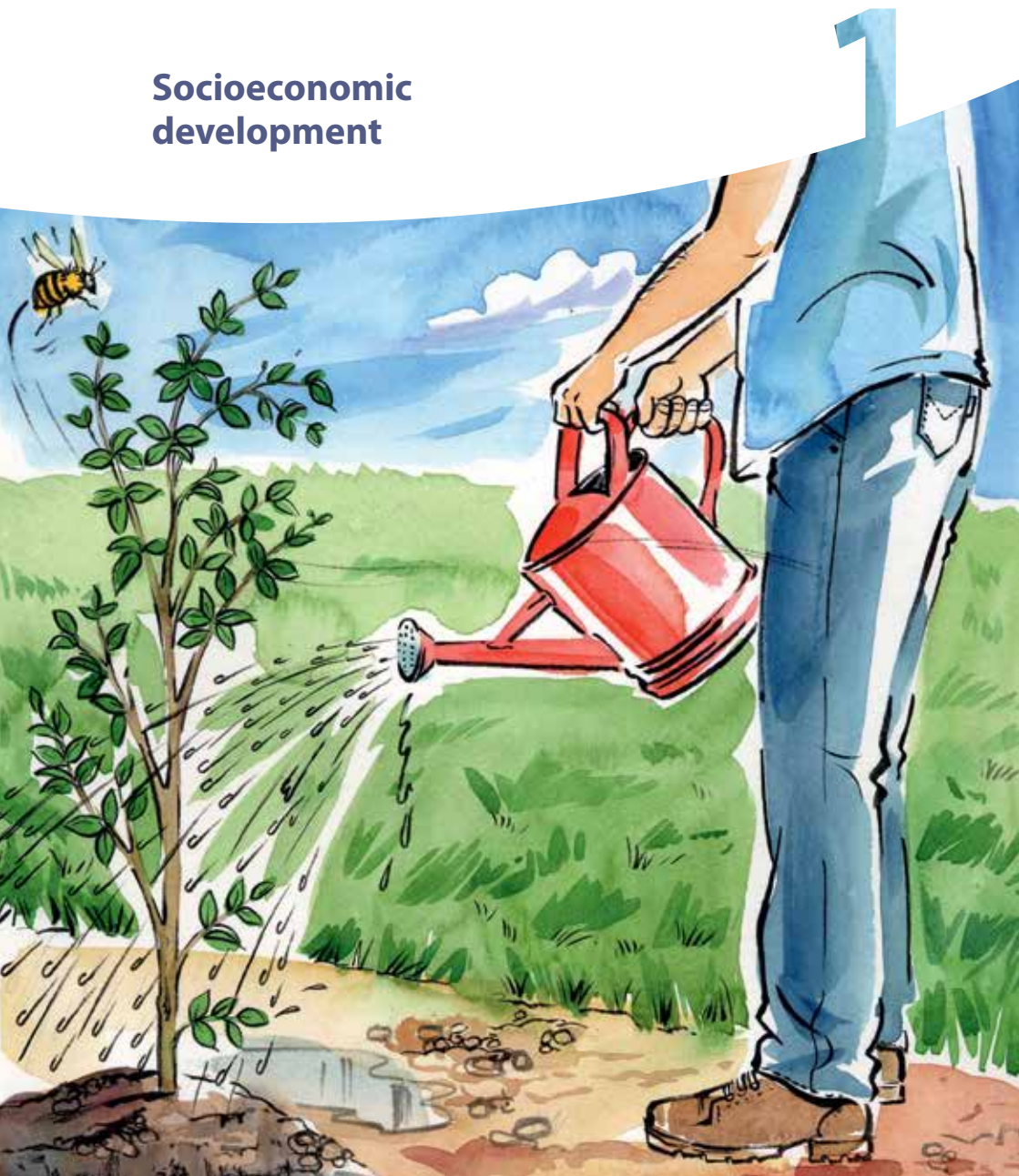
## About this 'lite' version of the monitoring report

This publication is a 'lite' version of the 2015 edition of the 'Sustainable Development in the European Union' monitoring report <sup>(20)</sup>. It makes use of the universal language of visuals, offering a shortcut to the essence of the messages delivered in the full edition, thus providing a snapshot of the key trends related to sustainable development in the EU.

While not all graphs published in the full edition are included in this 'lite' version, their original numbering has been kept the same to allow readers to easily find the detailed analyses of the trends shown in the full monitoring report. This means, for example, Figure 1.16 in this publication is identical to Figure 1.16 in the full edition. The sequence of the figures is, however, slightly different.

<sup>(20)</sup>Eurostat (2015), *Sustainable development in the European Union. 2015 monitoring report of the EU Sustainable Development Strategy*, Publications Office of the European Union, Luxembourg.

## Socioeconomic development





## Overview of the main changes

Real gross domestic product (GDP) per capita in the EU has increased moderately both in the long term (since 2000) and in the short term (since 2009). The indicator's continuous upward trend was interrupted by the start of the economic crisis in late 2008. Although the EU economy has since returned to growth, a fragile recovery is expected. Deterioration of economic conditions during the crisis has also affected other indicators in the 'socioeconomic development' theme. Labour markets were

**Table 1.1:** Evaluation of changes in the socioeconomic development theme, EU-28<sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
Real GDP per capita		
<b>Economic development</b>		
Investment	(?)	
Disposable household income	(?)	
Household saving		
<b>Innovativeness, competitiveness and eco-efficiency</b>		
Labour productivity		
Eco-innovation	:	:
Research and development expenditure		
Energy intensity	(?)	
<b>Employment</b>		
Employment	(?)	
Young people neither in employment nor in education or training	(?)	
Unemployment		

(1) An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction.

(?) From 2002.

(?) From 2003.



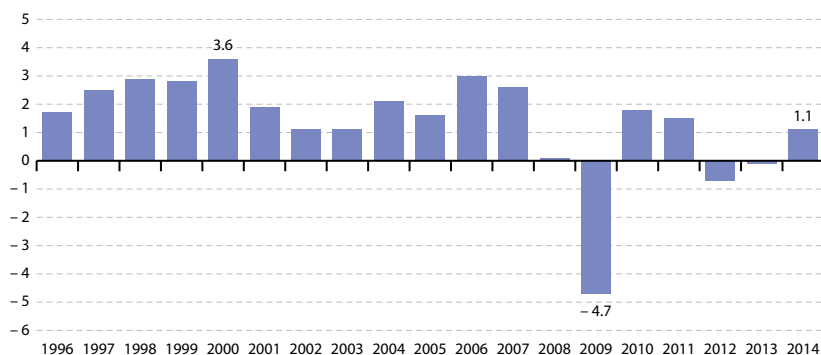
hard hit, with young people among the worst affected. Household savings have been strongly reduced in the short run, although disposable household income has improved moderately. Investment has also contracted, particularly in the short term. More favourable developments can be seen in some areas of competitiveness and eco-efficiency. Labour productivity has increased substantially since 2000, although some gains were reversed during the economic crisis. Energy intensity has improved even more steadily, both in the long term and short term. Investment in research and development (R&D) has increased only slightly.

## Key trends in socioeconomic development

### Recent changes in real GDP per capita indicate fragile recovery under way

In the long run between 2000 and 2014 **real GDP per capita** in the EU grew moderately by 0.9 % per year on average. Growth was more pronounced before the economic crisis of 2008. Between 1995 and 2007 real GDP per capita increased continuously at a rate of 2.2 % per year on average. As the financial and economic crisis took hold of the EU economy, however, GDP growth stalled in 2008 and by 2009 had contracted by 4.7%. Swift implementation of fiscal stimuli and other policy actions at national and EU levels contained the worst effects of the crisis and restored economic growth in 2010 and 2011. Although real GDP per capita contracted slightly in 2012 and 2013, it increased again in 2014 by 1.1 %. As a result, in the short term between 2009 and 2014 the EU economy grew at an average annual rate of 0.7 %.

**Figure 1.1:** Change in real GDP per capita, EU-28, 1996–2014  
(% change on previous year)



Source: Eurostat (online data code: [tsdec100](#))

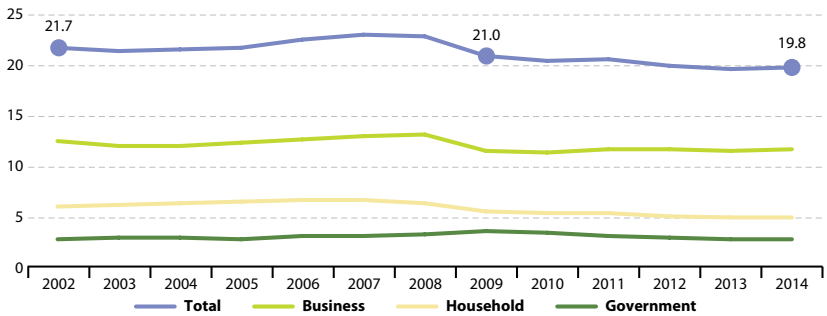




## The crisis continues to weigh on investment in the EU

Between 2002 and 2014 **investment** (as a share of GDP) declined in the EU. This was most likely due to a loss of household and business confidence during the financial market turmoil and the economic crisis. The drop in total investment was somewhat offset by increased government spending in the first years of the crisis. However, since 2009 government investment has also declined as a result of fiscal consolidation efforts, driving total investment down further.

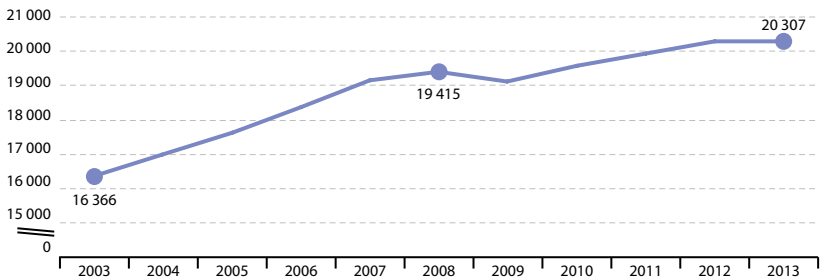
**Figure 1.4:** Investment by institutional sector, EU-28, 2002–2014  
(% of GDP)



Source: Eurostat (online data code: [tsdec210](#))

Public spending cuts have also contributed to reducing adjusted **disposable household income** in the Member States hardest hit by the economic crisis. In the rest of the EU, households experienced a continuous improvement in their disposable income in the period between 2003 and 2013.

**Figure 1.6:** Real adjusted gross disposable income of households per capita, EU-28, 2003–2013 (€)  
(Purchasing power standards (PPS))



(€) Break in time series in 2005.

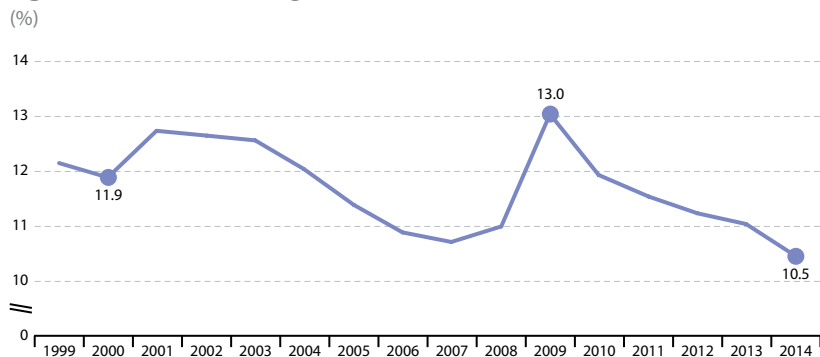
Source: Eurostat (online data code: [tec00113](#))





The EU **household saving rate** was strongly subdued in 2014 compared with 2009 due to the negative effects of fiscal consolidation efforts on household disposable income. Since 2010 the household saving rate has been falling, which was also observed before the 2008 economic crisis. In the long run between 2000 and 2014 the indicator dropped moderately by 1.4 percentage points.

**Figure 1.8:** Household saving rate, EU-28, 1999–2014

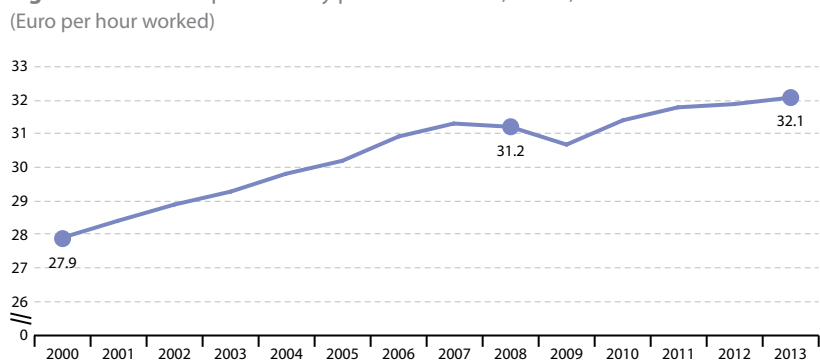


Source: Eurostat (online data code: [tsdec240](#))

## Gains in competitiveness due to higher labour productivity but subdued innovation

**Labour productivity** increased almost continuously between 2000 and 2013. Some gains were reversed between 2007 and 2009 as a result of the economic downturn, but in 2010 labour productivity rebounded to its pre-crisis level and has continued to grow.

**Figure 1.10:** Labour productivity per hour worked, EU-28, 2000–2013



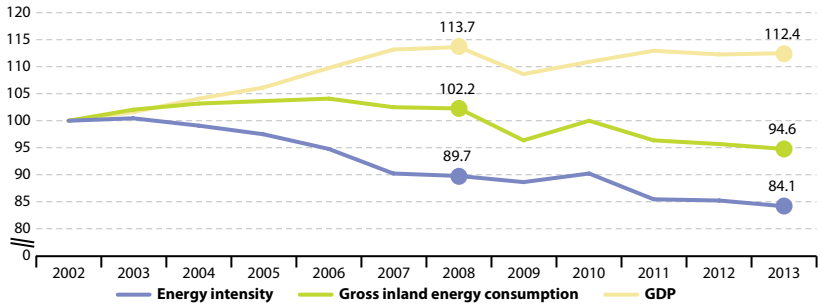
Source: Eurostat (online data code: [tsdec310](#))





**Energy intensity** in the EU has also improved. It declined by 15.9% between 2002 and 2013 as a result of absolute decoupling of gross inland energy consumption from economic growth (1).

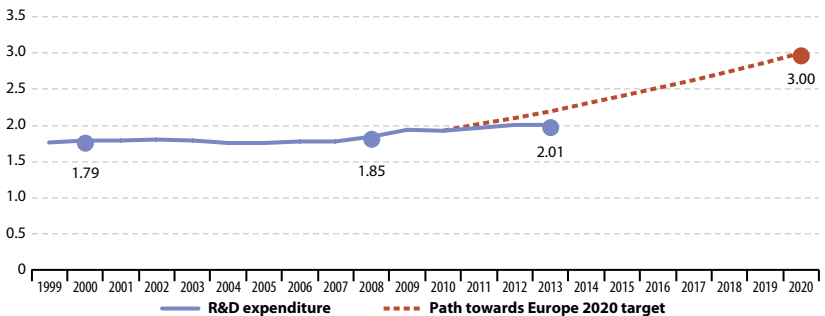
**Figure 1.15:** Energy intensity of the economy, EU-28, 2002–2013  
(index 2002 = 100)



Source: Eurostat (online data codes: [tsdec360](#), [tsdcc320](#) and [nama\\_10\\_gdp](#))

Less favourable developments have been observed with regard to innovation. **R&D expenditure** as a share of GDP increased slightly in the EU between 2000 and 2013 but more rapid progress is needed to reach the 3% target set out in the Europe 2020 strategy. Most of the increase in 2008 and 2009 came from the public sector, reflecting government efforts to support economic growth by boosting R&D expenditure. Since then R&D intensity has remained at about 2% of GDP.

**Figure 1.13:** Total R&D expenditure, EU-28, 1999–2013 (1)  
(% of GDP)



(1) Data for 1999 to 2003 and 2013 are estimates.

Source: Eurostat (online data code: [tsdec320](#))

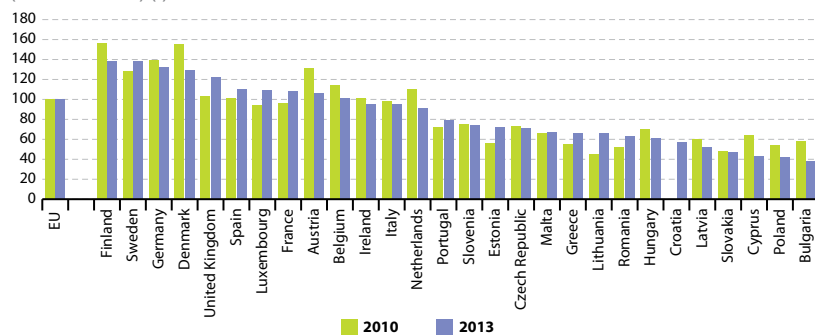
(1) For a detailed description of decoupling indicators see the Introduction chapter (p. 24)



In terms of **eco-innovation** activities, the majority of Member States performed lower in 2013 compared with 2010.

**Figure 1.12:** Eco-innovation index, by country, 2010 and 2013

(index EU=100) (¹)



(¹) For 2010–2012 the average used for indexing to 100 is based on the 27 EU Member States before the accession of Croatia. From 2013 onwards the EU average is based on data for the 28 EU Member States. As the units are relative, the index cannot indicate progress in absolute terms.

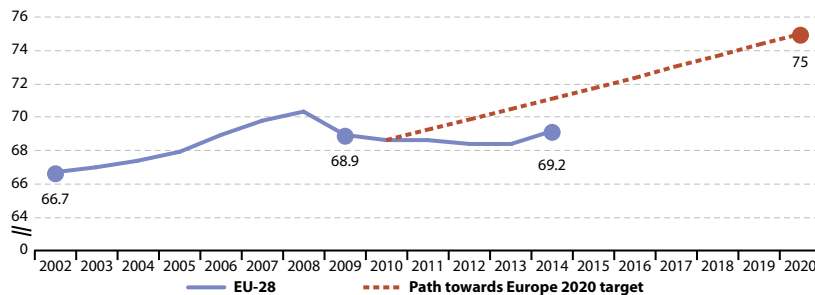
Source: Eurostat (online data code: t2020\_rt200)

## Muted labour market recovery

Between 2002 and 2014 the **EU employment rate** rose moderately by 2.5 percentage points, mostly due to strong labour market performance before the economic crisis. Short-term developments in the labour market have been much less favourable. The economic crisis and prolonged labour market stagnation held back employment between 2008 and 2013. Although the indicator picked up again in 2014, the EU is off-track to meeting the Europe 2020 target to reach a 75 % employment rate by 2020.

**Figure 1.16:** Total employment rate, EU-28, 2002–2014

(% of age group 20 to 64 years)



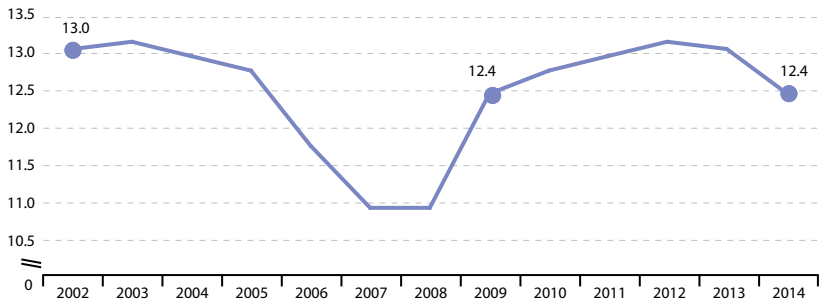
Source: Eurostat (online data code: tsdec410)





In 2014, the share of young people neither in employment nor in education or training (**NEET rate**) was equivalent to its 2009 level of 12.4 % and slightly lower than its 2002 level of 13.0 %. Although the NEET rate had been falling gradually before the crisis, it was driven up again with the start of the crisis, largely due to the rise in youth unemployment.

**Figure 1.19:** Young people neither in employment nor in education or training (NEET rate), EU-28, 2002–2014 (°)  
(% of the population aged 15 to 24)

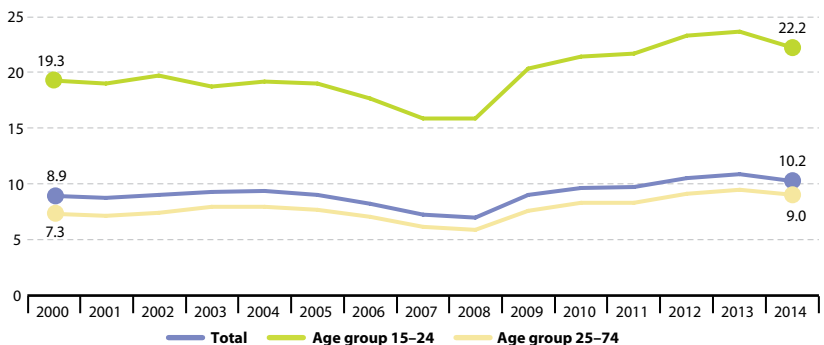


(°) Break in series for 2003 and 2006.

Source: Eurostat (online data code: [edat\\_ifse\\_20](#))

The overall **unemployment rate** in the EU followed a similar trend of falling gradually before the crisis and increasing sharply afterwards. In 2013 EU unemployment reached a record high of 10.9 % but fell slightly in 2014, indicating a possible labour market recovery.

**Figure 1.22:** Unemployment rate by age group, EU-28, 2000–2014  
(%)



Source: Eurostat (online data code: [tsdec460](#))

## Sustainable consumption and production

# 2
























## Overview of the main changes

Resource productivity in the EU has improved in both the long term since 2002 and in the short term since 2008. Developments in the underlying indicators — gross domestic product (GDP) and domestic material consumption (DMC) — over 2002 to 2013 suggest economic growth has been decoupling from resource use in the EU <sup>(1)</sup>. This is mainly due to the large drop in DMC since the economic crisis began. Temporary improvements were also visible in many other indicators in the ‘sustain-

**Table 2.1:** Evaluation of changes in the sustainable consumption and production theme, EU-28 <sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
Resource productivity	 <sup>(2)</sup>	
<b>Resource use and waste</b>		
Domestic material consumption	 <sup>(2)</sup>	
Generation of waste excluding major mineral wastes	 <sup>(3)</sup>	 <sup>(4)</sup>
Hazardous waste generation	 <sup>(4)</sup>	 <sup>(4)</sup>
Recycled and composted municipal waste	 <sup>(5)</sup>	
Atmospheric emissions	 <sup>(6)</sup>	
<b>Consumption patterns</b>		
Electricity consumption of households	 <sup>(7)</sup>	
Final energy consumption	 <sup>(8)</sup>	
<b>Production patterns</b>		
Environmental management systems	 <sup>(9)</sup>	 <sup>(9)</sup>
Organic farming	:	 <sup>(9)</sup>

<sup>(1)</sup> An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction.

<sup>(2)</sup> From 2002. <sup>(3)</sup> From 2004. <sup>(4)</sup> Last four-year period. <sup>(5)</sup> From 2005; EU-27. <sup>(6)</sup> EU-27.

<sup>(1)</sup> See the Introduction chapter for an explanation of ‘decoupling’ (p. 24).



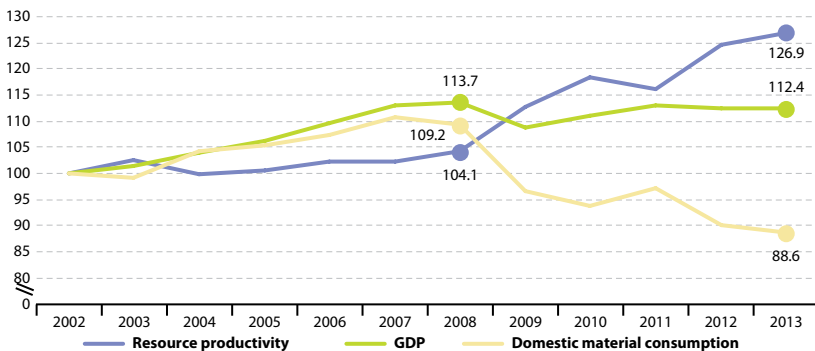
able consumption and production' theme during the economic slowdown; however, some of these trends started to reverse during the recent mild recovery. Therefore, it is debatable whether a shift towards more sustainable consumption and production patterns has actually occurred. This is particularly so for material use, generation of waste excluding major mineral wastes and, to a lesser extent, final energy consumption and electricity consumption. Hazardous waste has continued to show a clearly unfavourable trend. However, some long-term improvements can be seen in waste treatment, environmentally friendly production patterns and pollutant emissions of ammonia ( $\text{NH}_3$ ), sulphur oxides ( $\text{SO}_x$ ), nitrogen oxides ( $\text{NO}_x$ ) and non-methane volatile organic compounds (NMVOC).

## Key trends in sustainable consumption and production

### Modest signs of material use decoupling from economic growth

In 2013, the EU generated an economic value of EUR 1.93 per kilogram of material consumed. This represents a considerable improvement in **resource productivity** since 2002, when the economic benefit created had only been EUR 1.52 per kg. This long-term efficiency gain occurred because GDP had been growing faster than **domestic material consumption** (DMC), in particular before the onset of the economic crisis. Since 2008, EU resource use has dropped sharply, putting DMC below levels observed a decade ago.

**Figure 2.1:** Resource productivity, EU-28, 2002–2013 (!)  
(index 2002=100)



(!) Resource productivity and domestic material consumption: data are estimates (whole time series); 2013 data are provisional estimates.

Source: Eurostat (online data codes: [tsdpc100](#), [tsdpc230](#) and [nama\\_10\\_gdp](#))



These divergent trends — GDP growing while DMC is falling — indicate **decoupling of economic growth from resource use** in the EU over the long-term period from 2002 to 2013. Decoupling has also taken place in the short term with material con-



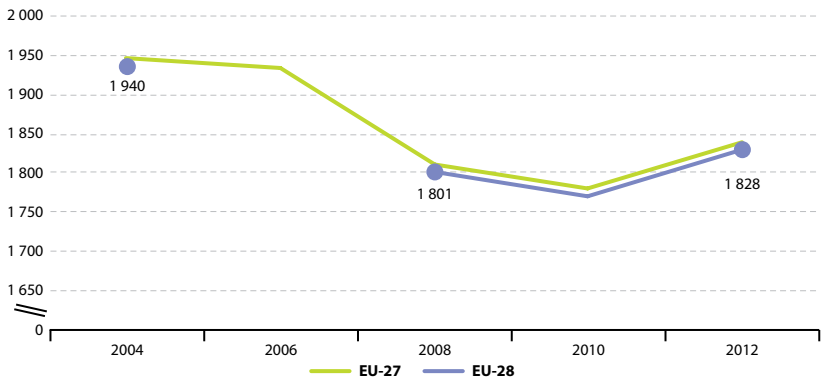


sumption falling sharply by 20.6% between 2008 and 2013, surpassing the 1.3% fall in GDP. Because the long-term trend was mainly due to positive short-term developments, the improvements in resource productivity are not likely to represent a major turnaround in resource use patterns, but rather mirror the impact of the economic crisis on resource-intensive industries such as construction.

### Improvements in generation of waste excluding major mineral wastes, waste treatment and pollutant emissions, but hazardous waste continued to increase

The amount of **waste excluding major mineral wastes** generated per inhabitant in the EU was reduced by about 5.8% between 2004 and 2012. However, this development is not likely to represent a sustainable shift because the indicator started rising again during a mild economic recovery from 2010 to 2012.

**Figure 2.8:** Generation of waste excluding major mineral wastes, 2004–2012 <sup>(1)</sup> (kg per capita)



(<sup>1</sup>) No 2006 data for EU-28.

Source: Eurostat (online data code: [tsdpc210](#))

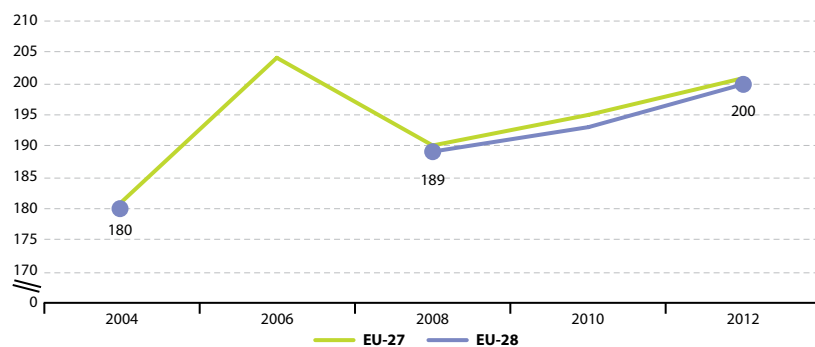
The amount of **hazardous waste** generated among the EU-28 increased considerably between 2004 and 2012, from 180 to 200 kg per capita. The highest increase was in 2012, when hazardous waste generation rose by 3.6% compared with 2010. In 2012, two sectors — the manufacturing industry and water supply, sewage, waste management and remediation — accounted for 46% of hazardous waste generated.





**Figure 2.10:** Generation of hazardous waste, 2004–2012

(kg per capita)

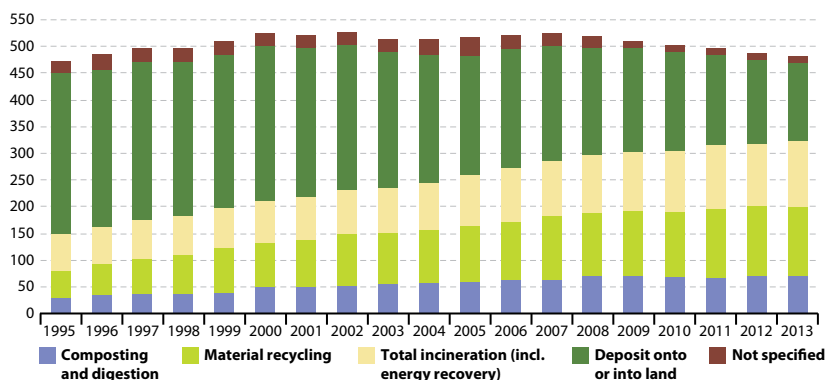


Source: Eurostat (online data code: [tsdpc250](#))

**Waste treatment** practices have improved considerably in the EU since 2000. Land-filling, the least environmentally friendly waste disposal method, has been gradually replaced by incineration and even more so by recycling and composting. In 2013, about 43 % of the EU's generated municipal waste was recycled or composted. These improvements have been to a large extent driven by EU and national strategies prioritising efficient waste management through various instruments.

**Figure 2.12:** Municipal waste generation and treatment, by type of treatment method, EU-28, 1995–2013 (¹)

(kg per capita)



(¹) Data for 1995–2006 refer to EU-27, data from 2007 onwards refer to EU-28.

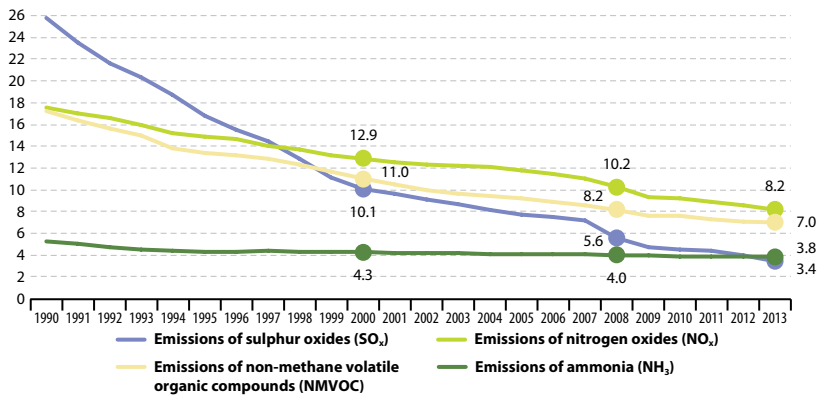
Source: Eurostat (online data code: [tsdpc240](#))





Similar improvements have taken place in the area of **atmospheric emissions** of acidifying substances and ozone precursors. Due to almost continuous declines since 1990, man-made emissions of ammonia ( $\text{NH}_3$ ), sulphur oxides ( $\text{SO}_x$ ), nitrogen oxides ( $\text{NO}_x$ ) and non-methane volatile organic compounds (NMVOC) in 2013 were between 1.4 and 7.5 times lower than in 1990. A strong reduction of emissions occurred in the short-term period between 2008 and 2013, with average annual reduction rates ranging from 9.2 % for  $\text{SO}_x$  to 0.7 % for  $\text{NH}_3$ .

**Figure 2.15:** Atmospheric emissions, EU-28, 1990–2013  
(million tonnes)



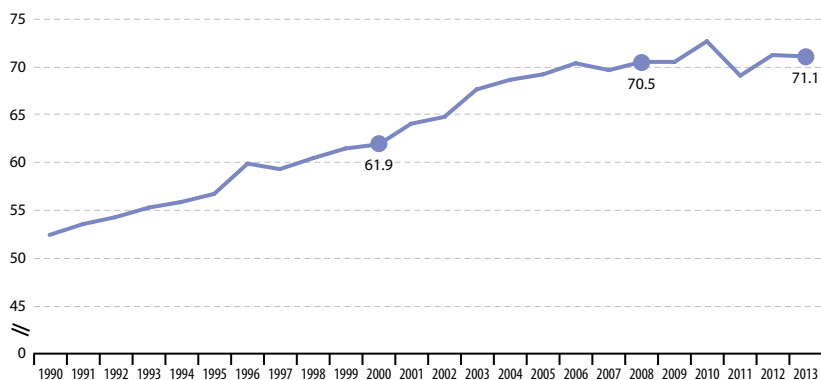
Source: European Environment Agency (online data codes: [tsdpc260](#), [tsdpc270](#), [tsdpc280](#) and [tsdpc290](#))

## Despite recent progress, sustainable consumption trends remain volatile

**Electricity consumption of households** has risen more or less continuously since 1990. Growth in the number of households has been a main driver of this trend. Increased ownership and usage of electric appliances, which has outstripped efficiency improvements of electronic devices, has also contributed to the increase in overall electricity consumption — a phenomenon known as the ‘rebound effect’. Unlike other consumption-related indicators presented in this report, household electricity consumption proved to be rather unresponsive to the economic crisis, with the three major drops occurring before and after the economic downturn, in 2007, 2011 and 2013.



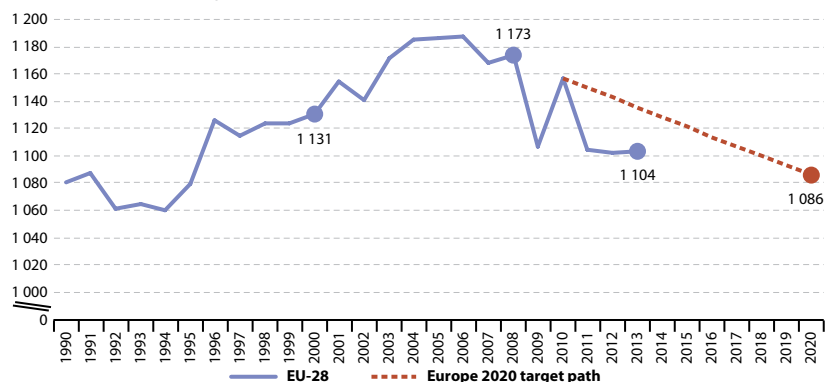
**Figure 2.16:** Electricity consumption of households, EU-28, 1990–2013  
(million tonnes of oil equivalent)



Source: Eurostat (online data code: [tsdpc310](#))

Similarly, **final energy consumption** in the EU has been rising since 1990. The year 2006, however, marked a turning point, with energy use stabilising and then experiencing strong fluctuations in the years after. The strong contractions in final energy use in 2009 and 2011 not only brought final energy consumption in 2013 down to pre-2000 levels, but also pushed the EU ahead on its projected path to reaching the 20% energy saving target.

**Figure 2.18:** Final energy consumption, EU-28, 1990–2013  
(million tonnes of oil equivalent)



Source: Eurostat (online data code: [tsdpc320](#))

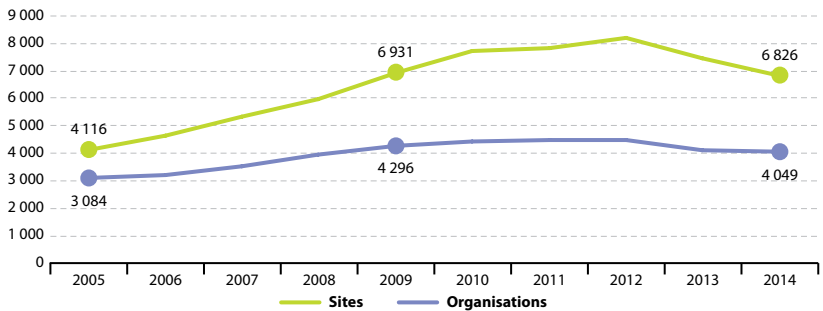




## More environmentally friendly production patterns

Production patterns have also shown mixed trends in the EU over the past years. Although organisations have increasingly implemented a certified environmental management system according to the **Eco-Management and Audit Scheme (EMAS)** since 2005, this trend has reversed in the short term. Between 2009 and 2014, the number of EMAS-registered organisations fell by 5.8%.

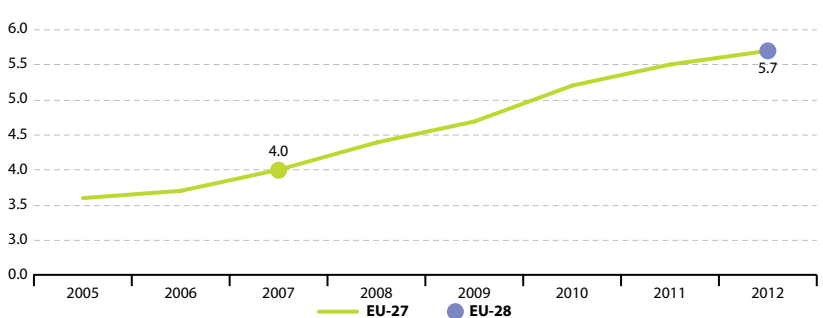
**Figure 2.20:** Organisations and sites with Eco-Management and Audit Scheme (EMAS) registration, EU-27, 2005–2014 (number)



Source: EU Commission, DG Environment (online data code: [tsdpc410](#))

In contrast, farming practices have become more and more sustainable in the EU since 2005, as illustrated by the increase in the share of **organic farming**. This dynamic development has also been reflected in growing sales of organic products on the EU food market.

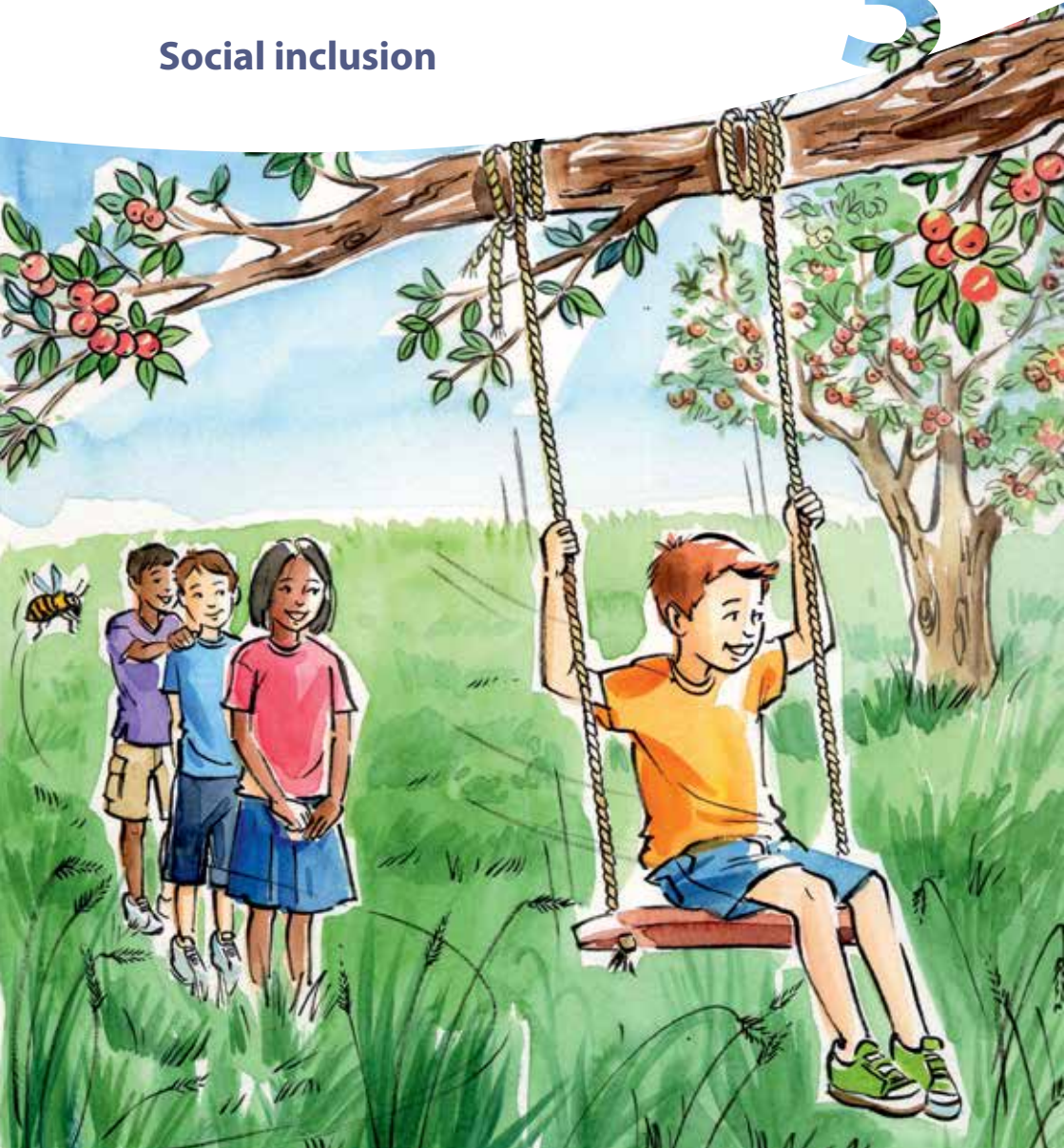
**Figure 2.21:** Area under organic farming (<sup>(1)</sup>), 2005–2012 (% of utilised agricultural area)



(<sup>1</sup>) Total fully converted and under conversion to organic farming.

Source: Eurostat (online data code: [tsdpc440](#))

Social inclusion





## Overview of the main changes

Until 2009, the number of people at risk of poverty or social exclusion had been falling steadily. However, in that year the trend reversed following the onset of the economic crisis. This unfavourable short-term trend has pushed the EU off its path to meeting the Europe 2020 strategy's target of lifting at least 20 million people out of the risk of poverty or social exclusion by 2020. The economic crisis has also in-

**Table 3.1:** Evaluation of changes in the social inclusion theme, EU-28 <sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
People at risk of poverty or social exclusion	<sup>(2)</sup>	<sup>(3)</sup>
<b>Monetary poverty and living conditions</b>		
Risk of poverty after social transfers	<sup>(2)</sup>	<sup>(3)</sup>
Severe material deprivation	<sup>(2)</sup>	<sup>(3)</sup>
Income inequalities	<sup>(2)</sup>	<sup>(3)</sup>
<b>Access to labour market</b>		
Very low work intensity	<sup>(2)</sup>	<sup>(3)</sup>
Working poor	<sup>(2)</sup>	<sup>(3)</sup>
Long-term unemployment	<sup>(4)</sup>	<sup>(3)</sup>
Gender pay gap	:	<sup>(5)</sup>
<b>Education</b>		
Early leavers from education and training	<sup>(5)</sup>	<sup>(3)</sup>
Tertiary education	<sup>(4)</sup>	<sup>(3)</sup>
Lifelong learning	<sup>(5)</sup>	<sup>(3)</sup>
Education expenditure	:	:

<sup>(1)</sup> An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction.

<sup>(2)</sup> Evaluation based on EU-27; from 2005. <sup>(3)</sup> Evaluation based on EU-27. <sup>(4)</sup> From 2002. <sup>(5)</sup> From 2003.



fluenced many of the other indicators in the social inclusion theme. Trends have deteriorated in the short term, in particular after 2009, with an increasing number of people being affected by one or more forms of poverty, namely monetary poverty, severe material deprivation and very low work intensity. The same holds true for long-term unemployment. In contrast, trends have been favourable for most of the education indicators, in particular regarding early school leavers and tertiary education. However, trends in adult education, as monitored through participation in lifelong learning, are less encouraging.

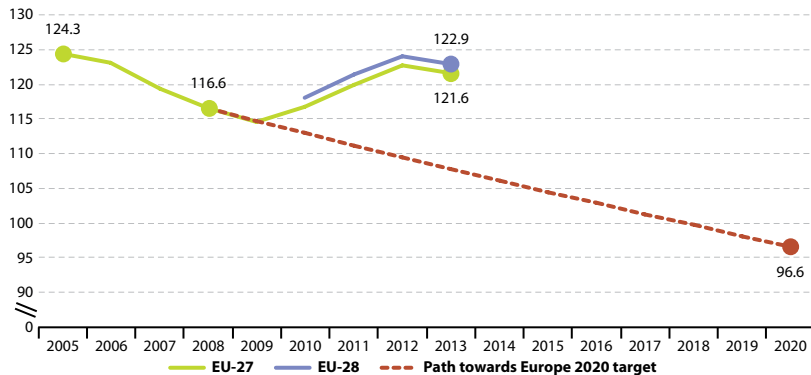
## Key trends in social inclusion

### Almost every fourth person at risk of poverty or social exclusion

Between 2005 and 2013, 2.7 million people were lifted out of the **risk of poverty or social exclusion** in the EU-27. This number fell consistently between 2005 and 2009 but started to rise again with the onset of the economic crisis. In 2012, the number of people at risk of poverty or social exclusion in the EU-28 peaked at more than 124 million, before falling back by more than one million in 2013.

Still almost one in four people in the EU were at risk of poverty or social exclusion in 2013. The overall slow progress endangers the Europe 2020 strategy's target of lifting at least 20 million people out of the risk of poverty or social exclusion by 2020.

**Figure 3.1:** People at risk of poverty or social exclusion, 2005–2013 <sup>(1)</sup><sup>(2)</sup>  
(million people)



<sup>(1)</sup> 2005–2006 data are estimates.

<sup>(2)</sup> The overall EU target is to lift at least 20 million people out of the risk of poverty or social exclusion by 2020. Due to the structure of the survey on which most of the key social data is based (the EU Statistics on Income and Living Conditions), a large part of the main social indicators available in 2010, when the Europe 2020 strategy was adopted, referred to 2008 data for the EU-27 as the most recent data available. This is why monitoring of progress towards the Europe 2020 strategy's poverty target takes EU-27 data from 2008 as a baseline year.

Source: Eurostat (online data code: [tsdsc100](#))



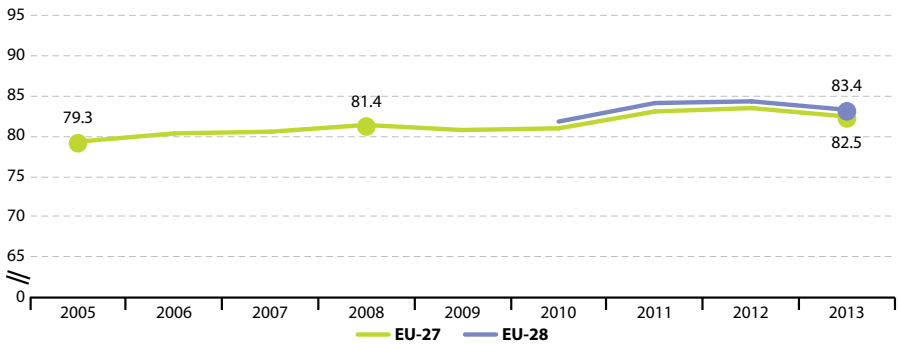


## Monetary poverty increasing and living conditions deteriorating

Monetary poverty remains the most prevalent form of poverty in the EU, with 16.6% of the total population affected. The number of people **at risk of poverty after social transfers** in the EU-28 has risen by 1.8% since 2010.

**Figure 3.7:** People at risk of poverty after social transfers, 2005–2013 (1)

(million people)



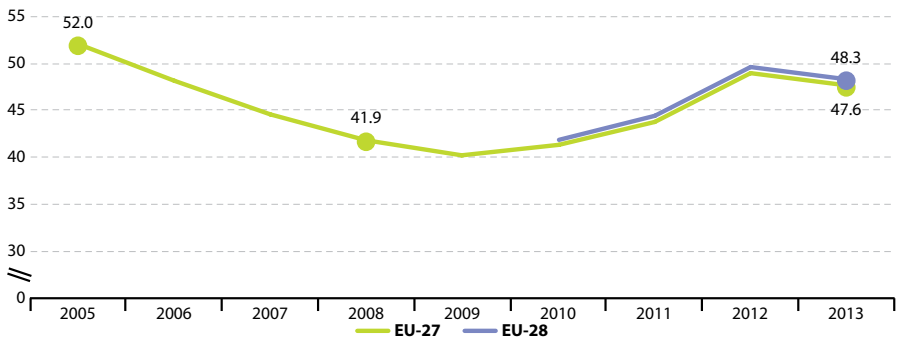
(1) 2005–2007 data are estimates.

Source: Eurostat (online data code: [tsdsc280](#))

The number of people affected by **severe material deprivation** fell overall between 2005 and 2013. However, the favourable trend had started to reverse in 2009 with the onset of the economic crisis. In 2013, 48.3 million people in the EU-28 were living in conditions severely constrained by a lack of resources. This was equal to 9.6% of the total EU population.

**Figure 3.9:** Severely materially deprived people, EU-27 and EU-28, 2005–2013 (1)

(million people)



(1) 2005–2006 and 2009 data are estimates.

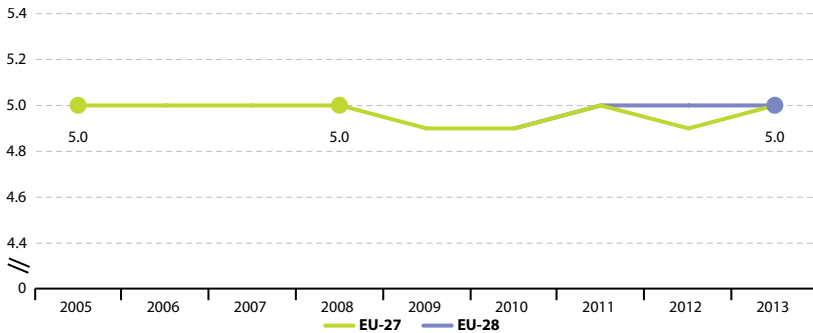
Source: Eurostat (online data code: [tsdsc270](#))





**Income inequality** barely changed between 2008 and 2013. In 2013, the richest 20% of the population earned about five times as much as the poorest 20%.

**Figure 3.11:** Inequality of income distribution, 2005–2013 (¹)  
(income quintile share ratio)



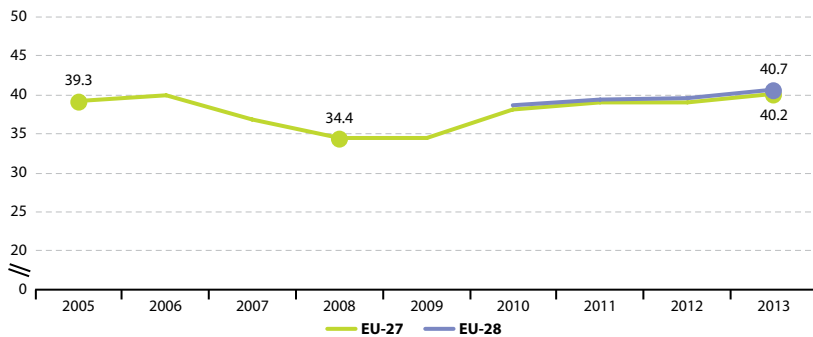
(¹) 2006 data are Eurostat estimates.

Source: Eurostat (online data code: [tsdsc260](#))

## Labour market has experienced less inclusive development

The number of people affected by **very low work intensity** increased by 5.3% in the EU-28 between 2010 and 2013. Economic inactivity substantially increases the risk of being poor.

**Figure 3.13:** People living in households with very low work intensity, EU-28 and EU-27, 2005–2013 (¹)  
(million people)



(¹) 2005–2006 data are Eurostat estimates.

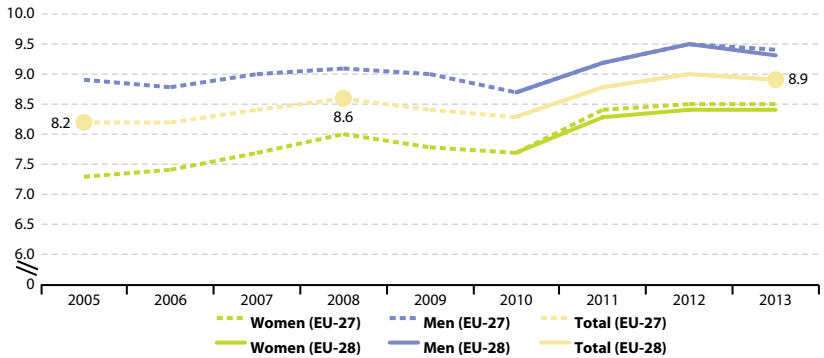
Source: Eurostat (online data code: [tsdsc310](#))





Poverty and social exclusion do not only affect economically inactive or unemployed people. The share of **working poor** increased between 2005 and 2013 by 8.5%. In general, men were more at risk of in-work poverty than women.

**Figure 3.15:** In work at-risk-of-poverty rate, by sex, EU-28, 2005–2013 (¹)  
(% of employed people aged 18 or over)

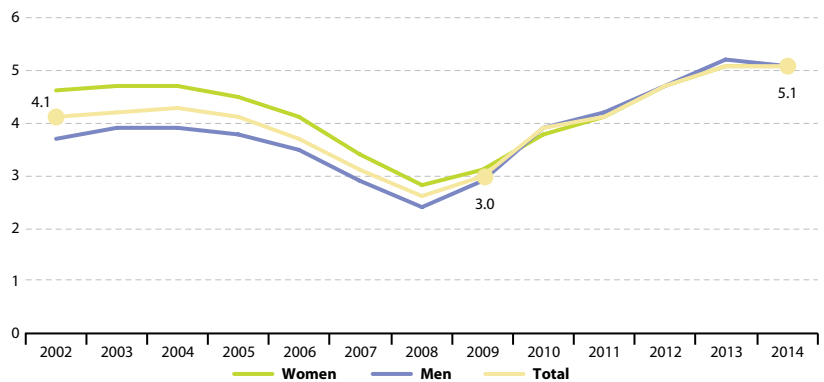


(¹) 2005–2006 data are estimates.

Source: Eurostat (online data code: [tsdsc320](#))

The EU-28's **long-term unemployment** rate fell between 2004 and 2008. However, this favourable trend started to reverse with the onset of the economic crisis from 2008 onwards. Until 2013 the long-term unemployment rate climbed to a high of 5.1% and remained at this level in 2014.

**Figure 3.16:** Long-term unemployment rate, by sex, EU-28, 2002–2014 (%)

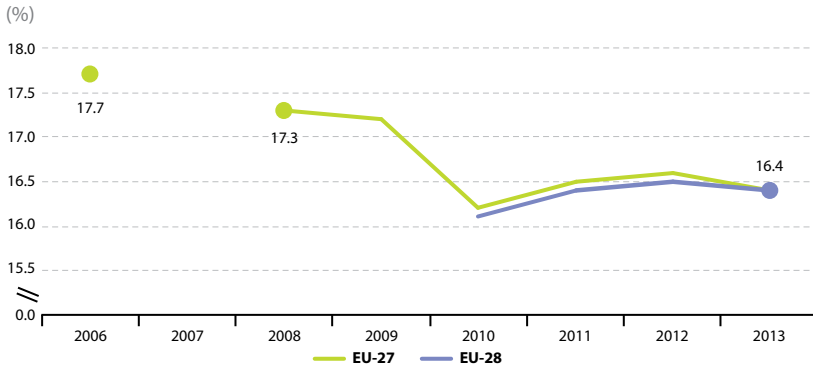


Source: Eurostat (online data code: [tsdsc330](#))



The hourly gross earnings of women are slowly catching up with those of men. Between 2006 and 2013, there was a 1.3 percentage point drop in the **gender pay gap**.

**Figure 3.17:** Gender pay gap in unadjusted form, 2006–2013 (%)



(<sup>1</sup>) 2009 and 2011–2013 data are provisional.

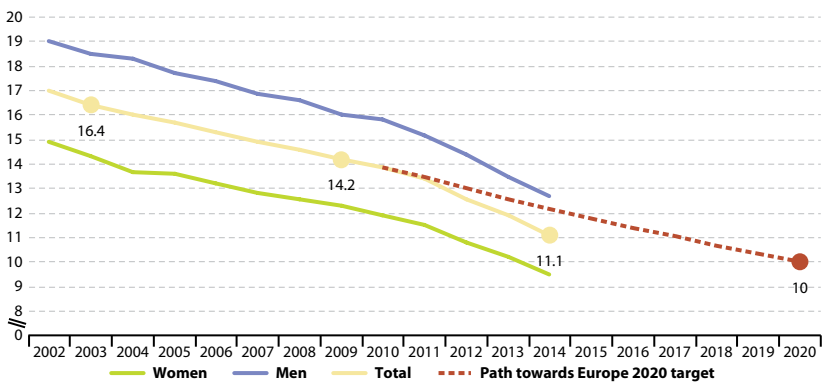
Source: Eurostat (online data code: [tsdsc340](#))

## Improvements in education

The share of **early leavers from education and training** has fallen steadily since 2003, reaching 11.1% in 2014. If this trend can be sustained, the target to reduce early school leaving rates to less than 10% by 2020 appears in reach.

**Figure 3.18:** Early leavers from education and training, by sex, EU-28, 2002–2014 (%)

(% of the population aged 18 to 24)



(<sup>1</sup>) Break in time series in 2003 and 2014; Europe 2020 target: less than 10%.

Source: Eurostat (online data code: [tsdsc410](#))

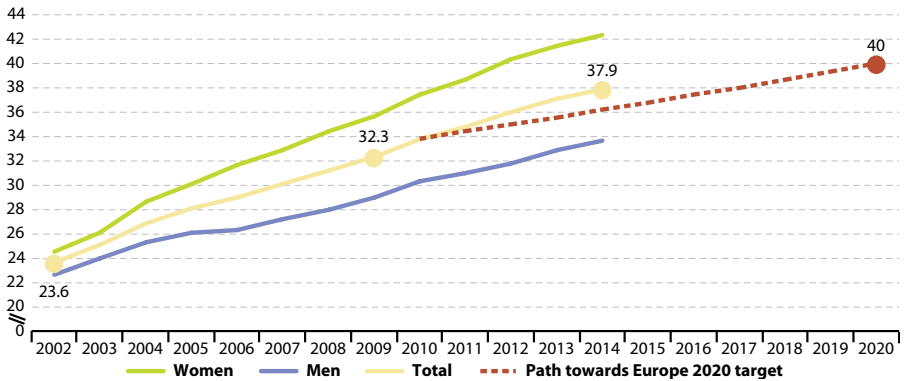




The share of the population aged 30 to 34 with **tertiary educational attainment** has been continuously increasing since 2002. The trend suggests the Europe 2020 target of increasing this share to at least 40% by 2020 will be reached.

**Figure 3.20:** Tertiary educational attainment, by sex, EU-28, 2002–2014<sup>(1)</sup>

(% of the population aged 30 to 34)



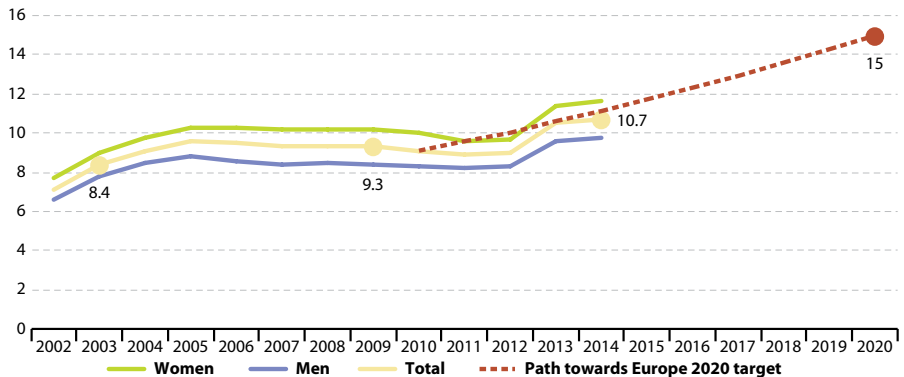
(<sup>1</sup>) Break in time series in 2014; Europe 2020 target: at least 40%.

Source: Eurostat (online data code: [tsdsc480](#))

Participation in **lifelong learning** increased by 27.4% between 2003 and 2014. Nevertheless, progress is slow and the EU benchmark of at least 15% of adults participating in lifelong learning in 2020 may be difficult to reach.

**Figure 3.22:** Lifelong learning, by sex, EU-28, 2002–2014<sup>(1)</sup>

(% of population aged 25 to 64)



(<sup>1</sup>) Break in time series in 2003 and 2013.

Source: Eurostat (online data code: [tsdsc440](#))

# 4

## Demographic changes
















## Overview of the main changes

The employment rate of older people has increased in both the long term since 2002 and the short term since 2009. The positive trend has been consistent for both men and women over the entire time period. Because the employment rate for older women has grown faster than for older men, the gap between men and women has narrowed slightly. Trends for other indicators in the ‘demography’ sub-theme have varied. Life expectancy at age 65 showed only moderate improvements in both the long and short terms. The fertility rate developed less favourably. Population growth

**Table 4.1:** Evaluation of changes in the demographic changes theme, EU-28 <sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
Employment rate of older workers	 <sup>(2)</sup>	
<b>Demography</b>		
Life expectancy and healthy life years at age 65	 <sup>(3)</sup>	
Population growth	:	:
Total fertility rate	 <sup>(4)</sup>	
Migration	:	:
Old-age dependency	:	:
<b>Old-age income adequacy</b>		
Income level of over-65s compared to before	 <sup>(5)</sup>	 <sup>(6)</sup>
<b>Public finance sustainability</b>		
Government debt	:	 <sup>(7)</sup>
Retirement		
The impact of ageing on public expenditure	:	:
Pension expenditure projections	:	:

<sup>(1)</sup> An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction.

<sup>(2)</sup> From 2002. <sup>(3)</sup> From 2004. <sup>(4)</sup> From 2001. <sup>(5)</sup> From 2005; evaluation based on EU-27. <sup>(6)</sup> Evaluation based on EU-27.

<sup>(7)</sup> Last three-year period.



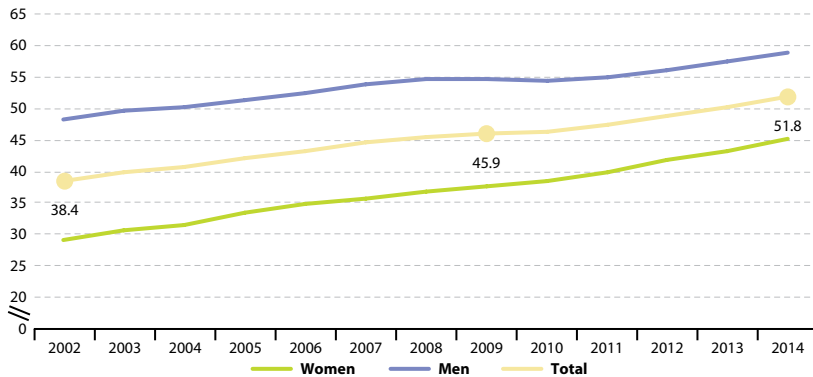
varied strongly in the long run and short run. Net migration generally increased but dipped substantially after the onset of the economic crisis. Old-age dependency has increased in the long term, with even stronger growth in the short term. In contrast, the ‘old-age income adequacy’ showed continuous progress. Trends in the sub-theme ‘public finance sustainability’ have been mixed. Government debt rose substantially, while the duration of working life has slightly but steadily progressed in both the long and short terms. From 2000 to 2008 the impact of ageing on public expenditure remained steady.

## Key trends in demographic changes

### Half of older workers have jobs and the gender employment gap for this group is closing

On average, 51.8% of older workers in the EU were employed in 2014. Since 2002 the **employment rate of older people aged 55 to 64** has slightly but continuously increased. As a result, the original 50% target set in the Lisbon strategy — the predecessor to Europe 2020 — to be met by 2010 was achieved finally in 2013.

**Figure 4.1:** Employment rate of older workers, by sex, EU-28, 2002–2014 (%)



Source: Eurostat (online data code: tsdde100)

Overall the employment rates of older women and older workers in total have resisted the effects of the economic slowdown, as shown by their steady upward trends. In 2014 the employment rate of older women remained roughly 13.7 percentage points lower than that of older men, with 45.2% of older women in employment compared with 58.9% of older men. However, a narrowing of the gender gap for this indicator can be observed. While the employment rate of older men has increased by 10.7 percentage points since 2002 and 4.3 percentage points since 2009, the increase was



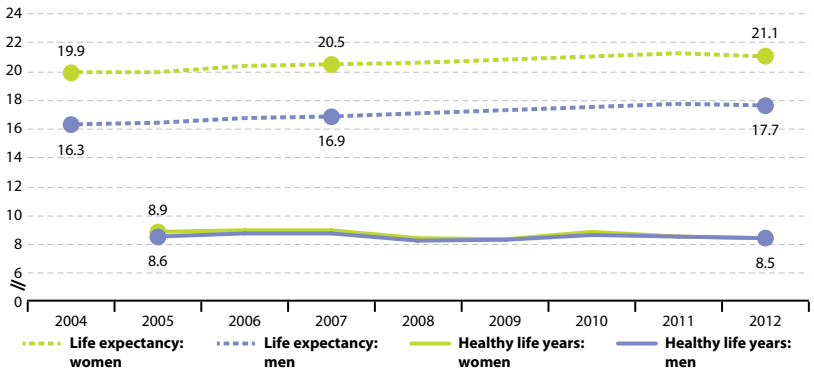


clearly higher for women, rising by 16.1 percentage points since 2002 and 7.5 percentage points since 2009.

### Population structure trends confirm demographic challenges

**Life expectancy at age 65** in the EU was 21.1 years for women and 17.7 years for men in 2012. Since 2002 the expected years to live have increased continuously for both sexes and the gap between men and women has declined. However, from 2011 to 2012 life expectancy has fallen slightly for both women (by 0.9%) and men (by 0.6%). Despite the overall improvements, the years to live without any activity limitation have not followed the same positive trend. In 2012, both women and men aged 65 were expected to live on average 8.5 years in a healthy condition.

**Figure 4.3:** Life expectancy and healthy life years at age 65, by sex, EU-28, 2004–2012<sup>(1)</sup>  
(years)



<sup>(1)</sup> Life expectancy: breaks in time series in 2007, 2011 and 2012; Healthy life years: data for 2005–2009 refer to EU-27; data for 2005 and 2006 are estimates.

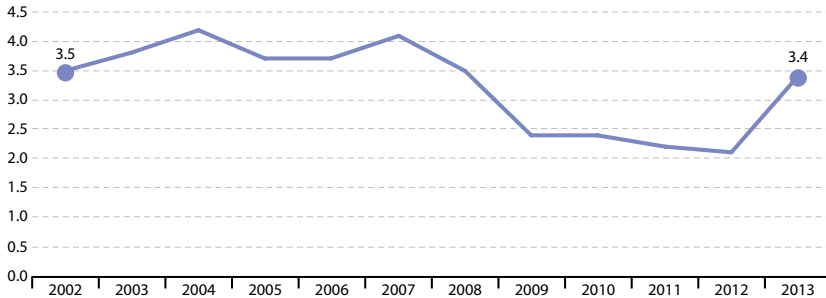
Source: Eurostat (online data code: [tsdph220](#))





In 2013, the total EU population grew by 3.4 per 1 000 persons. The crude rate of **population change** has been volatile over time. An increase after 2002 was followed by a temporary dip in the short term, after 2008, caused by a slowdown in both net migration plus adjustment and natural population growth. Furthermore, a considerable divergence in this indicator is visible across Member States.

**Figure 4.5:** Crude rate of population change, EU-28, 2002–2013 (°)  
(per 1 000 persons)

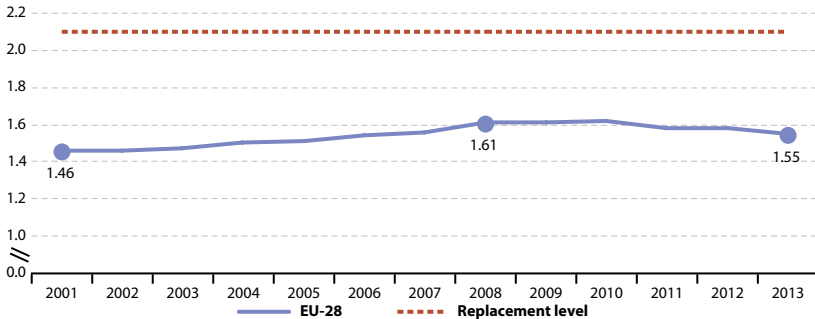


(°) Breaks in time series in 2007, 2011 and 2012; 2013 data are provisional estimates.

Source: Eurostat (online data code: [tps00006](#))

In 2013, the EU **total fertility rate** was at 1.55 children per woman, far below the replacement level of 2.1 children per woman. The indicator has increased by 6.2% since 2001 (1.46 children per woman), but has fallen by 3.7% since 2008 (1.61). After a period of stabilisation at 1.6 children per woman until 2011, the indicator has since slightly decreased further.

**Figure 4.7:** Total fertility rate, EU-28, 2001–2013 (°)  
(number of children per woman)



(°) Breaks in time series in 2011 and 2012; 2013 data are provisional.

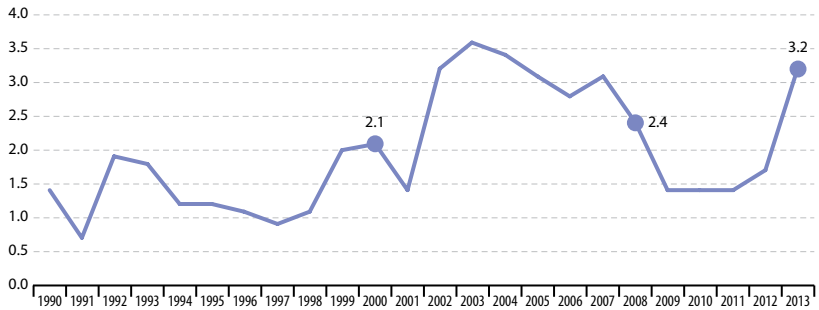
Source: Eurostat (online data code: [tsdde220](#))





In contrast to the fertility rate, the crude rate of **net migration plus adjustment** in the EU seems to be recovering after a dip following the economic crisis. In 2013 it was 3.2 per 1 000 persons, similar to the crude rate of 2002.

**Figure 4.9:** Crude rate of net migration plus adjustment, EU-28, 1990–2013<sup>(1)</sup> (per 1 000 persons)

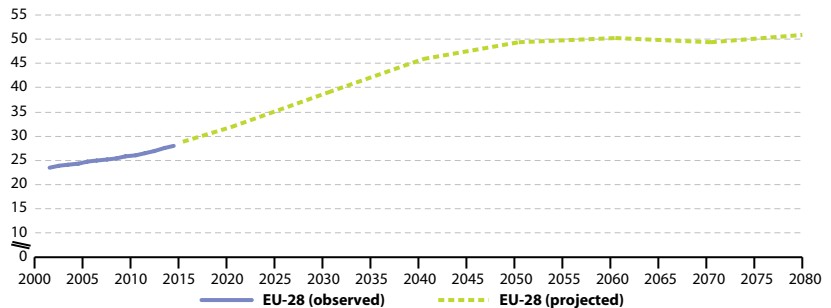


<sup>(1)</sup> Break in time series in 2001, 2010, 2011 and 2012; data for 2013 are provisional estimates.

Source: Eurostat (online data code: [tsdde230](#))

The EU **old-age-dependency ratio**, that is the ratio between the elderly population aged 65 and over and the population of working persons aged 15 to 64 years, increased continuously between 2001 and 2014 to 28.1%. *Europop2013* population projections<sup>(1)</sup> point towards further increases, up to 50% in 2055.

**Figure 4.11:** Actual and projected old-age-dependency ratio, EU-28, 2001–2080<sup>(1)</sup> (%)



<sup>(1)</sup> Breaks in time series in 2011, 2012 and 2014; 2014 data are provisional estimates; data for 2015–2080 are based on *Europop2013* population projections.

Source: Eurostat (online data codes: [tsdde510](#) and [tsdde511](#))

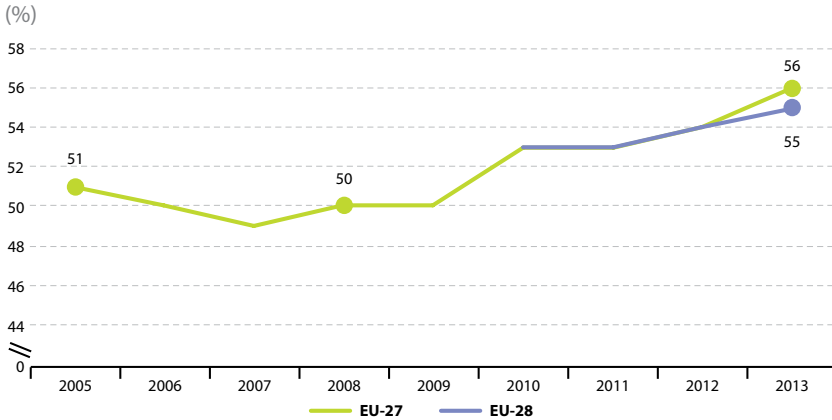
<sup>(1)</sup> Population projections are what-if scenarios that aim to provide information about the likely future size and structure of the population. *Europop2013*, the latest Eurostat's population projection is one of several possible population developments scenarios based on a set of assumptions for fertility, mortality and net migration.



## Income levels of pensioners have improved continuously

In 2013 the average income level of pensioners in the EU was 55 % of the earnings of the working population aged 50 to 59. The **aggregate replacement ratio** has followed a moderate upward trend both in the long term, since 2005, and the short term, since 2008.

**Figure 4.12:** Aggregate replacement ratio, EU-27 and EU-28, 2005–2013 (¹)



(¹) 2005–2006 data are estimates.

Source: Eurostat (online data code: [tsdde310](#))

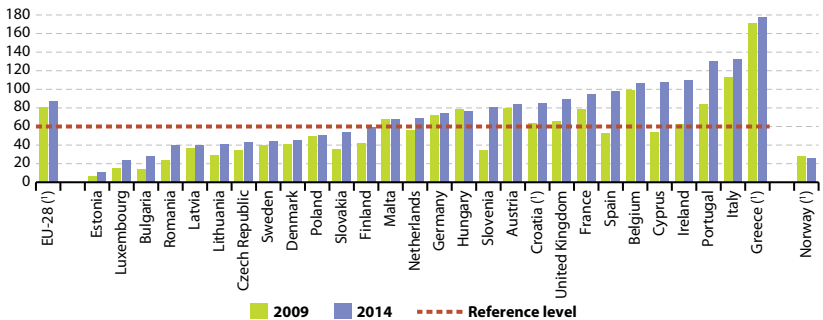




## Government debt levels are rising and drifting apart across Member States

**Government debt** in the EU increased substantially between 2011 and 2014, from 80.9% to 86.8%. A recovery from the onset of the economic crisis has yet to be seen. Government debt levels varied significantly across the EU in 2014, ranging from 10.6% of gross domestic product (GDP) in Estonia to 177.1% in Greece. Compared with 2009, the range between the lowest and the highest general government gross debt level of Member States has slightly increased.

**Figure 4.15:** General government gross debt, by country, 2009 and 2014 (% of GDP)



(\*) 2011 data (instead of 2009).

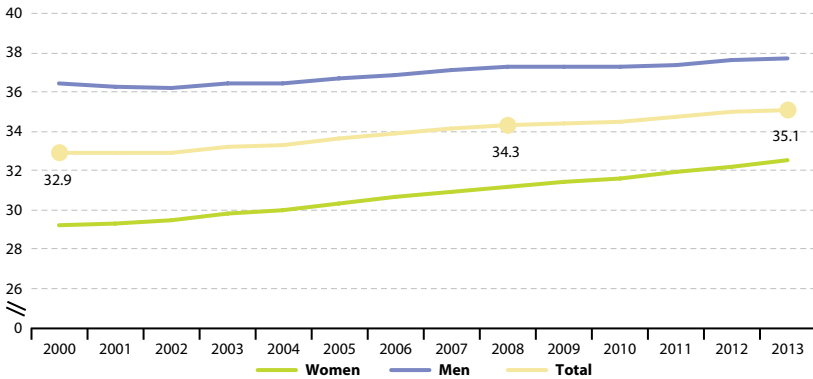
Source: Eurostat (online data code: [tsdde410](#))



Many Member States reformed their pension systems to extend their population's **duration of working life** and subsequently reduce the costs for pension payments by the state. Between 2000 and 2013 the duration of working life in the EU increased by 2.2 years. In 2013, men worked on average 37.7 years and women 32.5 years during the course of their life.

**Figure 4.16:** Duration of working life, by sex, EU-28, 2000–2013 (¹)

(years)



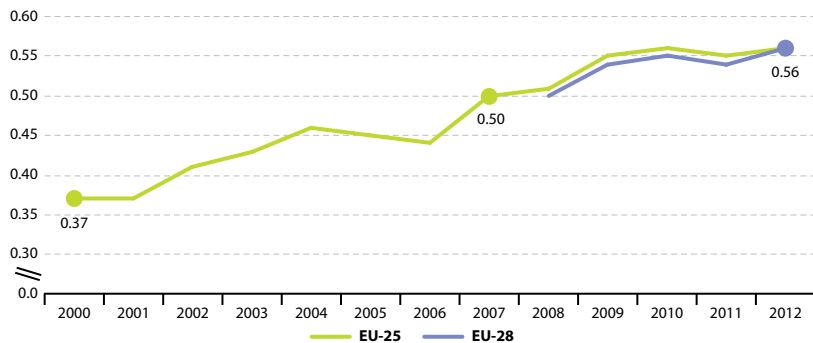
(¹) Data calculated with probabilistic model combining demographic data and labour market data.

Source: Eurostat (online data code: [tsdde420](#))

The **social protection expenditure on care for the elderly** in the EU-27 has increased from 0.37% of GDP in 2000 to 0.50% in 2008 and further to 0.56% in 2012.

**Figure 4.17:** Expenditure on care for the elderly, 2000–2012

(% of GDP)



NB: 2010–2012 data are provisional.

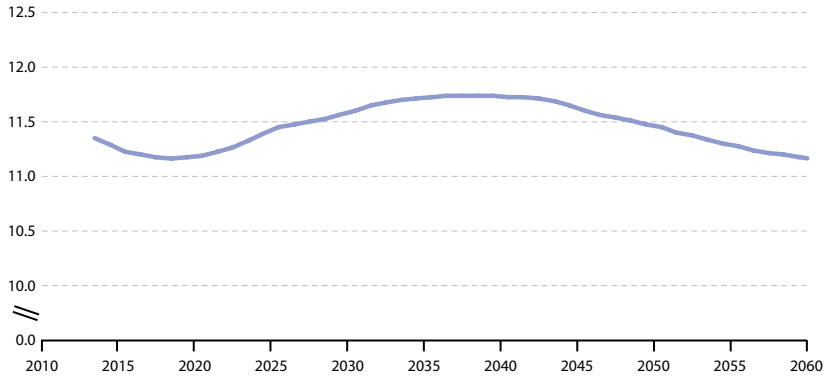
Source: Eurostat (online data code: [tsdde530](#))





**Pension expenditure** in the EU is projected to remain stable at around 11 % of GDP, from 11.3 % in 2013 to 11.2 % in 2060.

**Figure 4.18:** Pension expenditure projections (baseline scenario), EU-27, 2013–2060 (¹)  
(% of GDP)



(¹) Projections made on the basis of Eurostat's population projection EUROPOP2013.

Source: Economic Policy Committee (online data code: [tsdde520](#))

Public health

5



















## Overview of the main changes

The headline indicator in the ‘public health’ thematic area shows people are tending to live longer. This is also evident in the steadily decreasing amount of people dying from chronic diseases before the age of 65. However, the expected amount of years lived without activity limitations has not risen. This indicates that the extra years of life gained are not necessarily spent in good health.

Other public health trends generally show a moderately favourable picture. Progress can be seen in two determinants of health: the production of toxic chemicals and the share of people residing in living quarters exposed to excess noise.

No improvements are visible in the amount of people reporting unmet needs for health care due to monetary constraints. The share of people unable to afford health care has risen since the onset of the economic crisis in 2008. Little or no progress can

**Table 5.1:** Evaluation of changes in the public health theme (EU-28) <sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
<b>Life expectancy and healthy life years</b>	 <sup>(2)</sup>	
<b>Health and health inequalities</b>		
Deaths due to chronic diseases	 <sup>(3)</sup>	
Unmet needs for medical health care	:	 <sup>(4)</sup>
Long-standing illnesses or health problems	 <sup>(4)(5)</sup>	 <sup>(4)</sup>
<b>Determinants of health</b>		
Production of toxic chemicals	 <sup>(2)</sup>	
Exposure to air pollution by particulate matter		
Exposure to air pollution by ozone		
Annoyance by noise	:	 <sup>(4)</sup>

<sup>(1)</sup> An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction.

<sup>(2)</sup> From 2004.

<sup>(3)</sup> From 2002.

<sup>(4)</sup> Evaluation based on EU-27.

<sup>(5)</sup> From 2005.





also be seen in the share of people suffering from long-standing illnesses or health problems and exposure to air pollution by particulate matter and ozone. Improving these indicators and reducing health inequalities thus remain challenges for the EU.

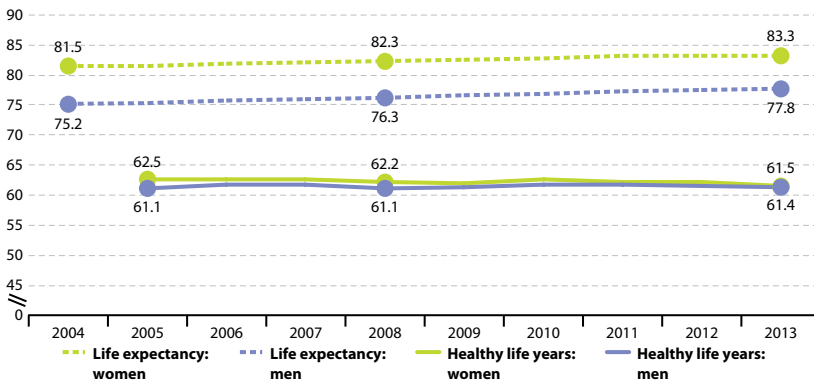
## Key trends in public health

### Increases in life expectancy but not in years lived without activity limitations

Girls born in the EU in 2013 could expect to live 83.3 years on average — 5.5 years more than boys. This is an improvement in **life expectancy** for both sexes. However, the number of **healthy life years** that girls or boys born in 2013 could expect to live has not changed compared with 2005.

**Health inequalities** between social groups persist, but evidence suggests that disproportionate health problems in different groups declined between 2004 and 2010.

**Figure 5.1:** Life expectancy and healthy life years at birth, by sex, EU-28, 2004–2013 <sup>(1)</sup>  
(years)



<sup>(1)</sup> Life expectancy: break in time series in 2009, 2011 and 2012; Healthy life years: data for 2005–2009 refer to EU-27; data for 2005, 2006, 2010 and 2013 are estimates, break in time series in 2008.

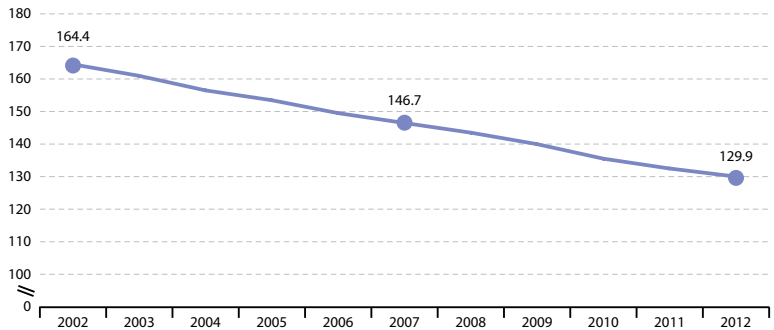
Source: Eurostat (online data code: [tsdph100](#))



## Improvements in health indicators have slowed since the onset of the economic crisis and inequalities persist

Out of every 100 000 people in the EU, 129.9 died due to chronic diseases before the age of 65 in 2012 <sup>(1)</sup>. This is a fall of 21.0 % compared with 2002. Such **pre-mature deaths due to chronic diseases** differ widely across the EU.

**Figure 5.4:** Death rate due to chronic diseases, population aged under 65, EU-28, 2002–2012 <sup>(1)</sup>  
(deaths per 100 000 persons)



<sup>(1)</sup> 2010 data are provisional.

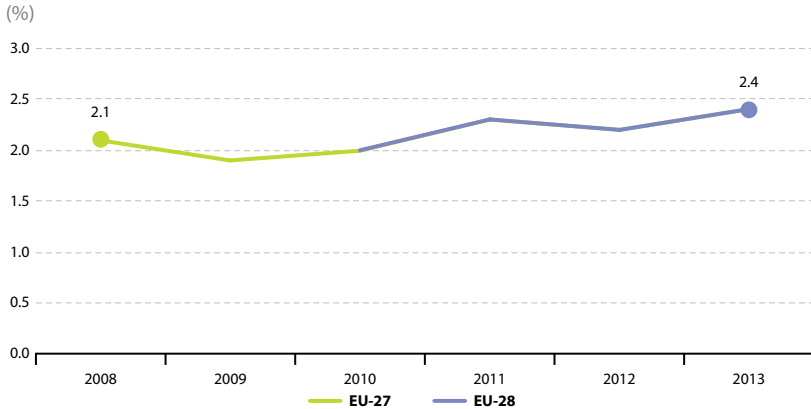
Source: Eurostat (online data codes: [hlth\\_cd\\_asdr](#) and [hlth\\_cd\\_asdr2](#))

<sup>(1)</sup> These numbers refer to standardised death rates and not crude death rates. The (age-) standardised death rate is a weighted average of age-specific mortality rates, whereas the crude death rate describes mortality in relation to the total population.



Overall, the share of people reporting **unmet needs for health care** due to monetary constraints grew from 2.1 % in 2008 to 2.4 % in 2013. Inequalities between income groups persist as those in the lowest income quintile were more likely to report unmet medical needs.

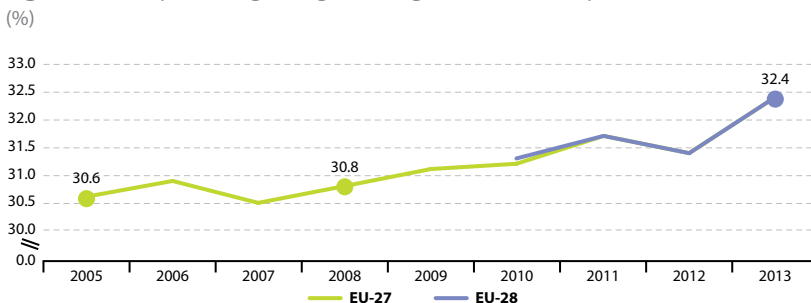
**Figure 5.6:** Self-reported unmet need for medical examination or treatment due to monetary constraints, 2008–2013



Source: Eurostat (online data code: [tsdph270](#))

Between 2005 and 2013 the share of people in the EU suffering from a **long-standing illness** or health problems increased slightly from 30.6 % to 32.4 %. The increase was more pronounced between 2010 and 2013. Long-standing illnesses remain more prevalent among the lower income groups.

**Figure 5.8:** People having a long-standing illness or health problem, 2005–2013 (¹)



(¹) Data for 2005 and 2006 are estimates.

Source: Eurostat (online data code: [hlth\\_silc\\_11](#))

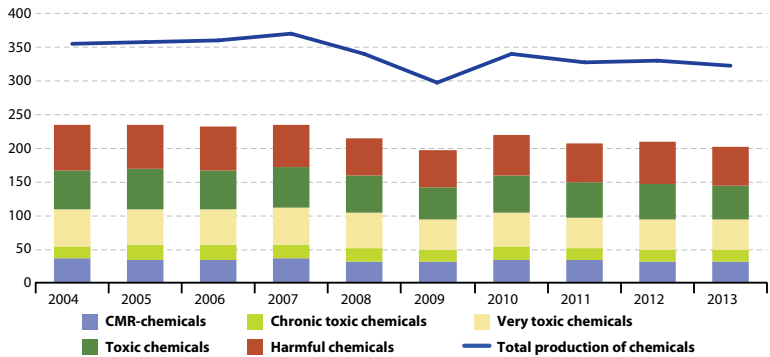




## Progress in determinants of health such as toxic chemical production or noise annoyance, but poor improvement in particulate matter and ozone exposure

Between 2004 and 2013 the **production volume of toxic chemicals** fell by 13.8%, from 234.0 million tonnes to 201.8 million tonnes. The decline in the production of chemicals classified as ‘carcinogenic, mutagenic and reprotoxic’ (CMR) — the most toxic chemicals — was less pronounced, with their share of total chemical production remaining close to 10%. At the same time, total production of non-toxic chemicals remained stable at about 120 million tonnes over the period 2004 to 2013.

**Figure 5.10:** Production of toxic chemicals, by toxicity class, EU-28, 2004–2013 <sup>(1)</sup>  
(million tonnes)



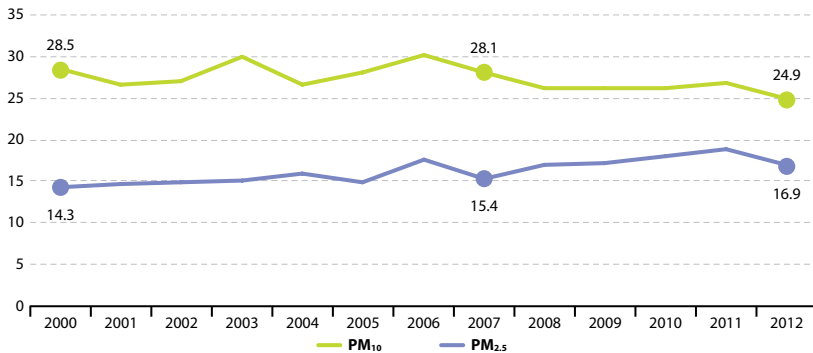
<sup>(1)</sup> Due to a change in the methodology the data presented in this 2015 edition of the *Sustainable development in the European Union* monitoring report differ from those presented in previous editions.

Source: Eurostat (online data code: [tsdph320](#))



There was an increase in the exposure to **air pollution by very fine particulate matter (PM<sub>2.5</sub>)** — the most hazardous to human health — from 14.3 micrograms per cubic metre in 2000 to 16.9 in 2012. In spite of the rise in PM<sub>2.5</sub>, overall exposure to air pollution by fine particulate matter (PM<sub>10</sub>) fell by 3.6 micrograms per cubic metre over the same period, with PM<sub>10</sub> concentrations reaching 24.9 micrograms per cubic metre in 2012.

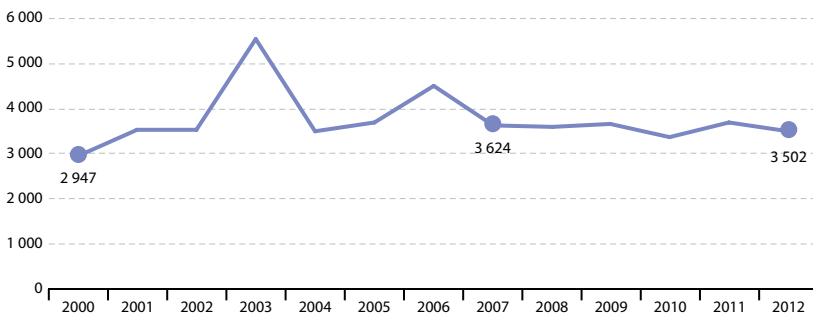
**Figure 5.12:** Urban population exposure to air pollution by particulate matter, EU-28, 2000–2012 (micrograms per cubic metre)



Source: European Environment Agency, Eurostat (online data code: [tsdph370](#))

Overall urban **exposure to air pollution by ozone** rose by 555 micrograms per cubic metre between 2000 and 2012, reaching 3 502 micrograms per cubic metre in 2012. However, the trend was volatile due to the influence of weather on ozone levels.

**Figure 5.13:** Urban population exposure to air pollution by ozone, EU-28, 2000–2012 (micrograms per cubic metre day)



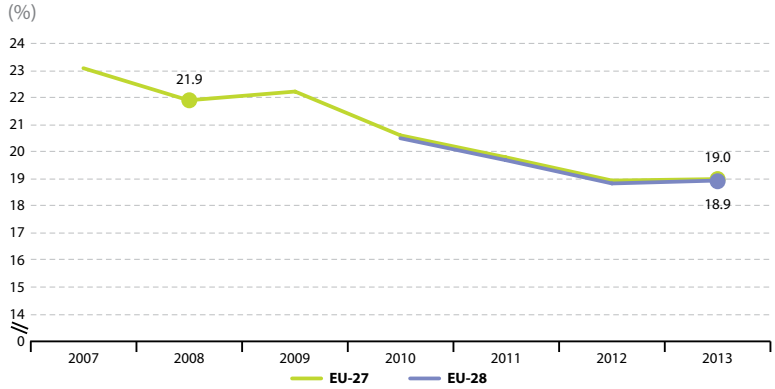
Source: European Environment Agency, Eurostat (online data code: [tsdph380](#))





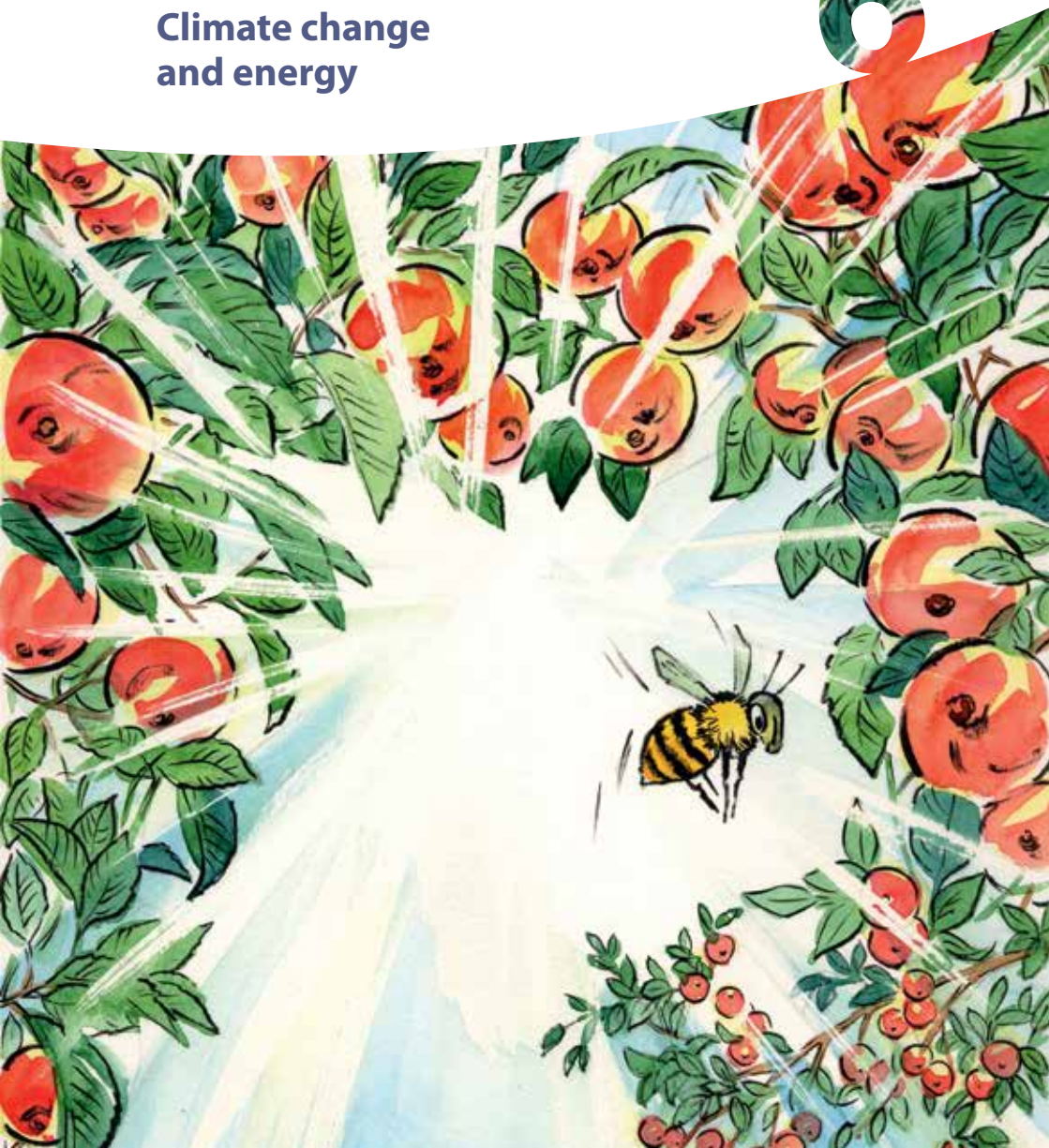
Last, there was a drop in the **share of the population inhabiting living quarters exposed to noise**, from 21.9% in 2008 to 19% in 2013. Whether this implies an actual reduction in noise levels or a change of people's subjective perception of noise is not clear. Across the EU, an estimated 90 million people in urban areas and 35 million outside of these are exposed to excessive noise.

**Figure 5.14:** Proportion of population living in households considering that they suffer from noise, EU-27 and EU-28, 2007–2013



Source: Eurostat (online data code: [tsdph390](#))

## Climate change and energy





## Overview of the main changes

The EU has made steady progress towards its climate and energy targets. Greenhouse gas (GHG) emissions have decreased both in the short term since 2008 and over the long run since 2000. In 2020, the EU is likely to surpass its 20% reduction target compared with 1990 levels. While primary energy consumption has risen in the past, reaching a peak in 2006, the trend has reversed in recent years and the short-term trend is therefore clearly positive. Some of the favourable trend can be attributed to the economic crisis, with a continuous economic downturn in some EU countries driving down industrial production, transport volumes and energy demand between 2007 and 2013 (with the exception of a limited rebound in 2010). Therefore, further action will be needed to continue improving energy efficiency up to 2020, particularly to avoid a bounce back in energy demand that is expected once economic growth picks up again.

**Table 6.1:** Evaluation of changes in the climate change and energy theme, EU-28<sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
Greenhouse gas emissions		
Primary energy consumption		
<b>Climate change</b>		
Greenhouse gas emissions by sector	:	:
Global surface average temperature	:	:
Greenhouse gas emissions intensity of energy consumption		
<b>Energy</b>		
Energy dependence		
Consumption of renewables	(?)	
Electricity generation from renewables	(?)	
Share of renewable energy in transport	(?)	

(<sup>1</sup>) An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction.

(<sup>2</sup>) From 2004.





Other indicators in the ‘climate change and energy’ theme also show positive trends — at least over the short-term — but will require additional effort in future. For example, renewable energy provides a growing share of the EU’s energy consumption. At the same time, economic difficulties and policy changes have recently led to a slump in renewable energy investments after years of rapid growth. Despite these challenges, recent progress demonstrates that EU and national climate and energy policies have an impact on the energy system. Improvements in energy efficiency and higher shares of renewables have lowered carbon emissions per unit of energy and per unit of gross domestic product (GDP). These trends have helped to stabilise the level of energy dependence and contributed to the sizable reduction in emissions between 2005 and 2012.

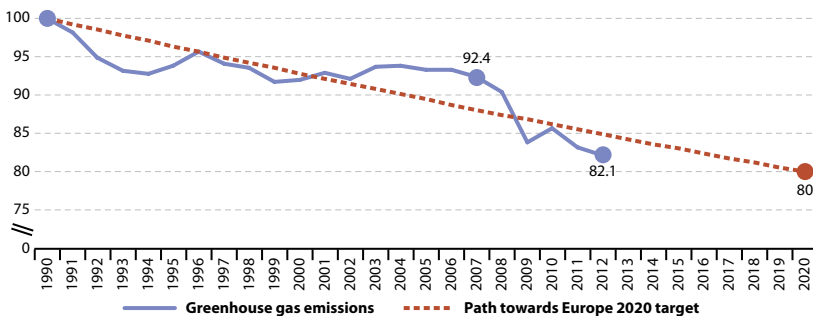
## Key trends in climate change and energy

### Greenhouse gas emissions and primary energy consumption are nearing 2020 targets

In 2012, EU **greenhouse gas emissions**, including emissions from international aviation, were down by 17.9% compared with 1990 levels. This has put the EU within reach of meeting the Europe 2020 target of reducing GHG emissions by 20% by 2020 eight years ahead of schedule. With average emissions 11.8% below base-year levels in the period 2008–2012, the EU-15 has also overachieved its commitment under the Kyoto Protocol to reach an average emission reduction of 8% in 2008–2012 compared with the base year (1).

**Figure 6.1:** Greenhouse gas emissions, EU-28, 1990–2012 (1)

(index 1990 = 100)



(1) Total emissions, including international aviation, but excluding emissions from land use, land use change and forestry (LULUCF). When considering the scope of the Kyoto Protocol, which excludes emissions from international aviation, the reduction achieved in 2012 reaches 19.2% compared with 1990 levels.

Source: European Environment Agency, Eurostat (online data code: tsdcc100)

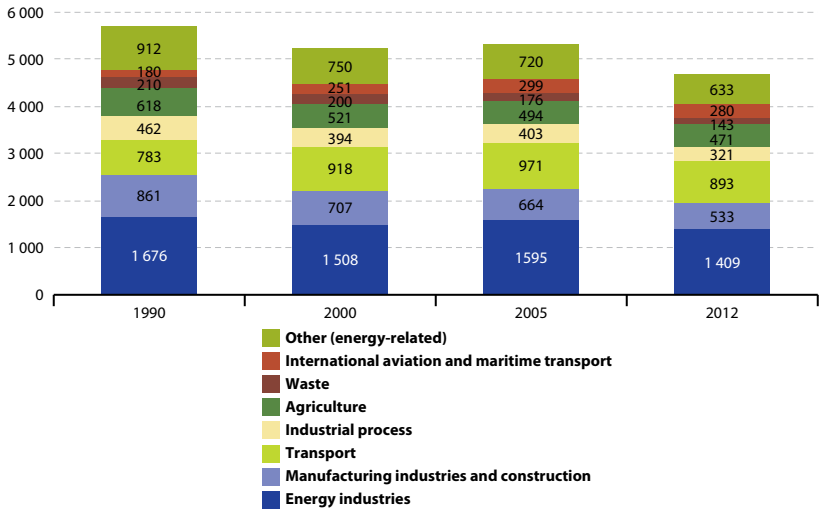
(1) This figure excludes emissions from land use, land-use change and forestry (LULUCF) and international aviation, in line with the Parties’ commitments under the Kyoto Protocol.





All sectors, except for transport and international aviation and shipping, contributed to the reductions between 1990 and 2012. While economic restructuring in eastern European countries and a switch from coal to natural gas primarily drove emission reductions in the 1990s, recent progress can partly be attributed to energy efficiency improvements and the expansion of renewable energies. Persistent low economic growth and a shift from industry to services also played a role.

**Figure 6.5:** Greenhouse gas emissions by sector, EU-28  
(million tonnes of CO<sub>2</sub> equivalent)



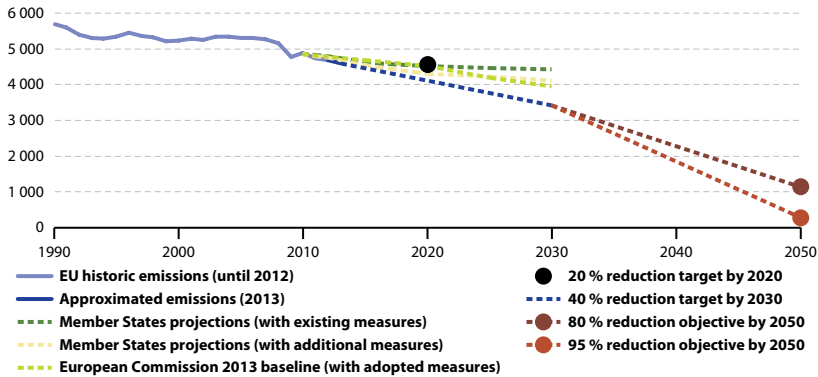
Source: European Environment Agency, Eurostat (online data code: [tsdcc210](#))



Despite the decreasing trend, projections show that much steeper annual emission reductions will be required to achieve the EU's 2030 target of cutting GHG emissions by 40 % <sup>(2)</sup> as well the long-term objective of reaching 80 % to 95 % GHG emission reductions by 2050 <sup>(3)</sup> (both compared with 1990 levels).

**Figure 6.3:** Greenhouse gas emissions and projections, 1990–2050 <sup>(1)</sup>

(million tonnes of CO<sub>2</sub> equivalent)



<sup>(1)</sup> Total EU GHG emissions include those from international aviation and exclude those from land use, land-use change and forestry (LULUCF). The 2013 GHG emissions data are preliminary estimates (from approximated GHG inventories).

Source: [European Environment Agency](#)



<sup>(2)</sup> Council of the European Union (2014), [Council Conclusions \(23–24 October 2014\)](#), European Union, Brussels.

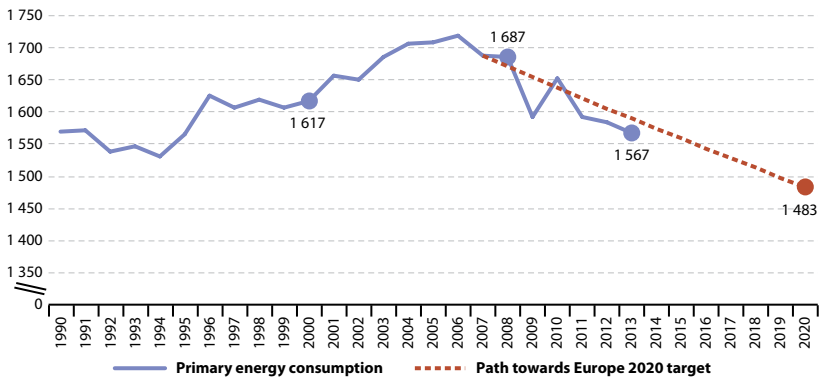
<sup>(3)</sup> Council of the European Union (2009), [Council Conclusions on EU Position for the Copenhagen Climate Conference \(7–18 December 2009\)](#), European Union, Brussels, p. 2.





With the exception of a rebound from crisis levels in 2010, **primary energy consumption** has been falling continuously since 2006. In 2013, it fell below 1990 levels for the first time since 1995 and was 8.3% lower than in 2005<sup>(4)</sup>. If the average annual decline of 1.5% achieved between 2008 and 2013 can be maintained, the EU would overachieve its 2020 target of reducing energy consumption by 20% compared with the 'business as usual' projections dating from 2007. Stricter efficiency standards for cars, buildings and other energy consuming devices appear to have played a role in driving down energy use and more efficient power plants and higher shares of renewables also had a positive effect. However, low economic performance also contributed to the trend.

**Figure 6.10:** Primary energy consumption, EU-28, 1990–2013  
(million tonnes of oil equivalent (Mtoe))



Source: Eurostat (online data code: [tsdcc120](#))

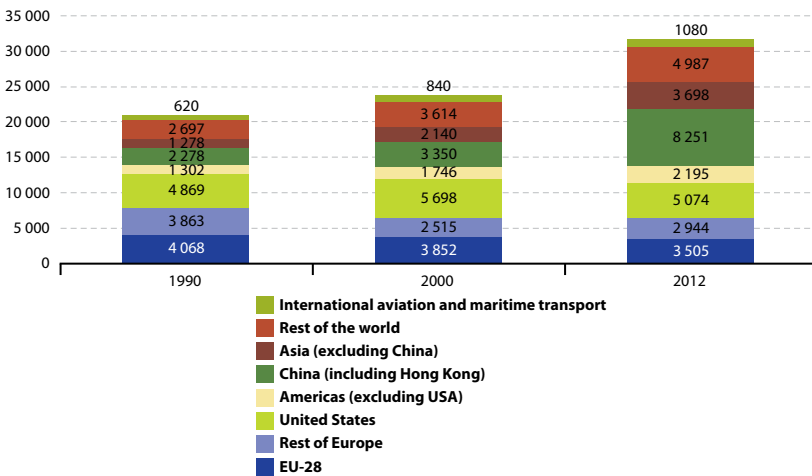
<sup>(4)</sup> Time series used in the summary differ because data on energy consumption were available up to the year 2013, while data on greenhouse gas emissions were only available for the period up to 2012 at the time of publication.



## Global average temperature keeps rising

EU GHG emissions represent about 10% of **global emissions**. Steep rises in emissions in other parts of the world, in particular China, have largely overcompensated for GHG emission reductions that were achieved in the EU since 1990 and the United States since 2005. Together with past emissions, these increases push up GHG concentrations in the atmosphere.

**Figure 6.4:** Global CO<sub>2</sub> emissions from fuel combustion, 1990, 2000 and 2012 (million tonnes of CO<sub>2</sub>)



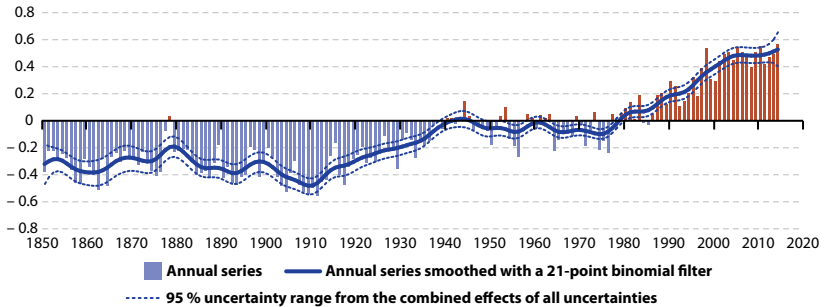
Source: International Energy Agency (IEA)





Although there is a time lag between emissions and temperature increases, the continuous upward trend in **average global surface temperature** is unequivocal. Together with 2010, 2005 and 1998, the year 2014 counts among the warmest years on record.

**Figure 6.7:** Global annual mean temperature deviations, 1850–2014 (temperature deviation in °C, compared with 1961–1990 average)

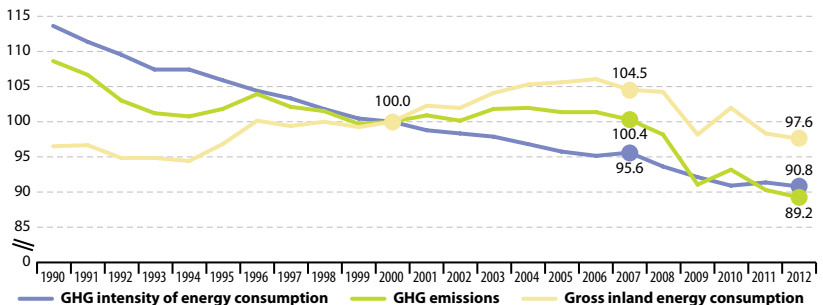


Source: Met Office Hadley Centre and the Climatic Research Unit at the University of East Anglia, HadCRUT4

## Steady expansion of renewables but energy dependence remains high

The EU energy sector shows positive trends on a range of indicators. Between 1990 and 2012, the EU has achieved absolute decoupling of GHG emissions from gross inland energy consumption. Compared with 1990, the EU emitted 20.1% less **greenhouse gas for each unit of energy** in 2012. While the dominant driver in the 1990s was the switch from coal to natural gas, the strong growth of renewable energy generation has contributed to the reduction in emission intensity between 2000 and 2012.

**Figure 6.9:** Greenhouse gas emissions intensity of energy consumption, EU-28, 1990–2012 (index 2000 = 100)

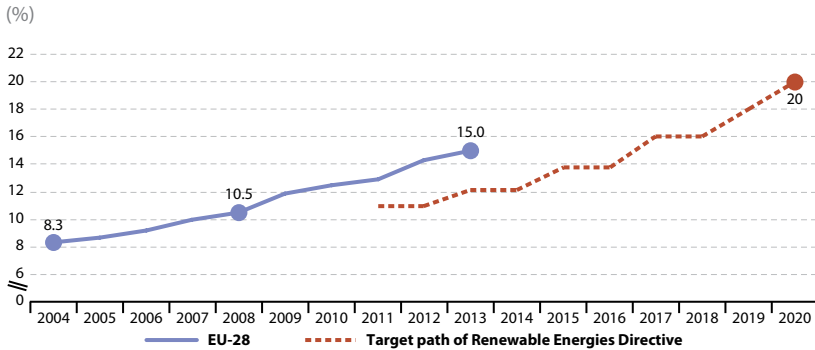


Source: European Environment Agency, Eurostat (online data codes: [tsdcc210](#), [tsdcc220](#) and [tsdcc320](#))



In 2013, **renewables** provided 15% of gross final energy consumption in the EU, up from 8.3% in 2004. The steady growth was possible due to effective support schemes, shrinking costs and lower energy consumption which statistically increases the renewable energy share. The annual growth rate observed over the past decade puts the EU on track to achieve its 2020 target of sourcing 20% of all final energy consumption from renewables. However, a recent investment slump due to policy uncertainty and an unfavourable economic climate points to the need to intensify efforts to promote renewable energy expansion in all sectors.

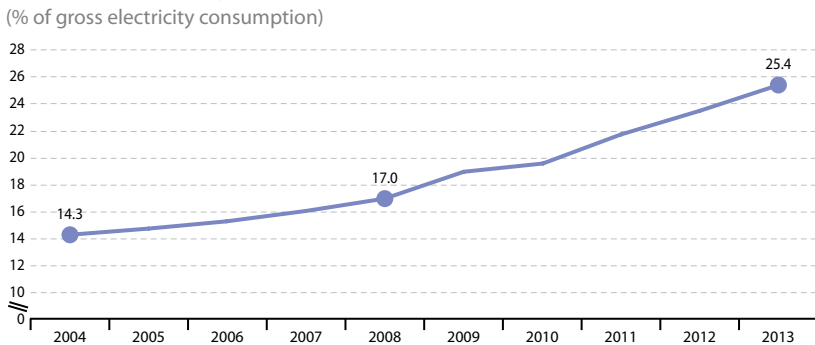
**Figure 6.13:** Share of renewable energy in gross final energy consumption, EU-28, 2004–2013



Source: Eurostat (online data code: [t2020\\_31](#))

The expansion of renewable capacity in the power sector has been dynamic. Gross **electricity generated from renewable sources** more than doubled between 2000 and 2013 and provided more than a quarter of all electricity in 2013.

**Figure 6.15:** Electricity generated from renewable sources, EU-28, 2004–2013



Source: Eurostat (online data code: [tsdcc330](#))

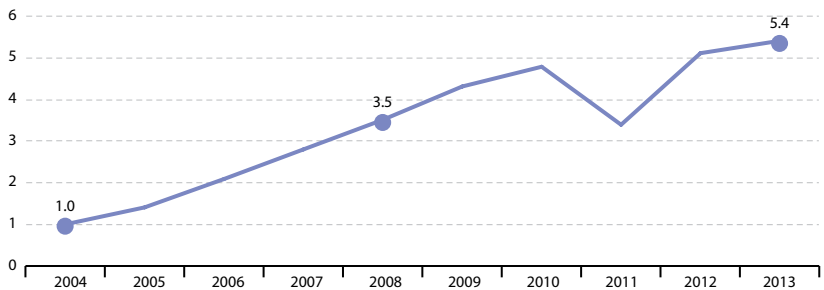




**Renewables** provided 5.4% of all **energy in transport** in 2013, up from 1% in 2004. After rapid growth up to 2010, the share of renewable energy in transport grew at a slower pace over the following three years. This slowdown can partly be attributed to the fact that not all Member States have fully transposed the Renewable Energy Directive's sustainability criteria for biofuels and because only certified biofuels have been counted towards the indicator since 2010.

**Figure 6.17:** Share of renewable energy in fuel consumption of transport, EU-28, 2004–2013 <sup>(1)</sup>

(%)



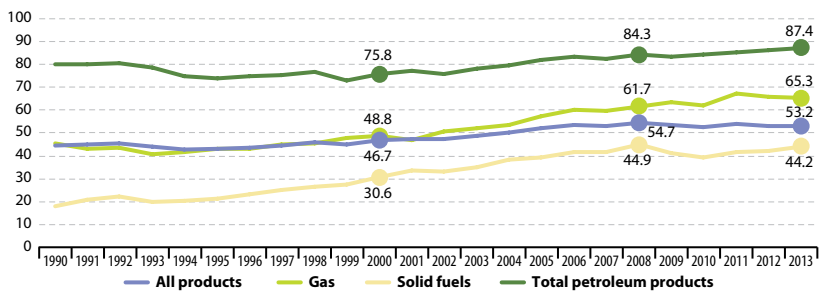
<sup>(1)</sup> Break in time series in 2011.

Source: Eurostat (online data code: [tsdcc340](#))

The EU still relies heavily on **energy imports** from non-EU countries, which provided 53.2% of all energy consumed in 2013. However, after increasing steadily since 2002, the share of energy imports peaked in 2008 and has since declined slightly. Greater use of domestic renewables and lower energy demand explain this stabilisation.

**Figure 6.18:** Energy dependence, EU-28, 1990–2013 <sup>(1)</sup>

(share of imports in total energy consumption, %)



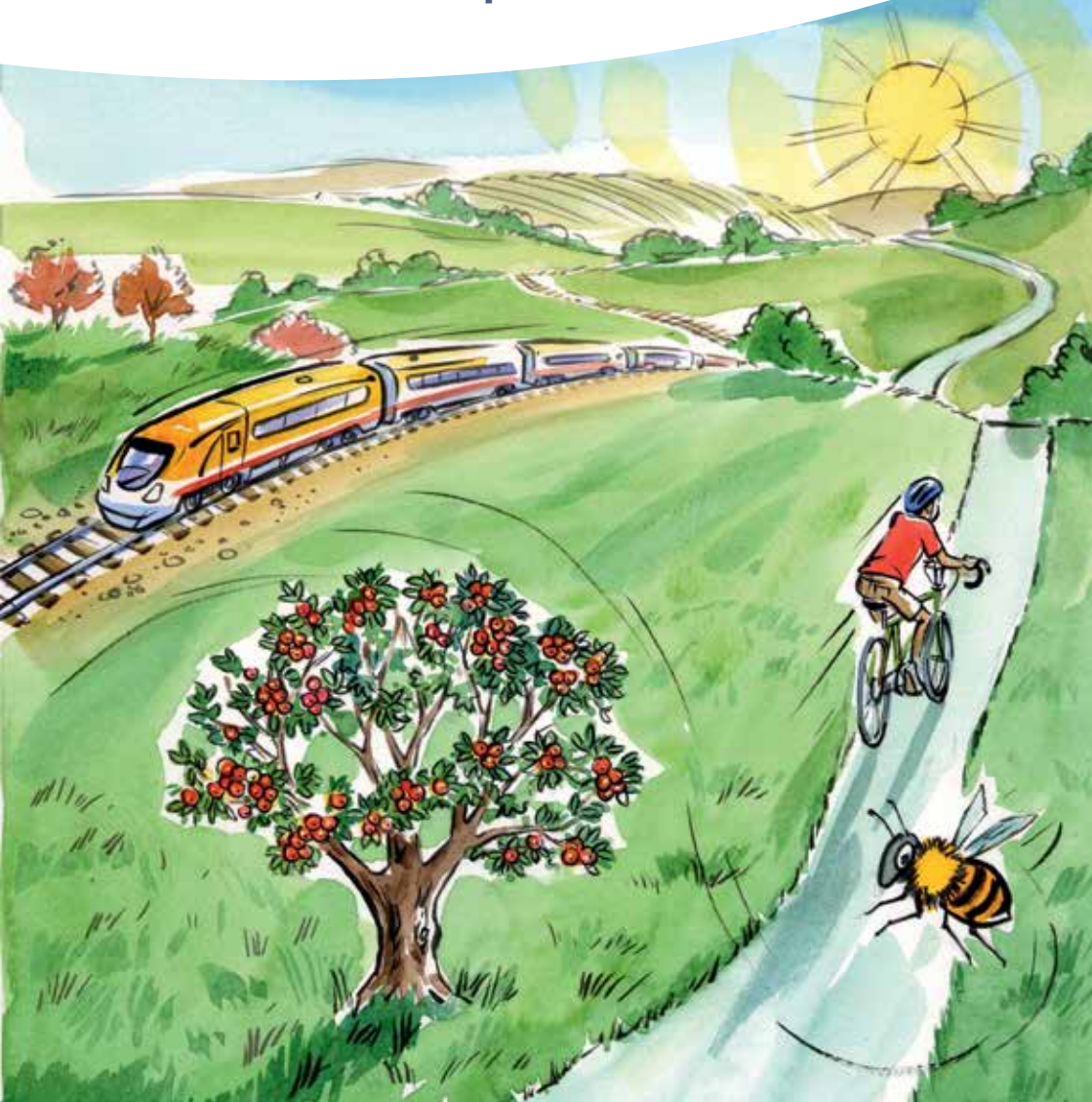
<sup>(1)</sup> 'Total' is not the average of the other three fuel categories shown. It also includes other energy sources, such as renewable energy or nuclear energy, which are treated as domestic sources.

Source: Eurostat (online data code: [tsdcc310](#))



# 7

## Sustainable transport





## Overview of the main changes

Energy consumption of transport per unit of gross domestic product (GDP) in the EU has fallen in the long term since 2000, with the strongest declines seen in the short-term period since 2008. This downward trend was amplified by the impacts of the economic crisis starting in 2008. It is unclear whether this favourable short-term trend will continue with the economic recovery.

Because transport volumes are strongly dependent on economic activity, the economic crisis has also affected the other indicators in the 'sustainable transport' theme. In the short term, modal split and volumes of freight transport have recorded slightly favourable developments. However, no conclusive assessment of these trends can yet be made. The transport impact indicators show a more favourable trend,

**Table 7.1:** Evaluation of changes in the sustainable transport theme, EU-28 <sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
Energy consumption of transport relative to GDP		
<b>Transport and mobility</b>		
Modal split of freight transport	<sup>(?)</sup>	<sup>(?)</sup>
Volume of freight transport relative to GDP	<sup>(?)</sup>	<sup>(?)</sup>
Modal split of passenger transport		
Volume of passenger transport relative to GDP		
<b>Transport impacts</b>		
Greenhouse gas emissions from transport		
People killed in road accidents		
Average CO <sub>2</sub> emissions per kilometre from new passenger cars	:	<sup>(?)</sup>
Emissions of ozone precursors from transport		
Emissions of particulate matter from transport		

<sup>(1)</sup> An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction.

<sup>(?)</sup> Evaluation based on EU-27

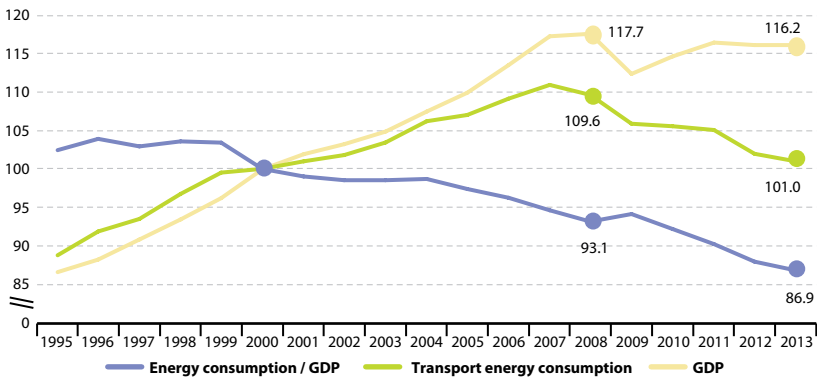
both in the long and short terms. Greenhouse gas emissions have fallen in the short term. This can be explained partly by smaller transport volumes as well as other factors such as newly implemented transport and environmental regulation policies and technological progress. These underlying reasons can also explain the favourable trends of other transport impact indicators such as people killed by road accidents or emissions of ozone precursors and particulate matter.

## Key trends in sustainable transport

### Absolute decoupling of energy consumption of transport from economic growth in the short term but not in the long term

**Energy consumption of transport per unit of GDP** has fallen by 13.1% since 2000 and by 6.2% since 2008. The environmental component of this indicator — transport energy use — has only declined since the start of the economic crisis in 2008. Between 2000 and 2013 GDP grew by 16.2% while transport energy only showed a minor increase.

**Figure 7.1:** Energy consumption of transport relative to GDP, EU-28, 1995–2013 (°) (index 2000 = 100)



(°) Energy consumption of transport includes the final energy consumption of all modes of transport.

Source: Eurostat (online data codes: tsdtr100, nrg\_100a and nama\_gdp\_k)

These trends — faster growth of GDP compared with energy consumption — imply a relative decoupling of energy consumption of transport from economic growth in the EU over the period 2000 to 2013. In the short term an absolute decoupling (that is a strong reduction in transport energy consumption while the economy decreased at a slower rate) could be observed. But it is yet unclear whether transport energy use will rise again with the economic recovery.

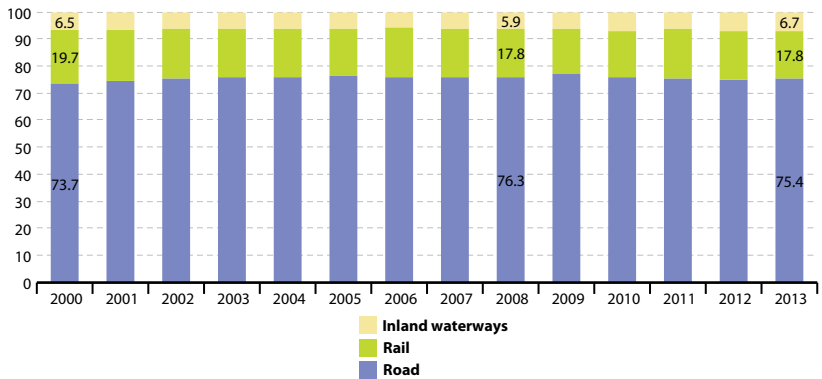




## No favourable long-term changes in transport modes and mobility

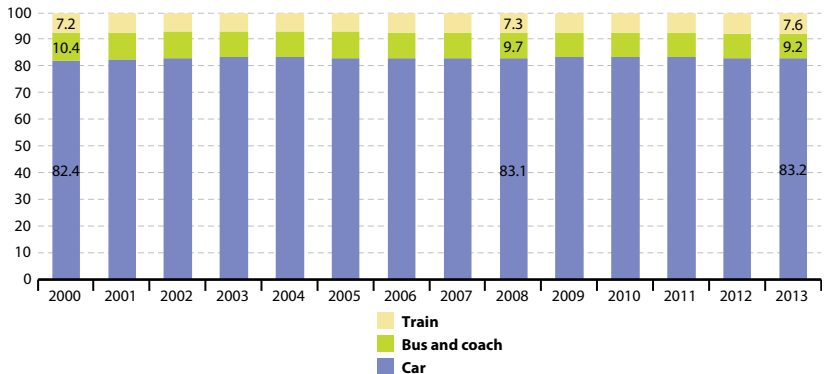
The **modal splits of passenger transport and freight transport** in 2013 remained similar to their 2000 levels. More than three-quarters of total inland freight transport is carried out on the road — slightly more than in 2000. In the short term a modest shift towards more environmentally friendly transport modes could be observed for freight transport but not for passenger transport. Most passenger journeys were undertaken by car, with a share of 83.2%, in 2013.

**Figure 7.6:** Modal split of freight transport, EU-27, 2000–2013  
(% in total inland freight tonne-km)



Source: Eurostat (online data code: [tsdtr220](#))

**Figure 7.9:** Modal split of passenger transport, EU-28, 2000–2013  
(% in total inland passenger-km)

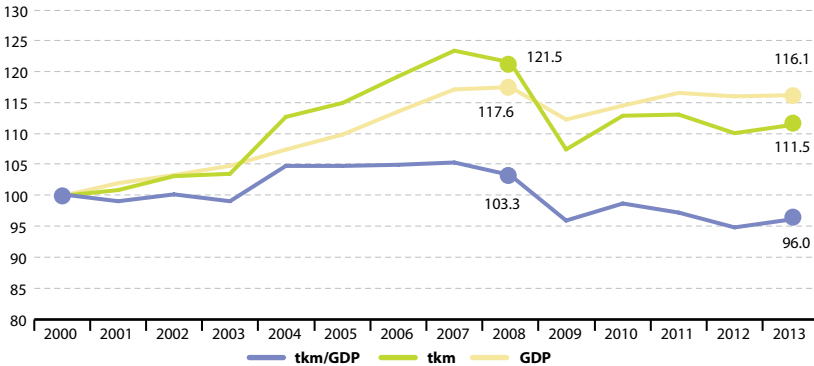


Source: Eurostat (online data code: [tsdtr210](#))



Volumes of freight transport relative to GDP have dropped by 4.0% since 2000 and by 7.3% since 2008. The economic crisis is considered to be the main reason why freight transport volumes have decoupled from GDP in the short term.

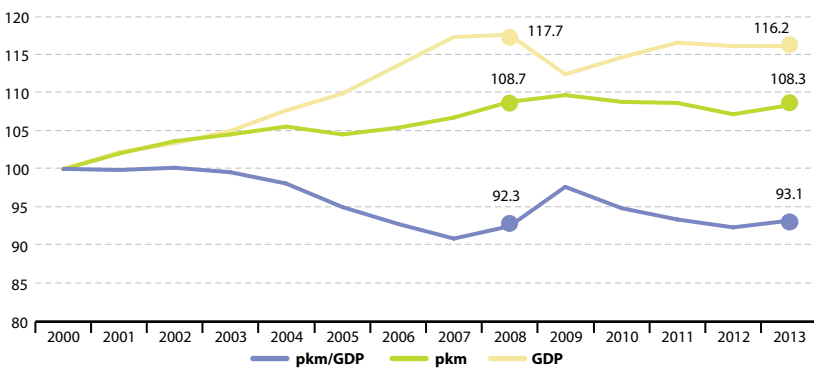
**Figure 7.8:** Volume of freight transport relative to GDP, EU-27, 2000–2013  
(index 2000 = 100)



Source: Eurostat (online data codes: [tsdtr230](#) and [nama\\_gdp\\_k](#))

In contrast, **passenger transport volumes** have reacted differently to the crisis and have not decoupled from GDP growth since 2008. While GDP dropped slightly, passenger-kilometres fell by even less between 2008 and 2013. Therefore volumes of passenger transport relative to GDP display no (absolute) decoupling so far.

**Figure 7.11:** Volume of passenger transport relative to GDP, EU-28, 2000–2013  
(index 2000 = 100)



Source: Eurostat (online data codes: [tsdtr240](#) and [nama\\_gdp\\_k](#))

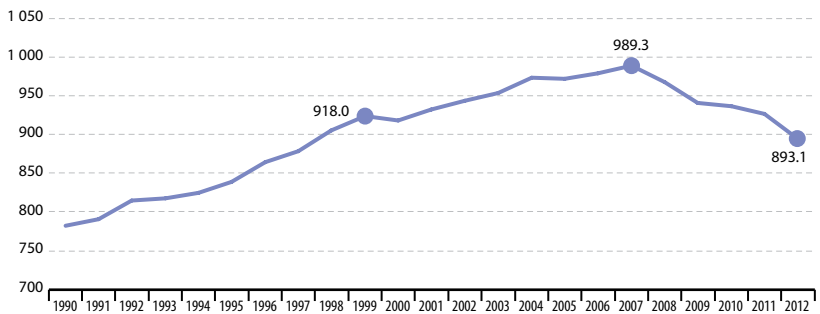




## Transport impacts have improved in the short term, but long-term reductions are not yet assured

**Greenhouse gas emissions from transport** decreased by 2.7% between 2000 and 2012. Declines, however, were not consistent, with emissions increasing until 2007 and sinking thereafter. Overall, growth was slower between 2000 and 2007 than during the 1990s. However, GHG emissions from transport have been falling at a slower pace compared with other sectors of the economy. Emissions from transport will need to fall sharply to meet the goals stated in the 2011 Transport White Paper.

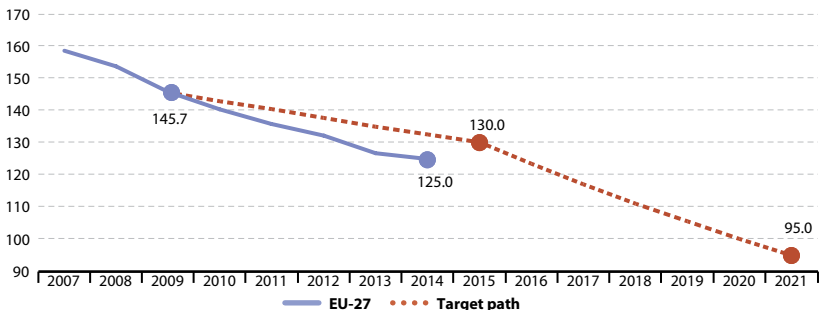
**Figure 7.12:** Greenhouse gas emissions from transport, EU-28, 1990–2012 (million tonnes of CO<sub>2</sub> equivalent)



Source: European Environment Agency (online data code: [tsdtr410](#))

Reduced **average CO<sub>2</sub> emissions per kilometre from new passenger cars** have contributed to the short-term decline in greenhouse gas emissions from road transport. On average, newly registered cars emitted 14% less CO<sub>2</sub> in 2014 compared with 2009.

**Figure 7.16:** Average carbon dioxide emissions per km from new passenger cars, EU-27, 2009–2014 (gram of CO<sub>2</sub> per km)

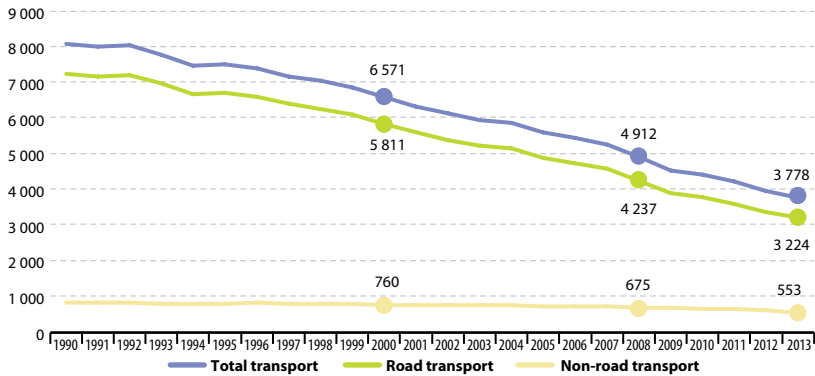


Source: Eurostat (online data code: [tsdtr450](#))



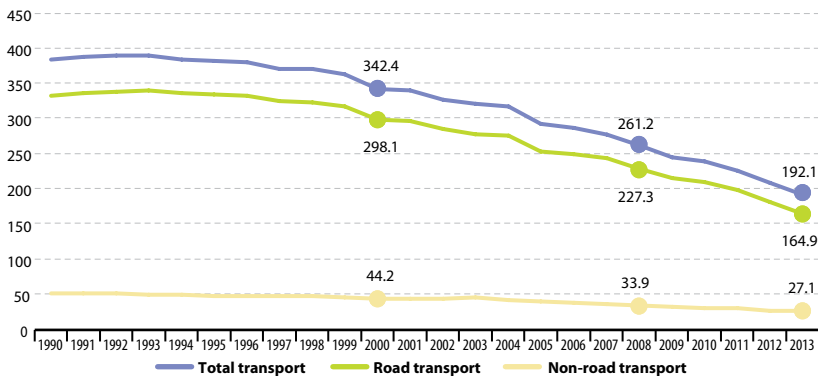
**Emissions of ozone precursors (nitrogen oxides, NO<sub>x</sub>) and emissions of particulate matter (PM<sub>2.5</sub>) both fell substantially between 2000 and 2013, by 42.5% and 43.9% respectively.**

**Figure 7.17:** Emissions of nitrogen oxides (NO<sub>x</sub>) from transport, EU-28, 1990–2013 (1 000 tonnes)



Source: European Environment Agency (online data code: [tsdtr430](#))

**Figure 7.18:** Emissions of particulate matter from transport (PM<sub>2.5</sub>), EU-28, 1990–2013 (1 000 tonnes)



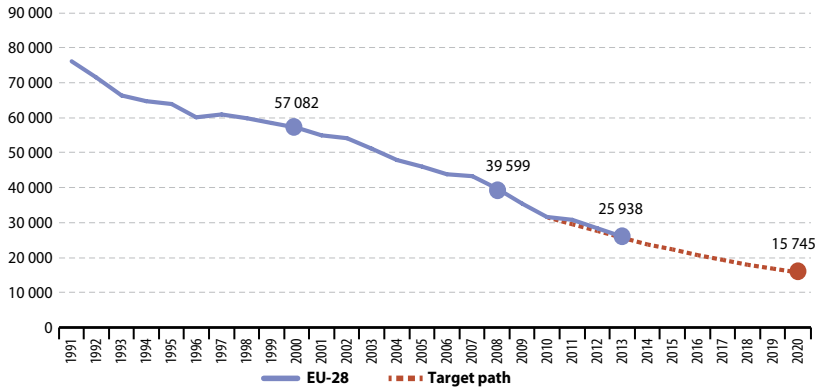
Source: European Environment Agency (online data code: [tsdtr440](#))





**Road accident fatalities** have continuously fallen and have been reduced by more than half since 2000. This reduction in fatalities, especially in the short term, is in line with the 2020 target to halve the number of road deaths in Europe set by the European Commission.

**Figure 7.14:** People killed in road accidents, EU-28, 1991–2013  
(number of killed people)

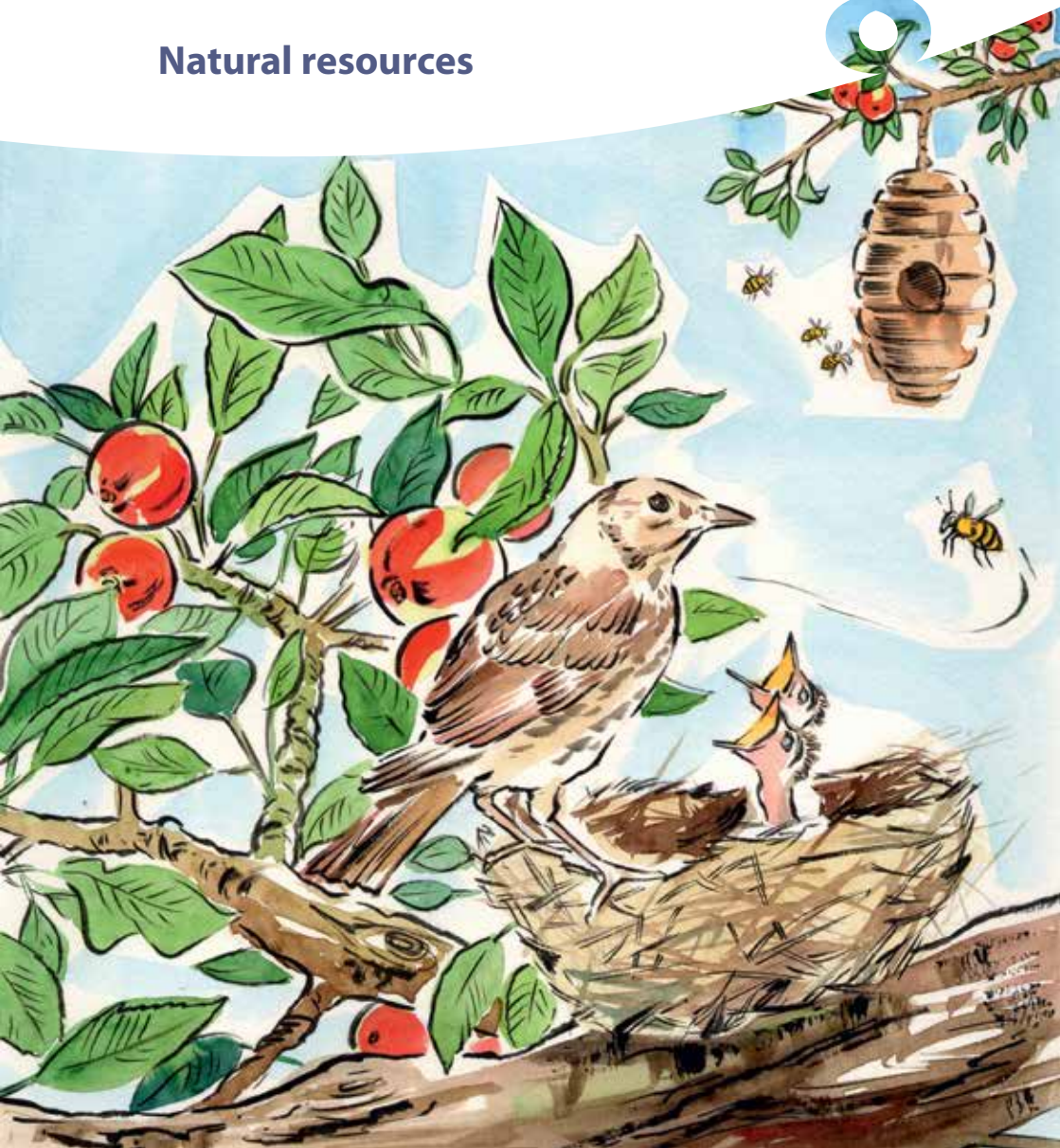


Source: European Commission services, DG Mobility and Transport, CARE database (online data code: [tsdtr420](#))



## Natural resources

8












## Overview of the main changes

The population status of common birds, the headline indicator of the ‘natural resources’ theme, continues to deteriorate. While the forest bird index has shown improvements since 2000, substantial declines in the abundance of farmland birds have led to an overall deterioration of the common bird index. Moreover, despite progress in the sufficiency of nature conservation sites designated to implement the Habitats Directive, many of the EU’s natural resources <sup>(1)</sup>, such as biodiversity, air, water, soil and spatial resources, are under continuous pressure, mainly due to land-take for settlements and infrastructure as well as intensification of agricultural production and fisheries. However, progress can be observed in the water quality of rivers as well as in the gross nutrient balance on agricultural land. These improvements, among other reasons, are due to better waste water treatment and farm management

**Table 8.1:** Evaluation of changes in the natural resources theme, EU-28 <sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
Common bird index	 <sup>(2)</sup>	 <sup>(2)</sup>
<b>Biodiversity</b>		
Protected areas	:	:
<b>Fresh water resources</b>		
Water abstraction	:	:
Water quality in rivers	 <sup>(3)</sup>	 <sup>(3)</sup>
<b>Marine ecosystems</b>		
Fishing capacity	:	:
<b>Land use</b>		
Artificial areas	:	 <sup>(4)</sup>
Nutrient balance on agricultural land	 <sup>(3)</sup>	 <sup>(3)</sup>

<sup>(1)</sup> An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction.

<sup>(2)</sup> EU aggregate with changing composition.

<sup>(3)</sup> 20 EEA countries.

<sup>(4)</sup> Last three-year period.

<sup>(1)</sup> The concept of natural resources also commonly includes raw materials, air and energy resources; however, these natural resource types are dealt separately under the Chapter 2 on sustainable consumption and production and Chapter 6 on climate change and energy. For more information on Eurostat’s concept of natural resources see <http://ec.europa.eu/eurostat/web/environmental-data-centre-on-natural-resources/overview/natural-resource-concepts>.



practices, most importantly regarding fertiliser application techniques. Nonetheless, further measures are needed to improve the state of natural resources in the EU and to put natural resource use on a sustainable path. New concepts and solutions are required in a number of areas, including agriculture, fisheries and water policies as well as transport, consumption and production patterns.

## Key trends in natural resources

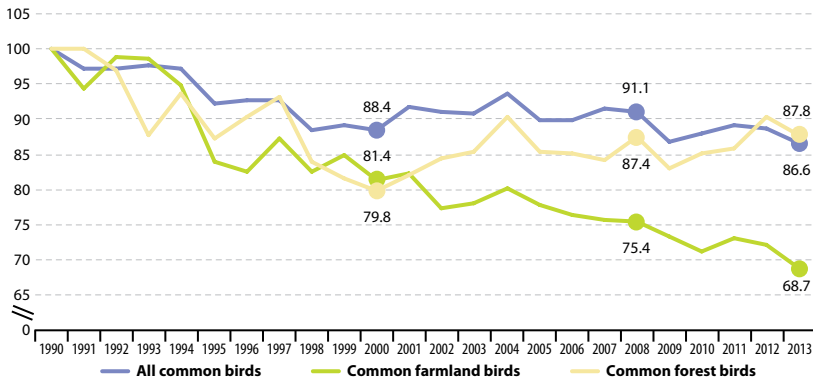
### Continued pressure on the EU's natural capital

The **index for all common birds** declined by 1.8 percentage points between 2000 and 2013, with two polarised trends in the populations of common farmland and common forest birds. While the forest bird index increased by 8.0 percentage points, the farmland bird index dropped by 12.7 percentage points in the long-term trend.

Agricultural intensification has largely been blamed for the decline of common farmland birds. Harmful subsidies and increased use of biomass for renewable energy production are key drivers of this intensification. Biodiversity concerns are increasingly being integrated into the regional development policy and the Common Agricultural Policy of the EU, but further efforts are needed.

**Figure 8.1:** Common bird index, EU, 1990–2013 (¹)

(index 1990 = 100)



(¹) The EU aggregate changes depending on countries joining the Pan-European Common Birds Monitoring Scheme.

Source: Eurostat (online data code: tsdnr100)

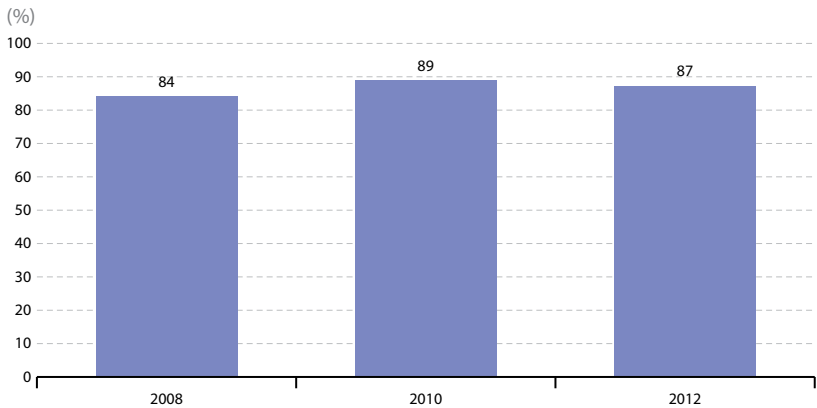




## Slight improvements in sufficiency of protected areas

Between 2008 and 2012 the sufficiency of areas proposed for nature conservation under the Habitats Directive increased slightly to 87 % for the EU-27, indicating progress in the implementation of EU nature legislation and biodiversity protection. Half of the Member States showed sufficiency levels of **protected areas** above 90 % in 2012. However, further improvement in the management of designated sites and connectivity between sites is needed.

**Figure 8.2:** Sufficiency of sites designated under the EU Habitats Directive, EU-27, 2008–2012 (¹)



(¹) Break in time series in 2012.

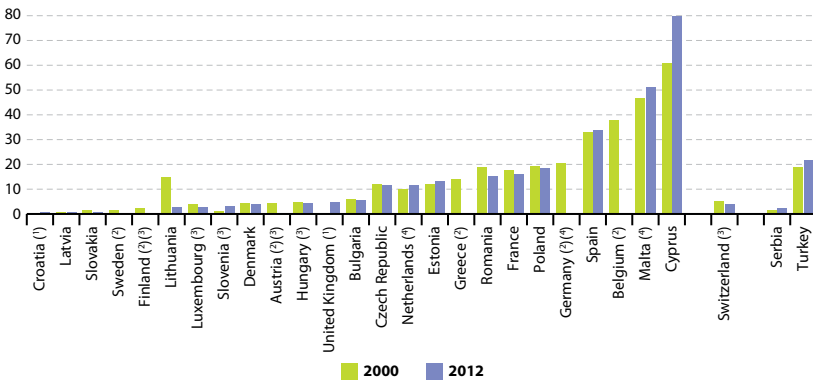
Source: Eurostat (online data code: [tsdnr210](#))



## Water exploitation close to sustainable levels and river water quality improving

**Water exploitation** decreased over the past decade in most regions of Europe with the exception of Estonia, Spain and Cyprus which reported higher water abstraction. Countries such as Lithuania and Romania made significant progress towards more sustainable water management by reducing water abstraction.

**Figure 8.4:** Water exploitation index, by country, 2000 and 2012  
(% of long-term average available water (LTA) from renewable fresh water resources)



(1) No data for 2000.

(2) No data for 2012.

(3) 1999 data (instead of 2000).

(4) 2001 data (instead of 2000).

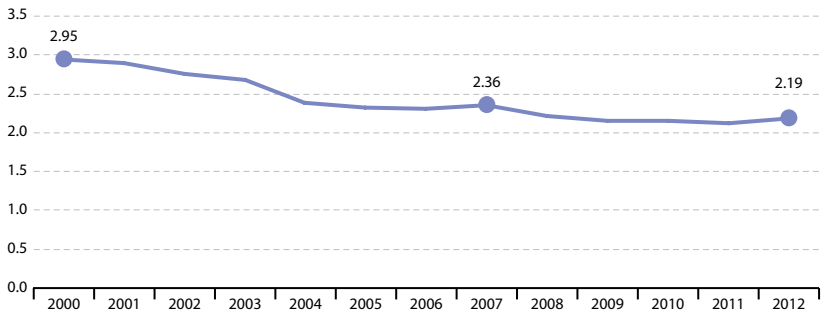
Source: Eurostat (online data code: [tsdnr310](#))





**Biochemical oxygen demand in rivers** — an indicator of organic pollution in water — decreased by an average of 2.5 % per year since 2000 for the 20 European countries (including 18 EU Member States) considered. These improvements are mainly due to a general improvement in wastewater treatment. However, significant risks to water quality remain, including diffuse pollution from agriculture.

**Figure 8.5:** Biochemical oxygen demand in rivers, Europe, 2000–2012<sup>(1)</sup>  
(mg O<sub>2</sub> per litre)



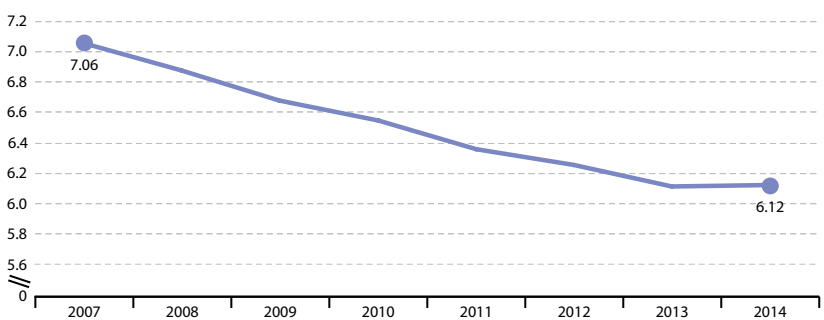
<sup>(1)</sup> Monitoring stations included: Europe (1 235), Austria (49), Belgium (36), Bosnia-Herzegovina (13), Bulgaria (91), Croatia (37), Denmark (38), Estonia (53), Finland (34), France (246), Ireland (54), Italy (165), Latvia (19), Lithuania (28), Luxembourg (3), Former Yugoslav Republic of Macedonia (19), Poland (106), Romania (116), Slovakia (15), Slovenia (14), and the United Kingdom (99).

Source: European Environment Agency (online data code: [tsdnr330](#))

## A declining fishing fleet

The engine power of the **EU fishing fleet** fell by 2.0 % per year on average from 2007 to 2014. Further efforts and policy reforms are needed for a sound fleet capacity adjustment, which would lead to more sustainable fish stock management and better economic conditions for active fishermen.

**Figure 8.6:** Fishing fleet, total engine power, EU-27, 2007–2014  
(million kilowatts)



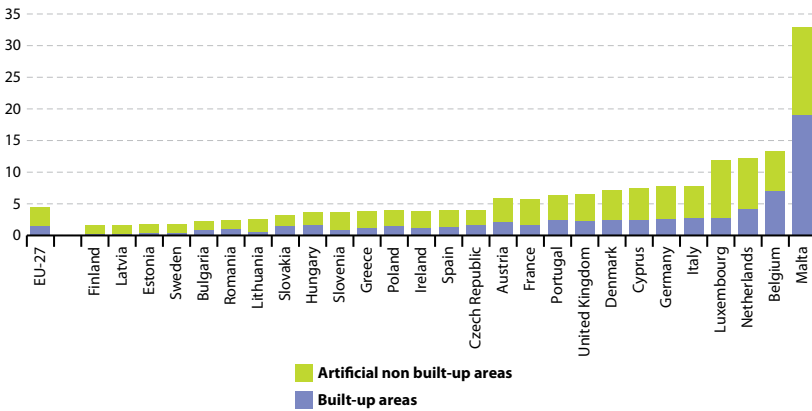
Source: Eurostat (online data code: [tsdnr420](#))



## Share of artificial areas growing but nutrient surplus on agricultural land declining

In 2012, 4.7% of the entire EU land area was covered by **artificial land**. Particularly high shares are associated with the most densely populated Members States. A rising demand for housing, economic activities in urban areas and transport infrastructure are mainly responsible for a continuous shrinkage of the share of semi-natural and arable land in the EU.

**Figure 8.7:** Artificial land cover, by country, 2012  
(% share of total area of country)



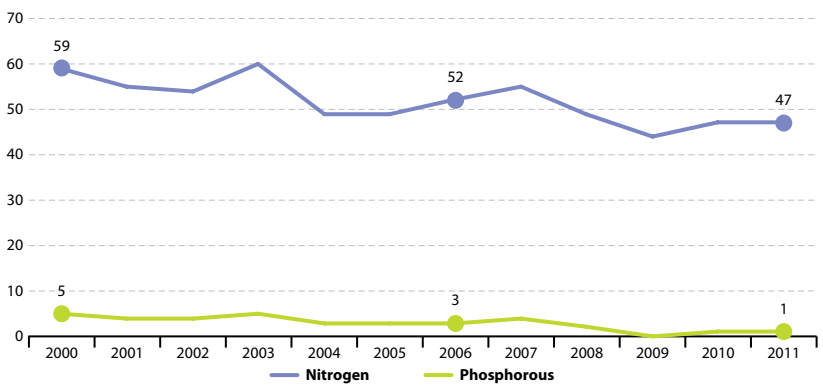
Source: Eurostat (online data code: [tsdnr510](#))





Since 2000 the **gross nutrient balance on agricultural land** has been disturbed, largely due to the use of fertilisers for agricultural production. However, the surplus of nutrients added to agricultural soils has a declining trend over the long-term and the short-term period, with the phosphorous balance almost reaching parity between inputs and outputs. Implementation of the Nitrates Directive and other agricultural improvements have stabilised nutrient inputs, potentially reducing environmental pressures. However, agricultural nitrogen surpluses are still high in some parts of Europe, in particular in western Europe and in some Mediterranean countries.

**Figure 8.8:** Gross nutrient balance on agricultural land, EU-28, 2000–2011 (¹)  
(kilograms per hectare)

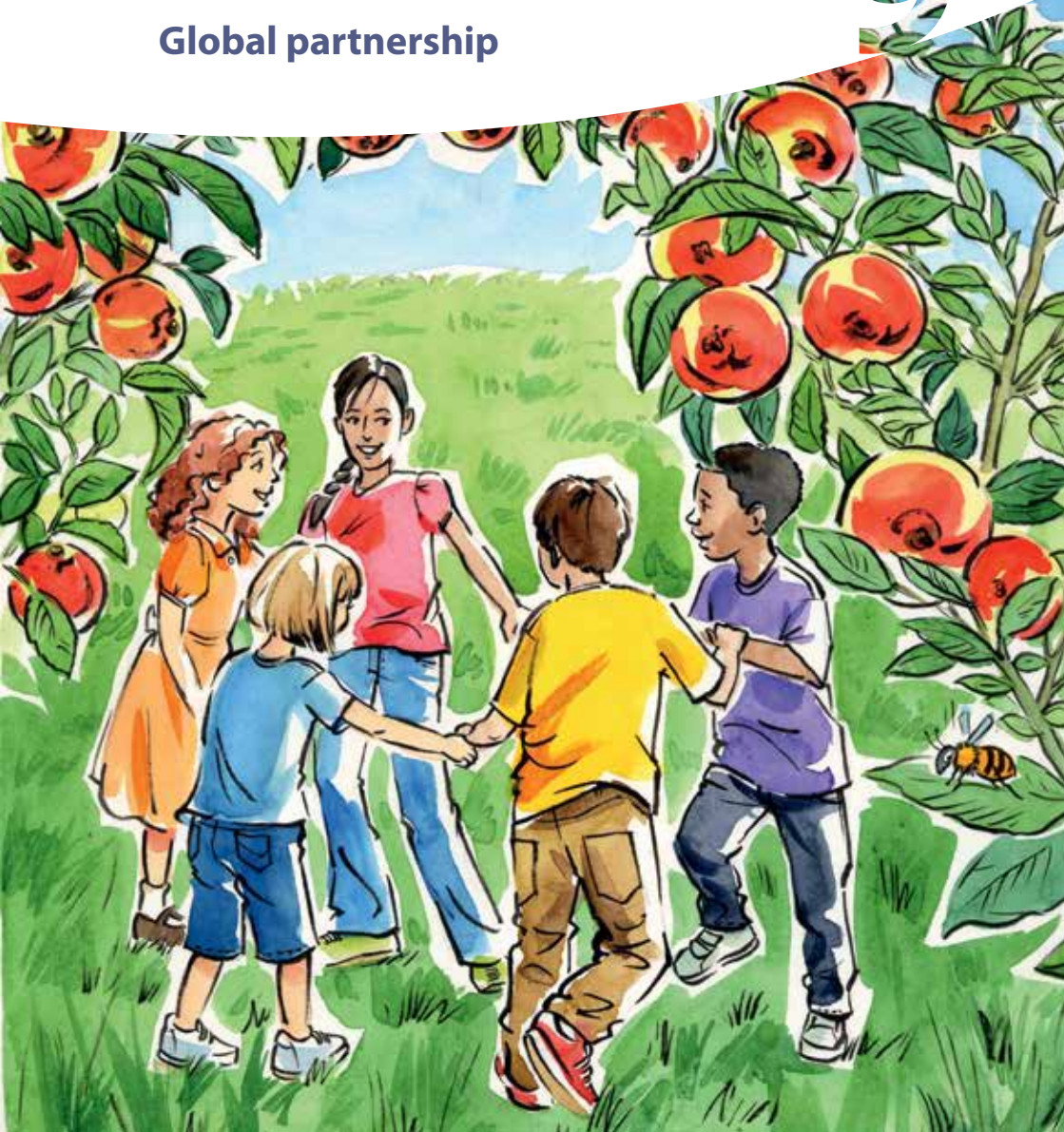


(¹) Estimated data

Source: Eurostat (online data code: [t2020\\_rm310](#))



# Global partnership



















## Overview of the main changes

The EU is not on track to meet its target for official development assistance (ODA). In spite of a slight increase in the long term (2000 to 2014), the short-term trend (2009 to 2014) saw a slight decline in the share of ODA in gross national income (GNI). The EU is increasingly lagging behind its path towards the 0.7% gross national income

**Table 9.1:** Evaluation of changes in the global partnership theme, EU-28 <sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
Official development assistance (ODA)	 (?)	
<b>Globalisation of trade</b>		
Imports from developing countries	 (?)	
Imports from least-developed countries	 (?)	
Subsidies for EU agriculture	 (*)	 (*)
<b>Financing of sustainable development</b>		
Financing for developing countries	 (?)	 (?)
Share of foreign direct investment in low-income countries	:	:
Share of official development assistance for low-income countries	 (?)	 (?)
Share of untied assistance	 (?)	 (?)
Bilateral official development assistance	:	:
Global poverty	:	:
<b>Global resource management</b>		
CO <sub>2</sub> emissions per inhabitant	:	:
Access to water	:	:

(<sup>1</sup>) An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction. (?) From 2004. (\*) From 2002. (†) Evaluation based on EU-27. (‡) Evaluation based on EU-15.



(GNI) target for 2015. However, compared with other countries in the world, the EU remains the world's largest donor, also in terms of ODA/GNI.

Many indicators in the global partnership theme are linked to the EU's economic situation. For this reason, several show clear impacts of the onset of the financial and economic crisis in 2008. This is particularly visible in the headline indicator 'official development assistance' where overall flows fell during the economic downturn. Although the EU is the world's largest donor, it is not on track to meet its long-standing target of dedicating 0.7% of its GNI to ODA in 2015. Nevertheless, the share of ODA for low-income countries did improve between 2000 and 2013 to some extent and particularly shows a favourable trend for the last five years. In addition, although ODA to developing countries is not enough to meet EU targets, it remains a largely stable source of finance in absolute terms. A negative trend that emerges is the fluctuation of private financial flows. These fluctuations can create unpredictability for developing countries that particularly rely on external financial support. In relation to trade, the EU has increased its imports from developing countries, although these have mainly been from China. Imports from least-developed countries (LDCs) represent a considerably lower share of overall EU imports. The largest increase among imports from LDCs is in the category of mineral fuels and lubricants.

The proportion of people whose income is less than USD 1.25 a day halved between 2010 and 1990. However, regional differences exist. The target had not been met in Sub-Saharan Africa, Southern Asia and Western Asia.

The ratio between per capita carbon dioxide (CO<sub>2</sub>) emissions in the EU and developing countries was halved between 2000 and 2012; yet this was mainly due to increasing emissions in developing countries.

The global target to halve the share of the population without access to safe drinking water by 2015 was achieved early in 2010. However, a large gap remains between high-income countries and LDCs.





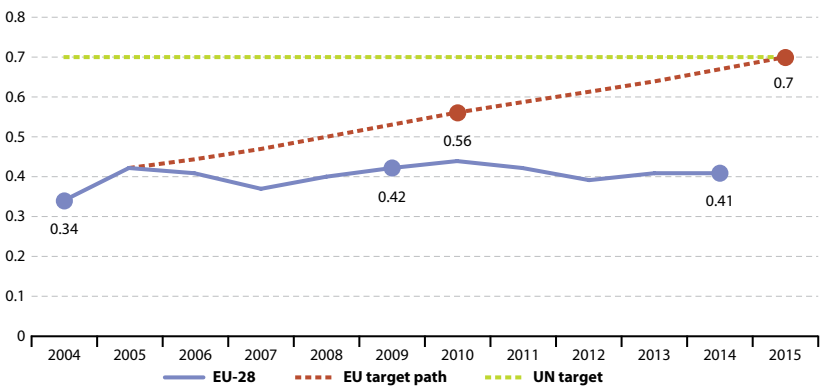
## Key trends in global partnership

### EU not on track to meet its target for official development assistance (ODA)

'Official development assistance' shows unfavourable trends in both the long term (2000 to 2014) and in particular in the short term (2009 to 2014). Although the EU is the world's largest donor, it is not on track to meet its long-standing target of dedicating 0.7% of its gross national income (GNI) to official development assistance (ODA) in 2015, although the rate did increase slightly in the long term. Nevertheless, the share of ODA for least-developed countries (LDCs) did improve in the decade from 2000 to 2010. However, in the short term (2008 to 2013) the share of ODA for LDCs continued to improve. Also, although ODA to developing countries is not enough to meet the EU's targets, it remains a largely stable source of finance in absolute terms.

**Figure 9.1:** Official development assistance as a share of gross national income, EU-28, 2004–2014 (¹)

(% of GNI)



(¹) 2014 data are provisional.

Source: OECD, European Commission services, Eurostat (online data code: [tsdgp100](#))

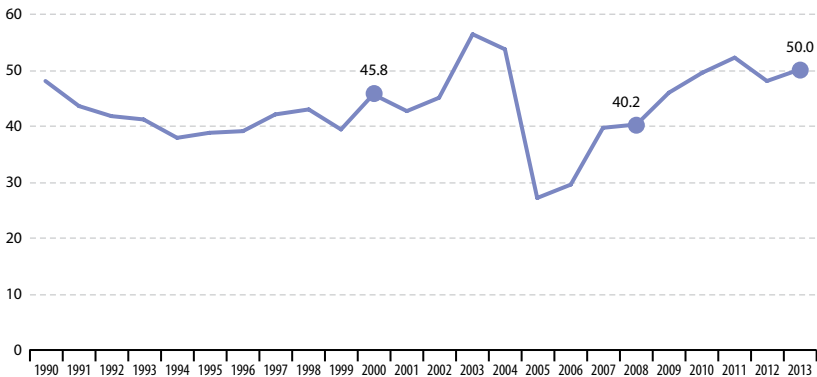


## Rise in ODA for low-income countries but no clear trend for EU foreign direct investment (FDI)

The indicators on financing for sustainable development show a mixed picture.

**Financing for developing countries** shows positive trends, both in the long and the short term. The **share of ODA for low-income countries** shows only a moderately favourable change in the long term, but the short-term trend has been favourable.

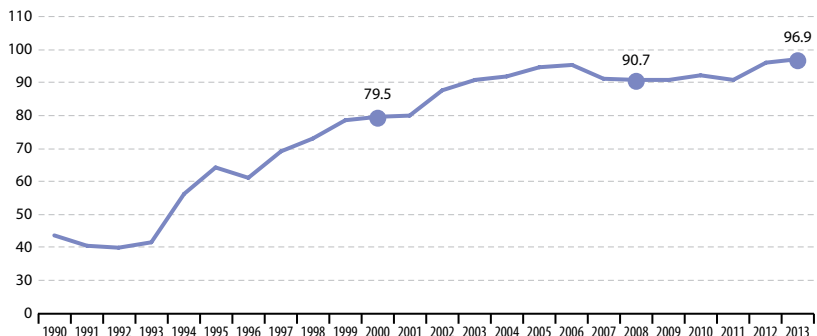
**Figure 9.5:** Share of ODA dedicated to low-income countries, EU-15, 1990–2013 (% of country-allocated ODA)



Source: OECD, Eurostat (online data code: [tsdgp330](#))

The **share of untied assistance** is continuously increasing, thus showing a clearly favourable trend in both the long and the short term.

**Figure 9.8:** Untied official development assistance, EU-15, 1990–2013 (% of total ODA)



Source: OECD, Eurostat (online data code: [tsdgp340](#))

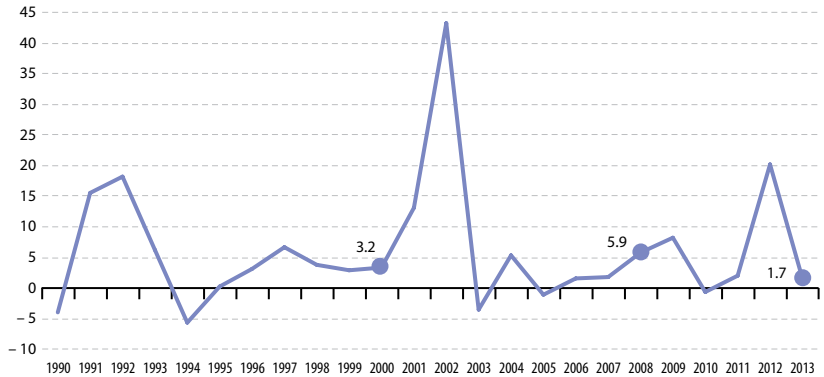




On the negative side, EU **foreign direct investment (FDI)** to low-income countries varies widely between years. It has not shown any consistent upward or downward trend towards the aim of increasing the share of EU FDI to these countries.

**Figure 9.10:** Share of foreign direct investment in low-income countries, EU-15, 1990–2013

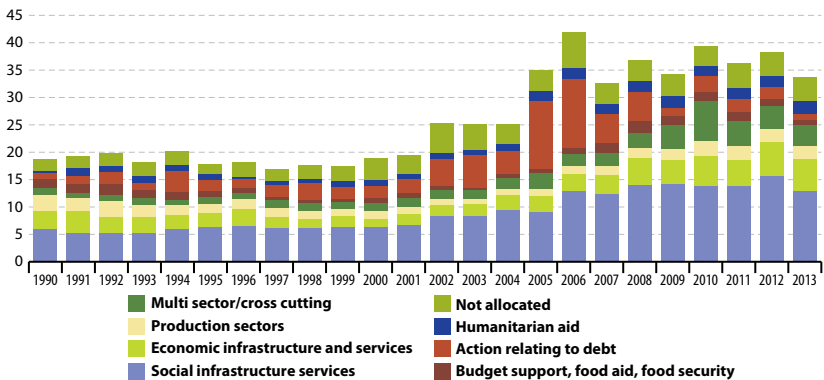
(% of country allocated FDI)



Source: OECD, Eurostat (online data code: [tsdgp320](#))

**Bilateral ODA** has increased in absolute terms in the long term, but has fluctuated over the last five years, showing varying changes in some categories.

**Figure 9.7:** Bilateral official development assistance, by category, EU-15, 1990–2013 (EUR billion; at current values)

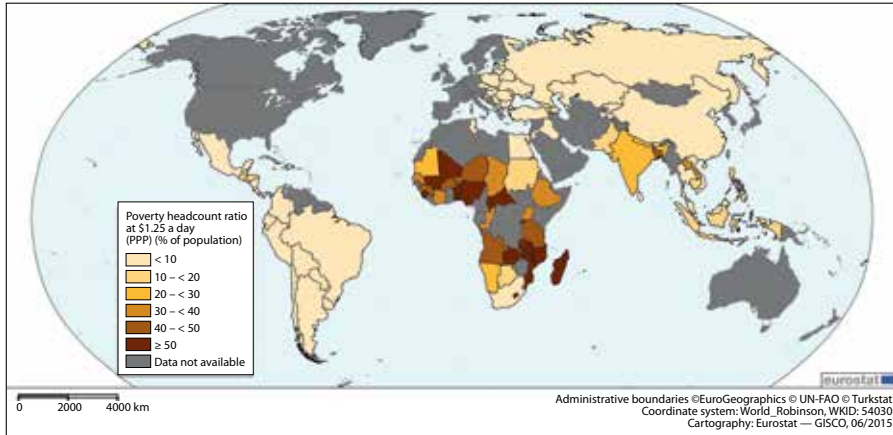


Source: Eurostat (online data code: [tsdgp350](#))



Regarding **global poverty**, the overall population living in poverty decreased but to varying degrees in different regions of the world.

**Map 9.2:** Population living on less than 1.25 USD a day, 2010–2013 <sup>(1)</sup><sup>(2)</sup>  
(% of population)



<sup>(1)</sup> The map shows most recent data, which lies between 2010 and 2013 for each country; figures are in PPP at 2005 international prices.

<sup>(2)</sup> Population below USD 1.25 a day is the percentage of the population living on less than USD 1.25 a day at 2005 international prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.

Source: World Bank





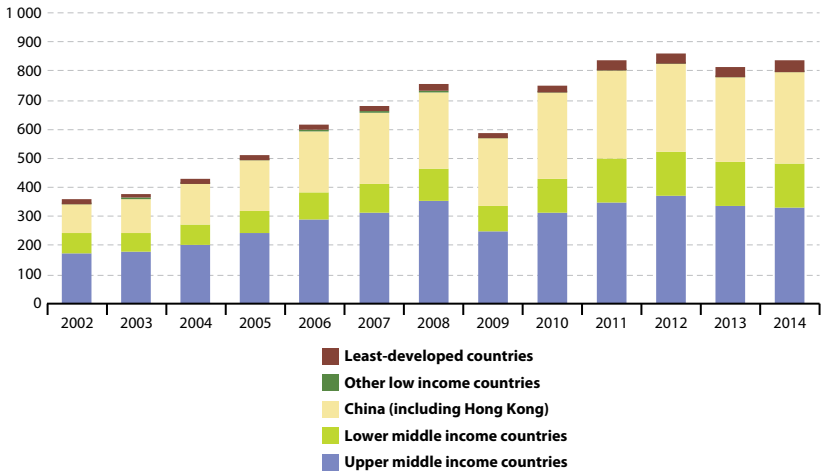
## Increase in EU imports from developing countries, mostly China

The indicators on globalisation of trade mostly show favourable trends.

With regard to the aim of increasing **imports from developing countries** to the EU, both the long-term trend (2002 to 2014) and the short-term trend (2009 to 2014) are positive as the share of developing country imports in overall EU imports increased. Imports from China were the single largest factor behind this trend.

**Figure 9.12:** EU Imports from developing countries by income group, EU-28, 2002–2014

(EUR billion, at current values)



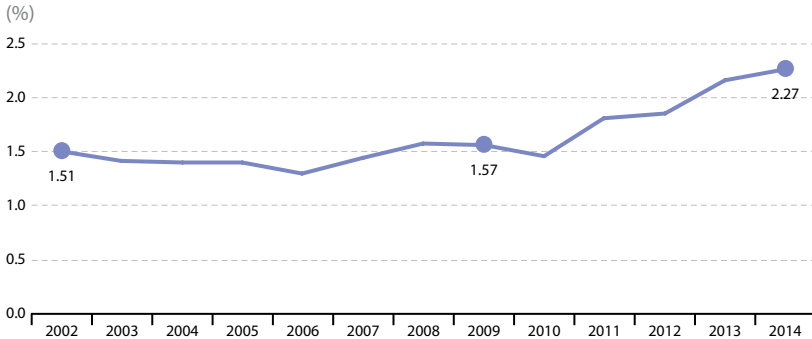
Source: Eurostat (online data code: [tsdgp210](#))





**Imports to the EU from least-developed countries** increased more strongly than imports from all developing countries. This marked progress towards the goal of raising the share of these particularly poor countries in global trade. Yet in 2014 imports from least-developed countries still represented only about 2 % of all EU imports.

**Figure 9.15:** Share of imports from least-developed countries in total extra-EU imports, EU-28, 2002–2014

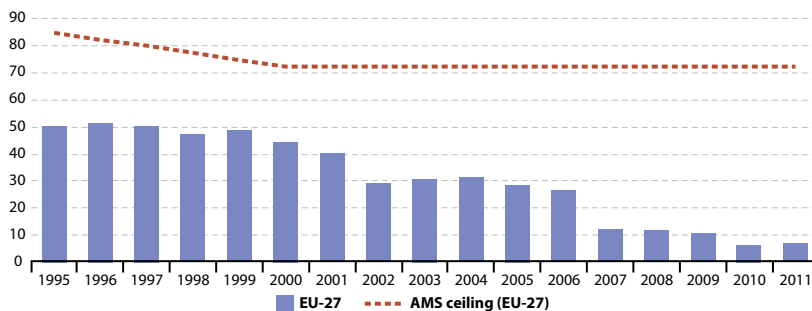


Source: Eurostat (online data codes: [tsdgp210](#) and [ext\\_lt\\_intrtrd](#))

Regarding **agricultural subsidies**, between 2000 and 2011 the EU significantly reduced subsidies considered to be trade-distorting under the World Trade Organization's Agreement on Agriculture. This is a positive trend. Yet these figures do not allow a conclusion on whether the EU has shifted its agricultural support to other types of payments that are not limited according to WTO rules, but may still have a negative impact on developing countries.

**Figure 9.18:** Aggregated measurement of support for agriculture, EU-27, 1995–2011

(EUR billion; at current values)



Source: EU Commission services, World Trade Organisation, Eurostat (online data code: [tsdgp240](#))

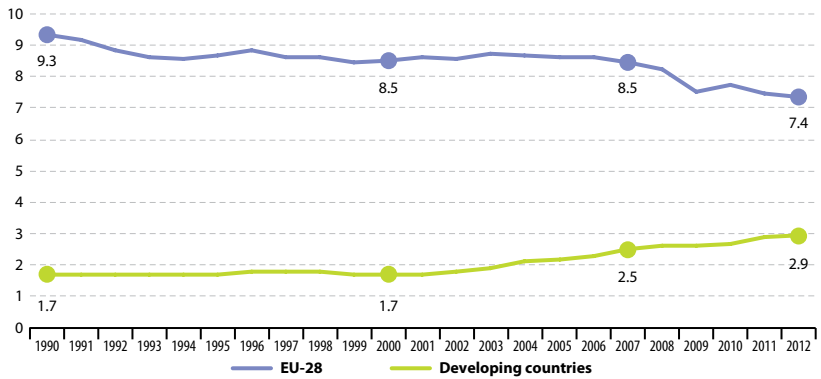




## 2.5 times more CO<sub>2</sub> emissions per inhabitant in the EU compared with developing countries

In 2012, the **per capita CO<sub>2</sub> emissions** per EU inhabitant were 2.5 times as high as those of developing country inhabitants. Between 2000 and 2012 CO<sub>2</sub> emissions per inhabitant in developing countries increased by more than 70%; by contrast, the increase was only 11.5% between 2009 and 2012.

**Figure 9.19:** CO<sub>2</sub> emissions per inhabitant in the EU and in developing countries, 1990–2012 (tonnes per inhabitant)



NB: CO<sub>2</sub> emissions for developing countries are from fuel combustion only.

Source: European Environment Agency, International Energy Agency, Eurostat (online data code: [tsdgp410](#))



## Access to water target reached but some challenges remain

The global target of halving the share of the **world population without access to safe drinking water** by 2015 was achieved five years early in 2010. Yet there are still more people without such access in developing than in developed countries. International aid is likely to have contributed to the progress.

**Map 9.1:** Population with sustainable access to an improved water source, 2012 <sup>(1)</sup>  
(% of population)



<sup>(1)</sup> Access to an improved water source refers to the percentage of the population using an improved drinking water source. The improved drinking water source includes piped water on premises (piped household water connection located inside the user's dwelling, plot or yard), and other improved drinking water sources (public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, and rainwater collection).

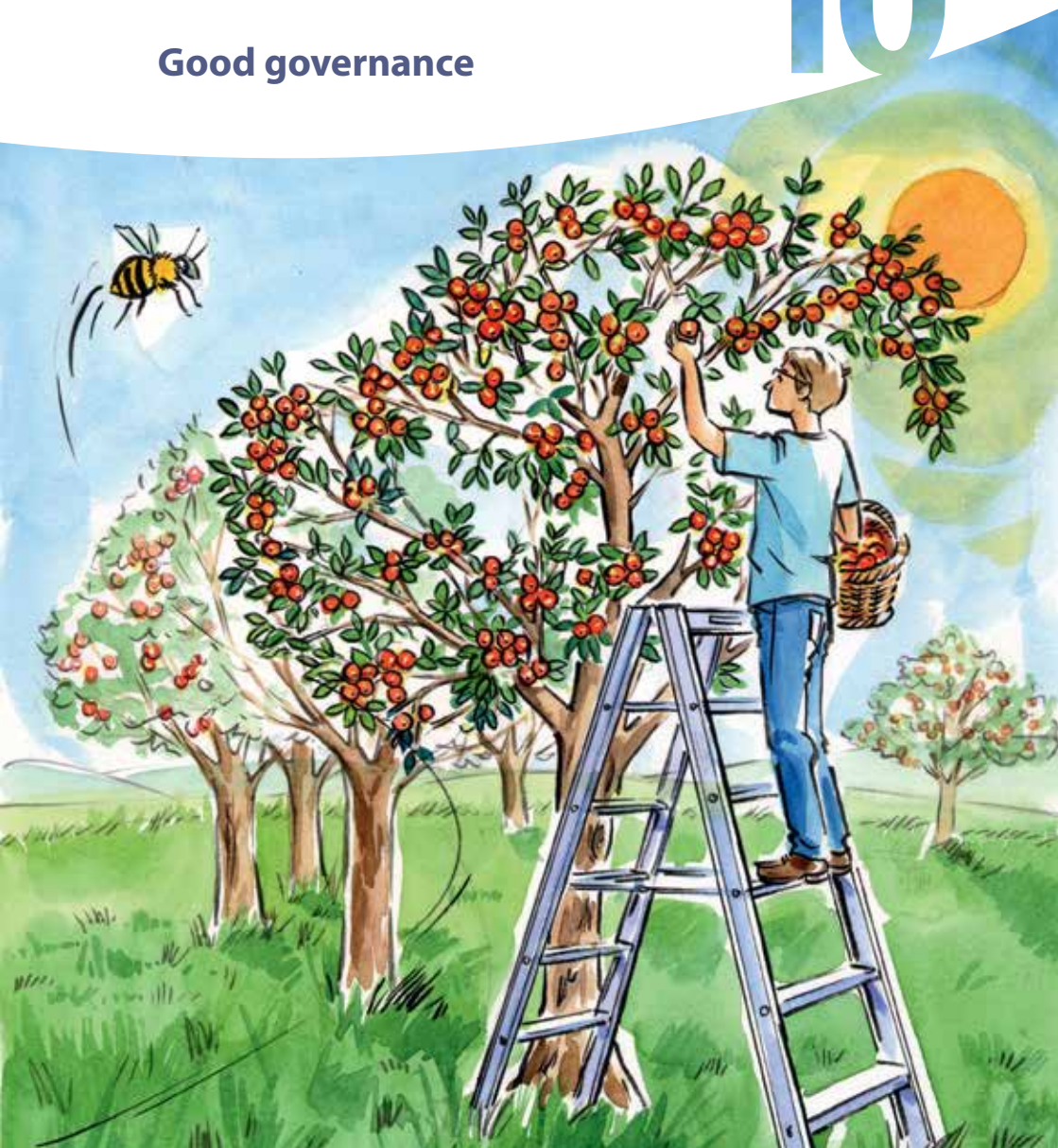
Source: World Bank





Good governance

10













## Overview of the main changes

The trends observed in the good governance theme since 2000 have been mixed. Short-term trends — considering the last five years — are often similar to the long-term overview. Favourable trends have been registered for new infringement cases and to the transposition deficit of EU law with respect to Single Market rules. In addition citizens continue to increasingly interact with public authorities over the internet. Some unfavourable trends, however, persist. Voter turnout in national parliamentary elections continues to decline, and a general shift from labour to environmental taxes, as called for in the EU Sustainable Development Strategy and more recently in the Europe 2020 strategy, has not been achieved.

**Table 10.1:** Evaluation of changes in the good governance theme, EU-28 <sup>(1)</sup>

Indicator	Long-term evaluation (since 2000)	Short-term evaluation (last five-year period)
: <sup>(2)</sup>	:	:
<b>Policy coherence and effectiveness</b>		
Citizens' confidence in EU institutions	:	:
Infringement cases	 <sup>(3)</sup>	 <sup>(4)</sup>
Transposition deficit of EU law	 <sup>(4)</sup>	 <sup>(4)</sup>
<b>Openness and participation</b>		
Voter turnout		
Citizens' online interaction with public authorities	:	
<b>Economic instruments</b>		
Environmental taxes compared with labour taxes	:	

<sup>(1)</sup> An explanation of the evaluation method and the meaning of the weather symbols is given in the Introduction.

<sup>(2)</sup> The chapter contains no headline indicator because none was judged robust and policy-relevant enough to provide a comprehensive overview of the good governance concept.

<sup>(3)</sup> From 2007; evaluation based on EU-27.

<sup>(4)</sup> Evaluation based on EU-27.

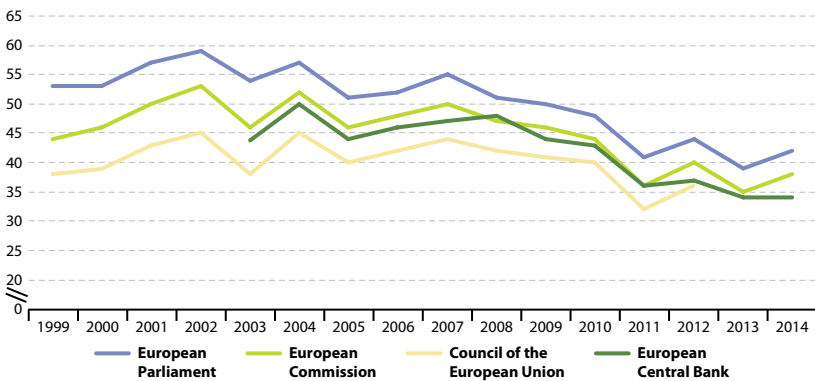


## Key trends in good governance

### Low trust in EU institutions, but positive trends in policy coherence

**Citizens' confidence in EU institutions** remains generally low. Data for 2013 signalled the lowest levels for the European Parliament, the European Commission and the European Central Bank. In 2014, trust in both the European Parliament and the European Commission registered a slight increase. The European Parliament continues to be the most trusted among the main EU institutions.

**Figure 10.1:** Level of citizens' confidence in EU institutions, EU, 1999–2014<sup>(1)</sup>  
(%)



(<sup>1</sup>) Data for trust in the Council of the European Union are only available up to 2012.

Source: European Commission, Eurobarometer (online data code: [tsdgo510](#))

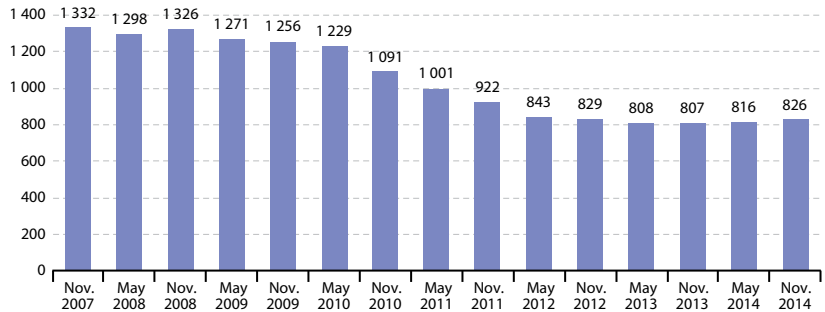




Favourable trends can be observed regarding policy coherence and effectiveness, both in the long term and the short term. The number of Single Market-related open **infringement cases** fell by 38% in the EU between 2007 and 2014. Most of this drop occurred in the short term between 2009 and 2014.

**Figure 10.2:** Open infringement cases, EU, 2007–2014<sup>(1)</sup>

(number)



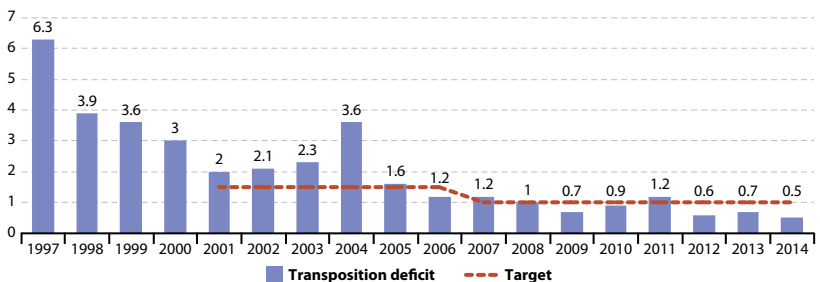
<sup>(1)</sup> Data refer to the EU composition of the reference period.

Source: European Commission services (Single Market Scoreboard)

Moreover, the EU has remained below its target for transposition deficit of Single Market rules. The long-term trend of **transposition deficit of EU law** is clearly favourable: since 2000 the transposition deficit has more than halved with a 2.5 percentage point drop until 2014. In the last five years, the deficit has remained below the 1% target except in 2011, with the EU reaching its best result ever in 2014 (0.5%).

**Figure 10.4:** Transposition deficit of Single Market law, EU, 1997–2014<sup>(1)</sup>

(%)



<sup>(1)</sup> Data refer to the EU composition of the reference period.

Source: European Commission services, Eurostat (online data code: [tsdgo220](#))

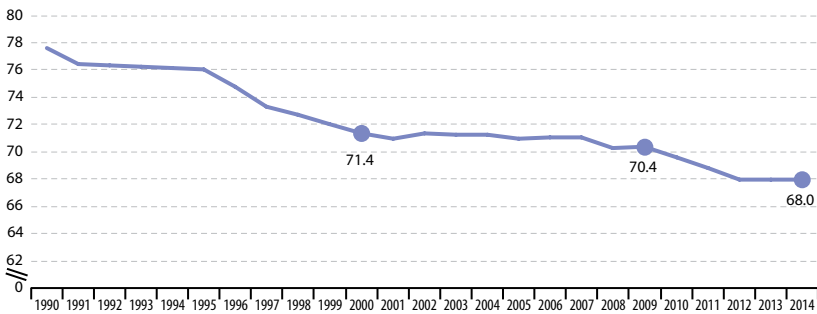




## Less participation in elections, but increasing online interaction with governments

Between 2000 and 2014, **voter turnout** in national parliamentary elections in the EU fell 3.4 percentage points. About two-thirds of this decline in the share of citizens casting their vote took place in the short term between 2009 and 2014.

**Figure 10.6:** Voter turnout in national parliamentary elections, EU-28, 1990–2014 (°)



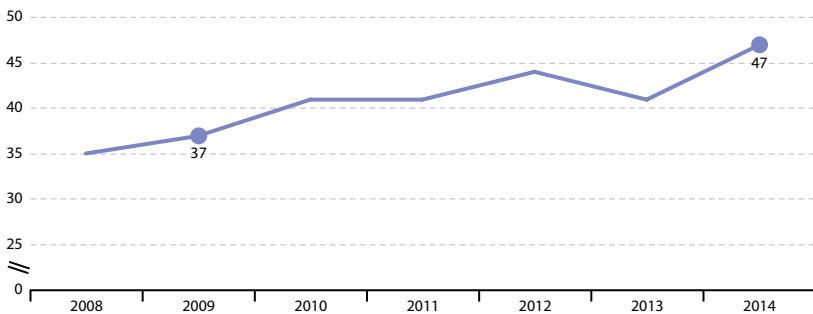
(°) Data refer to parliamentary elections for all countries, except for Cyprus (only presidential elections), France, Portugal and Romania (both parliamentary and presidential elections).

Source: Eurostat, IDEA (International Institute for Democracy and Electoral Assistance) voter turnout database (online data code: [tsdgo310](#))

Yet, over the same period, **online interactions of citizens with public authorities** in the EU showed a favourable trend, increasing by 10 percentage points. Overall, almost half of EU citizens aged 16 to 74 used e-government in 2014.

**Figure 10.8:** Individuals using the internet for interaction with public authorities, EU-28, 2008–2014

(% of individuals aged 16 to 74)



Source: Eurostat (online data code: [tin00012](#))

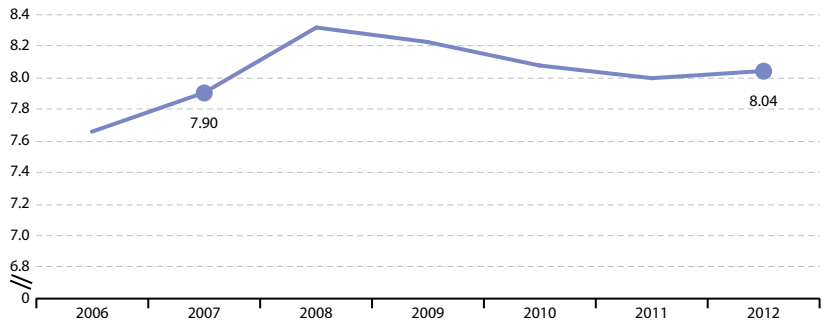




## No shift in taxation from labour to environmental taxes

The **ratio of labour to environmental taxes** increased by 1.8% in the EU, from 7.9 in 2007 to 8.0 in 2012. Such a trend remains counter to the EU goals of shifting the tax burden from labour to energy and environmental taxes ('greening' the taxation system).

**Figure 10.10:** Ratio of labour to environmental taxes, EU-28, 2006–2012<sup>(1)</sup>  
(ratio of the share of labour taxes in total revenues from taxes and social contributions to the share of environmental taxes)<sup>(2)</sup>



<sup>(1)</sup> Data are provisional (whole time series).

<sup>(2)</sup> Data on environmental taxes are available until 2013, while data on labour taxes until 2012 only. The ratio of labour to environmental taxes can therefore only be shown until 2012.

Source: Eurostat (online data code: [tsdgo410](#))

## Annex





## Annex

### Geographical aggregates and countries

- EU-28      The 28 Member States of the European Union from 1 July 2013 (BE, BG, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, UK)
- EU-27      The 27 Member States of the European Union from 1 January 2007 to 30 June 2013 (BE, BG, CZ, DK, DE, EE, IE, EL, ES, FR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, UK)
- EU-15      The 15 Member States of the European Union from 1 January 1995 to 30 April 2004 (BE, DK, DE, IE, EL, ES, FR, IT, LU, NL, AT, PT, FI, SE, UK)

Note that EU aggregates are back-calculated when enough information is available – for example, data relating to the EU-27 aggregate is presented when possible for periods before Bulgaria and Romania joined the EU in 2007 and the accession of ten Member States in 2004, as if all 27 Member States had always been members of the EU. The abbreviation ‘EU’ is usually used in texts when referring to the EU-28. The label is changed (to EU-27 or EU-15) if the data refer to another aggregate.

### European Union Member States

BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
HR	Croatia
IT	Italy
CY	Cyprus
LV	Latvia



LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom

### European Free Trade Association (EFTA)

IS	Iceland
LI	Liechtenstein
NO	Norway
CH	Switzerland

### EU candidate countries

ME	Montenegro
MK	The former Yugoslav Republic of Macedonia <sup>(1)</sup>
AL	Albania
RS	Serbia
TR	Turkey

(1) The name of the former Yugoslav Republic of Macedonia is shown in tables as 'FYR Macedonia'. This does not prejudice in any way the definitive nomenclature for this country, which is to be agreed following the conclusion of negotiations currently taking place on this subject at the United Nations.



## Potential candidates

BA	Bosnia and Herzegovina
XK	Kosovo <sup>(2)</sup>

## Countries from the rest of the world

JP	Japan
KR	South Korea
RU	Russia
US	United States

## Units of measurement

:	Data not available
%	per cent
°C	Degree Celsius
EUR	euro
kg	kilogram
km	kilometre
Mtoe	million tonnes of oil equivalent
pkm	passenger-kilometre
PPS	Purchasing power standards
tkm	tonne-kilometre
USD	US dollar

## Abbreviations

AMS	Aggregated measurement of support
CCS	Carbon capture and storage
CFP	Common Fisheries Policy
CMR	Carcinogenic, mutagenic and reprotoxic

<sup>(2)</sup> This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.



CO <sub>2</sub>	Carbon dioxide
CSR	Corporate social responsibility
DAC	Development Assistance Committee
DMC	Domestic material consumption
EAP	Environmental Action Programme
EDC	Endocrine-disrupting chemicals
EDP	Excessive deficit procedure
EEA	European Environment Agency
EFTA	European Free Trade Association
EMAS	Eco-Management and Audit Scheme
END	Environmental noise directive
EPC	Economic Policy Committee
ESD	Effort Sharing Decision
ESS	European Statistical System
ET 2020	'Education and Training 2020' Framework
EU	European Union
EU ETS	EU Emission Trading System
EU LFS	EU Labour Force Survey
EU SDS	EU Sustainable Development Strategy
EU SILC	EU Statistics on Income and Living Conditions
FAO	UN Food and Agriculture Organization
FDI	Foreign direct investment
GDP	Gross domestic product
GE	Green economy
GERD	Gross domestic expenditure on research and experimental development
GFCF	Gross fixed capital formation
GHG	Greenhouse gas
GNI	Gross national income
GNP	Gross national product



ICT	Information and communications technology
IEA	International Energy Agency
ILO	International Labour Organisation
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IRTAD	International Road Traffic Accident Database
ISCED	International Standard Classification for Education
ITR	Implicit tax rate
IUCN	International Union for Conservation of Nature
LDCs	Least-developed countries
LLL	Lifelong learning
LMICs	Lower middle-income countries
LULUCF	Land use, land-use change and forestry
MDGs	Millennium development goals
MEA	Multilateral environmental agreement
MIP	Macroeconomic imbalances procedure
MSY	Maximum sustainable yield
NECD	National Emissions Ceilings Directive
NEET	Not in education, employment or training
NGOs	Non-governmental organisations
NH <sub>3</sub>	Ammonia
NMVOC	Non-methane volatile organic compounds
NO <sub>2</sub>	Nitrogen dioxide
NO <sub>x</sub>	Nitrogen oxides
O <sub>3</sub>	Ozone
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
OLICs	Other low-income countries
PEC	Primary energy consumption





PM	Particulate matter
OWG	Open working group
R&D	Research and development
REACH	Registration, evaluation, authorisation and restriction of chemicals
RMC	Raw material consumption
RME	Raw material equivalents
RMI	Raw material input
RTD	Research and technological development
SCP	Sustainable consumption and production
SD	Sustainable development
SDGs	Sustainable Development Goals
SDIs	Sustainable development indicators
SGP	Stability and Growth Pact
SME	Small and medium enterprises
SMS	Single Market Scoreboard
SO <sub>2</sub>	Sulphur dioxide
SO <sub>x</sub>	Sulphur oxides
SVHC	Substances of very high concern
TAC	Total allowable catch
TFC	Transferable fishing concessions
UAA	Utilised agricultural area
UMICs	Upper middle-income countries
UN	United Nations
UNCSD	United Nations Conference on Sustainable Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	United Nations General Assembly
VAT	Value added tax
VOC	Volatile organic compounds



WCED	World Commission on Environment and Development
WHO	World Health Organization
WMO	World Meteorological Organization
WTO	World Trade Organization

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## Sustainable development in the European Union

### Key messages

Sustainable development is a fundamental and overarching objective of the European Union, enshrined in the Treaty. The EU Sustainable Development Strategy (EU SDS) brings together the many strands of economic, social and environmental policy under one overarching objective — to continually improve the quality of life and well-being for present and future generations.

The Eurostat monitoring report, based on the EU set of sustainable development indicators and published every two years, provides an objective, statistical picture of progress towards the goals and objectives of the EU SDS. This 'lite' version of the 2015 monitoring report provides a snapshot of the key trends related to sustainable development in the European Union.

<http://ec.europa.eu/eurostat>

