

# SUSTAINABLE DEVELOPMENT IN GERMANY

Indicator Report 2016



## IMPRINT

---

**Published by**

Federal Statistical Office (Destatis)

**Authors**

Heike Becker, Kristina Theis

**Edited by / Layout and graphics**

Federal Statistical Office (Destatis)

Published in February 2017

Order number: 0230002-16900-1

**Photo copyrights**

SDG pictograms © United Nations Department of Public Information

Paper: Metapaper Smooth, FSC-certified, climate-neutral, for 61 % by renewable energy

© Statistisches Bundesamt (Destatis), 2017

Reproduction and distribution, also of parts, are permitted provided that the source is mentioned.

In recent years sustainability has moved ever more to the center of the public and political interest. Sustainability means using all disposable resources only to the extent to which resources are further available in the future. Hence, the focus is on the preservation of environment, climate protection and the economical use of conventional energy sources such as coal and oil. However, the concept does not only include the often mentioned ecological perspective, but additionally embraces social justice and the economic development of states. Furthermore resources such as education, health, equality, human rights protection and peace should not be used excessively. Global population growth requires sustainable development in order to enable a life in dignity for every person on the planet today and in the future.



By adopting the Agenda 2030 in 2015, the international community has clearly affirmed their shared global responsibility to improve prospects for present and future generations around the world. By releasing the present, fully revised National Sustainable Development Strategy, the Federal Government has constituted the challenges for Germany derived from this commitment to global sustainable development, the concrete targets the government has set itself and the measures undertaken by it to achieve them. The sustainability management system is the heart of the German Sustainable Development Strategy: it defines targets with time-frames for their attainment, indicators for continuous monitoring as well as management rules and definitions for the institutional design.

The Federal Statistical Office, as independent authority, has already published five Indicator Reports on the development of the previous Sustainable Development Strategy's indicators. The Federal Statistical Office was further commissioned to collect reliable data for the indicators and to report about their development objectively. The German Sustainable Development Strategy's target system is structured according to the 17 international Sustainable Development Goals, instead of the previous four indicator groups: equity, quality of life, social cohesion and international responsibility. Compared to the previous strategy, the total number of indicators has increased substantially to 63. The Federal Statistical Office hereby presents its sixth report on the development of the German Sustainable Development Strategy's indicators.

A handwritten signature in blue ink that reads "Dieter Sarreither". The signature is written in a cursive style.

Dieter Sarreither  
*President of the Federal Statistical Office*



The present indicator report on German's Strategy for Sustainable Development was carried out under the leadership of the Federal Statistical Office. All indicators described in this report as well as their geographic presentation were developed by the Federal Government and determined jointly with the respective target values within the framework of the German Strategy for Sustainable Development.

The Federal Government's revision of the previous National Sustainable Development Strategy to the German Sustainable Development Strategy resulted in adjustments to the indicators and targets. The majority of the already established indicators of the National Sustainable Development Strategy are likewise part of the German Sustainable Development Strategy, in some cases with light adjustments and new targets. In deviation from the previous reports, however, the indicators are no longer assigned to the four indicator groups: intergenerational equity, quality of life, social cohesion and international responsibility. Instead they are structured according to the 17 international Sustainable Development Goals.

Each of the total of 63 indicators of the German Sustainable Development Strategy is illustrated in the present report individually, or together with a closely linked indicator as to content on a double page. Its development is visualised by a graphic and the indicator is described by a text divided into three parts. There is a short definition of the respective indicator in the first part. In the following part the politically determined target values are stated and, if necessary, are translated into a statistically assessed target value. Likewise, the intention for the political selection of this indicator is outlined. The third part provides information about the content and development of the indicator and describes in detail what the indicator captures and which statements can be made regarding to its values and their alterations. Additionally the development of the indicator over time is pictured and put into a statistical context. All relevant information about the indicator and its development over time are illustrated on the respective double pages in a structured and easy to grasp manner.

The previous appraisal system with the known "weather symbols", enabling a fast assessment of the development of the respective indicator, was enhanced in order to adapt it to the requirements of the new indicators and target types. Simultaneously its clarity and comprehensibility were improved. The annex shows, besides the current assessment, also the assessment for previous years in order to facilitate a more simple evaluation of the development. However, these symbols are merely a reading aid. They serve to give a first impression of developments, but do not replace a study of the texts with its background information and analyses. Compared to the previous indicator reports, a data annex was attached to the present one, providing data for the individual indicators – if available – starting from the reporting year 2010.

# CONTENTS

---

## 1 No poverty

Poverty – *reducing poverty*

1.1.a, b	Material deprivation and severe material deprivation	10
----------	--	----

## 2 Zero hunger

Farming – *Environmentally sound production in our cultivated landscapes*

2.1.a	Nitrogen surplus in agriculture	12
-------	---------------------------------	----

2.1.b	Organic farming	14
-------	-----------------	----

## 3 Good health and well-being

Health and nutrition – *Living healthy longer*

3.1.a, b	Premature mortality	16
----------	---------------------	----

3.1.c, d	Smoking rate amongst adolescents and adults	18
----------	---	----

3.1.e	Obesity rate among adolescents	20
-------	--------------------------------	----

3.1.f	Obesity rate among adults	22
-------	---------------------------	----

Air pollution – *Keeping the environment healthy*

3.2.a	Emissions of air pollutants	24
-------	-----------------------------	----

3.2.b	Share of the population with excessive exposure to PM <sub>10</sub> in Germany	26
-------	--	----

## 4 Quality education

Education – *Continuously improving education and vocational training*

4.1.a	Early school leavers (18- to 24-year-olds leaving school without graduation)	28
-------	--	----

4.1.b	30- to 34-year-olds with a tertiary or post-secondary non-tertiary level of education	30
-------	---	----

Prospects for families – *Improving the compatibility of work and family life*

4.2.a, b	All-day care provision for children	32
----------	-------------------------------------	----

## 5 Gender equality

Equality – *Promoting equal opportunities in society*

5.1.a	Gender pay gap	34
-------	----------------	----

5.1.b	Women in management positions in business	36
-------	---	----

Equality – *Strengthening the economic participation of women globally*

5.1.c	Vocational qualification of girls and women through German development cooperation	38
-------	--	----

## 6 Clean water and sanitation

Water quality – *Reducing the pollution of water with substances*

6.1.a Phosphorous in flowing waters 40

6.1.b Nitrate in groundwater 42

Drinking water and sanitation – *Better access to drinking water and sanitation worldwide, higher (safer) quality*

6.2 Development cooperation for drinking water and sanitation 44

## 7 Affordable and clean energy

Resource conservation – *Using resources economically and efficiently*

7.1.a, b Final energy productivity and primary energy consumption 46

Renewable energies – *Strengthening a sustainable energy supply*

7.2.a Share of renewable energies in gross final energy consumption 48

7.2.b Share of renewable energy sources in electricity consumption 50

## 8 Decent work and economic growth

Resource conservation – *Using resources economically and efficiently*

8.1 Raw material input productivity 52

Government debt – *Consolidating public finances – Creating intergenerational equity*

8.2.a, b Government deficit, structural deficit 54

8.2.c Government debt 56

Provision for future economic stability – *Creating favourable investment conditions – Securing long-term prosperity*

8.3 Gross fixed capital formation in relation to GDP 58

Economic output – *Combining larger economic output with environmental and social responsibility*

8.4 Gross domestic product per capita 60

Employment – *Boosting employment levels*

8.5.a, b Employment rate 62

Global supply chains – *Enabling decent work worldwide*

8.6 Number of members of the Textile Partnership 64

## 9 Industry, innovation and infrastructure

Innovation – *Shaping the future with new solutions*

9.1 Private and public spending on research and development 66

# CONTENTS

---

## 10 Reduced inequalities

Equal educational opportunities – *Educational success of foreigners in German schools*

10.1 Foreign school graduates 68

Distributive justice – *Preventing too-great inequality within Germany*

10.2 Gini coefficient of income distribution 70

## 11 Sustainable cities and communities

Land use – *Sustainable land use*

11.1.a Built-up area and transport infrastructure expansion 72

11.1.b Loss of open space 74

11.1.c Settlement density 76

Mobility – *Guaranteeing mobility – Protecting the environment*

11.2.a Final energy consumption in freight transport 78

11.2.b Final energy consumption in passenger transport 80

11.2.c Population-weighted average travel time with public transport  
from each stop to the next medium-sized/large city 82

Housing – *Affordable housing for all*

11.3 Housing cost overload 84

## 12 Responsible consumption and production

Sustainable consumption – *Making consumption environmentally and socially compatible*

12.1.a Market share of goods certified by independently verified  
sustainability labelling schemes 86

12.1.b Energy consumption and CO<sub>2</sub> emissions from private household consumption 88

Sustainable production – *Increasing the proportion of sustainable production*

12.2 EMAS eco-management 90

## 13 Climate action

Climate protection – *Reducing greenhouse gases*

13.1.a Greenhouse gas emissions 92

Climate protection – *Germany's contribution to international climate finance*

13.1.b International climate finance for the reduction of greenhouse gases  
and adaptation to climate change 94

## 14 Life below water

Protecting the oceans – *Protection and sustainable use of oceans and marine resources*

- |        |   |    |
|--------|---|----|
| 14.1.a | Nitrogen input into Baltic and North Sea via German inflows         | 96 |
| 14.1.b | Share of sustainably fished fish stocks in the North and Baltic Sea | 98 |

## 15 Life on land

Biodiversity – *Conserving species – Protecting habitats*

- |      |   |     |
|------|---|-----|
| 15.1 | Species diversity and landscape quality | 100 |
|------|---|-----|

Ecosystems – *Protecting ecosystems, conserving ecosystem services and preserving habitats*

- |      |                              |     |
|------|------------------------------|-----|
| 15.2 | Eutrophication of ecosystems | 102 |
|------|------------------------------|-----|

Forests – *Preventing deforestation*

- |      |   |     |
|------|---|-----|
| 15.3 | Payments to developing countries for the verified preservation or restoration of forests under the REDD+ rulebook | 104 |
|------|---|-----|

## 16 Peace, justice and strong institutions

Crime – *Further increasing personal security*

- |      |                   |     |
|------|-------------------|-----|
| 16.1 | Criminal offences | 106 |
|------|-------------------|-----|

Peace and security – *Practical action to combat proliferation, especially of small arms*

- |      |   |     |
|------|---|-----|
| 16.2 | Number of projects to secure, register and destroy small arms and light weapons carried out by Germany in affected regions of the world | 108 |
|------|---|-----|

Good governance – *Combating corruption*

- |           |  |     |
|-----------|--|-----|
| 16.3.a, b | Corruption Perceptions Index (CPI) in Germany and in partner countries in the German development cooperation | 110 |
|-----------|--|-----|

## 17 Partnerships for the goals

Development cooperation – *Supporting sustainable development*

- |      |   |     |
|------|---|-----|
| 17.1 | Share of expenditure for official development assistance in gross national income | 112 |
|------|---|-----|

Knowledge transfer, especially in technical areas – *Sharing knowledge internationally*

- |      |  |     |
|------|--|-----|
| 17.2 | Number of students and researchers from developing countries and LDCs per year | 114 |
|------|--|-----|

Opening markets – *Improving trade opportunities for developing countries*

- |      |  |     |
|------|--|-----|
| 17.3 | Share of imports from LDCs in total imports to Germany | 116 |
|------|--|-----|

Indicator status summary	118
--------------------------	-----

Data annex	134
------------	-----

# 1 NO POVERTY

Poverty – reducing poverty

## 1.1.a, b Material deprivation and severe material deprivation

a) Material deprivation

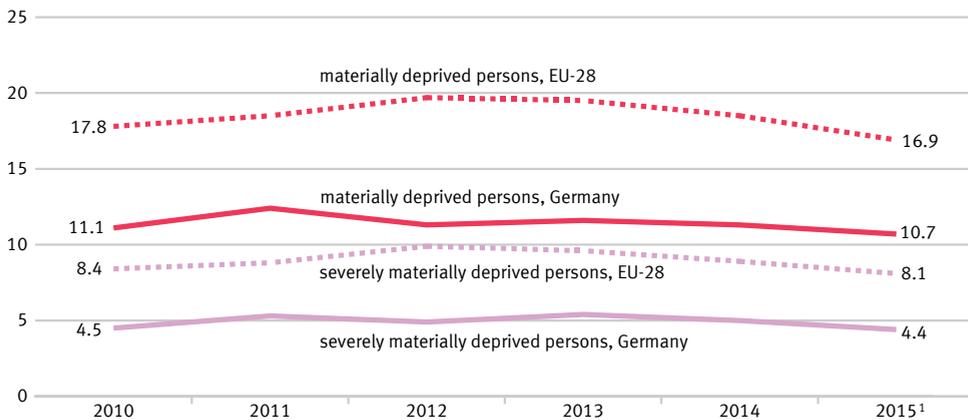


b) Severe material deprivation



### Materially deprived and severely materially deprived persons

Shares, in %



<sup>1</sup> Estimated values for EU-28.

Source: Federal Statistical Office, Eurostat

### Definition of indicators

Material deprivation describes the lack of specific consumer goods and the involuntary foregoing of discretionary consumption for financial reasons. The two indicators represent the proportion of people out of the total population who are deemed to suffer either material deprivation (1.1.a) or severe material deprivation (1.1.b). The designation of (severe) material deprivation applies to all people whose household meets at least three (severely materially deprived: at least four) of nine defined criteria reflecting the financial restrictions of the household.

### Target and intention of the indicator

The indicator “material deprivation” also is part of the extensive reporting on poverty and wealth conducted by the Federal Government. By identifying individual deficiencies, it aims to act as a substitute for illustrating living conditions threatened by poverty. Therefore both, the percentage of persons who are materially as well as severely materially deprived, should stay below the level within the European Union.



## Content and progress of the indicator

The data is drawn from the Europe-wide harmonised survey “EU-SILC” (European Union Statistics on Income and Living Conditions), which is in Germany conducted by the Federal Statistical Office in cooperation with the statistical offices of the various Länder and titled “Living in Europe”. This involves about 14,000 private households in Germany which voluntarily provide information on their income and living conditions annually.

The indicators show the respective proportion of the population for which involuntary foregoing or deficiencies in several areas apply for financial reasons. A set of expenditures on lifestyle items considered to be appropriate, desirable or even essential in Europe was chosen as classification. The nine criteria used to characterise “material deprivation” are standardised across all countries in which EU-SILC is conducted, thereby allowing for Europe-wide comparisons.

Specifically, the nine criteria cover: the lack of a car, a washing machine, a colour TV or a telephone in the household (in each case because the household is unable to afford one); a financial problem, paying rent, mortgage or utility bills on time; ensuring adequate heating in the residence; eating meat, fish or an equivalent vegetarian meal every second day; spending one week’s holidays per year outside the actual residence; meeting unplanned expenditures of a specific amount (2015: EUR 980) from one’s own financial resources.

Material deprivation is associated with the problem of social exclusion because participation in social life is jeopardised by the lack of financial means. The “severe material deprivation” indicator is also part of the “poverty or social exclusion” indicator, which is used to measure one of the five core objectives of the Europe 2020 strategy (combating poverty and social exclusion).

In 2015, 10.7% of the population in Germany were classified as materially deprived, while 4.4% were affected by severe material deprivation. The corresponding values in 2010 were 11.1% and 4.5% respectively, sometimes, in subsequent years even slightly higher. Consequently, the figures are slightly decreasing. However, the measured changes are that marginal that a reliable interpretation is not yet possible.

The average values for persons in the European Union are significantly higher than the respective values for Germany. For instance, the proportion of the materially deprived EU population in 2015 was 16.9% according to the estimates of the Statistical Office of the European Union (Eurostat) and was therefore more than 50% higher than in Germany. A total of 8.1% of the EU population were considered as severely materially deprived persons. This quota is 84% higher than the respective value in Germany.

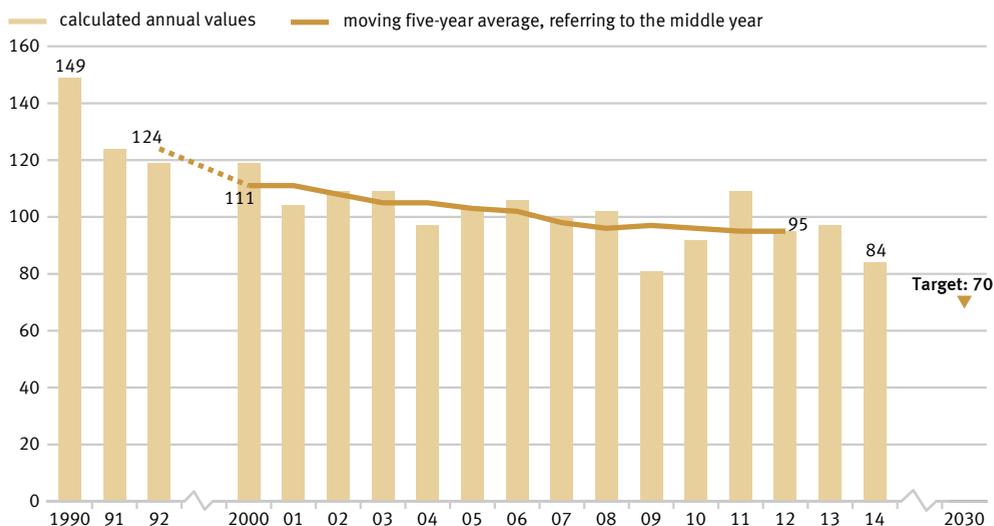
## 2 ZERO HUNGER

Farming – Environmentally sound production in our cultivated landscapes

### 2.1.a Nitrogen surplus in agriculture



#### Nitrogen surplus in land used for agriculture in kilograms per hectare



Source: Institute for Crop and Soil Science, Julius Kühn Institute (JKI) and Institute for Landscape Ecology and Resources Management, University of Giessen

#### Definition of the indicator

The indicator represents the annual nitrogen surplus for the agricultural sector, calculated as nitrogen input minus removal of nitrogen, in kilograms per hectare of land utilised for agriculture.

#### Target and intention of the indicator

Excess nitrogen input into the environment causes the pollution of groundwater and surface water, the oversupply of nutrients (eutrophication) in inland waters, lakes and onshore ecosystems, the generation of greenhouse gases and acidifying atmospheric pollutants each with negative consequences for the climate, biodiversity and landscape quality. On average, overall nitrogen surpluses for Germany are to be reduced to 70 kilograms per hectare of land used for agriculture per year between 2028 and 2032.



## Content and progress of the indicator

The calculation of the indicator takes account of nitrogen inputs from fertilisers, atmospheric inputs which are not emitted by agriculture, biological nitrogen fixation, seed and seedlings next to feedstuff from domestic production and from imports. Nitrogen is removed via plant and animal market products.

The total balance is calculated based on the farm-gate model, meaning that nitrogen flows within the farming operation are not taken into account. The relevant time series for the indicator is based on the moving five-year average of the total balances of the relevant year as well as the two preceding and subsequent years. Thereby, yearly meteorological and market fluctuations which cannot be influenced by farmers are balanced. The indicator does not provide an interpretation regarding the regional distribution of nitrogen surpluses. Even if the average value, defined as a national target for Germany, is achieved, regional nitrogen surpluses may be significantly higher than 70 kg per hectare and year. The indicator is calculated by the Institute for Crop and Soil Science at the Julius Kühn Institute and the Institute of Landscape Ecology and Resources Management at the University of Gießen.

During the period from 1992 to 2012, the nitrogen balance (moving five-year average) fell from 124 to 95 kg per hectare and year (– 23.0%). Succeeding the major reduction in nitrogen surpluses at the beginning of the time series, the nitrogen surplus fell by only 1.0% between 2008 and 2012. If this trend is continued, decreasing the nitrogen surplus to 70 kg/ha of land used for agriculture on annual average between 2028 and 2032 may not be possible.

The significant reduction of the nitrogen surplus at the early 1990s resulted from diminished use of fertilisers and falling numbers of livestock in the new Länder. The marginal decline of the indicator in the remaining course of the time series is based on a minor reduction in mineral fertiliser use and improved harvest yields resulting from technical advances in plant production and breeding (more efficient nitrogen fertilisation, variety spectrum) combined with the simultaneous expansion in the cultivation of high-yield crop types (maize, wheat) as well as improved feed conversion by livestock. The indicator “nitrogen surplus in agriculture” reveals a direct connection to the indicators 3.2.a “Emissions of air pollutants”, 6.1.b “Nitrate in groundwater”, 14.1.a “Nitrogen input via the inflows into the Baltic and the North Sea” and 15.2 “Eutrophication of ecosystems”.

With 55.2% (103 kg nitrogen per hectare and year) in total, fertilisers were the most important components of overall nitrogen input in 2014. Domestic forage contributed 23.6% (44 kg/ha), compared to feedstuff from abroad with 10.6% (20 kg/ha). Biological nitrogen fixation had a share of 6.3% (12 kg/ha), non-agricultural emissions 3.8% (7 kg/ha) and seed and seedlings contributed 0.7% (1 kg/ha) to the input of nitrogen. While nitrogen input decreased by approximately 13% between 1990 and 2014, the nitrogen removal between 1990 and 2014 was increased at a clearly higher rate of 59%. Three quarters of nitrogen removal from agriculture were accounted for by plant and one quarter by animal market products in 2014.

## 2 ZERO HUNGER

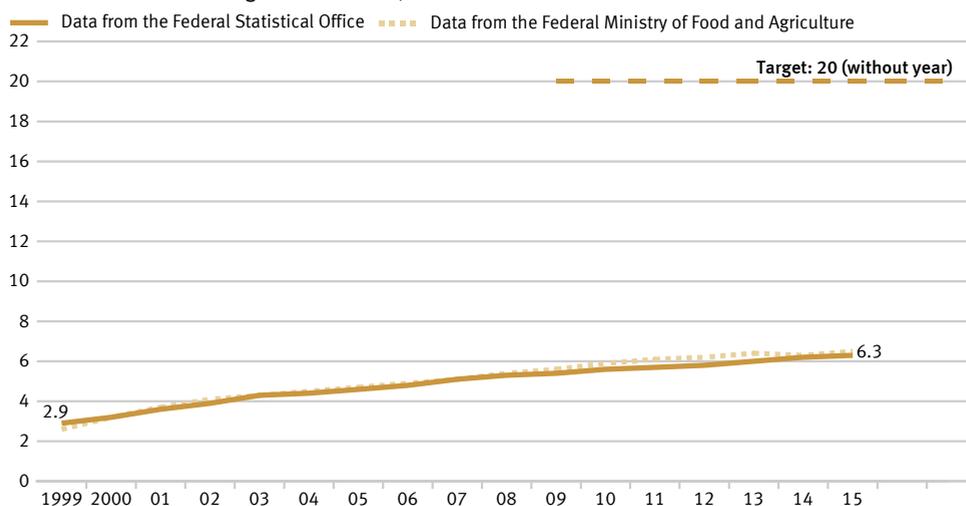
Farming – *Environmentally sound production in our cultivated landscapes*

### 2.1.b Organic farming



#### Organically farmed agricultural land

Share of total utilised agricultural land, in %



Source: Federal Statistical Office, Federal Ministry of Food and Agriculture (BMEL)

#### Definition of the indicator

The indicator shows the share of total utilised agricultural land in Germany that is cultivated by organically managed farms subject to the inspection system prescribed by the EU legislation on organic farming (Regulation (EC) No. 834/2007 and the implementing rules). It includes land that has been fully converted to organic management as well as areas still undergoing conversion.

#### Target and intention of the indicator

Organic farming preserves and protects natural resources to a particularly high degree. It has a range of positive effects upon nature, climate and the environment, and provides for the production of high quality food. For this reason, the proportion of organically farmed agricultural land should be 20% in future.



## Content and progress of the indicator

Data on organic farming is collected by the Federal Office for Agriculture and Food (BLE) on behalf of the Federal Ministry of Food and Agriculture (BMEL) and by the Federal Statistical Office.

The Federal Statistical Office uses various surveys to determine the amount of organically farmed land. The reference value for the proportional computation is the amount of agricultural land determined annually as part of the main survey of land use. The agricultural land includes all areas and sub-areas used for agricultural or horticultural purposes. Building and farmyard areas of agricultural businesses are therefore not included in the reference value.

The data collected by the BMEL includes details of the amount of organically farmed land reported annually by the organic regulatory authorities at the Länder. The reporting date is 31 December of each year. All reports for a current year are accumulated no later than this reporting date. For a variety of reasons that include the fact that land without a cut-off threshold is referred to all land with a cut-off threshold, the data from the BMEL contains slightly higher values. According to data from the Federal Statistical Office, the share of organically farmed land increased from 2.9% to 6.3% of agricultural land between 1999 and 2015. As a result, the figure for organically farmed land in 2015 was 1.06 million hectares. The data from the BMEL indicates a slightly higher share of organic farming land from total agricultural land due to the methodology employed. Consequently, the value for 2015 was 6.5% or 1.09 million hectares.

The last few years have seen the amount of organically farmed land increase further, but the annual percentage increase has eased. Most recently, it was 3.2%, compared with 11.9% between 1999 and 2000. Should this trend continue at the level recorded during recent years, it would take many decades to achieve the target value.

Germany's organic farming land was used as follows in 2015: 56.4% as permanent pasture, 42.0% for farmland and 1.6% for other land. In contrast, the main focus of agriculture as a whole was with 70.8% on farmland, while the share of permanent pasture was 28% and other land accounted for 1.2% of total utilised agricultural land.

According to the results of the 2013 agricultural structure survey, Bavaria held the largest share of organically farmed land among all Länder with around 21%, followed by Brandenburg with 13% and Baden-Württemberg with just under 12%. The conversion to organic farming is promoted to varying degrees by the individual Länder.

According to Eurostat statistics, a total area of 11.14 million hectares was organically farmed in the states of the EU-28 in 2015. With reference to the total of all agriculturally utilised land in individual EU countries, the highest shares of organic farming land was recorded in Austria with 20.3%, followed by Sweden with 17.1%, Estonia with 16.3% and the Czech Republic with 13.7%.

### 3 GOOD HEALTH AND WELL-BEING

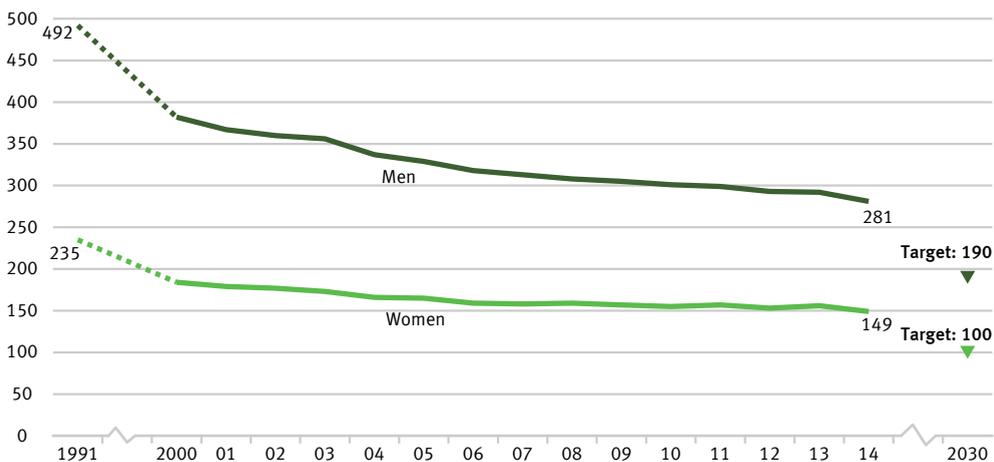
Health and nutrition – *Living healthy longer*

#### 3.1.a, b Premature mortality

a) Women ☁️      b) Men ☀️

##### Premature mortality

Deaths per 100,000 population below the age of 70 (excluding those under 1 year of age)



Source: Federal Statistical Office

##### Definition of the indicators

The indicator includes fatalities among females (3.1 a) and males (3.1 b) in the population below 70 years of age with reference to 100,000 inhabitants of the “old” standardised European population below 70 years (excluding those less than 1 year old).

##### Target and intention of the indicators

By 2030, premature mortality among women should not exceed 100, and for men, it should not exceed 190 fatalities per 100,000 inhabitants.



## Content and progress of the indicators

The data sources are the causes of death statistics and the population statistics issued by the Federal Statistical Office. As part of the causes of death statistics issued by the Federal Statistical Office, all official death certificates are recorded and evaluated. The population statistics specify the current population based on the results of the most recent census. The data refers to the “old” standardised European population of 1976. Those under 1 year of age and therefore the infant mortality rate are excluded from the assessment, in contrast to the previous representation of the Sustainable Development Strategy. The indicator is also part of the health reporting conducted by the Federal Government.

Premature mortality has steadily decreased between 1991 and 2014, for women (– 36%) and for men (– 43%). As a result of this decrease, the gender difference in premature mortality has also reduced. In 2014, for example, 149 women and 281 men per 100,000 inhabitants died before they reached the age of 70. If this trend continues unchanged, the gender-specific targets for 2030 would not be achieved, although only by a slim margin in the case of men. The computational adjustment does not constitute a forecast and the target realisation is therefore generally possible.

In accordance with the steady decrease in premature mortality, the trend for life expectancy in Germany continued developing in a positive direction. 70-year-old women today can expect to, statistically, live another 16.8 years and 70-year-old men another 14.1.

Between 2012 and 2014, the average life expectancy for new-born girls was 83.1 years of age and for boys 78.1 years of age, which was 0.4 years higher for both genders than the average for the years 2009 to 2011. Differences in life expectancy between the western Länder and the eastern Länder (each excluding Berlin) are to be seen only among new-born boys. In this case, a difference of 1.3 years continues to apply.

The largest share of all causes of premature mortality in 2014 was malignant neoplasms with 38.9%, followed by cardiovascular diseases with 21.2%. Fatalities due to external causes (such as accidents, poisoning, suicide) made up a significant share of 9.0%. Diseases of the digestive and respiratory tracts contributed with figures of 6.9% and 4.9% respectively. Since 1991, the share of malignant neoplasms and diseases of the respiratory tract among all causes of death increased (by 17.2% and 22.5% respectively). In contrast, causes such as cardiovascular diseases (– 31.7%), external causes (– 18.2%) and diseases of the digestive tract (– 9.2%) have declined.

Besides factors such as health behaviour (see also indicators for the smoker rate or for obesity), medical care also plays an important role in the mortality rate. Expenditure on health care rose to EUR 328 billion in 2014 – corresponding to an increase of EUR 13.3 billion or 4.2% compared with 2013. This level of spending represented 11.2% of the gross domestic product (similar to the previous year) or EUR 4,050 per capita (2013: EUR 3,902).

### 3 GOOD HEALTH AND WELL-BEING

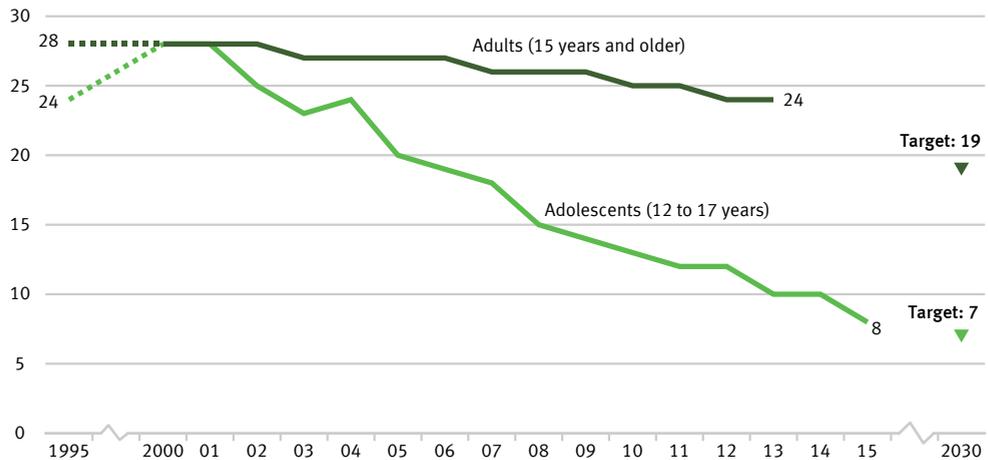
Health and nutrition – *Living healthy longer*

#### 3.1.c, d Smoking rate amongst adolescents and adults

c) Adolescents  d) Adults 

##### Adolescent and adult smokers

Share of all persons in the respective age group, in %



Values interpolated for interim years.

Source: Federal Statistical Office, Federal Centre for Health Education

##### Definition of the indicators

The smoking rate among adolescents (3.1.c) reflects the share of 12 to 17-year-olds who indicate that they smoke regularly or occasionally.

The smoking rate among adults (3.1.d) indicates the share of those surveyed aged 15 and above who answered the questions in the microcensus regarding smoking behaviour and who smoke regularly or occasionally.

##### Target and intention of the indicators

Smoking poses a risk of serious health impairment and premature death. And this risk is not confined to smokers themselves. Non-smokers exposed to tobacco smoke do not just suffer annoyance but can also fall ill from it. The Federal Government is pursuing the target of reducing the percentage of juvenile and adolescent smokers to under 7% by 2030, and that of all smokers aged 15 years and older to 19%.



## Content and progress of indicators

The data for young people is compiled by the Federal Centre for Health Education as part of telephone interviews. The survey has been conducted almost annually since 2000. In 2015, the random sample used included 4,903 interviewees. In contrast to previous studies, this study also took the education of those surveyed into account in order to weight the data. Without this weighting, people of lower education are under-represented while those of higher education are over-represented. In the case of survey features, such as smoking, that are linked to education levels, the education weighting compensates for these types of distortions in the survey results.

The data for adults is surveyed every four years as part of the microcensus conducted by the Federal Statistical Office. The intermediate years in the data series are interpolated. The microcensus is the largest household survey in Germany and Europe. The sample survey includes 1% of the total population. Since the microcensus is a representative survey, the data recorded is not weighted according to education level. The responses to the questions regarding smoking habits are voluntary and were provided by 80% of those surveyed in 2013.

In the group of adolescents between 12 and 17 years of age, the proportion of smokers initially increased from 24% (1995) to 28% (1997 and 2001), but then declined steadily to 8% by 2015. In this context, there appears to be no difference in smoking behaviour between the genders. If the trend seen in recent years continues, the target value set for 2030 will be achieved in the near future.

In 2013, a total of 24% of the overall population above the age of 15 indicated that they smoked occasionally or regularly. This compares with a figure of 28% in the years from 1995 to 1999. This meant that the rate for adult smokers had declined only slightly. If the trend remains unchanged in accordance with the previous five-year average, the target for this sub-indicator will also be fulfilled.

In 2013, 21% of all adults aged 15 years or older considered themselves regular smokers, while 4% smoked occasionally (the deviation in the total is due to rounding). The rate among women (20%) was significantly lower than for men (29%). While the proportion of women remained virtually unchanged since 1995, the proportion of male smokers decreased by 7 percentage points.

In 2013, 97% of the smokers surveyed preferred cigarettes. The level of tobacco consumption is important when considering the individual threat to health. Twelve per cent of regular cigarette smokers were in the category of heavy smokers (1995: 17%) with a consumption of more than 20 cigarettes a day, whereas 81% smoked 5 to 20 cigarettes a day. In this case, there were differences between the genders. Almost one in six of male regular cigarette smokers was a heavy smoker, but only one in twelve of the female smokers.

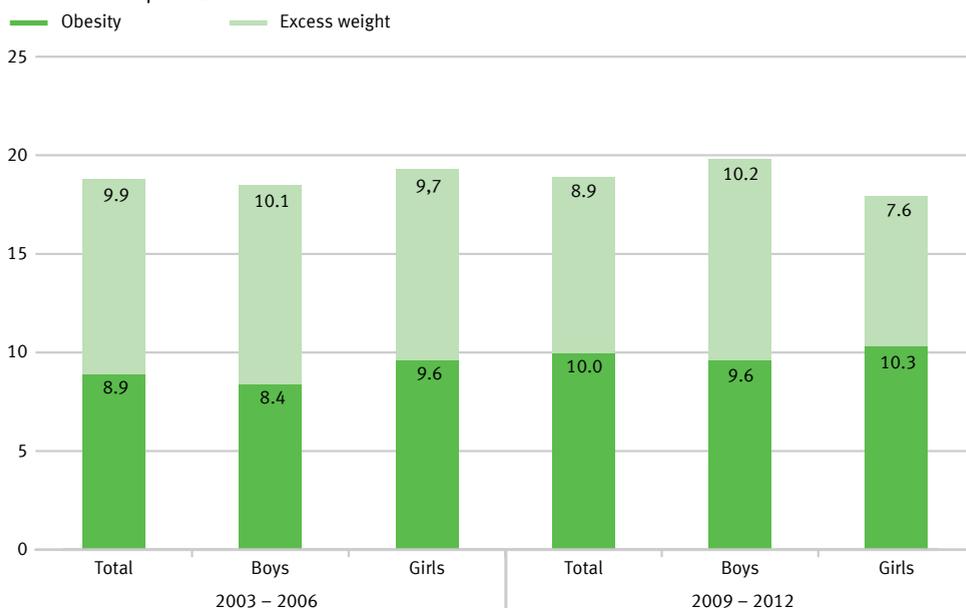
Smoking poses a high and at the same time avoidable risk to health. In 2014, 5.4% of all fatalities (3.5% among women, 7.3% among men) could be attributed to symptomatic diseases for smokers (lung, bronchial, laryngeal and tracheal cancer). In 2014, the average age of those who died of lung, bronchial, and tracheal cancers was 71.1 years and therefore seven years below the average age of all fatalities (78.1 years). A reduction in the number of smokers would therefore help reduce premature mortality.

### 3 GOOD HEALTH AND WELL-BEING

Health and nutrition – *Living healthy longer*

#### 3.1.e Obesity rate among adolescents

##### Share of overweight and obese 11- to 17-year-old adolescents in % of those polled



2003 – 2006: measurements, 2009 – 2012: corrected information from respondents.

Source: Robert Koch Institute (RKI)

##### Definition of the indicator

The indicator shows the proportion of 11- to 17-year-old adolescents suffering from excess weight and obesity.

##### Target and intention of the indicator

Obesity among adolescents poses a danger to normal development in that age group. Exclusion and withdrawal from society are the consequences and lead to additional health and social problems. A majority of adolescents already classified as obese will continue to suffer from obesity as adults. For this reason, the proportion of obese adolescents in Germany should not be allowed to increase any further.



## Content and progress of the indicator

The Body Mass Index (BMI) is a benchmark that is used to measure excess weight and obesity. It is calculated by dividing the body weight in kilograms by the square of an individual's height in metres. This calculation does not take age-specific and gender-specific differences into account. Nor does it indicate the individual body mass composition. Obesity and excess weight among children and adolescents are defined by taking age and gender into account and comparing them with a defined comparison group (reference population). The percentile reference values according to Kromeyer-Hauschild as recommended by the "Arbeitsgemeinschaft Adipositas im Kinder- und Jugendalter" (AGA) are used as a comparative benchmark. According to these values, children and adolescents are considered to be overweight if their BMI value is above the 90th age- and gender-specific percentile of the reference population. This means that they fall within the range of those 10% of the reference group with the highest BMI values. A BMI value above the 97th percentile of the reference population (that is, as high as the 3% of adolescents with the highest BMI values) is classified as obesity. These reference values are based on details of body size and weight that were recorded between 1985 and 1998 in various regions of Germany using different methods.

The data for the indicator are gathered by the Robert Koch Institute. The German Health Interview and Examination Survey for Children and Adolescents (KiGGS, – referred to as the KiGGS baseline study) for the period 2003 to 2006 delivered the first nationwide representative results. In 2015, new results for the reporting years 2009 to 2012 were published (KiGGS Wave 1).

In the years 2009–2012, 10.0% of adolescents were classified as obese. The proportion of girls was 10.3% and of boys 9.6%. In the years 2003–2006, the proportion of adolescents suffering from obesity was 8.9%. This equated to 9.6% of girls and 8.4% of boys. The obesity rate among adolescents has therefore increased slightly.

In contrast, the prevalence of excess weight has fallen slightly (by 1 percentage point to 8.9%) over the same period. Here, the proportion of overweight girls has decreased, while the proportion of overweight boys has increased slightly. As a result, in total the proportion of overweight and obese adolescents has remained roughly the same.

The widely discussed factors influencing excess weight and obesity include social status, parental education and migrant backgrounds. The lower the social status, the more frequent the incidence of excess weight and obesity. This correlation is more pronounced among girls than boys.

An opposite phenomenon to excess weight is underweight. A BMI value below the 10th percentile of the reference population is deemed to indicate underweight. The proportion of underweight adolescents has developed in a positive direction over the last few years, falling from 7.1% to 6.4%. In this context, a decrease can be seen in particular among girls (from 6.5% to 5.2%), while the proportion of boys (7.7%) has remained unchanged. Overall, more boys than girls are affected by underweight.

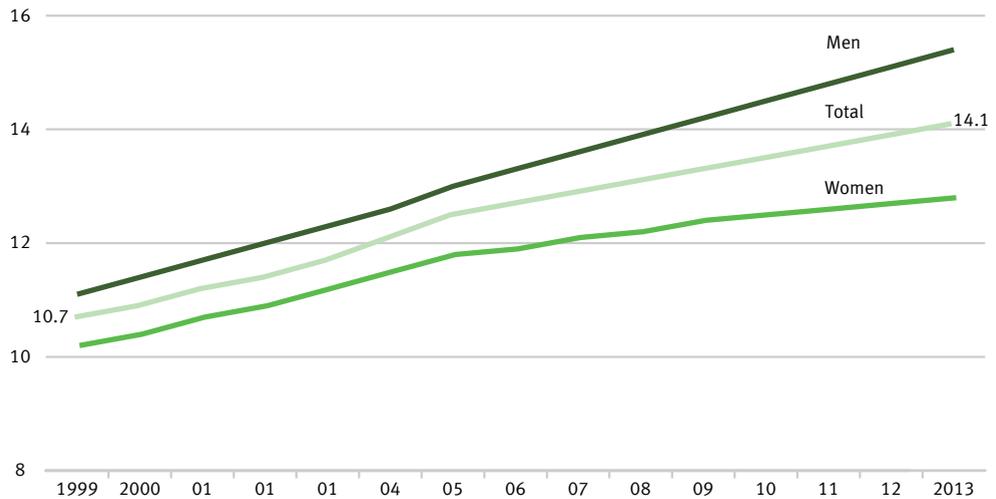
## 3 GOOD HEALTH AND WELL-BEING

Health and nutrition – *Living healthy longer*

### 3.1.f Obesity rate among adults



#### Share of adults suffering from obesity in % of adults



Data for interim years was interpolated. Age-standardised results based on the new European population.

Source: Federal Statistical Office

#### Definition of the indicator

The indicator shows the proportion of adults (aged 18 years and older) suffering from obesity in the total adult population.

#### Target and intention of the indicator

Excess weight plays a crucial role in the emergence of diseases of civilisation, such as cardiovascular diseases, diabetes and joint injuries. Besides the consequences to health, excess weight is also a burden on the national economy and has a negative impact on social life. Consequently, the proportion of the population with obesity in Germany should not to increase any further.



## Content and progress of the indicator

Obesity is calculated with the help of the Body Mass Index (BMI), which is calculated by dividing the body weight in kilograms by the square of an individual's height in metres. People with a BMI of 25 and above are classified according to the WHO as “overweight” and those with a BMI of 30 as “obese”. The BMI is a benchmark that does not take into account the physique, age- and gender-specific differences as well as the individual body mass composition.

The data used for the indicator is based on the microcensus conducted by the Federal Statistical Office. The sample survey is conducted for 1 % of the total population and responses to the health questions, which are generally conducted every four years, are provided on a voluntary basis. Consequently, the indicator is based on the proportion of the population with a BMI of 30 and higher that also answered the questions concerning body weight and body size in the microcensus. The corresponding data was standardised relative to the European population of 1990 to enable comparisons of data from different years and regions without distortions due to different age structures. Since the questions on health in the microcensus are not asked annually, the intermediate years in the chart were interpolated.

In 2013, 14.1 % of the population in Germany over the age of 18 was classified as obese. Here, the share of obese women (12.8 %) was lower than that of obese men (15.4 %). Before, in 1999, the percentage of obese persons was only 10.7 % of the population. At that time, the proportion of women (10.2 %) affected by obesity was slightly lower than that of men (11.1 %), too. The obesity rate among adults has therefore increased and has developed contrary to the goal envisioned by the German Sustainable Development Strategy.

The proportion of adults suffering from obesity increases with age, and the trend reverses only among people of very advanced age. In 2013, 2.8 % of 18- to 20-year-old women were obese. By the age of 30 to 35, 9.5 % of women were obese, and 15.0 % had become obese by the time they were between 50 and 55. The highest proportion of obese women (20.8 %) was found in the age group between 60 and 65 years of age. After this age, the figures fell slightly. The obesity rate among men of the same age was higher in each case, reaching its highest proportion of 24.7 % in the age group of 60- to 65-year-olds.

In 2013, 34.0 % of the population over the age of 18 was classified as overweight (BMI between 25 and below 30). Again, the proportion of women (26.2 %) was lower than that of men (41.5 %). Being underweight, i. e. having a BMI lower than 18.5, is the opposite phenomenon to that of obesity. In 2013, the share of women who were underweight (4.0 %) was considerably greater than the share found in men (0.9 %). In fact, 13.0 % of young women between 18 and 19 years of age were underweight, and 8.9 % were still underweight at age between 20 and 24.

### 3 GOOD HEALTH AND WELL-BEING

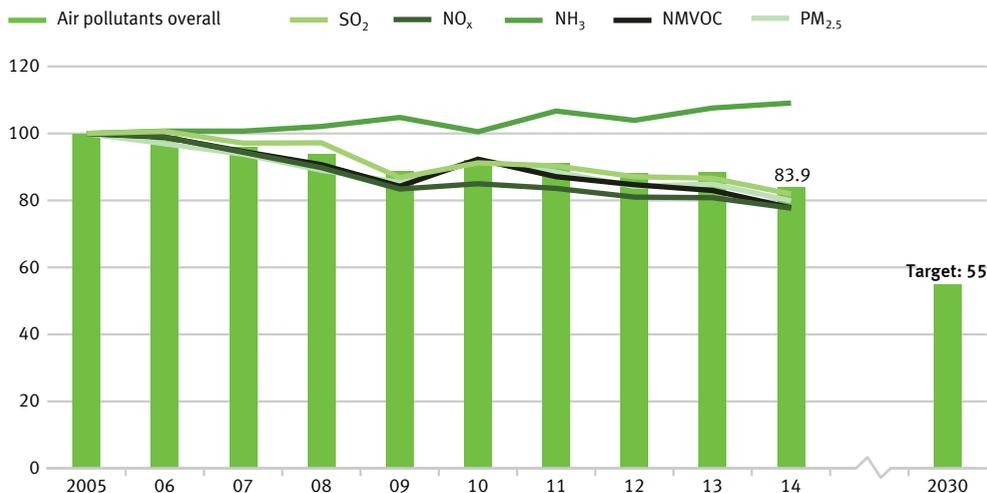
Air pollution – Keeping the environment healthy

#### 3.2.a Emissions of air pollutants



##### Emissions of air pollutants

Index 2005 = 100



Sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), volatile organic compounds (NMVOC) and particulate matter (PM<sub>2.5</sub>), average index of measurements.

Source: German Environment Agency

##### Definition of the indicator

The indicator presents the mean value of the index of national emissions of the five air pollutants sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), volatile organic compounds (NMVOC) and particulate matter (PM<sub>2.5</sub>).

##### Target and intention of the indicator

Air pollutants not only impair human health, but also ecosystems and biodiversity. Therefore, emissions of air pollutants should be reduced by 45 % by 2030 compared to 2005. To represent the development of health-relevant as well as ecosystem pollution, German emissions of SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, NMVOC and PM<sub>2.5</sub> have been summarised into a single indicator



## Content and progress of the indicator

In accordance with the “National Emission Reduction Commitments” negotiated at European level (NERC Directive), Germany is required to reduce emissions of individual air pollutants as follows by 2030: SO<sub>2</sub> by 58 %, NO<sub>x</sub> by 65 %, NH<sub>3</sub> by 29 %, NMVOC by 28 % and PM<sub>2.5</sub> by 43 %. On this basis, the German Environment Agency calculated a non-weighted, arithmetic mean of the individual reductions in the specified air pollutants cumulated in one target. The rates of change of the individual air pollutants are offset equally against one another. Independent of the individual reduction targets arising from the NERC Directive, this means that increasing emissions of single pollutants of this indicator may be offset by higher reductions of emissions of other pollutants.

The data is computed annually by the German Environment Agency using various sources. It serves as a basis for the reporting obligation pursuant with the Geneva Convention on Long-Range Transboundary Air Pollution and the NERC Directive. The data undergoes further editing as part of the Environmental-Economic Accounting reports issued by the Federal Statistical Office. As a result, emissions are divided according to various production areas and private households along with other emitters.

Emissions of air pollutants overall fell by 16.1 % up to 2014 in comparison to 2005. In so doing, the indicator has moved in the desired direction, but the trend must be accelerated if the goal is to be achieved by 2030. Emissions of individual pollutants changed to varying degrees in the period from 2005 to 2014.

Emissions of volatile organic compounds (NMVOC), which arise primarily due to the industrial use of solvents, were significantly reduced during the specified period by 26.8 %. Consequently, the targeted reduction of 28 % by 2030 has almost been achieved.

Emissions of particulate matter (PM<sub>2.5</sub>) have been reduced by 20.1 % in the specified period. If this annual trend continues, the set reduction target will be missed by just under 20 %. The largest proportion of PM<sub>2.5</sub> emissions, at 28.6 %, originated from households and small consumers and arose in particular from the generation of heat. The transport sector accounted for 22.9 % of PM<sub>2.5</sub> emissions in the same year.

Emissions of nitrogen oxides (NO<sub>x</sub>) decreased by 24.5 % up to 2014, and those of sulphur dioxide (SO<sub>2</sub>) by 18.1 %. Although these emissions developed in the targeted direction, the average reduction achieved in recent years will not be sufficient to achieve the set goals. The majority of nitrogen oxides and sulphur dioxides emitted in 2014 came from the transport sector and the energy industry.

Following a prolonged period of stagnation, emissions of ammonia increased by a total of 9.1 % between 2005 and 2014 and are therefore moving contrary to the desired direction. The increase can be attributed primarily to the production of digestate from the fermentation of fuel crops. According to calculations by the German Environment Agency, 95.1 % of all domestic ammonia emissions in 2014 originated from agricultural production, and from livestock farming in particular.

### 3 GOOD HEALTH AND WELL-BEING

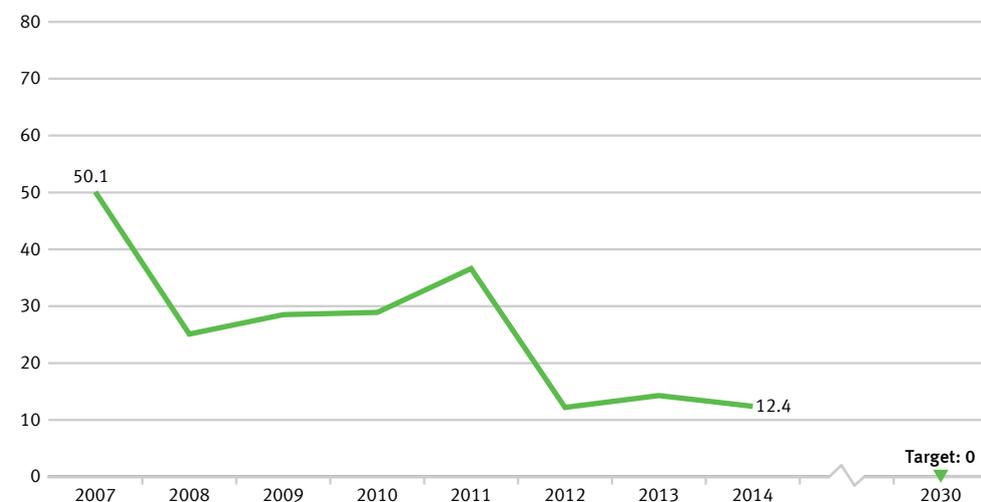
---

Air pollution – *Keeping the environment healthy*

#### 3.2.b Share of the population with excessive exposure to PM<sub>10</sub> in Germany



**Particulate matter exposure (PM<sub>10</sub>), of at least 20 µg per m<sup>3</sup> air on average per year**  
Population, in millions



Source: German Environment Agency, World Health Organisation

#### Definition of the indicator

The indicator shows the number of persons who are exposed at their place of residence to an annual average of more than 20 micrograms (µg) of PM<sub>10</sub> particulate matter (dust particles with a diameter less than 10 µm) per m<sup>3</sup> of air.

#### Target and intention of the indicator

The inhalation of particulate matter has been shown to be harmful to health. The particles are absorbed via the respiratory system and lead to respiratory diseases. Therefore, the World Health Organisation's recommended guideline value for particulate matter of an average of 20 µg per m<sup>3</sup> air annually should be achieved, if possible, nationwide in Germany by 2030.



---

### Content and progress of the indicator

The particulate matter (PM<sub>10</sub>) contained in the air is recorded at a total of more than 370 air measurement stations both in metropolitan and rural areas for all of Germany. However, the computation of this indicator only takes account of those measuring stations that record no direct particulate matter emissions from transport, as these regularly map only elevated peak values rather than general pollution levels. This recorded data which is called background pollution is used in a model to determine the number of persons who are exposed to average annual particulate matter pollution of more than 20 µg per m<sup>3</sup> air in their place of residence.

Rather than mapping comprehensive adherence to the guideline value, the indicator maps adherence with reference to the population's places of residence. Neither does it shed any light on the level of exposure or its variation throughout the year. In addition, this indicator makes no provision for the separate analysis of pollution caused by finer dust particles (PM<sub>2.5</sub>).

The last few years have seen a significant reduction in background pollution caused by PM<sub>10</sub>. Whereas the average pollution exposure of the population was 20.7 µg per m<sup>3</sup> air in 2007, it was just 17.3 µg per m<sup>3</sup> in 2014. During the same period, the number of people exposed to an annual average of more than 20 µg PM<sub>10</sub> per m<sup>3</sup> air has also fallen significantly – from around 50 million people in 2007 to around only 12 million people in 2014.

If the average trend over the past few years continues, the goal of a nationwide reduction of particulate matter to below 20 µg per m<sup>3</sup> air on average can be achieved.

## 4 QUALITY EDUCATION

Education – *Continuously improving education and vocational training*

### 4.1.a Early school leavers (18- to 24-year-olds leaving school without graduation)



#### Early school leavers (18- to 24-year-olds)

Share of all 18- to 24-year-olds, in %

— Total — Female — Male



#### Definition of the indicator

The indicator specifies the proportion of 18- to 24-year-olds from all people of the same age group who currently do not attend any school or institution of higher education, who are not attending any further education programmes and who have not completed second-stage secondary school (ISCED level 3-university entrance level or completed course of vocational training).

#### Target and intention of the indicator

The state educational system and the dual system of vocational training are the cornerstones of future-orientated qualifications for young people in Germany. Failure to complete school or vocational training poses a risk of poverty and places a strain on the social welfare systems. Moving in line with the European Union's "Europe 2020" strategy, the Federal Government has set itself the target for 2020 to reduce the proportion of early school leavers among all people of the same age group to below 10%.



## Content and progress of the indicator

The term “early school leavers” does not refer to the young “high-flyers”, who achieve a school leaving certificate before the end of the regular school period. Nor should the term be confused with school drop-outs. On the contrary, it refers to people between 18 and 24 years of age who possess neither a university entrance qualification, such as an “Abitur” or “Fachhochschulreife” (entrance qualification for general or applied sciences universities), nor have completed a course of vocational training and who are also not attending training and further education programmes. This means that even those young people who, for example, have successfully completed the Hauptschule or the Realschule (lower secondary education, ISCED level 2) but are no longer participating in the education process are also counted as early school leavers. Therefore, the indicator records people with and without Hauptschule or Realschule certificates who are not undergoing further education. The indicator does not specify the age at which the people under review last attended school, nor does it specify the type of educational facility involved.

The information originates from the microcensus, whose annual sample survey covers 1% of the population. Annual school statistics and coordinated Länder statistics provide supplementary information. Both statistics are published by the Federal Statistical Office.

In 2015, the indicator stood at 9.8%, which means that there were a total of 581,000 young people who did not complete second-stage secondary school and who were not or no longer receiving training, education or further education. Therefore, the goal set for 2020 has already been achieved. Compared with 1999, the value fell by 5.1 percentage points

Between 1999 and 2005, the gender-specific figures for the indicator have deviated from the total values to varying degrees and in different directions. Since 2006, there have been fewer young women than young men leaving school early without a certificate of completion. For instance, the values in 2015 were 9.5% for women and 10.1% for men.

Data provided by school statistics show that a total of around 47,435 young people (6% of the resident population of the same age) left school without a Hauptschule certificate in 2015. Compared with 1999, this equates to a reduction by more than a third. In the case of young women, the proportion continues to be markedly lower (4.7%) than that of young men (7.1%).

Among early school leavers with a school leaving certificate, 17.6% (139,952) of the resident population of the same age achieved a Hauptschulabschluss (general school leaving certificate), 46.5% (370,201) a Realschulabschluss (intermediate school leaving certificate), 34.8% (287,862) an allgemeine Hochschulreife (general higher education entrance qualification) and 0.1% (973) a Fachhochschulreife – all data for 2015. Over the course of time since 1999, two types of certificates have seen particularly large changes. Thus, the share of people with a Hauptschulabschluss fell by 8.5 percentage points, while the share of people with a general Hochschulreife rose by 10.0 percentage points (with reference to the population of the same age in each case).

Another indicator that matches this context is 10.1 “Foreign school graduates”.

## 4 QUALITY EDUCATION

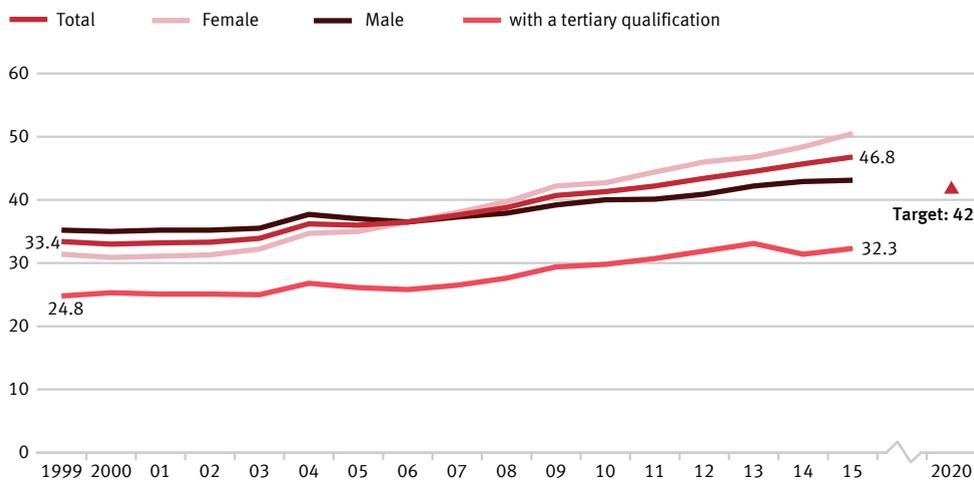
Education – *Continuously improving education and vocational training*

### 4.1.b 30- to 34-year-olds with a tertiary or post-secondary non-tertiary level of education



#### 30- to 34-year-olds who have completed a programme of tertiary or post-secondary non-tertiary education

Share of all 30- to 34-year-olds, in %



Source: Federal Statistical Office

#### Definition of the indicator

The indicator specifies the proportion of 30- to 34-year-olds who hold a certificate from the tertiary education sector (levels 5 to 8 of the ISCED 2011) or a post-secondary non-tertiary certificate (level 4 of the ISCED).

#### Target and intention of the indicator

Advanced economies like Germany's, in which the service and knowledge/expertise sectors are becoming increasingly important, need a highly skilled and qualified labour force. For this reason, the value of this indicator should increase to 42% by 2020. This objective is in line with the target of the European Union's "Europe 2020" strategy to ensure that 40% of 30- to 34-year-olds in the European Union hold a tertiary certificate by 2020.



## Content and progress of the indicator

The “International Standard Classification of Education” (ISCED) enables international comparisons of statistics and indicators regarding certificates of education. To maximise the extent of international comparability, certificates that are regarded as equivalent are assigned to the same ISCED levels as part of the classification.

The data for the indicator originates from the microcensus, where the annual sample survey covers 1 % of the population. The university statistics provide supplementary information. Both sets of statistics are compiled by the Federal Statistical Office.

The name of the indicator is linked to the tradition of dual education system in Germany. Therefore, the indicator includes both the tertiary degrees corresponding to levels 5 to 8 of the ISCED as well as the degrees corresponding to level 4 of the ISCED.

The following tertiary degrees are available in Germany: degrees from universities, universities of applied sciences and universities of applied administrative sciences, professional and vocational academies, master’s and technician’s certificates, other certificates from technical schools and from training establishments for child care workers. The post-secondary non-tertiary certificates are distinguished by the fact that two certificates of second-stage secondary school are obtained either consecutively or simultaneously. Possible combinations include, for example, an Abitur from an evening school or vocational /technical school (this pre supposes that a vocational certificate has already been attained) or a vocational training certificate following Abitur two consecutive vocational training certificates. In addition, the post-secondary non-tertiary certificates also include certificates from educational establishments for healthcare professions.

Starting at 33.4 % in 1999, the indicator rose 13.4 percentage points to 46.8% up in 2015 and is therefore already above the target value set for 2020. This applies both to women (50.5%) and to men (43.1%). The ratio of gender-specific proportions has changed over time: In 1999, the value of the indicator for men was still 3.8 percentage points higher than for women. In 2006, the values for both genders were the same. Since 2007, the share of women who have completed a programme of tertiary or post-secondary non-tertiary education is now higher than that of men.

Many other countries do not offer post-secondary non-tertiary education programmes. Therefore, the indicator for the European Union’s “Europe 2020” strategy is more concisely defined and takes only tertiary degrees (ISCED levels 5–8) into account.

Following a steady increase since 2005, it reached a total of 38.7 % across the EU-28 states in 2015. If one also selects this narrowly defined indicator for Germany, the value of 32.3% in 2015 will stay more than 6 percentage points below the EU value. In 2015, the proportions of women and men are virtually identical (32.3 % and 32.2%; not shown on the chart).

The number of university graduates in 2015 totaled 481,588, or 117 % more than in 1999. These included 100,401 engineering graduates (137 % more than in 1999) and 80,473 graduates of mathematics and the natural sciences (147 % more than in 1999).

## 4 QUALITY EDUCATION

Prospects for families – *Improving the compatibility of work and family life*

### 4.2.a, b All-day care provision for children

a) 0- to 2-year-olds

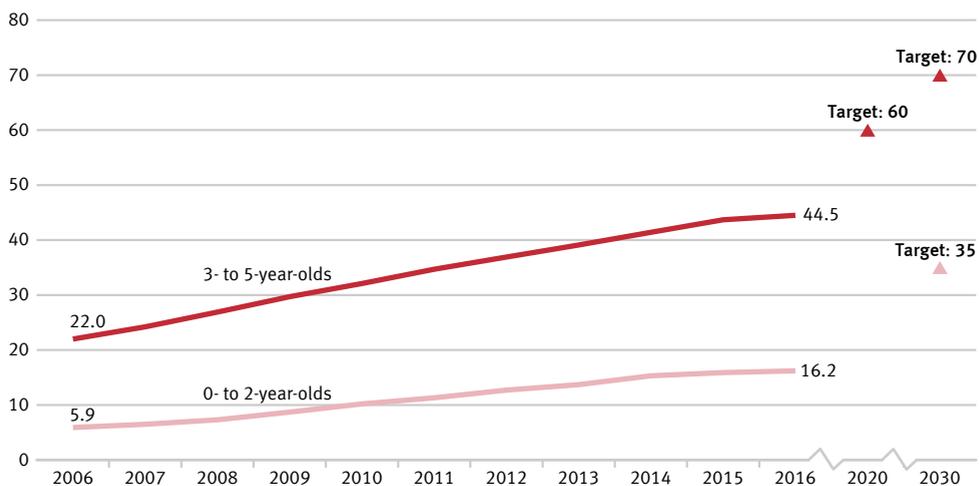


b) 3- to 5-year-olds



#### Children in institutional all-day care

Proportion of all children of the same age group, in %



Childcare provision of more than seven hours in day-care facilities, excluding day care in private homes.

Source: Federal Statistical Office

#### Definition of the indicators

The indicator shows the proportion of children in all-day care among all children of the same age group. In this context, all-day care refers to a duration of more than seven hours. Day care in private homes is not taken into account. Indicator 4.2.a refers to the group of 0- to 2-year-olds. Indicator 4.2.b refers to 3- to 5-year-old children.

#### Target and intention of the indicators

The proportion of 0- to 2-year-old children attending all-day care is set to reach at least 35 % (4.2.a) by 2030. For 3- to 5-year-olds (4.2.b), the proportion is set to increase to at least 60 % by 2020 and at least 70 % by 2030. An increase in the proportion of children attending all-day care is desirable because the availability of childcare options to meet the demands of today's families improves the balance between family life and work. They also make an important contribution to equal opportunities, gender equality and integration.



## Content and progress of indicators

The information is provided by the annual statistics on children and people employed at child care facilities. The data is collected by the Federal Statistical Office in cooperation with the statistical offices of the Länder as part of a decentralised survey of all children that attend day care facilities. Here, information about the duration and scope of weekly childcare time is surveyed for each individual child in addition to their age and gender. As indicator values have been calculated since 2015 based on the updated 2011 census, comparisons with values from previous years are possible only to a limited degree.

The indicator shows the proportion of children for whom a daily childcare time of more than seven hours has been arranged. This length of time may deviate from the actual time spent on childcare. Contractually agreed childcare provision of seven hours and less, which can also make work and family life more compatible, along with additional types of care such as day care in private homes, are not included in the indicator. Furthermore, information on childcare services aimed at children aged six and older is also relevant to this topic. Suitable supplementary information is provided, for example, by data from the The Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (see the last section).

In 2016, parents of 44.5 % of the 3- to 5-year-olds (kindergarten age) made use of institutional all-day care, while for children under 3 years of age (nursery age) this figure was 16.2 %. As a result, the proportion of children receiving all-day care among 3- to 5-year-olds has increased by 22.5 percentage points since 2006 and has therefore more than doubled. The full-day care of children below the age of three rose from 2006 to 2016 by 10.3 percentage points, thus by more than 2.5 times the value compared to 2006.

The absolute number of children receiving full-time care in daycare centres in 2016 was around 1.3 million. The figure for children in part-time care was also around 1.3 million. In addition, some 53,600 children under six years of age are cared for in publicly subsidised day care in private homes. More than a quarter of the children receiving full-time or part-time care in daycare centres had a migration background, meaning that at least one of the parents was of foreign origin. The care rate for these children in 2015 was just under 56 %, while the rate for children with no migration background was around 67 % in 2015.

With regard to availability of all-day care facilities, there is a clear gap between the Länder in the east and the Länder in the west of Germany. The highest full-time care rates for 0- to 2-year-olds are recorded in the eastern Länder and in Berlin. The figures range from 46.3 % in Thuringia to 9.6 % in Baden-Württemberg and Bavaria. For 3- to 5-year-olds, the highest percentage of all-day care was also found in Thuringia at 90.8 %; the lowest in Baden-Württemberg at 22.7 % (both 2016).

In terms of childcare opportunities, after-school care programmes and all-day schools also play a significant role. In 2016, 21,400 children between 6 and 13 years of age were cared for on an all-day basis in after-school care programmes while 458,200 children received part-time care (teaching time is excluded from the calculation of childcare time here). The proportion of pupils attending all-day schools out of all pupils in general education schools during the 2014/2015 school year was 37.7 %. However, this figure includes pupils from all school types, including pupils who are older than 13. In Grundschulen (primary schools) in the same school year, 33.1 % of the children received all-day care. In comparison to 2006, the number of all-day school pupils has risen markedly, from almost 1.5 million to 2.7 million (in all general education schools) and from 400,000 to around 892,000 in the primary schools.

## 5 GENDER EQUALITY

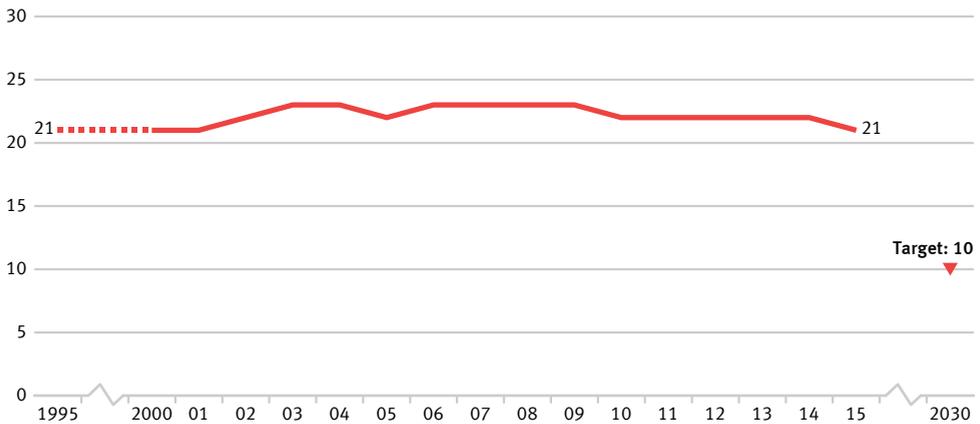
---

Equality – *Promoting equal opportunities in society*

### 5.1.a Gender pay gap



**Difference between average gross hourly earnings of women and men**  
in % of earnings by men



Source: Federal Statistical Office

#### Definition of the indicator

The indicator shows the difference between the average gross hourly wages for women and men expressed as a percentage of the average gross hourly wage of men

---

#### Target and intention of the indicator

Differences in pay between men and women in a modern business-oriented society are a sign of social inequality. A narrowing of pay disparities indicates the progress on the road to equality. The Federal Government is therefore pursuing the target of reducing the pay gap to 10 % by 2030.



## Content and progress of the indicator

The indicator presented here shows the unadjusted gender pay gap. It merely expresses the relative average gross hourly wages as a ratio without taking their causes into account. As a result, it also records the pay gap that arises due to different factors such as the choice of job and career paths of the respective cohorts.

The data for the indicator is based on the four-yearly structure of earnings survey conducted by the statistical offices of the Länder as a representative sample survey with a disclosure obligation covering a maximum total of 60,000 businesses. This survey is supplemented by administrative data that is available for the public sector. Based on this data, results are published according to age, education level, performance groups, activity, collective agreement, company size classes and economic sectors and the adjusted gender pay gap is calculated. For the interim years, the unadjusted gender pay gap is updated using the rates of change from the quarterly wage survey.

In 2015, the unadjusted gender pay gap was 21 % on average, which means that the average gross hourly wage for women was around one fifth lower than that of men. Since 1995 the gender pay gap has scarcely changed. If the trend recorded over the last five years continues, the goal set for 2030 will not be achieved.

The unadjusted gender pay gap varies markedly between the Länder: from 26 % in Baden-Württemberg in 2015 to 4 % in Mecklenburg-Western Pomerania, although in the context of significantly lower overall wage levels.

Investigations into the causal factors behind the gender pay gap can be conducted every four years based on the detailed results of the wage structure survey. The results for 2010 are currently available. Since the factors that determine the wage differences are subject to long-term change processes, the results currently available are likely to be valid. Accordingly, the measurable key reasons for the unadjusted pay gap are the different sectors and jobs in which women and men are employed and the performance group, that is, the specific workplace requirements in terms of leadership and qualification. There are additional factors such as a shorter period of service and a lower scope of employment. By the reasons mentioned, around two thirds of the difference of the hourly wages can be statistically explained. The remaining third of the difference in earnings corresponds to the adjusted pay gap. This remaining 7 % of wage difference between men and women cannot be explained using the above-mentioned variables.

## 5 GENDER EQUALITY

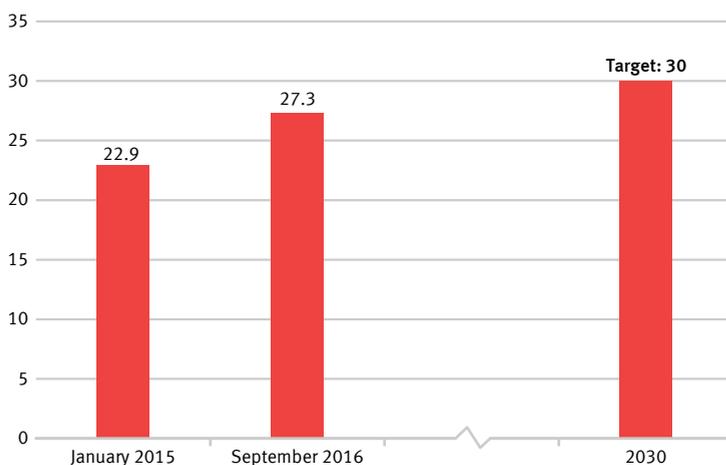
---

Equality – Promoting equal opportunities in society

### 5.1.b Women in management positions in business

#### Women on supervisory boards

Share in listed and fully co-determined companies, in %



Source: Frauen in Aufsichtsräten e.V.

#### Definition of the indicator

The indicator shows the share of women on supervisory boards of listed and fully co-determined companies.

---

#### Target and intention of the indicator

Although women are just as likely as men to complete a programme of study and are as highly qualified as men, they are still under-represented in management positions in the German economy, particularly at senior management level. For this reason, the share of women on supervisory boards of listed and fully co-determined companies is to be increased to 30% by 2030.



## Content and progress of the indicator

The data for the indicator is based on the publications of results of votes at the general meetings of listed and fully co-determined companies. Pursuant to the law on equal opportunities of women and men in management positions in the private and public sectors, these are listed companies and joint-stock companies with generally more than 2,000 employees as well as European companies (SE) that are subject to equal co-determination by agreement or by the application of the standard provision under the SE Participation Act (SEBG). The same applies to listed companies that result from cross-border mergers and in which equal co-determination is enshrined by the Act on Employee Participation in the Event of Cross-Border Mergers (MgVG).

The concept of a management position is not universally defined. It is generally understood to include all those who hold responsibility at least for personnel or budget to a certain extent. The indicator presented here examines management positions of women on supervisory boards in listed companies and fully co-determined companies. Consequently, the majority of management positions in the economy and their allocation between genders are not recorded by this indicator.

In mid-September 2016, 27.3% of those on the supervisory boards of listed and fully co-determined companies were women. In almost half of the companies (44.8%), 30% or more of those on supervisory boards were women. The share of women on the supervisory boards of the corresponding companies has recently increased significantly. In January 2015, the figure was just 22.9% in the 100 relevant companies at the time.

Since 2016, all listed and fully co-determined companies are legally required to allocate at least 30% of all new supervisory board appointments to women. A large number of elections to supervisory boards are due in 2018 and will involve electing new members to just under one third of the oversight bodies. As a result of gradual new appointments, it can be assumed that the indicator will achieve the goal by 2030.

The German Institute for Economic Research (DIW) not only records the share of women on supervisory boards, but also the representation of women on the management boards of the thirty companies in the German Share Index (DAX). In June 2016, 30.2% of all supervisory board positions in these companies were occupied by women, but only 9.4% of all management board positions.

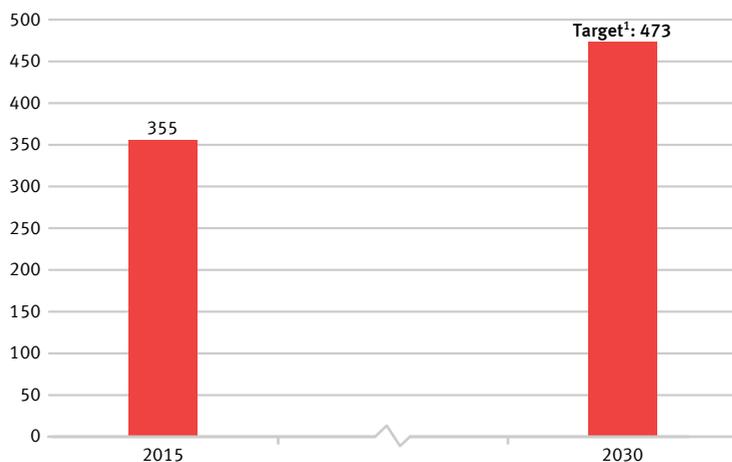
## 5 GENDER EQUALITY

---

Equality – *Strengthening the economic participation of women globally*

### 5.1.c Vocational qualification of girls and women through German development cooperation

**Girls and women reached by the vocational qualification programmes of German development cooperation in thousands**



<sup>1</sup> This equates to an increase of one third compared with 2015.

Source: Federal Ministry for Economic Cooperation and Development, Centrum für Evaluation GmbH, Deutsche Gesellschaft für internationale Zusammenarbeit GmbH

#### Definition of the indicator

The indicator specifies the number of girls and women in developing and emerging countries who were reached by the vocational qualification programmes of German development cooperation.

---

#### Target and intention of the indicator

The economic participation of girls and women in developing and emerging countries is to be strengthened. To this end, the number of girls and women in development and emerging countries who obtain vocational qualifications through German development cooperation is to be gradually increased by one third by 2030 compared with 2015.



## Content and progress of the indicator

Information provided by the Federal Ministry for Economic Cooperation and Development (BMZ) on supported projects in implementation in 2015 served as a data source. These measures include all short-, medium- and long-term formal and non-formal vocational training programmes in developing and emerging countries. The measures are financed entirely by funds from the federal budget and market funds from the government-owned development bank. The data was collected for the first time in 2015 on behalf of the BMZ by the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH and the Centrum für Evaluation GmbH and is to be conducted every three years in the future.

Girls and women are reached at different levels of German development cooperation, which is why the data was queried at three levels. For measures at individual level, the number of girls and women who received vocational training and further education or who participated in suitably organised consulting programmes can be recorded directly. When it comes to the funding of institutions or funding at policy area level, the number in the funded training and further education facilities has to be estimated. In this case, the total number of female trainees in the respective funded training and further education facilities are included at institutional level along with all female trainees in the partner countries at policy area level. Consequently, this can lead to overestimates and multiple counting – especially at policy area level. Furthermore, the possibility of duplication of the number of girls and women reached in the case of follow-on projects or where multiple projects are implemented simultaneously in the same region cannot be excluded.

The value of the indicator is closely related to the funded level, as the funding of institutions or policy areas generally reaches more girls and women than individual measures. The indicator does not make any statement regarding the success, scope and quality of the qualification programmes, which can vary quite significantly.

The programmes for promoting the vocational qualification of girls and women are part of the overall official development assistance. These are presented in indicator 17.1.

In 2015, 354,841 girls and women accessed vocational qualification programmes. 3.6% of these could be accessed by direct vocational training programmes. A total of 14.1% of girls and women were reached by institutional funding and 29.9% by programmes at policy area level. Additionally, 50.7% of girls and women were reached through financial cooperation. These measures did not involve allocations to one of the three levels mentioned above, and another 1.7% of the girls and women reached could not be assigned.

Looking at the number of programmes, a total of 151 vocational qualification programmes for girls and women were conducted through German development cooperation in 2015. Of these, 44.6% were at individual level, 12.0% at institutional level and 8.7% at policy level. Another 28.0% were conducted in the context of financial cooperation, while 6.7% of measures could not be assigned to individual levels.

The data was recorded for the first time for the reporting year 2015, which means that the development so far and possible target realisation cannot be evaluated yet.

## 6 CLEAN WATER AND SANITATION

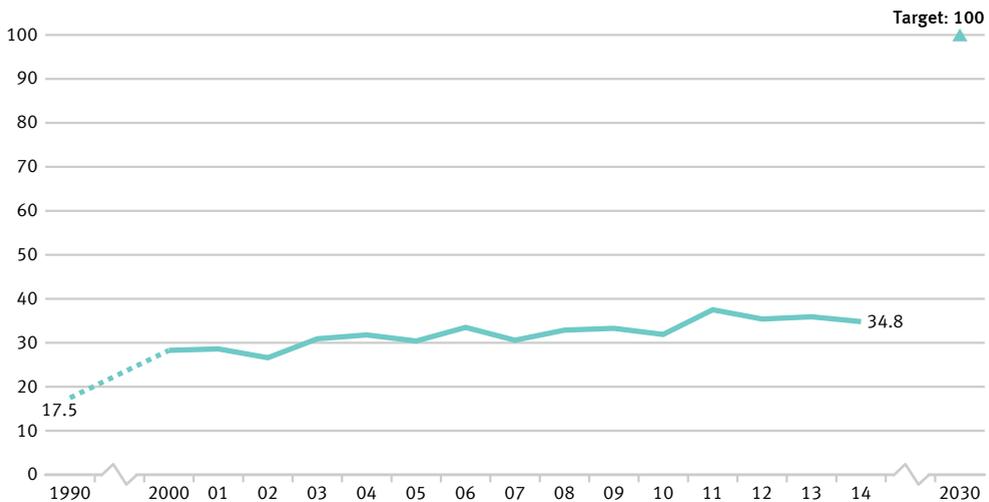
Water quality – Reducing the pollution of water with substances

### 6.1.a Phosphorous in flowing waters



#### Phosphorous in flowing waters

The share of monitoring points at which the benchmark value for a good ecological status for total phosphorous in flowing waters is observed, in %



Source: German Environment Agency according to information from the German Working Group on water issues of the Länder and the Federal Government represented by the Federal Environment Ministry

#### Definition of the indicator

The indicator specifies the share of those monitoring points at which the benchmark values for phosphorous in flowing waters for a good ecological status in specific types of bodies of water are observed.

#### Target and intention of the indicator

Roughly half of the phosphorous entering flowing water in Germany today comes from agriculture, and the other half originates from cities (municipal water treatment plants and rainwater run-offs). In addition to nitrate pollution, it is one of the causes of an oversupply of nutrients (eutrophication) in rivers, lakes and seas. The consequences of this are algae growth, oxygen depletion all the way to fish kills or the growth of poisonous blue-green algae. For this reason, adherence to benchmark values for specific types of bodies of water, as specified in the Ordinance on the Protection of Surface Waters, at all monitoring points was defined as a target for 2030.



## Content and progress of the indicator

The pollution of rivers with phosphorous is measured by the Länder as part of the monitoring conducted for the EU Water Framework Directive. The data from the overlying monitoring network is used for the indicator. This monitoring network is relatively widely dispersed. However, the river basin for each monitoring point should not exceed 2,500 square kilometres. In most cases, the monitoring points were installed in the main flows of the large rivers and at the confluences of important backwaters. The composition of the data is performed by the German Environment Agency according to information from the German Working Group on water issues of the Länder and the Federal Government represented by the Federal Environment Ministry (LAWA).

Since the different bodies of water react with differing levels of sensitivity to nutrients such as phosphorous, the precise benchmark values vary. The vast majority of flowing water uses the benchmark value of 0.1 mg/l of phosphorous. In organic substrate-dominated rivers, the benchmark value is 0.15 mg/l, for marshland streams 0.3 mg/l and for transitional waters influenced by tidal movement 0.045 mg/l.

The indicator shows whether a particular monitoring point adhered to or fell below the annual average of the benchmark value. However, it does not show by how far the target was surpassed if it was exceeded. The information about the individual monitoring points is summarised. Accordingly, the value of the indicator is strongly dependent on the number and representative status of the distribution of monitoring points. Lakes and other standing waters are not covered by the indicator. However, they are affected to the same degree by excessive phosphorous pollution, and their benchmark values are exceeded with similar frequency.

The indicators of phosphorous and nitrate content (6.1.a and 6.1.b) cover two key aspects of water quality. However, there are other, additional components such as the provision of natural habitats around bodies of water, their stock of organisms (biodiversity), the exposure to pollutants (such as pesticides, metals, medicines) and salts (such as chloride, sulphate) and changes to groundwater levels, all of which are relevant to water quality. Phosphorous generally enters a body of water through the input of phosphates.

In 2014, the annual average at 35% of the monitoring points at rivers was below the benchmark value. 56% of monitoring points showed average concentrations extending up to double the benchmark value, while 7% of monitoring points were in the range of up to four times the benchmark value (not shown in the chart). The remaining 2% showed even higher concentrations.

When viewed over time, the proportion of monitoring points adhering to the benchmark value has continuously increased and has doubled since 1990. However, the percentage rate of monitoring points with concentrations of up to double the benchmark value tripled during the same period and therefore increased even more sharply. Conversely, the share of monitoring points with even higher values has fallen significantly since the early 1990s. The level of pollution has been reduced significantly thanks in particular to the introduction of phosphate-free detergents and phosphate precipitation in water treatment plants following the specification of threshold values for the introduction of treated wastewater.

If one examines the average trend of the last five years, the indicator has changed only to an insignificant degree. The goal of adhering to the respective specified threshold value at all monitoring points is still a long way off.

## 6 CLEAN WATER AND SANITATION

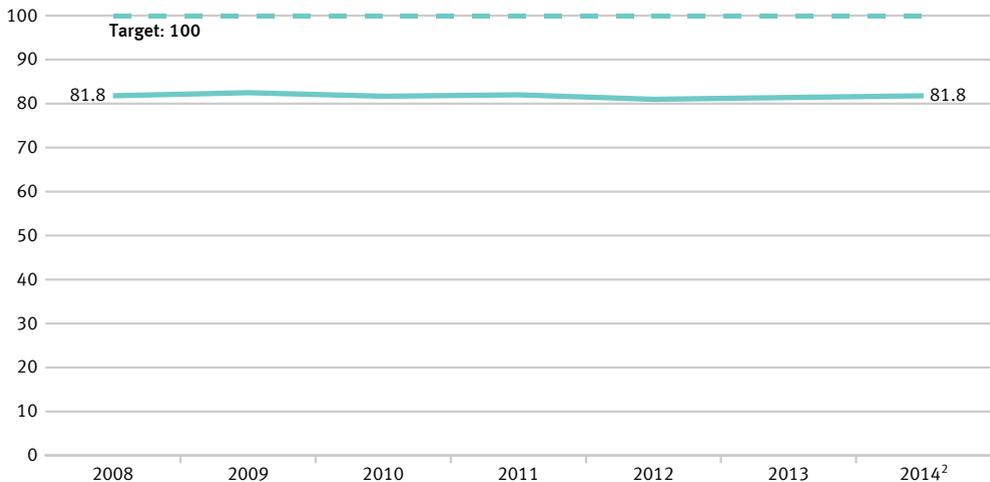
Water quality – Reducing the pollution of water with substances

### 6.1.b Nitrate in groundwater



#### Nitrate in groundwater

Proportion of monitoring points at which the threshold<sup>1</sup> is observed, in %



1 Basis: EUA monitoring network; threshold 50 milligrams of nitrate per litre per year on average.

2 Excluding data for Berlin and Mecklenburg-Western Pomerania.

Source: German Environment Agency and Länder Initiative for a Set of Core Indicators (LIKI) based on data from the German Working Group on water issues of the Länder and the Federal Government represented by the Federal Environment Ministry

#### Definition of the indicator

The indicator shows the share of monitoring points at which the threshold value of 50 mg/l nitrate in the groundwater on average per year is adhered to.

#### Target and intention of the indicator

Groundwater is a key element of the ecosystem. It is part of the water cycle and performs important ecological functions. Groundwater is also Germany's most important drinking water resource. However, elevated nitrate contents impair the ecology of bodies of water. The threshold value of 50 mg/l of nitrate in groundwater, as specified in the Ground Water Ordinance and in the Ordinance on the Protection of Surface Waters, should therefore be adhered to at all monitoring points.



## Content and progress of the indicator

The nitrate content of groundwater is recorded by the Länder for the purpose of reporting the condition of groundwater in Germany to the European Environment Agency (EEA). The monitoring points used for this purpose are combined in the “EEA monitoring network”. The data is summarised by the German Environment Agency according to information from the German Working Group on water issues of the Länder and the Federal Government represented by the Federal Environment Ministry (LAWA).

The pollution of groundwater with nitrate, a natural nitrogen compound, is caused primarily by washing nitrate out from various fertilisers that are rich in nitrogen. In addition to farm fertilisers such as liquid manure or slurry that are produced in regions of intensive livestock farming, this also includes the mineral fertilisers used for intensive agriculture. The last few years have also seen an increase in the volume of digestate, which is produced as a by-product of biogas power plants and is likewise used as a fertiliser in agriculture. This form of fertilisation also leads to an increased nitrogen content in the soil and therefore to higher nitrate values in groundwater.

The natural background values for nitrate, which means the natural pre-loading, are between zero and a maximum of 10 mg/l. Contents between 10 and 25 mg/l are signs of minor to medium pollution. Concentrations of between 25 and 50 mg/l indicate a high level of groundwater pollution. If the threshold value of the Ground Water Ordinance of 50 mg/l, on which this indicator is based, is exceeded, the groundwater is deemed to be in a poor chemical state. This threshold value also applies to drinking water.

The indicator examined here offers no insight regarding by how much a threshold value was exceeded or undercut. As with the indicator on phosphate in flowing waters, it summarises information from many individual monitoring points and shows at how many of these monitoring points the specified threshold value was adhered to. In this context, the number and the representative nature of the distribution, as well as the regional concentration of monitoring points have a major influence on the result of this indicator. Over the last three years, however, EEA groundwater monitoring has been fundamentally revised, adapted and expanded in order to make the results more representative.

The values of the indicator do not exclude the possibility of significant reductions in pollution by nitrate at some monitoring points. For instance, if nitrate content fell sharply at a specific point, but remained above the threshold value of 50 mg/l, this is not reflected by the indicator. The interpretation must also take into account the fact that measures to reduce nitrate pollution may show an effect only after a delay, for instance, because the percolation time from surface to groundwater can take several years.

In 2014, the threshold value of 50 mg/l of nitrate was exceeded at 18.2 % of groundwater monitoring points in the EEA monitoring network. This means that the groundwater there must not be used without treatment for drinking water supplies. Since 2008, the share of monitoring points at which this threshold value is exceeded is unchanged. Consequently, the goal of adhering to the threshold value at all monitoring points has not been achieved nor is any movement of the indicator in this direction to be seen.

The value of 25 mg/l, which still indicates a high level of pollution, was exceeded at more than one third (36.1 %) of all monitoring points. This percentage rate also remained virtually unchanged over the years.

## 6 CLEAN WATER AND SANITATION

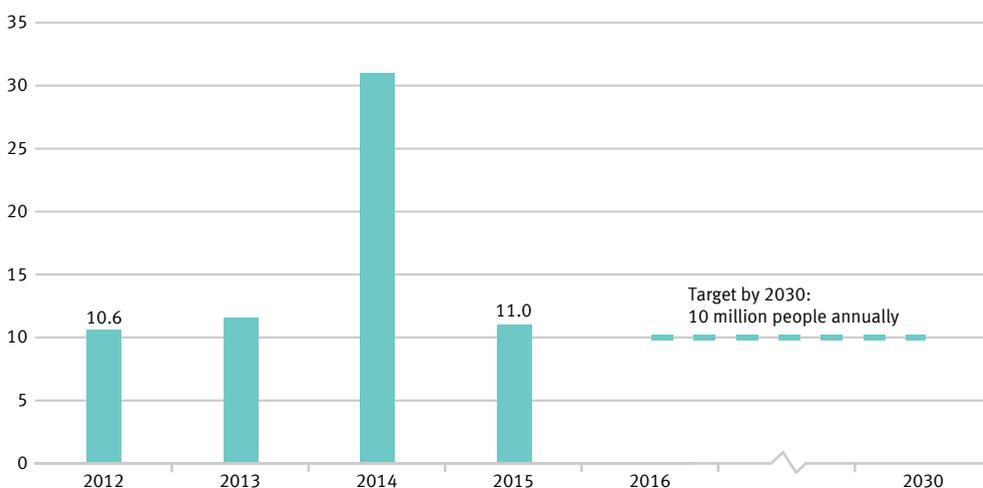
Drinking water and sanitation – *Better access to drinking water and sanitation worldwide, higher (safer) quality*

### 6.2 Development cooperation for drinking water and sanitation



#### Access to drinking water and sanitation subsidised by Germany

Persons reached, in millions



Source: Kreditanstalt für Wiederaufbau (KfW)

#### Definition of the indicator

The indicator shows the number of people in the respective reporting year who received new or improved access to drinking water and sanitation as a result of German support.

#### Target and intention of the indicator

Inadequate provision of drinking water and sanitary facilities has far-reaching consequences for human nutrition and health. The target of the Federal Government is therefore to give 10 million people worldwide access to drinking water and sanitation each year up to 2030 with German support.



## Content and progress of the indicator

This indicator is based on information provided by the Kreditanstalt für Wiederaufbau (KfW). In this case, it is based exclusively on the planned scope of new financing commitments for projects in the area of drinking water and sanitation at the time of submission of the programme proposal to the Federal Ministry for Economic Cooperation and Development. On this basis, the KfW estimates the number of people who will in future (i.e. after the implementation of these planned projects) receive new or improved access to drinking water and sanitation. The funding announced by the KfW includes subsidies and loans, refinanced from the Federal Budget and internal market funds.

Concrete estimates of the extent to which the planned figures are achieved, that is, whether the goal was exceeded or the number of people reached is less than envisaged, can be made only after the relevant infrastructures have been put into operation.

Follow-on projects are evaluated as independent projects. However, if the target group of the follow-on project is identical to that of the original project, it is taken into account only once to avoid duplicate counting. Only in duly substantiated exceptional cases it is permitted to count the target group twice, for example, in scenarios following military confrontations and the destruction of infrastructure where installations previously funded by the KfW are being repaired.

The share of German participation in the projects over the last five years is between 98% and 85%. The recipients are generally developing and emerging countries, which means that this indicator is related to indicator 17.1.

There is a range of additional stakeholders in Germany (e.g. Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH, the Länder, private stakeholders), who support access to drinking water and sanitation in developing and emerging countries. The indicator therefore includes only a part of the German development cooperation in the drinking water and sanitation sector. In the reporting year of 2015, the KfW's share of the water sector was 82.5% of all German development cooperation in this sector.

In previous years, the planned numbers of people who were to receive access to drinking water and sanitation with German support were always just above the set goal of ten million people. The year 2014 was an exception. Here, the planned scope – despite a funding volume of just under EUR 409 million, which was only half that of 2012 – was significantly higher than the goal that applies from 2016 onwards. The reason for this is a nationwide programme in Mexico, which according to KfW estimates was able to reach significantly more people. If the trend recorded over the last four years is maintained, the goal will continue to be met. However, the possibility of major fluctuations due to the diverse nature of the projects cannot be ruled out in the future.

## 7 AFFORDABLE AND CLEAN ENERGY

Resource conservation – *Using resources economically and efficiently*

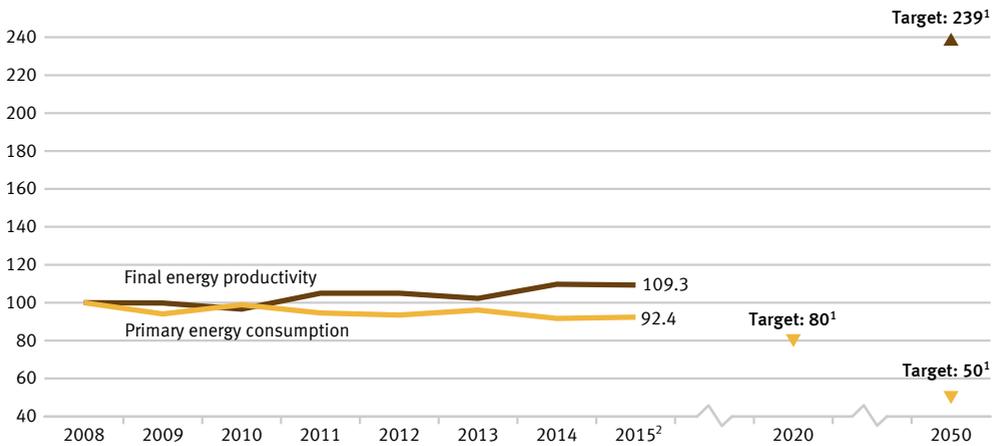
### 7.1.a, b Final energy productivity and primary energy consumption

a) Final energy productivity ☁

b) Primary energy consumption ☁

#### Final energy productivity and primary energy consumption

2008 = 100



1 The target equates to an annual increase in final energy productivity of 2.1% compared to 2008 up to 2050 and a reduction in primary energy consumption by 20% compared to 2008 in 2020 or by 50% compared 2008 in 2050 (energy concept).

2 Preliminary data.

Source: Federal Statistical Office, Energy Balance Association in Berlin (AGEB)

#### Definition of the indicators

The indicator “Final energy productivity” shows the trend of value added per unit of final energy used. The concept of “final energy” refers to the part of the energy that is used energetically in form of thermal or electric energy in the production sectors for the manufacturing of goods or by private households. Primary energy consumption specifies how much energy was consumed by a country in the energy sectors for conversion purposes on the one hand, and by production activities, transport and private households on the other.

#### Target and intention of the indicators

Along with the expansion of renewable energies, the lowering of energy consumption through increased energy efficiency represents the second supporting pillar of the energy transition. The aim is to achieve a high level of economic output while using as little energy as possible. Energy conservation protects the climate and the environment, it helps to improve the security of supply and the industrial competitiveness.



According to the Federal Government's energy concept, final energy productivity is to be increased by 2.1 % annually in the period 2008 to 2050. At the same time, primary energy consumption is to be reduced by 20 % by 2020 and by 50 % by 2050, both compared with 2008. These targets are also used here as a basis.

### **Content and progress of indicators**

Final energy and primary energy consumption are directly related to one another. Final energy consumption is derived from the sum of primary energy consumption, (negative) conversion, flare and piping losses as well as the statistical difference. Primary energy consumption is the sum of domestically extracted primary fuels and all imported fuels minus the withdrawal of energy in the form of exports and marine bunkers. A key component in the calculation of energy consumption is the data from the energy balances of the Energy Balance Association in Berlin (AGEB), which is supplemented with data from other sources. Final energy productivity indicates the amount of value added created by each unit of final energy used. It represents a measurement of energy efficiency in production areas and in the energy use of private households. However, estimates of energy efficiency in the conversion areas (efficiency of power stations) or in the transmission of energy (elimination of leaks, improved heat insulation, etc.) cannot be directly derived from the indicator.

According to preliminary results, final energy productivity in the period 2008 to 2015 has increased by 9.3 %, equating to an average annual increase of 1.3 %. This means that the goal of an annual increase of 2.1 % on average up to 2050 has not yet been achieved. In the year-on-year comparison, energy productivity for 2015 has even fallen slightly by 0.4 percentage points. A year-on-year increase in final energy consumption by private households of around 4.6 % was responsible for this. The final energy consumption of the industry at an annual rate of change of around 1.2 % remained below the growth rate of gross domestic product and thus had a positive impact on final energy productivity.

Primary energy consumption rose slightly in 2015, which can be partially attributed to slightly cooler weather conditions and growth in the economy. Nevertheless, primary energy consumption reached its second lowest level since 1990. Preliminary results indicate that primary energy consumption fell by 7.6 % in the period from 2008 to 2015. This means that the target value for 2020 will not be achieved if the trend recorded over the past few years remains unchanged. Primary energy consumption between the years 2008 and 2011 was subject to significant annual fluctuations of 5.1 % on average. Based on these values, a trend from 2008 onwards can be determined only on a preliminary basis and with reservations.

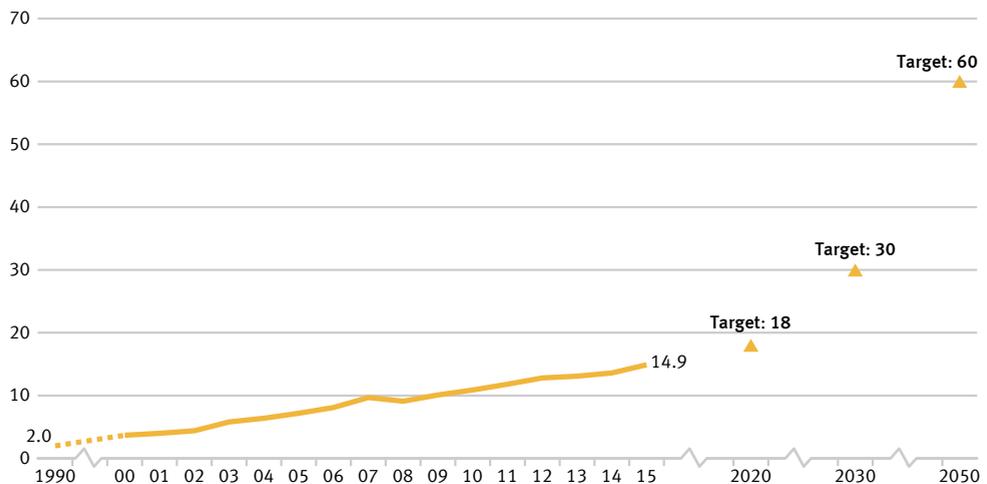
## 7 AFFORDABLE AND CLEAN ENERGY

Renewable energies – *Strengthening a sustainable energy supply*

### 7.2.a Share of renewable energies in gross final energy consumption



#### Generation of renewable energies relative to gross final energy consumption in %



Source: Working Group on Renewable Energies Statistics, Federal Ministry for Economic Affairs and Energy, data updated: August 2016

#### Definition of the indicator

The indicator expresses the generation of renewable energies relative to gross final energy consumption. Gross final energy consumption covers energy consumption by the end consumer and the losses arising during the generation and transportation of energy.

#### Target and intention of the indicator

The reserves of fossil fuels such as oil and gas are limited, and their use is associated with greenhouse gas emissions. Switching to renewable energies (natural energy sources that constantly regenerate) serves to reduce energy-related emissions and hence the extent of climate change. In addition, dependency on energy imports and the consumption of resources is reduced and technical innovations are promoted. For this reason, the target of the Federal Government is to increase the share of renewable energy in gross final energy consumption to 18% by 2020, to 30% by 2030 and to 60% by 2050.



---

### Content and progress of the indicator

For this indicator, the energy generated from renewable sources (including hydropower, wind power on land and at sea, solar energy and geothermal energy, biomass or biogenic waste) is expressed relative to all fuels consumed in Germany. In addition to renewable energy, this also includes imported electricity and fossil fuels such as lignite and hard coal, oil and gas. Another characteristic of the indicator is that energy consumption is taken into account in all areas of application. This includes its use in the form of mechanical energy, as electric power, as heat or as fuel in the transport sector.

The indicator is calculated by the Working Group on Renewable Energies Statistics (AGEE-Stat), but does not take into account the calculation rules according to the EU Renewable Energy Directive (Directive 2009/28/EC), which applies an average value across several years for the supply of hydropower and wind power due to the annual variations here. Instead, the actually generated quantities (of wind power and hydropower) are taken into account for these fuels. In calculating the indicator, it is assumed that all energy generated from renewable sources is consumed domestically and is not exported.

Between 1990 and 2015, the share of renewable energy in final gross energy consumption rose from 2.0% to 14.9%. If the trend continues at the average pace seen in the past few years, the goal for 2020 will be achieved. The use of renewable energies varies significantly depending on the sector. Of the total energy produced from renewable energies in 2015, 49% was used for electricity generation, 42% for heat generation and 9% for biogenic fuels. In particular, biomass with a 57.8% share and wind power with a 20.9% share of all renewable sources played the most important role as fuels used.

The indicator has cross-references to indicators 13.1.a “Greenhouse gas emissions”, 3.2.a “Emissions of air pollutants” and 7.2.b “Share of electricity from renewable energy sources in gross electricity consumption”.

## 7 AFFORDABLE AND CLEAN ENERGY

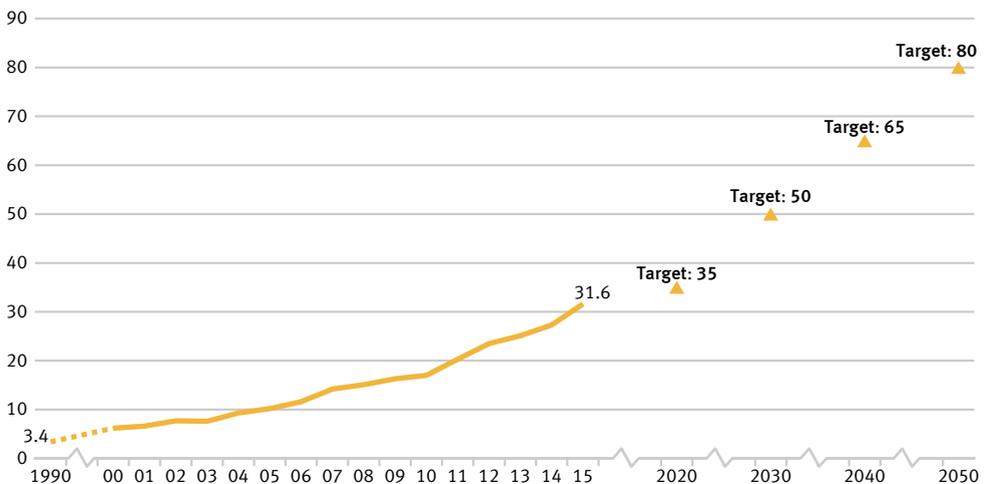
Renewable energies – *Strengthening a sustainable energy supply*

### 7.2.b Share of renewable energy sources in electricity consumption



#### Electricity generated from renewable energy sources

Share in gross electricity consumption, in %



Source: Working Group on Renewable Energies Statistics, Federal Ministry for Economic Affairs and Energy, data updated: August 2016

#### Definition of the indicator

The indicator reflects the share of electricity from renewable energy sources in gross electricity consumption.

#### Target and intention of the indicator

Switching to renewable energies (natural energy sources that constantly regenerate) can reduce demand for fossil fuels. As a result, the dependency on imports of conventional fuels would be reduced, as would emissions of energy-related emissions, and hence the extent of climate change would be contained. According to the energy concept of the Federal Government, the share of electricity generated from renewable energy sources, measured against gross electricity consumption, is therefore set to increase to at least 35 % by 2020, at least 50 % by 2030, at least 65 % by 2040 and at least 80 % by 2050.



## Content and progress of the indicator

The indicator is calculated by the Working Group on Renewable Energies Statistics based on different official and unofficial sources. Gross electricity consumption is the sum of all generated and imported electricity minus the amount of exported electricity. It therefore comprises the net electricity supply, the balance of exchanges across national frontiers, the internal electricity consumption of power stations as well as network losses.

The following are considered to be renewable energy sources: wind energy, hydropower, solar radiation energy, geothermal energy and biomass including biogas, biomethane, landfill gas and gas from purification plants as well as the bio-degradable proportion of waste from households and the industry.

The comparison of domestic gross electricity consumption with domestic electricity generation from renewable sources excludes foreign trade links. As a result, the indicator is calculated on the assumption that all energy generated domestically from renewable sources is also consumed domestically. However, domestically generated electricity from renewable sources may also be exported in the event of overproduction, and conventionally generated electricity may be imported from abroad in the event of insufficient production. Consequently, the indicator may also overestimate the share of renewable energy in gross electricity consumption.

During the period from 1990 to 2015, the share of renewable energy in electricity consumption increased from 3.4 % to 31.6 %. If the average trend over the past five years is maintained, the goal of 35 % will already be achieved before 2020. This trend has been driven by legal measures, such as the Renewable Energy Sources Act (EEG). The EEG requires producers of electricity to give priority to renewable energy sources when buying and distributing electricity.

Since 2000, the share of renewable energy in electricity generation has risen, in particular due to the increased use of wind energy, biomass as well as photovoltaics. In the period between 2000 and 2015, a slight downward trend in the generation of electricity from conventional fuels coincided with an increase by more than 151 TWh in the production of renewable electricity. Specifically, electricity generation by means of wind energy on land and at sea soared from 9.5 TWh in 2000 to 79 TWh in 2015. Thereof, the share accounted for by wind energy at sea in 2015 was approximately 8.3 TWh. Electricity generation from photovoltaics rose between 2000 and 2015 from 0.06 TWh to around 39 TWh. Electricity generation from biomass has increased more than tenfold in the same period.

## 8 DECENT WORK AND ECONOMIC GROWTH

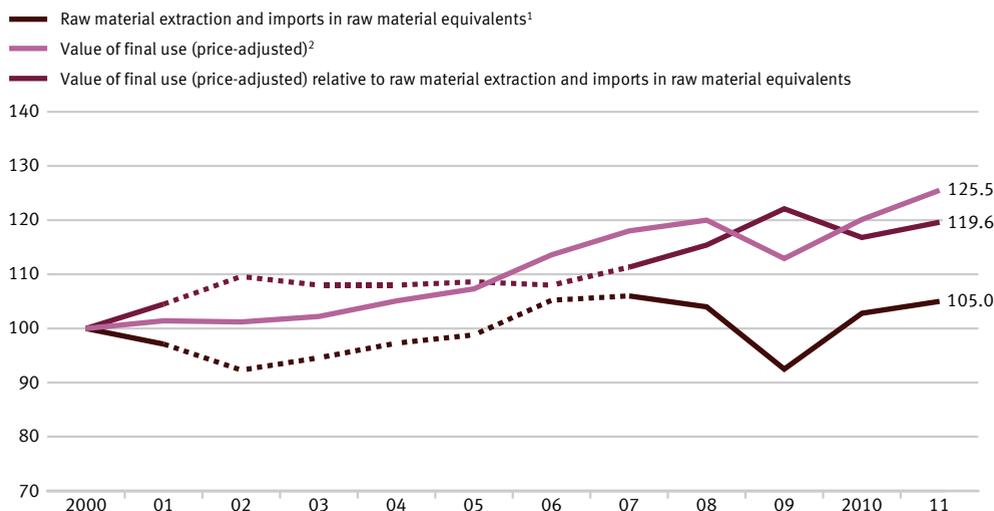
Resource conservation – *Using resources economically and efficiently*

### 8.1 Raw material input productivity



#### Value of final use relative to raw material extraction and imports in raw material equivalents

2000 = 100



1 Interpolated from 2001 to 2007.

2 Equivalent to price-adjusted gross domestic product plus the value of imports.

Source: Federal Statistical Office

#### Definition of the indicator

The indicator for raw material input productivity compares the value of all goods submitted for final use (in EUR, price-adjusted) relative to the mass of the raw materials used domestically and abroad for their production (in tonnes). Final use covers all three, domestic consumption and domestic investment as well as exports.

The denominator of the indicator takes into account abiotic and biotic raw materials from the environment as well as plant materials produced by farming and forestry.



### Target and intention of the indicator

The removal of raw materials is always associated with impairments to the natural environment. Due to the growing demand for raw materials, raw material deposits are increasingly being developed in areas worldwide that are particularly sensitive to mechanical influences. For this reason, the Federal Government has already set the target in the German Resource Efficiency Programme (ProgRes) II in 2015 of continuing to increase raw material input productivity. In the years from 2000 to 2010, raw material input productivity was already increasing by an average of around 1.5 % annually. This kind of positive trend should be continued up to 2030.

### Content and progress of the indicator

To calculate this indicator, it is necessary to determine the mass of all raw materials required to produce the imports. The calculation of this variable designated as imports in raw material equivalents is based on a complex model that employs data from various official and unofficial sources.

Due to the monetary and physical incorporation of imports, the indicator takes into account the value added and raw material use across the entire production chain both inside and outside of Germany. Compared with the “raw material productivity” indicator of the previous national Sustainable Development Strategy, international economic ties are accommodated to a greater degree. The raw material use mapped in the indicator not only covers domestic final use, but also exports. It should therefore not be confused with a resource footprint for Germany.

With the mineral raw materials and fossil fuels, the previous indicator included exclusively those raw materials that were considered to be non-renewable. In contrast, the indicator presented here also includes plant-based products from farming and forestry activities. This means that duplicate counting occurs to a limited degree. For example, both the mass of an agricultural product at harvest time as well as that of the mineral fertiliser used to produce it are recorded.

Based on preliminary results, the value of the indicator increased by approximately 20 % from 2000 to 2011. This increase results in particular from the growth of the numerator: The value of the final use increased by around 25 % during the reference period. The removal of domestic raw materials fell moderately between 2000 and 2011; at the same time, however, the mass of imports in raw material equivalents increased, causing a slight increase of approximately 5 % in the indicator’s denominator.

Domestically extracted raw materials as well as imports are also being exported (again) to an increasing degree. Consequently, the indicator’s denominator does not point to increased global raw material extraction for consumption and investment in Germany, but reflects generally more intensive links between the German economy and the outside world.

The year 2009 should be considered an outlier due to the exceptional economic situation. The values for the years 2010 and 2011 continued the path of development that prevailed up to 2008. From 2010 to 2011, the value of the indicator grew by 2.39 % and thus followed the positive trend from the preceding ten years.

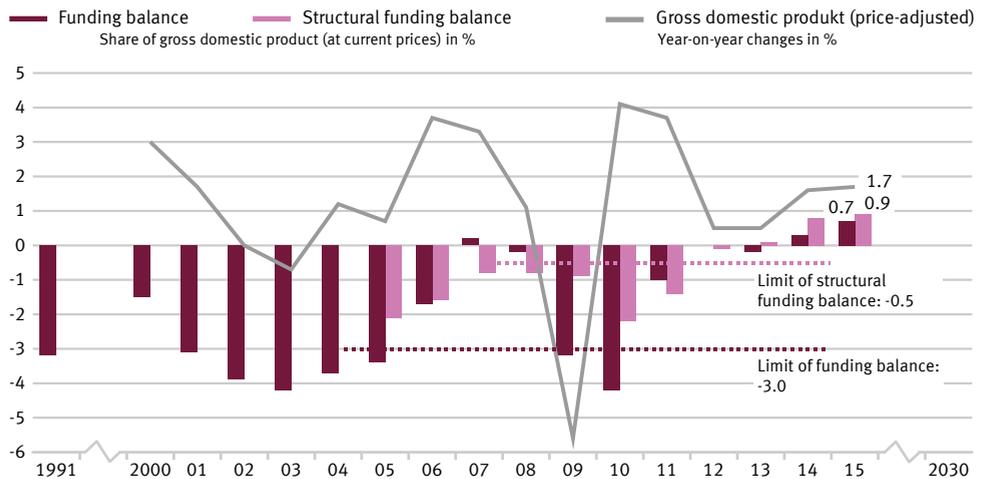
## 8 DECENT WORK AND ECONOMIC GROWTH

Government debt – Consolidating public finances – Creating intergenerational equity

### 8.2.a, b Government deficit, structural deficit

a) Government deficit  b) Structural deficit 

#### Funding balance and structural governmental funding balance



Source: Federal Statistical Office, Federal Ministry of Finance, updated: October 2016

Previous year's prices indexed, 2010 = 100

#### Definition of the indicators

The indicators show the governmental funding balance (deficit or surplus) and the structural funding balance in relation to gross domestic product at current prices (GDP). The governmental funding balance is calculated from government revenue minus government expenditure. The annual structural balance refers to the part of the funding balance that cannot be attributed to cyclical fluctuations and temporary effects.

#### Target and intention of the indicators

Sound public finances represent an essential element of a sustainable financial policy. A policy that relies too heavily on borrowing to fund current public expenditures and then passes this debt on to future generations is simply not sustainable.

According to the convergence criteria for the European Union (referred to as the Maastricht Criteria), the annual government deficit should be less than 3% of GDP. The structural deficit must not exceed 0.5% of GDP. These are the stipulations of the European Stability and Growth Pact. The guiding principle of the structurally balanced budget has also been enshrined in Germany's Basic Law since 2009 (Article 109, referred to as the debt brake).



## Content and progress of indicators

The calculation of GDP and governmental funding balances is specified by the European System of National and Regional Accounts (ESA) and is conducted by the Federal Statistical Office. The structural funding balance is determined by the Federal Ministry of Finance. The calculation of the government deficit takes into account the finances of the public authorities, that is, of Federal Government, the Länder and municipalities, and the finances of the social insurance system. Additional units – such as the German Financial Market Stabilisation Fund, which must be allocated to the state sector according to the ESA – are also included. The values are based mainly on the financial results of the Federal Budget according to information provided by the Federal Minister of Finance and, for the Länder and municipalities, on the quarterly cash results of the financial statistics.

In 2014, the governmental overall budget reported a surplus of EUR 8.6 billion – the first positive result since the German reunification. The Federal surplus rose to EUR 10.0 billion in 2015. At the same time, the Länder reported a cumulated budget surplus (EUR 4.6 billion) for the first time since 2007. The results from the municipalities (EUR 4.2 billion) and the social insurance fund (EUR 2.1 billion) were also positive. Combining all levels, the financing surplus was EUR 20.9 billion. The national budget in 2014 and 2015 showed a structural surplus of 0.8% and 0.9% of GDP respectively. As a result, the convergence criteria of the European Union for the government as well as the structural deficit were met for the fourth time in succession since 2012.

Viewed over the entire period from 1991 to 2015, government revenues grew more strongly (98.8%) than GDP (92.0%) at current prices and expenditure (82.1%). The share of government revenues measured according to GDP therefore increased from 43.2% to 44.7%. However, higher revenue growth became apparent only from 2011 onwards.

Expenditures revealed a disproportionate increase in social benefits in kind. These have increased by 150.9% since 1991, whereas the largest item on the expenditure side – monetary social benefits – recorded an increase of 100.0%, which was only slightly higher than GDP growth (92.0%). Around 70% of monetary social benefits are accounted for by social insurance, primarily in the form of pensions and unemployment benefits. From 2003 onwards, these two benefits measured as a proportion of GDP fell from 18.4% to 15.5% (2015), which can be primarily attributed to sharp reductions in payments of unemployment insurance cover. These fell between 2003 and 2015, as a result of the Hartz legislation and an upturn in the labour market, by approximately EUR 24 billion.

## 8 DECENT WORK AND ECONOMIC GROWTH

---

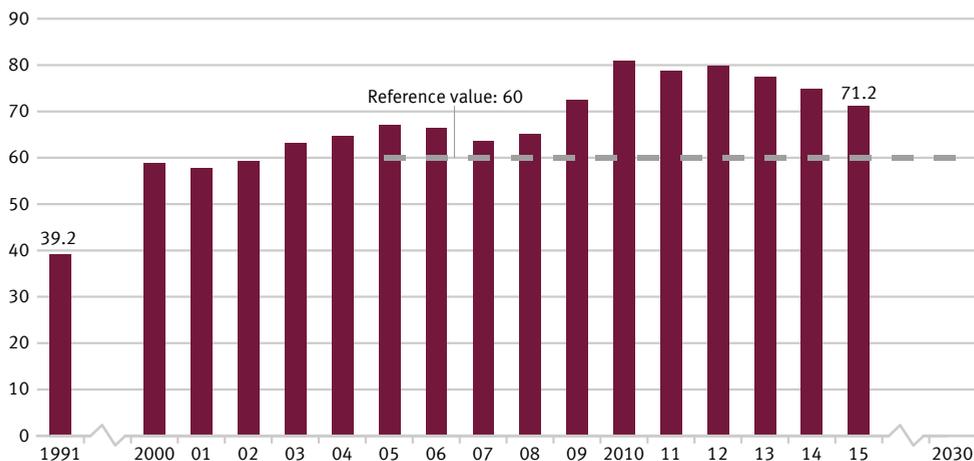
Government debt – Consolidating public finances – Creating intergenerational equity

### 8.2.c Government debt



#### Public debt

Share of gross domestic product at current prices, in %



Source: Federal Statistical Office, updated: August 2016; German Bundesbank; updated: October 2016

#### Definition of the indicator

The indicator shows the national debt as defined by the Maastricht Treaty as a ratio to gross domestic product (GDP) at current prices. The indicator therefore serves as a measure of government debt.

#### Target and intention of the indicator

The European Union's Stability and Growth Pact specifies a reference value of 60% as the maximum debt-to-GDP ratio. This also is the upper limit of the national target-value of the indicator which is relevant for this report.



## Content and progress of the indicator

The national debt is determined by the Bundesbank twice annually pursuant to the requirements of the Maastricht Treaty based on calculations by the Federal Statistical Office. Gross domestic product at current prices is determined as part of the national accounts systems by the Federal Statistical Office and published as a preliminary value in January of the following year.

The debt-to-GDP ratio is influenced by the state of the public budgets and by economic development in general. Assuming balanced budgets, the debt-to-GDP ratio falls faster the stronger the GDP growth. In case of positive economic development, the debt-to-GDP ratio will even fall without any reduction in overall public debt.

Since the indicator compares only the inventory variable of debt in relation to the flow variable of gross domestic product, the nation's financial and fixed assets are not included in the calculation. Furthermore, the indicator also excludes implicit government debt, which refers to the government's future payment obligations that are pledged but not yet due.

Since 2003, the debt-to-GDP ratio in Germany has been continuously above, and since 2009 far above, the limit set on European level. Following public budget consolidation efforts in the middle of the last decade, it fell to 63.7% in 2007, only to increase further to a high of 81.0% by 2010. This rise must be seen in the light of the financial and economic crisis. The sharp increase from 72.6% (2009) to 81.0% (2010) was primarily due to the fact that the new resolution agencies established for the Hypo Real Estate and WestLB banks were assigned to the public sector, meaning that their liabilities were factored into the government debt. This alone accounted for EUR 238 billion of the increase in government debt in 2010. Overall, the financial market crisis had driven up government debt by an additional EUR 311 billion by 2010. At the same time, it also led to an increase in the government's financial assets that is not shown by this indicator due to the gross presentation of debt.

In the subsequent years, the burdens imposed by the financial market crisis were significantly reduced. This was assisted by the repayment of the asset balances of the resolution agencies. The sales of financial assets of the agencies resulted in payments up to the end of 2015 – from loss compensation obligations – of EUR 9.3 billion. The Federal Agency for Financial Market Stabilisation (FMSA) estimates the total anticipated loss at around EUR 22 billion.

The Federal Government reduced its debt for the first time in 2015 by EUR 24.6 billion to EUR 1,359 billion. The debts of the Länder fell from their high point in 2012 by EUR 34 billion to EUR 648 billion in 2015. The debt owed by municipal governments in Germany continued to grow, albeit at a slower rate, to EUR 152 billion (2015). As in previous years, the social insurance payments achieved budget surpluses and have recorded small asset surpluses since 2010. In 2015, 63.0% of the overall debt was owed by the Federal Government, 30.0% by the Länder and 7.0% by the municipalities.

In the national balance of assets, the debt owed by the government is balanced by its assets – both tangible and financial. The biggest asset owned by the state is its infrastructure (roads, schools, public buildings). According to the asset accounts maintained by the Federal Statistical Office, these assets were valued (after amortization) at EUR 1,338 billion in 2015. The financial assets were valued at EUR 1,063 billion (2014). Not least, due to the interests held in the resolution agencies mentioned above, securities now represent the second most highly valued asset.

## 8 DECENT WORK AND ECONOMIC GROWTH

---

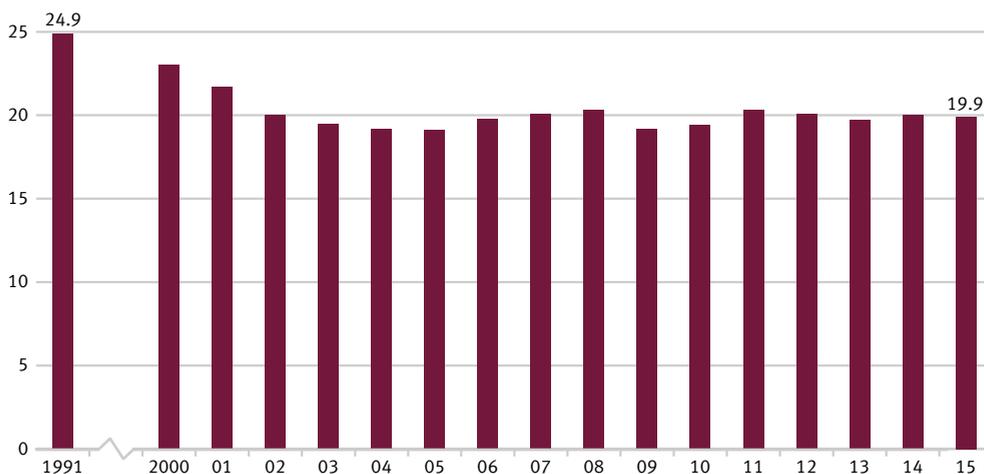
Provision for future economic stability – *Creating favourable investment conditions – Securing long-term prosperity*

### 8.3 Gross fixed capital formation in relation to GDP



#### Gross fixed capital formation

Share of gross domestic product at current prices in %



Source: Federal Statistical Office

#### Definition of the indicator

The indicator shows the share of gross fixed capital formation relative to nominal gross domestic product (which means at current prices). This share is also referred to as the investment ratio.

---

#### Target and intention of the indicator

Future investments made by both the private and public sectors are decisive in creating a strong and competitive economy. For this reason, the target of the Federal Government is to promote appropriate development of the share of gross fixed capital formation in gross domestic product.

#### Content and progress of the indicator

The level of gross fixed capital formation is determined by the Federal Statistical Office. It includes net additions (that is, acquisition minus dispositions) of investment goods by resident producers. Investment goods are manufactured capital goods that are designed for repeated or continuous use in production processes for longer than a year.



These include buildings (dwellings, non-dwellings), equipment (machinery, vehicles, tools), military weapon systems and other assets (intellectual property such as investments in research and development, software, copyrights and exploratory drilling as well as livestock and crops). Also included are repairs that lead to a significant increase in the value of an asset and/or prolong its useful life.

Gross fixed capital formation is determined as part of the system of national accounts, which are compiled according to harmonised European rules and based on multifaceted results of all available, relevant data sources.

In 2015, the share of gross fixed capital formation in gross domestic product was 19.9% and was thus 5 percentage points below the initial value of the time series in 1991. The indicator has moved contrary to the desired direction both in the medium and the long run.

The investment ratio in Germany during the years 2012 to 2014 of 20.0% on average was slightly below the investment ratio for the entire OECD region (20.4%). However, the ratios have largely reached the same level since 2010.

Looking at the time series reveals a wavelike trend in the investment ratio that is marked by declines at the start of the millennium and, following a slight recovery, again in 2009 following the economic and financial crisis of 2008/2009. Up to 2011, investment activity recovered, and gross fixed capital formation once again exceeded the level of the pre-crisis year. After 2011, gross fixed capital formation grew less strongly than gross domestic product for two years, which pushed down the investment ratio to 19.7%. In 2014 and 2015, gross fixed capital formation increased strongly again and reached a nominal level of just under EUR 604 billion. Since the increase in nominal gross domestic product in the same period was slightly lower, the investment ratio increased slightly to 19.9%.

With regard to investments in construction, the dwellings sector has recorded strong nominal growth (+33.7%) since 2010, while the growth of investments in the area of non-dwellings (both in building construction and underground construction) in the same period was less pronounced (+12.5%) and even declined in 2012. Equipment investment at current prices increased most recently by 6.1% (2014) and 4.6% (2015) compared to the previous year, but have yet to return to pre-crisis levels due to the sharp decline in 2009 (–22.0%).

The strongest growth since 1991 was recorded for investment in research and development as well as in software and databases. Between 1991 and 2015, its volume has more than doubled. Investment in research and development in 2015 already accounted for 12.9% of overall gross fixed capital formation. Software and databases accounted for a share of 4.2%.

The period from 1991 to 2015 witnessed a strong shift in investment activity from the manufacturing sector to the service sector. In 1991, 30.9% of new investments were still being made by manufacturing companies. By 2015, this figure had fallen to just 24.1%. In 2015, 74.4% of investments were made in the service sectors. In 1991, this figure was still 67.5%. The largest single investment area was that of property and housing. In 2015 alone, this sector accounted for 30.8% of investments in all new buildings and equipment.

## 8 DECENT WORK AND ECONOMIC GROWTH

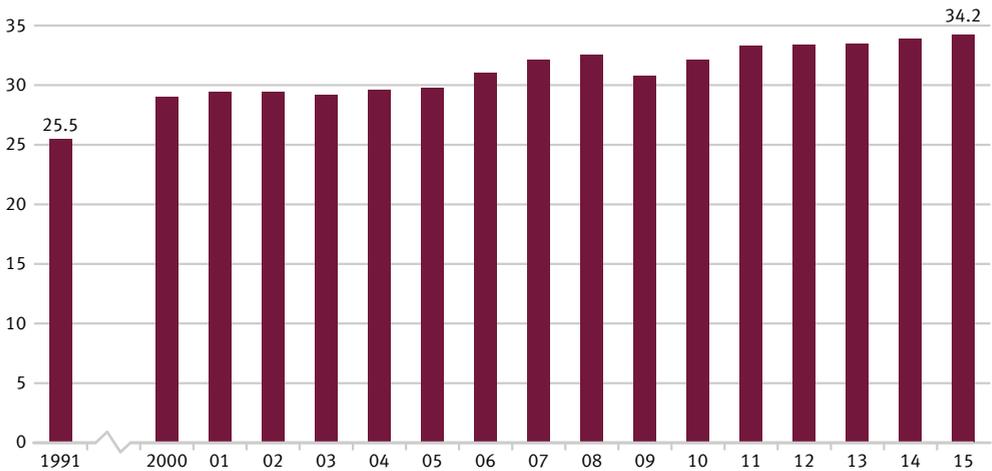
---

Economic output – *Combining larger economic output with environmental and social responsibility*

### 8.4 Gross domestic product per capita



**Gross domestic product per capita**  
price-adjusted, in thousands of euros



Source: Federal Statistical Office

Previous year's prices indexed, reference year 2010

#### Definition of the indicator

The indicator shows the price-adjusted gross domestic product per inhabitant in Germany. Gross domestic product (GDP) measures the value of all goods and services produced in the domestic economy; inhabitants are all those people whose permanent residence is in Germany.

---

#### Target and intention of the indicator

Changes in GDP are related in a variety of ways to other indicators included within the National Sustainability Strategy. Social factors such as the population structure, the labour supply, the educational system and social cohesion play an important role in society with regard to international economic competitiveness. Gross domestic product is an important indicator of a nation's economic strength and growth. Consequently, the target is to achieve continuous and appropriate levels of growth.



## Content and progress of the indicator

Gross domestic product expresses the total economic output produced within the country in a reporting period. The focus in this context is primarily on goods and services that are traded on markets as well as on public goods and services. GDP is determined quarterly and annually by the Federal Statistical Office in accordance with rules that are harmonised throughout Europe. Due to the early calculation dates, much of the necessary basic data is not available in time for the first publication date. Instead, the first publication is still largely based on indicators and estimates. Missing information is initially estimated or carried forward. The data basis is subsequently improved with additional statistics, which are successively incorporated into the calculations. Only after around four years all basic statistics are virtually fully available, and the data is then classified as “final”.

GDP and other standard variables of the European System of National and Regional Accounts (ESA) represent an important part of the material wealth, namely, income generated primarily in the market and its use. However, GDP is not suitable for use as a welfare indicator, as an assessment of material wealth is not sufficient to achieve a comprehensive calculation of well-being and quality of life. This requires additional indicators, for example, to cover unpaid work in private households, which is not included in the calculation of GDP. The distribution of income (and assets) among different population groups is not shown by GDP.

Furthermore, GDP is also a pure flow parameter that generally refers to the period of a quarter or a year. The change of inventory variables is not recorded – with the exception of the capital stock through the calculation of investments and amortisations. Key economic variables such as inventories and qualities of human capital (such as education, health), of social capital (such as security, integration) and of natural capital (such as resources, ecosystems) remain hidden. Statements as to whether GDP and its growth have led to capital preservation in a broad sense are therefore impossible. Consequently, GDP cannot be incorporated for statements regarding the sustainability of the economic growth that it represents.

Between 1991 and 2015, price-adjusted gross domestic product per inhabitant increased by a total of 34.1%. Following vigorous year-on-year GDP growth averaging a 2.9% increase per annum over the period 2005 to 2008, in 2009, GDP per capita fell by 5.3% compared to the previous year to EUR 30,800 as a result of the global financial and economic crisis. Economic output then recovered and in 2011 GDP, at an average of EUR 33,300 per capita, once again exceeded the 2008 level. Between 2011 and 2013, GDP per capita was virtually stagnant. It rose again by 1.2% in 2014 and, following an increase of 0.9% in 2015, reached a value of EUR 34,200 per capita in 2015. If one examines the trend over the last five years, the indicator has developed in a positive direction.

## 8 DECENT WORK AND ECONOMIC GROWTH

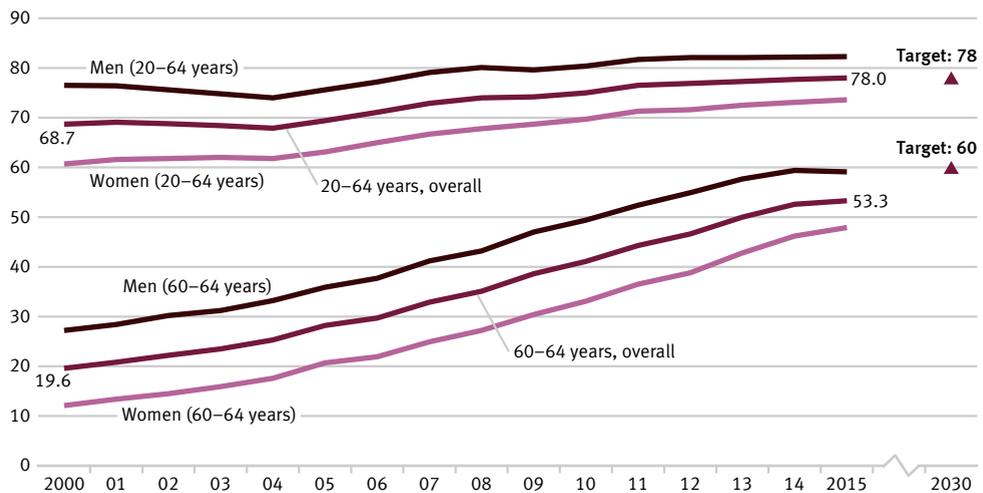
Employment – *Boosting employment levels*

### 8.5.a, b Employment rate

a) 20-64 years, total  b) 60-64 years, total 

#### Working population

Shares of population of the same age, in %



Source: Federal Statistical Office, Eurostat

#### Definition of the indicators

The indicators specify the proportion of people in work aged between 20 and 64 years (8.5.a) and aged between 60 and 64 years (8.5.b), measured in each case as share of the total population of the same age group.

#### Target and intention of the indicators

Due to demographic changes, there may be a shortage of professionals in Germany in the long run. At the same time, the social security system is threatened by an increasing lack of funds. The available labour potential must therefore be more effectively exploited in the future. The share of people in work in the employable age group (20 to 64 years of age) shall be increased to 78% by 2030. In addition, the target of the Federal Government is to achieve an employment rate among older people (60 to 64 years of age) of 60% by 2030.



## Content and progress of the indicators

The data source for the indicators is the EU Labour Force Survey, which is integrated into the microcensus in Germany. The Labour Force Survey is conducted during each year and is initially summarised by Eurostat in the form of quarterly results and then condensed to create annual average values. It covers the population living in private households, but does not include people living in shared accommodation. The working population consists of people aged 15 years and above who have performed an activity for remuneration or revenue for at least one hour during the reference week, or who have not worked because they were temporarily absent from their workplace, e.g., due to holidays or illness.

Since the reporting year 2005, average annual values are used for the employment rate. In previous years, the calculation was based on a single representative working week per year. From 2011 onwards, the survey was revised in order to improve the recording of employment, and the extrapolation factor was adjusted using the population estimate based on the 2011 census. The results are therefore comparable with previous years only to a limited degree.

The indicators do not provide any information regarding the proportion of full-time and part-time employment. Since the number of people in work is divided by the total population, an increase in the number of people in work does not address the question, for example, whether one full-time position was divided into two part-time positions or whether a further (full-time) position was created alongside the existing (full-time) position.

The employment rate overall rose by 9.3 percentage points from 68.7% in 2000 to 78.0% in 2015. Thus, the target value of 78.0% for 2030 has already been achieved.

The employment rate among the older age groups rose by 33.7 percentage points from 19.6% in 2000 to 53.3% in 2015. The rate for men in this age group more than doubled, by 31.9 percentage points to 59.1%, while the rate for women almost quadrupled in value: by 35.8 percentage points to 47.9%. If the average annual trend continues, it is likely that the goal of 60% in 2030 will be achieved.

The employment rates of women and men have developed in the same direction since 2000, but to different degrees. The rate for men in the period under review rose by 5.8 percentage points to 82.3%, whereas in the case of women it rose by 12.9 percentage points to 73.6%, and therefore much more strongly albeit from a lower level. In evaluating the increase in the employment rate of women, it must be taken into consideration that this was accompanied by a clear increase in part-time employment (+ 2.6 million), while the number of women in full-time employment increased by just 0.14 million.

If the employment rate is broken down into age groups, there can be identified various development trends. Among 20- to 24-year-olds, the rate fell by 1.2 percentage points between 2000 and 2015 to 63.6%. One of the reasons for this is the fact that the qualification requirements placed on young people are growing, meaning that they are, on average, spending longer time at school and university and therefore enter the workforce later than was the case before. Among 25- to 59-year-olds, however, an increase to 82.8% (+ 6.6 percentage points compared with 2000) in 2015 can be observed.

## 8 DECENT WORK AND ECONOMIC GROWTH

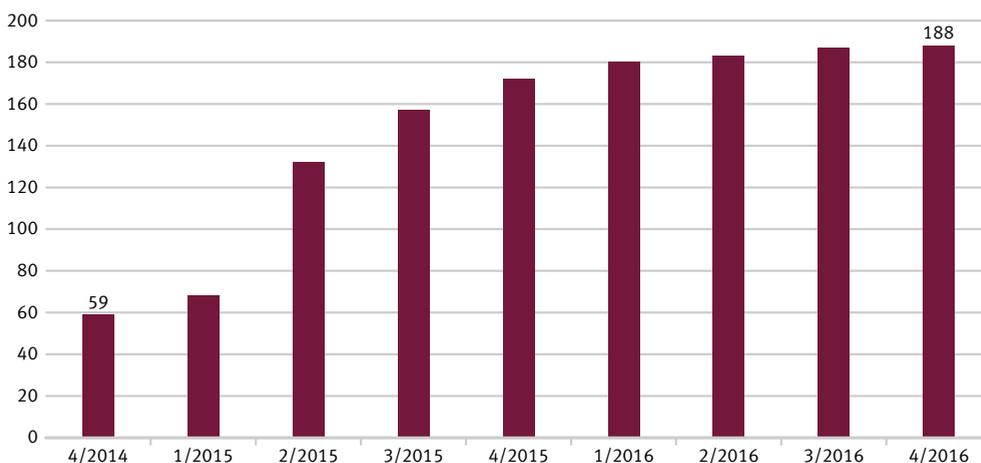
---

Global supply chains – *Enabling decent work worldwide*

### 8.6 Number of members of the Textile Partnership

#### Partnership for Sustainable Textiles

Number of members



Source: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

#### Definition of the indicator

The indicator shows the number of members of the Partnership for Sustainable Textiles (Textile Partnership), who demonstrably adhere to and report on the social and ecological partnership standards throughout their supply chain.

---

#### Target and intention of the indicator

The multi-stakeholder initiative “Partnership for Sustainable Textiles” was founded in 2014. The Textile Partnership aims to improve the underlying social, ecological and economic conditions in the producer countries. To this end, the number of members of the Textile Partnership who demonstrably introduce and report on measures to improve the conditions and adherence to social and ecological partnership standards all along their supply chain is to be significantly increased.



## Content and progress of the indicator

Building on collectively defined partnership standards, each member on joining the partnership undertakes to implement measures aimed at bringing about continuous improvements. To this end, all members are to develop individual implementation plans (roadmaps) by the end of January 2017. In spring 2017, an independent body will carry out a plausibility check (logical comparison) on the roadmaps. From 2018 onwards, the members' roadmaps must be published.

At present, the indicator maps the number of members of the textile partnership – irrespective of the extent to which they already adhere to the partnership standards. As a multi-stakeholder initiative, the Textile Partnership not only includes companies but also associations, trade unions, non-governmental organisations, standards organisations and the Federal Ministries of Labour and Social Affairs (BMAS), for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) as well as for Economic Cooperation and Development (BMZ).

In its founding year of 2014, 59 members joined the Textile Partnership. By October 2016, the number of partners grew by 129 to a total of 188 members.

In addition to the number of members, the retail sales of member companies of the Textile Partnership in the area of clothing, textiles (excluding carpets) as well as curtains and drapes can be recorded. Retail sales by non-members of the Textile Partnership involving goods attributed to members of the partnership in an upstream step in the value-added chain are naturally not taken into account.

The data basis for this is provided by an analysis of the company register conducted by the Federal Statistical Office. Building on this, the retail sales of each member company were recorded along with the share of the above-mentioned product groups clothing, textiles (excluding carpets) as well as curtains and drapes typical for the respective economic sector.

In 2014, retail sales of the above-mentioned product groups for the 22 companies that joined the Textile Partnerships in its founding year of 2014 were around EUR 53 million. By July 2016, the number of member companies had increased by 105 to a total of 127. If these 127 companies are examined, they generated revenues of just under EUR 11 billion in 2014 with the product groups clothing, textiles (excluding carpets) as well as curtains and drapes.

A detailed and differentiated evaluation by product groups can currently not be carried out for the other steps in the value-added chain, in particular for production. Here, the companies can only be attributed with their entire sales to a single main focus. The companies that announced their membership of the partnership by July 2016 and that will be allocated to the “manufacture of textiles”, generated revenues of around EUR 160 million in 2014. Sales of those companies that were primarily active in the area “manufacture of clothing (excluding fur garments) and clothing made from knitted and crocheted fabrics” were significantly higher. In 2014, they generated sales of around EUR 1.8 billion.

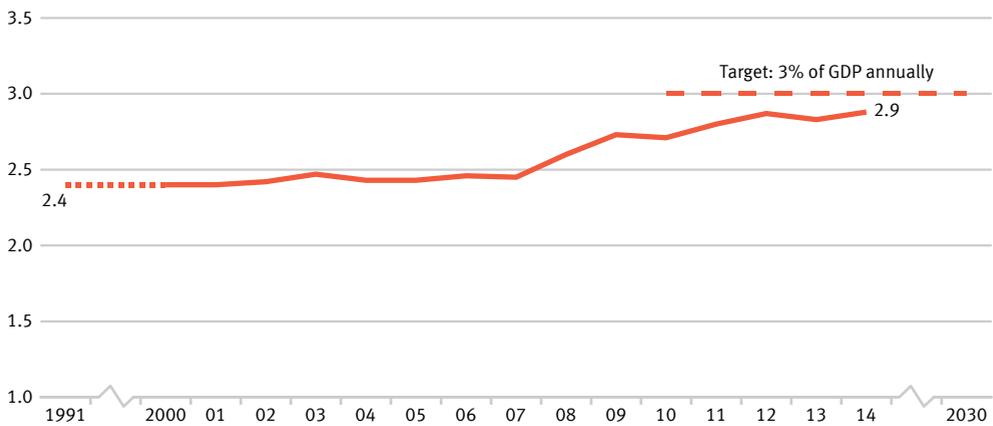
## 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Innovation – *Shaping the future with new solutions*

### 9.1 Private and public spending on research and development



#### Private and public spending on research and development Expenditure in % of gross domestic product



Source: Federal Statistical Office

#### Definition of the indicator

The indicator shows the expenditure on research and development by the private sector, the Federal Government and institutions of higher education in relation to gross domestic product (GDP).

#### Target and intention of the indicator

Spending on research and development (R&D) can be counted among the most important parameters in determining the pace of innovation of an economy. The higher the spending, the better the prospects of more dynamic gains in productivity, the stronger economic growth and the more competitiveness is improved. The Federal Government has therefore set itself the target of ensuring that expenditure on research and development amounts to at least 3% of gross domestic product annually by 2030.



## Content and progress of the indicator

Research and development are scientific activities and are defined as creative and systematic activities with the goal of expanding knowledge – including knowledge of humankind, culture and society – as well as the designing of new application possibilities for existing knowledge. In order to differentiate between R&D and related activities, the existence of an appreciable element of further development is evaluated as a main criterion.

The share of research and development expenditure in the gross domestic product is determined annually by the Federal Statistical Office. Overall expenditure on research and development comprises expenditure by the public and private sectors and by institutions of higher education. The surveys and calculations adhere to the recommended methodologies of the Frascati Manual of the OECD on statistics about research and development, which also enable international comparisons.

Overall R&D expenditure in Germany in 2014 amounted to EUR 84.5 billion, equivalent to 2.9% of GDP. Since 2000, the proportion in Germany has risen by about 0.5 percentage points. In the 1990s it initially fell, dropping to its lowest point in 1994/95 and not surpassing the 1991 level again until 2002. The original goal envisaged for 2010 – a 3% share of R&D expenditure in GDP – had not yet been achieved at this time, the share was at 2.7%. Even in 2014, the share was still 0.1 percentage points below the annual goal. If the trend observed over the last five years continues, it will be possible to reach the target mark only in the coming years.

In international comparison, Germany is ahead of the USA with 2.7% (2013) and the EU-28 region with just 1.9%. On the other hand, Japan with a share of 3.5% leads Germany by a significant margin.

In 2014, the private sector accounted for the by far largest share of R&D expenditure at around 67%, with 18% spent by institutions of higher education and a further 15% by both public and private non-profit research institutions. Staff employed in R&D comprised around 605,000 full-time equivalents, a figure that includes only the share of their working hours actually spent on R&D work. Some 61% of these employees work in the private sector, 22% in institutions of higher education and 17% in public and private non-profit research institutions.

## 10 REDUCED INEQUALITIES

---

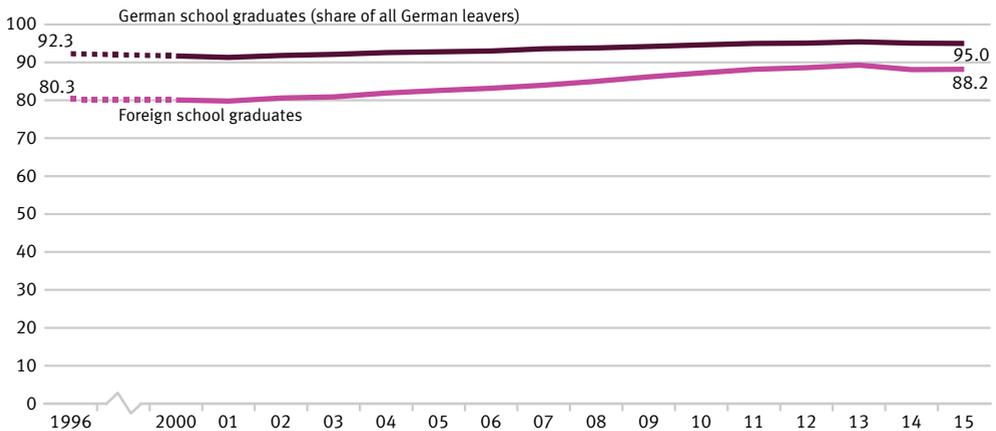
Equal educational opportunities – *Educational success of foreigners in German schools*

### 10.1 Foreign school graduates



#### Foreign school graduates

Share of foreign leavers in a year, in %



Source: Federal Statistical Office

#### Definition of the indicator

The indicator shows the proportion of foreign school graduates as a percentage of all foreign school leavers within one school year. In this case, the term “graduates” refers to people who leave general education schools with at least a Hauptschulabschluss.

#### Target and intention of the indicator

The integration of foreigners living in Germany is an important prerequisite for cohesion within our society. A necessary condition for successful integration is the acquisition of sufficient qualifications at school to open up further educational and professional opportunities later on. The target of the Federal Government is therefore to increase the share of foreign school graduates who obtain at least a Hauptschulabschluss and to bring this share into line with the corresponding rate for German school graduates by 2030.

## Content and progress of the indicator

The school statistics, compiled by the individual Länder, form the data basis for this indicator. These statistics are generally derived from a full census for which a disclosure obligation applies. They are summarised to create a national result by the Federal Statistical Office based on the catalogue of school types compiled by the Standing Conference of the Ministers of Education and Cultural Affairs.

The survey date is generally four weeks after the start of the school year following the survey period. Due to the different holiday dates in the individual Länder, the survey dates of the Länder differ from one another.

The ability to aggregate the Länder results into the national result is impaired by the different education policies of the Länder, for example, with regard to admission rules, in setting up courses of education in the area of vocational schools, etc. This can also only be partially offset by formal regulations for the respective allocations.

In 2015, the share of foreign school graduates who obtained at least a Hauptschulabschluss measured against all foreign school leavers was 88.2%. Consequently, the share has increased by 7.9 percentage points compared with 1996. Regarding the gender-specific shares, the share of foreign female graduates from all foreign female leavers was 90.3%, whereas the share of male graduates from all foreign male leavers was slightly lower at 86.2%.

The share of German school graduates, who obtained at least a Hauptschulabschluss, measured against all German school leavers, was most recently 95.0% and has therefore continued to increase compared with the figure of 92.3% in 1996. As a result, the gap between the share of foreign school graduates and German school graduates of just 12.0 percentage points in 1996 has narrowed to 6.8 percentage points in 2015. Without the increase among German graduates, this gap would already have been significantly smaller at 4.1 percentage points.

Considering the certificates achieved, just under 32.7% of foreign school graduates from general schools achieved a Hauptschulabschluss in 2015, 49.8% completed their schooling with an intermediate secondary school leaving certificate, and 17.5% earned entrance qualification for general or applied sciences universities. The corresponding figures among German school graduates were 16.1%, 46.0% and 37.9%. Young foreign people are thus substantially under-represented in comparison to Germans, especially when it comes to the higher-level school leaving certificates.

The indicator 4.1.a “Early school leavers” also offers additional information on the topic of school graduates.

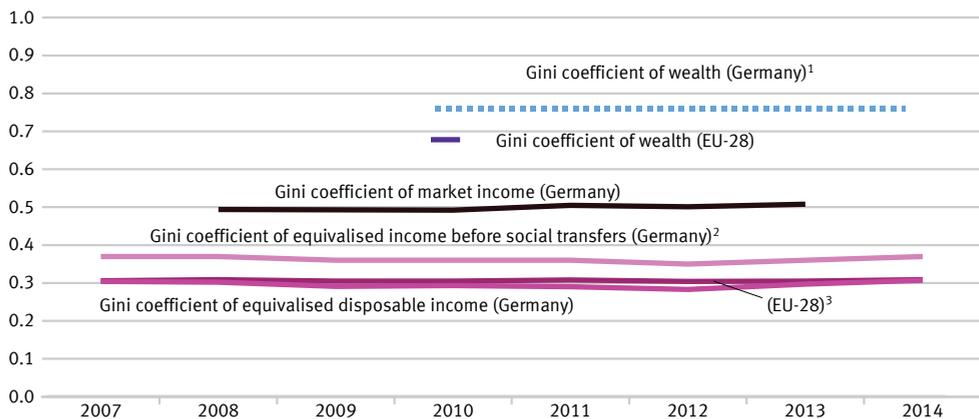
## 10 REDUCED INEQUALITIES

Distributive justice – Preventing too-great inequality within Germany

### 10.2 Gini coefficient of income distribution



#### Equivalised disposable income (Gini coefficient)



1 Interim years were interpolated.

2 Social transfers do not include pensions.

3 Gini coefficient of equivalised disposable income: to 2009 EU-27, from 2010 EU-28.

Source: Federal Statistical Office, Eurostat, German Bundesbank, European Central Bank, German Institute for Economic Research

#### Definition of the indicator

The indicator maps the distribution of equivalised disposable income per person using Gini coefficients

#### Target and intention of the indicator

Inequality in income and wealth distribution is a generally accepted component of a dynamic market economy. However, the income and wealth gap must remain moderate and social inclusion guaranteed for all. By means of suitable framework conditions as well as the targeted redistribution of income through taxes and social benefits, the target is to keep the Gini coefficient of equivalised disposable income below the EU average.

#### Content and progress of the indicator

The Gini coefficient is a statistical measure of income inequality. It has a value between 0 and 1. The value 0 means that every person has exactly the same income whereas the value 1 indicates that only one person receives all the income, thereby representing a situation of maximum income inequality.

The equivalised income is a value derived from the total income of a household and the number and age of the people living from this income. With the help of an equivalence scale, the incomes are weighted according to household size and composition, as the shared use of living space and household appliances results in savings. This approach makes it possible to compare incomes independently from household size or the age of household members because the equivalised income is allocated equally to each household member. The equivalised disposable income is a household's income, including social transfers, after taxes and other deductions, and is therefore the income available for spending and saving. A distinction must be made between this measure and equivalised income before social transfers, which looks at disposable income without possible social transfers (e.g. unemployment benefits, housing assistance), and market income, which is calculated before taxes, social contributions and social benefits.

The initial data for equivalised income is taken from the harmonised Europe-wide annual statistics on income and living conditions (EU-SILC), the data on income distribution comes from the "Household Finance and Consumption Survey" (HFCS) conducted at irregular intervals by the European Central Bank. The fact that households with high income and extensive assets are under-represented in voluntary sample surveys is methodologically compensated for. As a result, the values for income as well as for assets in Germany are comparable to those of Europe and the Eurozone in terms of methodology. Apart from that, no equivalent, methodologically harmonised and verifiable international comparative values are available. Since no Gini coefficient is yet calculated for market income from the EU-SILC, the data from the German Socio-Economic Panel (SOEP) located at the German Institute for Economic Research is used.

The Gini coefficient of equivalised disposable income of 0.31 in 2014 is clearly below the Gini coefficient of the equivalised income before social benefits and excluding pensions (0.37). As expected, the Gini coefficient for market income of 0.51 (2013) was higher.

As a general rule, in Germany social benefits, social insurance and taxes therefore contribute significantly to reducing inequalities in disposable income. However, the equivalised disposable income in Germany is still not noticeably more equally distributed than the European average (EU-28). Consequently, the Gini coefficient of equivalised disposable income for Germany is virtually identical to the value for the European Union (0.31). Even in previous years, the differences recorded between the Gini coefficient of equivalised disposable income for Germany and Europe tended to be low and did not suggest significant differences in income distribution.

Turning to the corresponding Gini coefficient (0.76 in 2014), wealth in Germany is much less evenly distributed than income. In this context, virtually no change can be detected over time (2010: 0.76). The gap to the European comparative value (Eurozone 0.68 in 2010) is substantial. However, the impression of disproportionately high wealth inequality is qualified by several factors not covered by the Gini coefficient. For instance, the evaluation of wealth does not take into account future pension entitlements. In addition, due to the stricter tenant protection people in Germany are more likely to rent rather own their homes, compared to other European countries.

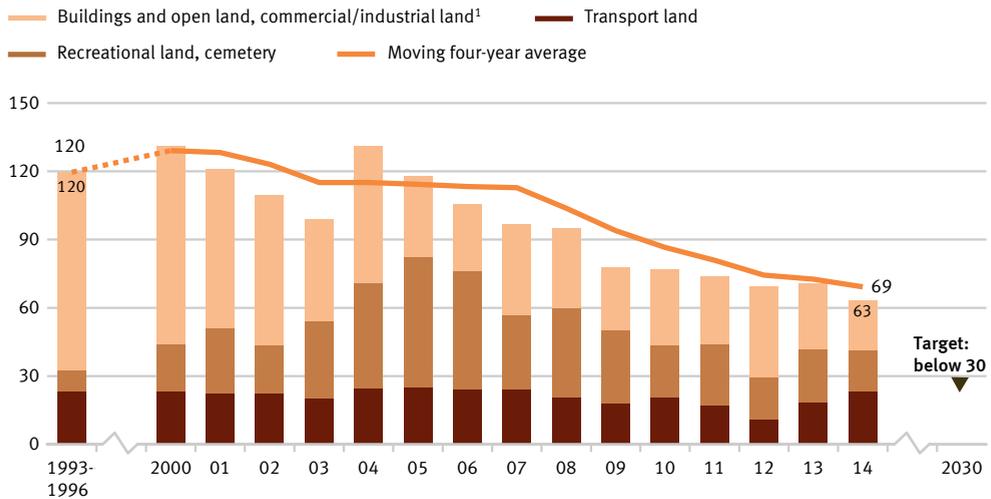
## 11 SUSTAINABLE CITIES AND COMMUNITIES

Land use – *Sustainable land use*

### 11.1.a Built-up area and transport infrastructure expansion



#### Built-up area and transport infrastructure expansion in hectares per day



<sup>1</sup> Excluding mining.

Source: Federal Statistical Office

#### Definition of the indicator

The indicator shows the average daily expansion of built-up area and transport infrastructure.

#### Target and intention of the indicator

Land is a limited resource. A variety of interests are competing for such land, including those of agriculture and forestry, settlement and transport, nature conservation, resource extraction and energy generation. The development of additional land for settlement and transport purposes is to be limited to below 30 hectares per day by 2030.



## Content and progress of the indicator

Settlement and transport land should not be compared with sealed land. Settlement and transport land includes the usage types of buildings and open land, commercial/industrial land (except mining), transport land, recreational land and cemeteries. The indicator does not focus on sealed land, but also records undeveloped and non-sealed land such as gardens, yard areas and landscaping around transport infrastructure as well as open spaces such as parks and green spaces, allotments, garden landscape within towns and villages, sports and recreational facilities, camp sites as well as cemeteries. According to the calculations of the Environmental-Economic Accounting reports compiled by the Länder, the sealed share of settlement and transport land in the Länder average is estimated at 45 % (2013).

The data source for the indicator is the land use survey by type of actual use in the public land survey registers of the Länder. Changes in the methodology of the public land survey register have in previous years resulted increasingly in the reclassification of land for which no real changes of use applied. In order to partially offset the resulting distortion, a moving average to enable the evaluation of development is formed, in each case, from the four preceding specified years.

Between 1992 and 2014, 8,590 km<sup>2</sup> of land was converted into settlement and transport land. As a result, settlement and transport land expanded by 21.3 % compared to 1992 settlement land by 29.2 % and transport land by 9.9 %.

In recent years, this increase in the amount of land used for settlement and transport has noticeably been slowing down. In 2014, the moving four-year average for first-time land use for settlement and transport purposes was 69 hectares per day, compared to 120 hectares per day at the start of the time series. If the average trend of the previous five years is maintained, the originally specified target of 30 hectares per day, which is supposed to be reached by 2020, will be achieved in 2030.

From 2005 until 2009, the development of settlement land was temporarily dominated by high growth rates in the usage category “recreational land, cemeteries”. To this extent, it does not reflect any real changes in the landscape and can be attributed to, among other things, the above-mentioned changes in the land survey registers. In 2014, the share of recreational land and cemeteries in settlement and transport land was 9.8 %. However, the expansion of transport land has accelerated again significantly since 2012.

Overall, settlement and transport land of 48,895 km<sup>2</sup> in 2014 accounted for around 13.7 % of the all land in Germany. The largest land types in Germany are agricultural land with 184,607 km<sup>2</sup> (51.7 %) followed by forest land with 109,306 km<sup>2</sup> (30.6 %). In the reference period from 1992 to 2014, the share of forest land increased by 4,770 km<sup>2</sup>, while agricultural land shrank by 10,505 km<sup>2</sup>. It can thus be assumed that the increase in settlement and transport land was primarily at the expense of agricultural land.

## 11 SUSTAINABLE CITIES AND COMMUNITIES

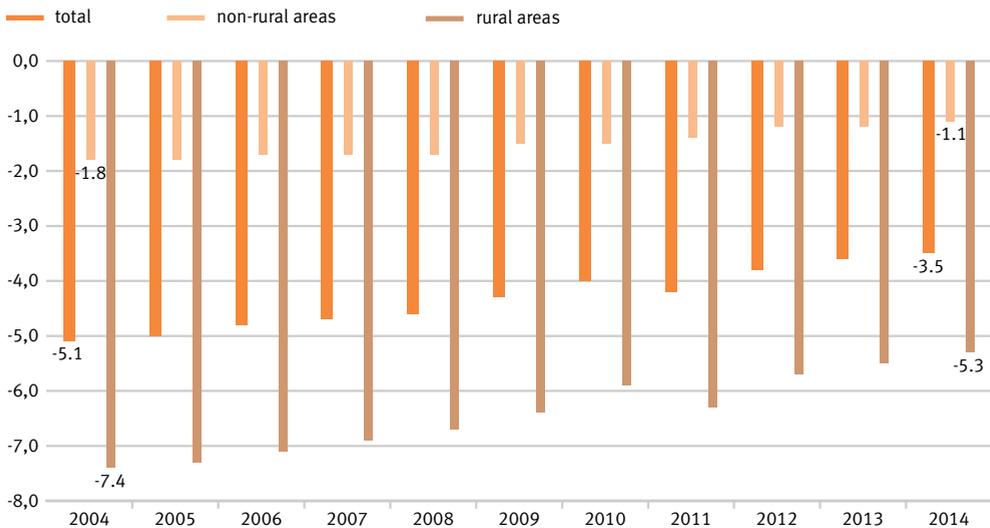
Land use – *Sustainable land use*

### 11.1.b Loss of open space



#### Change in open space per capita

Moving four-year average in square metres per year



Source: Federal Statistical Office, Federal Institute for Research on Building, Urban Affairs and Spatial Development

#### Definition of the indicator

The indicator represents the annual change in open space in square metres per capita as a moving four-year average.

#### Target and intention of the indicator

Open-space land should be preserved for agricultural and forestry use, as cultural and natural landscapes as well as recreational areas. For this reason, the decline in open-space land per capita should be reduced. A reduction in the loss of open space points to the success of measures to strengthen brownfield development and thereby conserve agricultural and forest land as well as water systems for farming forestry, nature conservation and for recreational use by the population.



## Content and progress of the indicator

Agricultural, forest, mining and dumping areas as well as water systems in the form of flowing and standing water are designated as open-space land. Therefore, all land not covered by the category of settlement and transport land is included. A distinction must be made between open-space land and open areas and settlement open areas, such as cemeteries, gardens, parks, green spaces or wildlife preserves, which although undeveloped are considered part of settlement and transport land. The indicator for the loss of open space corresponds to the indicators 11.1.a “increase in settlement and transport land” (in hectares per day) and 11.1.c “settlement density”.

The data sources for the indicator are the population and the land use survey by type of actual use compiled by the Federal Statistical Office. Since population data at regional level is used for the calculation, the 2011 census delivered a jump in the time series. Moreover, changes in the methodology of the public land survey register in the Länder have increasingly resulted in the reclassification of land in previous years. To smooth out these effects and to establish the long-term trend, a moving four-year average is calculated, which spans the four preceding years.

The distinction between “rural” and “non-rural” is based on a type standardisation of the Thünen Institute. This standardisation allocates a degree of “ruralness” to districts and district-free cities – based on spatial characteristics such as “settlement density”, “share of agricultural and forest land” and “location relative to the centres”.

In the period under review, the loss of open space per capita reduced on average nationwide. Whereas the moving four-year average for 2004 was still around 5 square metres per capita and year, the current average for 2014 reveals a figure of just 3.5 square metres. Although subject to a similar trend, significant differences can be observed between rural and non-rural district types in terms of the scope of change. For instance, the loss of open space per capita and year in rural district types fell back from above 7 to slightly over 5 square metres. In the non-rural district types, it fell from just under 2 to around 1 square metre. In this context, it is important to remember that non-rural districts and district-free cities have much less open-space land such as forests or agricultural land than rural areas. In addition, demographic trends develop at differing rates and have a corresponding impact on the indicator. Whereas the majority of rural regions in the period under review reported a decline in population, the population figures in non-rural regions as a whole rose slightly.

## 11 SUSTAINABLE CITIES AND COMMUNITIES

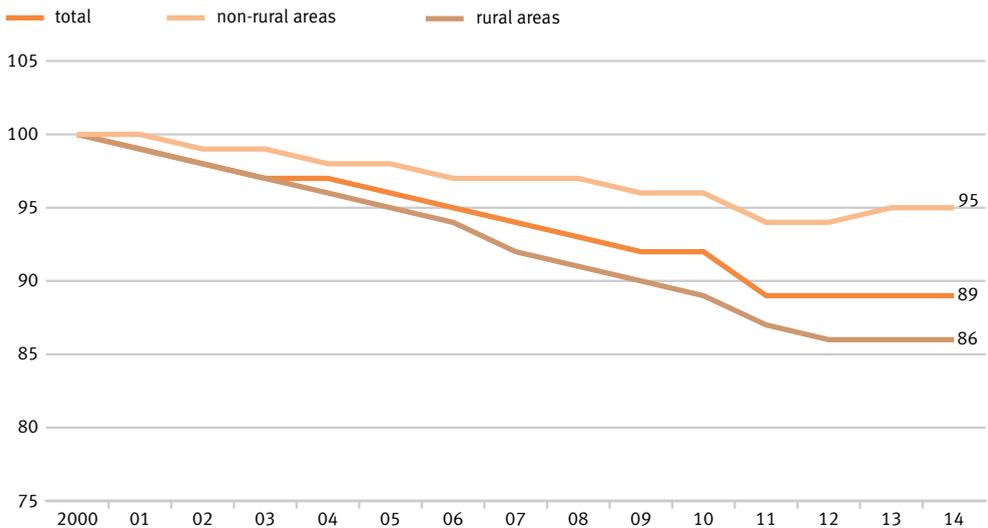
Land use – *Sustainable land use*

### 11.1.c Settlement density



#### Inhabitants per square kilometre of settlement and transport land

Index 2000 = 100



Source: Federal Statistical Office, Federal Institute for Research on Building, Urban Affairs and Spatial Development

#### Definition of the indicator

The indicator shows the number of inhabitants per square kilometre of settlement and transport land.

#### Target and intention of the indicator

The “settlement density” indicator provides information on the efficiency of settlement land use. The target of the Federal Government is to implement space-saving measures for all new construction projects and in brownfield development such as the reduction in residential and commercial vacancy as well as re-densification and increased densities of development in order to counteract the reduction in settlement density.

#### Content and progress of the indicator

The data sources for the indicator are the population and the land use survey by type of actual use compiled by the Federal Statistical Office. With regard to population data, the 2011 census resulted in a jump in the time series, which is why only the comparisons up to 2010 and after 2011 can be usefully interpreted. The distinction between “rural” and “non-rural” is based on a



type standardisation of the Thünen Institute. This standardisation allocates a degree of “ruralness” to districts and district-free cities – based on spatial characteristics such as “settlement density”, “share of agricultural and forest land” and “location relative to the centres”.

In contrast to population density, with the concept of settlement density the inhabitants are solely related to settlement and transport land. In addition to residential building land, settlement land includes areas of special functional character (such as hospitals and schools), industrial and commercial land and mixed-use land. Consequently, changes not only in population numbers, but in residential building land, transport land or commercial land lead to a change in settlement density.

Settlement density differs substantially between rural and non-rural regions: one square kilometre of settlement and transport land accommodates around 3,267 people on average in non-rural district types, compared with around 1,214 people in rural district types (as in 2014). In this context, residential building land in cities is frequently much more densely developed (and with multiple floors) than in rural regions, where more scattered development incorporating larger, unsealed areas such as domestic gardens is prevalent.

From 2000 until the end of 2010, there was a steady decline in settlement density in both rural and non-rural regions. In this case, the non-rural regions, which had an average settlement density of 3,432 inhabitants per square kilometre in 2000, experienced an absolute decline by 130 to 3,302 people per square kilometre of settlement and transport land in 2010. This reduction was slightly lower than in rural regions, where settlement density fell by 151 from 1,415 to 1,264 people per square kilometre of settlement and transport land. Viewed in relative terms, this 11% decline, due to the significantly lower settlement density in rural regions, was however significantly larger than that of 4% in non-rural regions.

Since 2012, differences have been observed between the trends in rural and non-rural regions. Whereas the decline in rural regions continued at a weaker level (down to 1,214 inhabitants per square kilometre), settlement density in the non-rural regions slightly rose again to 3,267 inhabitants per square kilometre. The development of additional land for settlement and transport purposes here was slightly below the population growth.

Considering the trends for inhabitants and settlement and transport land separately, marked differences between rural and non-rural regions can be observed. Between 2000 and 2014, the volume of settlement and transport land in both rural and non-rural regions increased, although to different extents of 12% and 7% respectively.

Following the slight increase in the population of rural regions at the start of the millennium, it reduced by around 2% over the entire period until 2010 and then remained virtually unchanged until 2014. In the non-rural regions, however, the population grew between 2000 and 2010 (by a total of just under 2%) and between 2011 and 2014 (by over 2%). The effects of the development of additional settlement and transport land were therefore amplified in rural regions by the declining population numbers.

## 11 SUSTAINABLE CITIES AND COMMUNITIES

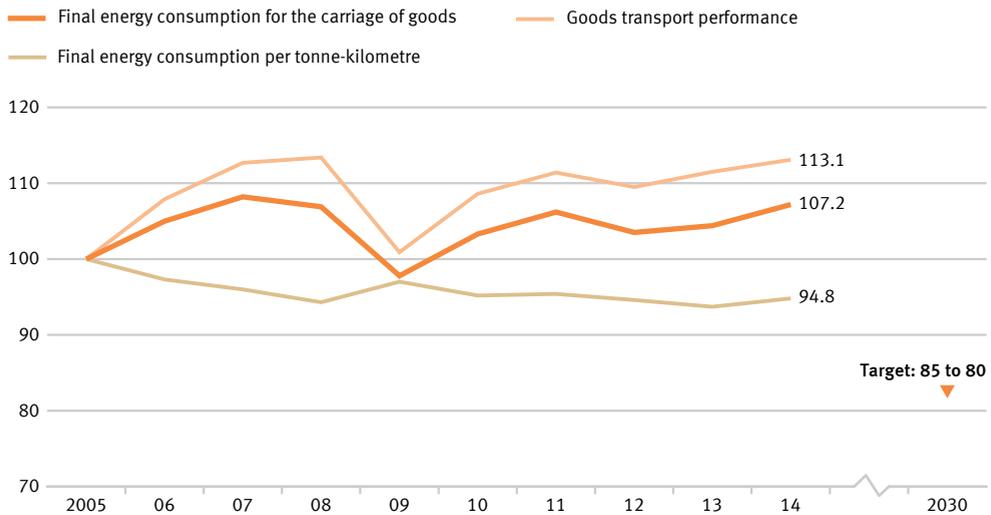
Mobility – *Guaranteeing mobility – Protecting the environment*

### 11.2.a Final energy consumption in freight transport



#### Final energy consumption in freight transport

2005 = 100



Source: Federal Ministry of Transport and Digital Infrastructure, Institute for Energy and Environment Research

#### Definition of the indicator

Final energy consumption in freight transport represents the energy consumption for the transport of goods within Germany via inland shipping, by rail and by road.

#### Target and intention of the indicator

Transport creates a range of problems. For instance, noise and air pollutants impair the quality of life especially in cities, and traffic-related emissions contribute to climate change. The emission of harmful greenhouse gases is closely linked to the energy consumed for transport purposes. Therefore, final energy consumption in freight transport shall be reduced by 15 to 20 % by 2030.

#### Content and progress of the indicator

The data regarding domestic energy consumption originates from the TREMOD database at the Institute for Energy and Environmental Research. TREMOD (Transport Emission Estimation Model) is a model for evaluating transport emissions. The data includes fuel consumption levels within Germany irrespective of where refuelling takes place (according to the consumption concept).



“Final energy” refers to the part of the energy used directly during transportation, so this excludes conversion losses that arise during production of fuels as well as possible pipeline losses.

The transport performances used to calculate the specific energy consumption are calculated by the German Institute for Economic Research on behalf of the Federal Ministry of Transport and Digital Infrastructure. Road freight transport takes into account transports on lorries with payloads in excess of 3.5 tonnes. On the other hand, air freight transport is not included as it accounts for negligibly small volumes.

The indicator for final energy consumption in freight transport refers by definition to consumption within Germany. The influence of the German economy’s increasingly international links in the context of globalisation are reflected only to an insufficient degree. As a result, transport flows and the associated energy consumption that arises due to German exports and imports are not included.

The energy consumption presented here is supplemented by energy efficiency, or the energy consumption per tonne-kilometre. The number of tonne-kilometres provides information about the extent to which the transport intensity, or the distance per transported ton, changes.

Contrary to the reduction targeted in the previous Sustainable Development Strategy – final energy consumption for the carriage of goods in 2014 increased by 7.2% compared to 2005. This sharp increase can be attributed primarily to freight transport by road. Final energy consumption for road freight transport increased during this period by 8.8%, while consumption for rail and inland shipping was significantly reduced (– 5.9% and – 12.7% respectively).

During the same period, the transport of goods performance increased by 13.1%. With comparable energy consumption in 2005 and 2014, efficiency increased significantly by 5.2% during this period.

During the economic crisis of 2009, price-adjusted gross value added in the manufacturing industry suffered a particularly sharp decline of nearly 20%. This heavy loss affected the transport sector in particular, which reacts directly to increases and falls in the production of goods. The resulting lower transport capacity utilisation explains the slight increase in average energy consumption per tonne-kilometre, despite the fact that overall energy consumption fell sharply during the crisis years.

Besides the presumably short-term consequences of the economic crisis of 2009, a number of long-term factors also influenced the development of final energy consumption in freight transport during the review period between 2005 and 2014. For instance, the number of production steps per company has decreased, something that is normally associated with greater transport volumes because companies procure more intermediate goods from domestic and international suppliers. Furthermore, the average distance between the production location for the goods and their place of use increased, which also caused transport volumes to increase. These effects are countered by a shift in the demand structure towards less material-intensive goods (e. g., an increasing demand for services). The resulting change of composition in the volume of goods dampened the increase in transport-related energy consumption.

## 11 SUSTAINABLE CITIES AND COMMUNITIES

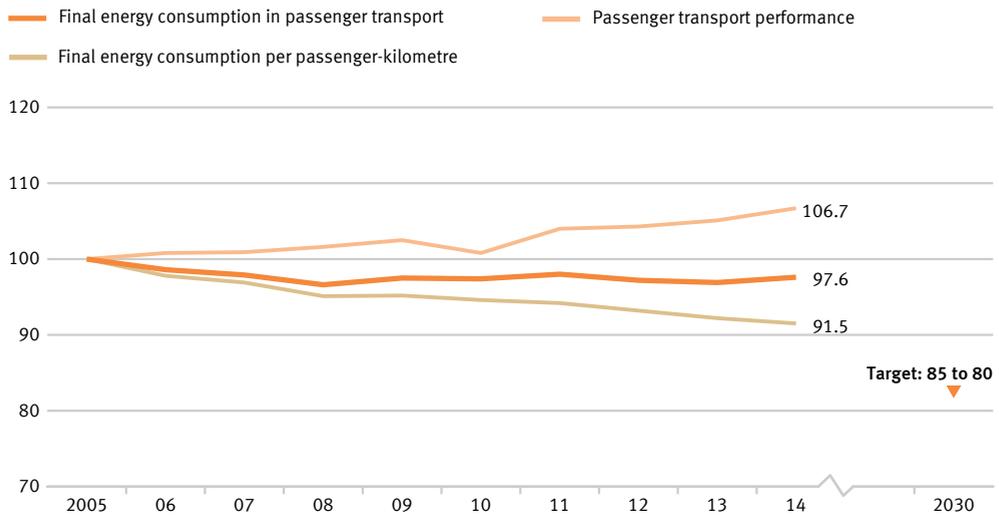
Mobility – *Guaranteeing mobility – Protecting the environment*

### 11.2.b Final energy consumption in passenger transport



#### Final energy consumption in passenger transport

2005 = 100



Source: Federal Ministry of Transport and Digital Infrastructure, Institute for Energy and Environmental Research

#### Definition of the indicator

Final energy consumption in passenger transport represents energy consumption due to the carriage of people by rail, by air and by road (public and private transport) within Germany.

#### Target and intention of the indicator

Transport implicates a range of challenges. For instance, noise and air pollutants impair the quality of life especially in cities, and traffic-related emissions contribute to climate change. The emission of harmful greenhouse gases is linked to the energy consumed for transport purposes. Therefore, final energy consumption in passenger transport shall be reduced by 15 to 20 % by 2030.



## Content and progress of the indicator

The data regarding domestic final energy consumption originates from the TREMOD database at the Institute for Energy and Environmental Research. TREMOD (Transport Emission Estimation Model) is a model for evaluating transport emissions. The data includes fuel consumption levels associated with passenger transport within Germany – irrespective of where refuelling takes place (according to the consumption concept). “Final energy” refers to the part of the energy used directly during transportation, so this excludes conversion losses that arise during production of fuels as well as possible pipeline losses.

Passenger transport performance specifies the number of passenger-kilometres covered. It is used to calculate the specific energy consumption and is calculated by the German Institute for Economic Research on behalf of the Federal Ministry of Transport and Digital Infrastructure. For air transport, only domestic flights (national aviation) are taken into account. International flights within Germany are excluded. The carriage of passengers by ship is not included.

Nearly 30% of overall final energy consumption can be attributed to transport. Savings in final energy consumption in passenger transport therefore have a marked effect on total energy consumption in Germany. The number of passenger-kilometres provides information on the extent to which transport intensity (distance per road/rail or air passenger numbers) changes. In addition to final energy consumption, energy efficiency in passenger transport, measured as energy consumption per passenger-kilometre, is examined.

Final energy consumption in passenger transport decreased by a total of 2.4% in the period from 2005 until 2014. Analysis of the subsequent progress since 2008 reveals that the indicator value increased slightly by 1%.

Although the number of passenger-kilometres covered increased by 6.7% between 2005 and 2014, energy consumption with reference to all forms of transport fell by 8.5% to 1.48 megajoules per passenger-kilometre during the same period. Consequently, efficiency in passenger transport was increased notably. A particular large share of the efficiency increase can be attributed to the railway. Here, transport performance increased by 18.4%, while final energy consumption was successfully reduced by 12.7%. This accumulates to a 26.3% increase in efficiency. A significant increase in efficiency of 15.6% was also achieved in aviation compared to 2005. A slight improvement in the efficiency of private motorised transport was recently achieved due to the increased transport performance, even if energy consumption here remained constant.

Private motorised transport by car and two-wheel vehicles accounted for 83.9% of total passenger transport performance in 2014. It can be subdivided into various categories. In 2014, recreational traffic at 35.5% accounted for the largest share, closely followed by commuter traffic (commuter and business trips) with 34.3%. Shopping traffic had a share of 17.6%. The various journey types have developed in differing directions since 2005. In particular, work-related traffic has increased significantly (+13.5%), while holiday journeys have declined.

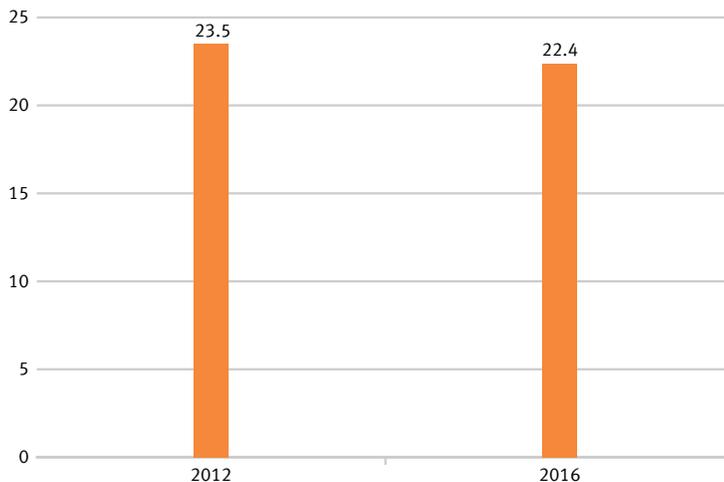
## 11 SUSTAINABLE CITIES AND COMMUNITIES

---

Mobility – *Guaranteeing mobility – Protecting the environment*

### 11.2.c Population-weighted average travel time with public transport from each stop to the next medium-sized/large city

**Travel time by public transport to the nearest medium-sized or large city in minutes**



Source: Federal Institute for Research on Building, Urban Affairs and Spatial Development

#### Definition of the indicator

The indicator shows the population-weighted average travel time by public transport to the nearest medium-sized or large city.

---

#### Target and intention of the indicator

Mobility is a key factor in enabling people to participate in society. Accordingly, spatial development and transportation should be designed to provide good mobility services and suitable connections to medium-sized or large cities for the entire population. Therefore, the target of the Federal Government is to shorten the average travel time by means of public transport to the nearest medium-sized or large city.



## Content and progress of the indicator

The indicator is computed by the Federal Institute for Research on Building, Urban Affairs and Spatial Development. Means of public transport are defined as those transport services that are available for use by anyone on payment of the relevant fees. Flexible forms of operation, such as on-call buses that operate on demand without fixed stopping points and timetables, are therefore not taken into account.

The data basis comprises schedule data of the Deutsche Bahn, transport associations along with numerous other timetables. With the help of the timetable data, the travel times to the nearest medium-sized or large city during peak morning traffic times were determined for approximately 250,000 stops. This period is defined differently in the two reporting years. Whereas connections with an arrival time between 6:00 a.m. and 9:00 a.m. were taken into account in 2012, only those with arrival times between 8:00 a.m. and 12:00 noon were included in 2016.

Since not all local transport schedules were fully integrated into the database used, the values for 2012 and 2016 cannot be compared without restrictions, too. The frequency of a transport service to the nearest medium-sized or large city is similarly ignored as is the travel time to and from the stopping point. Furthermore, this indicator is based on the timetable data – which means that delays or even cancellations are not taken into account.

The classification of a location as a medium-sized or large city is determined according to the availability of goods, services and infrastructures at that location that are not available in the surrounding regional towns. These include, among other things, specialist doctors, hospitals, cultural facilities as well as secondary schools and institutions of higher education.

In each medium-sized or large city, especially in major cities, only one destination point (city centre) was determined. The destination stops were selected in a radius of one kilometre around the destination point. After that, the fastest connection from the starting stop to this final destination is searched for. With the help of small-scale population data from the Federal Statistical Office, a population-weighted average value of the travel time for Germany was then determined.

The indicator values available for 2012 and 2016 show that the population-weighted average travel time to the nearest medium-sized or large city in this period has reduced from 23.5 to 22.4 minutes. This corresponds to a reduction of 4.7%. It is not possible to determine the extent to which the previously described methodological changes or re-designation of medium-sized cities are partly responsible for the decrease. However, the number of medium-sized or large cities has increased from 1,010 in 2012 to 1,069.

## 11 SUSTAINABLE CITIES AND COMMUNITIES

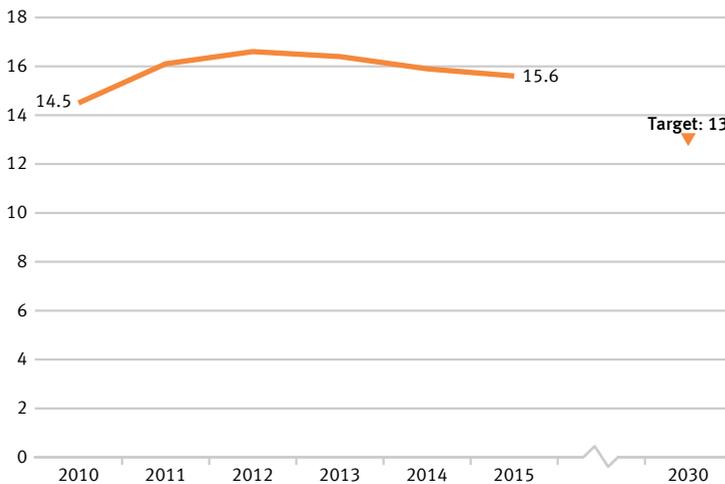
---

Housing – *Affordable housing for all*

### 11.3 Housing cost overload



**Share of people in households that spend more than 40% of their disposable income on living expenses**  
in %



Source: Federal Statistical Office

#### Definition of the indicator

The indicator shows the share of people who live in households that spend more than 40% of their disposable household income on living expenses. Living expenses in this case are net rent not including heating, ancillary costs, energy costs and expenditure on water supply as well as value-maintaining investments and interest payments on loans in the case of home ownership.

---

#### Target and intention of the indicator

High living costs place restrictions on households with regard to their other consumption choices. Living expenses that amount to more than 40% of disposable household income are considered to be an overload. The share of people who live in households that spend more than 40% of their disposable household income on living expenses is therefore to be reduced to 13% by 2030.



## Content and progress of the indicator

The initial data for the indicator originates from the Europe-wide harmonised statistics on income and living conditions (EU-SILC). The indicator expresses expenditure on living relative to disposable household income. In case a household is in receipt of housing benefits or comparable social benefits such as payments for accommodation and heating from basic social security benefits, these are also included in the calculation of the indicator. These social benefits are not added to the income, but are deducted from the living expenses so that the burden of living expenses of households that rely on housing-related social benefits is reduced or approaches zero.

The purchase of an owner-occupied property is not added to the expenditure on living. Other spending on measures to enhance the value of a property should also not be taken into account. However, it is not always possible to clearly differentiate between these and value-maintaining expenditures that are considered as expenditures on living. To do this, it is necessary to fall back on simplifying assumptions in some cases. Moreover, the indicator also does not take into account any additional expenditure associated with the place of residence. For instance, expenditure on travelling from the place of residence to the workplace is not taken into account, although it is possible that only due to the long distance from home to work the threshold of 40% can be undercut.

By defining the threshold value “40% of disposable household income”, the indicator provides no information about average costs of living. If clusters emerge close to this threshold, they can cause major changes in the indicator over time even if there is only a small change in the ratio of income and living expenses.

The indicator rose from 14.5% in 2010 to a relatively constant 16% during the period from 2011 until 2013. In 2014, it fell slightly to 15.9%, and decreased further to 15.6% in 2015. Due to statistical uncertainties, however, this cannot be considered a statistically significant change, but constitutes more of a continuation at a similar level. Based on the current trend, it is therefore not possible to determine whether there is any movement in the direction of the set target.

With regard to the actual living situation and disposable income, the indicator provides only a limited amount of information. Ultimately, the calculation method declares households with high incomes and high expenditure on living also as being overloaded. However, the data does indicate that significantly more households with a low income are above the 40% threshold. Separate analysis of the population at risk of poverty, which means those people with less than 60% of the median of the equivalised income of the population at their disposal, also shows that the share of people overloaded by living costs is closely related to income. Among those at risk of poverty, the share of people overloaded by living costs rose from 42.2% (2010) to 51.9% (2015). For those people who are not considered at risk of poverty, however, the share of households overloaded by the cost of living reduced particularly during the last two years (2010: 9.4%, 2015: 8.4%).

## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

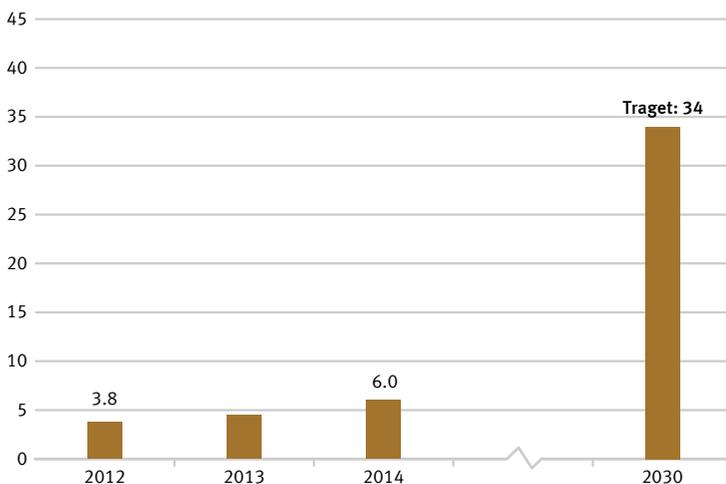
---

Sustainable consumption – *Making consumption environmentally and socially compatible*

### 12.1.a Market share of goods certified by independently verified sustainability labelling schemes

#### Market share of products certified by independently verified sustainability labelling schemes

in %



All data is preliminary.

Source: Gesellschaft für Konsumforschung, the Federal Motor Transport Authority, Agrarmarkt Informations-Gesellschaft mbH, the Organic Food Production Alliance, the Association for Sustainable Mobility, the German Environment Agency

#### Definition of the indicator

The indicator measures the market share of products with voluntary or mandatory ecolabels, whose tendering procedures are stipulated by governmental bodies.

---

#### Target and intention of the indicator

Private households can carry out sustainable consumption directly and indirectly. On the one hand, their purchasing decision influences their own environmental balance, as energy-efficient vehicles or insulated homes require less energy and lead to lower emissions of greenhouse gases. On the other hand, the consumers can purchase products that have been manufactured along exceptionally sustainable lines. The aim of the Federal Government is therefore to increase the market share of products certified by independently verified sustainability labelling schemes to 34 % by 2030.



## Content and progress of the indicator

The indicator comprises the market shares of products bearing one of the ecolabels “EU ecolabel”, “EU organic label”, the “Blue Angel” or the respective highest class of the “EU energy label”. The EU energy label primarily addresses energy consumption and greenhouse gas emissions, while the other three product labels also take into account other threats to the environment such as pesticide use and harmful wastewater. The indicator should monitor whether environmentally friendly product variants are replacing conventional product variants in the market. In this case, only a selection of product groups is examined for reasons that include the limited availability of data regarding sales of products bearing sustainability labels. In addition, the inclusion of certain product groups would lead to duplicate counting as they bear multiple sustainability labels simultaneously.

For the indicator, household appliances such as refrigerators, washing machines, televisions and vacuum cleaners are examined. Illuminants, organic foods, tissue paper, washing and cleaning agents and cars are also assessed. Since the markets for the individual product groups are of different sizes, the market shares are weighted with the sales volume of the respective overall market. This is to prevent any distortion of the indicator by high market shares in small niche markets. Furthermore, this enables the expenditure on environmentally friendly products to be related to the total expenditure by private households.

It is not possible to weight the market shares of the respective product groups according to their environmental relevance because the environmental labels address different categories (energy consumption, greenhouse gas emissions, material demand) that cannot be balanced against one another. Therefore, it is not possible to present an all-encompassing evaluation across multiple environmental categories in form of an environmental footprint of the product groups. As the indicator covers only products that are newly introduced on the market in relation to the overall market, rebound effects are not considered. It also describes the market share based on sales. Due to the price differences between products with and without the relevant ecolabels, it does not allow conclusions to be drawn regarding their numbers. In addition, any change in the value of the indicator may be attributable to pricing changes for a product group.

Data supplied by the Gesellschaft für Konsumforschung, the Federal Motor Transport Authority, Agrarmarkt Informations-Gesellschaft mbH, the Organic Food Production Alliance, the Association for Sustainable Mobility and the German Environment Agency serves as source for calculating the indicator. The latter calculates the indicator values annually from the reporting year of 2012 onwards.

Between 2012 and 2014, the market share of products certified by independently verified sustainability labelling schemes increased from 3.8% to 6.0%. This is equivalent to overall sales of EUR 16.8 million in 2014. Due to the short time series, it is not yet possible to evaluate the realisation of the set target.

The definition of the energy consumption classes is updated in line with the current technical state at regular intervals by the European Union. The corresponding devices such as refrigerators, ovens or tumble dryers must also meet minimum legal requirements for new products. In general, this will contribute to the wider distribution of energy-saving products, but can also manipulate the indicator indirectly, through adjustments to the allocation criteria.

## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

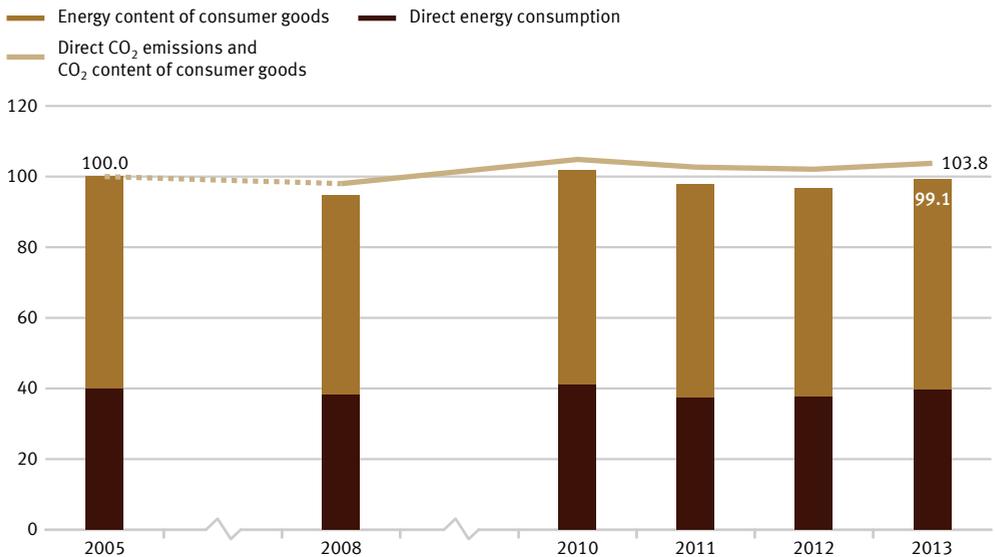
Sustainable consumption – *Making consumption environmentally and socially compatible*

### 12.1.b Energy consumption and CO<sub>2</sub> emissions from private household consumption



#### Energy consumption and CO<sub>2</sub> emissions by private households

2005 = 100



Source: Federal Statistical Office

#### Definition of the indicator

The indicator specifies the development of direct and indirect energy consumption by private households and thus illustrates the strain placed on energy by the consumption activities of private households.

#### Target and intention of the indicator

Private households are responsible for a significant share of the energy consumption in an economy as well as the carbon dioxide emissions that are closely linked to energy consumption. However, energy use in consumption is not confined to the domestic economy alone, but also extends to the production of imported goods abroad. The indicator therefore provides additional information about the damage being done to the environment on a global scale as a result of consumption activities. A reduction in energy consumption will conserve resources both domestically and abroad and will curb carbon dioxide emissions that are harmful to the environment. The target of the Federal Government is therefore, to continuously lower energy consumption associated with consumption.



## Content and progress of the indicator

The data originates from calculations by the Federal Statistical Office based on the energy balances from the Energy Balance Association and on the emission reporting of the German Environment Agency.

Households use energy directly, for example, for heating or through the consumption of fuels for road transport. Apart from this direct energy consumption, the production of goods intended for private consumption involves large expenses of energy. This indirect energy consumption occurs domestically and abroad, both at the actual manufacturers of the consumer goods and with their suppliers. Both forms are recorded by this indicator.

The same applies to the emissions of carbon dioxide (CO<sub>2</sub>), presented here as an index for information purposes: In addition to the direct emissions by private households caused by the combustion of fuels, much greater quantities of emissions are generated indirectly during the production of consumer goods. The depicted key figure includes both direct as well as indirect emissions.

Closer analysis of the time series reveals a wavelike trend in energy consumption due to the consumption activities of private households with a slight increase by 1.9% from 2005 until 2010. Between 2010 and 2012, energy consumption by private households declined steadily by a total of 5.1%. In contrast, consumption in 2013 rose again by 2.6% year on year, which means in summary, that the value of the indicator in 2013 fell by a total of 0.9% compared with 2005. However, there are currently no signs of a continuous reduction.

In 2013, direct energy consumption by private households accounted for 40.1% of overall household energy consumption. Of this total, combustibles including electricity and district heating accounted for 64.7% and fuels accounted for 35.3%. The larger component of overall energy consumption at 59.9% was indirect energy consumption associated with the production of consumer goods domestically and abroad. The reduction of 1.0% in the energy content of consumer goods between 2005 and 2013 was slightly stronger than the reduction in direct energy consumption.

Energy consumption is differentiated according to the demand areas of living, mobility, food, other products and services. The most energy is consumed in the areas of living, transport and food. Here, the living area with around 3,696 petajoules in total (37.6% of total consumption of private households) represents the highest consumption area in 2013. The losses incurred during the generation of electricity and district heating for private households are included here via indirect consumption.

The trend for energy-related CO<sub>2</sub> emissions reveals a similar pattern as that for energy consumption. In 2013, CO<sub>2</sub> emissions by private households including the emission content of consumer goods as well as emissions from the combustion of biomass amounted to 668 million tonnes, representing a 3.8% increase compared with 2005. The combustion of fuels accounted for 34.0% of emissions, with the remaining 66.0% accounted for by the production of consumer goods. Between 2005 and 2013, direct CO<sub>2</sub> emissions fell by 2.2%, although the emission content of consumer goods rose by 7.2%.

This indicator has cross-references to indicators 7.1.a, b “Final energy productivity and primary energy consumption”, 7.2.a “Share of renewable energy sources in gross final energy consumption” as well as 11.2.a, b “Final energy consumption in freight transport and passenger transport”.

## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

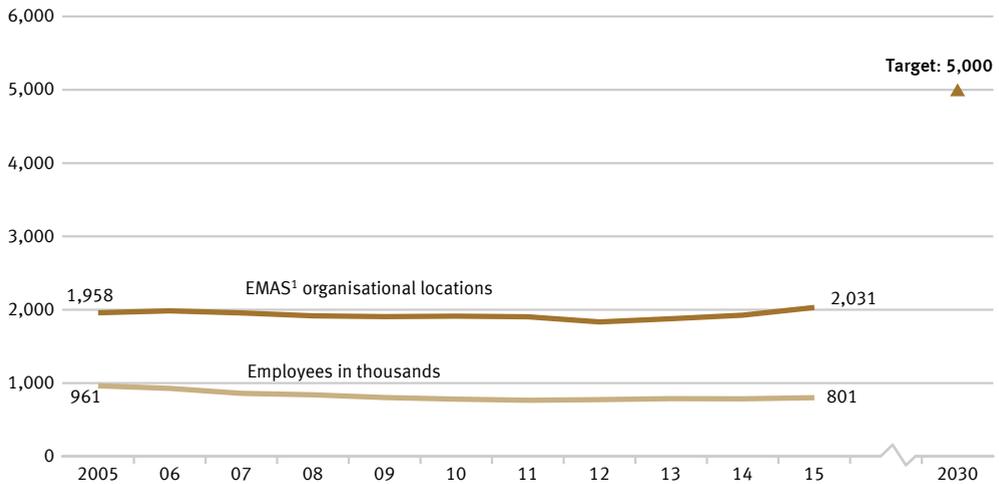
Sustainable production – *Increasing the proportion of sustainable production*

### 12.2 EMAS eco-management



#### Use of the EMAS eco-management system in Germany

Number of organisation locations registered in Germany as well as their employees



<sup>1</sup> EMAS = Eco-Management and Audit Scheme

Source: Deutscher Industrie und Handelskammertag e.V., the German EMAS Advisory Board, the German Environment Agency

#### Definition of the indicator

The indicator shows the number of organisation locations registered in Germany for EMAS (Eco-Management and Audit Scheme)

#### Target and intention of the indicator

Climate change, the energy transition and scarce resources are presenting companies with new challenges that are forcing them to reconfigure their business processes, structures and products along environmentally sound and resource-saving lines. The EMAS environmental management system offers a concept of systematic corporate environmental protection and is associated with the goal of continuously improving the environmental performance of the organisation's location. For this reason, the target is to identify a total of 5,000 organisational locations complying with the EMAS environmental management system by 2030.



## Content and progress of the indicator

EMAS is a voluntary instrument of the European Union that helps companies and organisations of any size in any sector to continuously improve their environmental performance. EMAS is associated with an environmental reporting obligation (called an environmental statement) that contains the most important environmental impacts of the company in question and involves the obligatory provision of data on the topics of energy and material efficiency, emissions, water, waste and land use/biodiversity. Internal documents as well as the environmental statement are inspected by independent, government-approved environmental experts. Organisations that pass the inspection and against which no environmental violations and complaints apply are accepted into the EMAS register. The inspection must be repeated on a regular basis, no later than every three years. The environmental verification committee is responsible for quality control. The environmental statement must be updated by the organisations annually – since 2010, small and medium-sized companies can apply to do so every two years. EMAS organisations and locations are registered by the responsible chambers of industry and commerce and listed in a publicly-accessible database at the Association of German Chambers of Commerce and Industry. Data recorded using a standardised methodology is available from 2005 onwards.

In terms of methodology, note that the EMAS register shows the number of registrations. Participating organisations are free to include several locations under a single organisation registration (collective registration) or to have locations registered individually. Some companies also participate in EMAS with foreign locations and have these registered in Germany. These are also contained in the EMAS register, which can result in the number of managed EMAS locations and employees with reference to Germany to be too high. Statistical data is available regarding the number of registered organisations and regarding the number of locations, irrespective of whether they are part of a registered organisation or are registered as independent location.

In 2015, there were 2,031 EMAS locations registered in Germany. This is an increase of 3.7 % compared with 2005. Considering the development of the last five years, the indicator has on average been moving gradually in the direction of the set target. If the trend continues unchanged, the goal for 2030 will nevertheless not be achieved.

A new EC Regulation, known as EMAS III, came into force in 2010. The details of the key environmental aspects in the environmental statement were further specified in the form of standardised key figures for the above-mentioned topics. The specifications were interpreted by some stakeholders as an intensification. At the same time, EMAS III introduces simplifications for small- and medium-sized companies.

The 2,031 EMAS locations registered in Germany in 2015 belonged to a total of 1,216 organisations, which were distributed very unevenly across the country. The majority were based in Baden-Württemberg (422) and Bavaria (269), followed by North Rhine-Westphalia (114). In contrast, there were just 5 organisations in Mecklenburg-Western Pomerania. Distributed according to economic sectors, 38 % of the organisations were manufacturing companies, 11 % were involved in the provision of other services and 10 % operated in the hospitality industry.

The registered organisations employed a total of 800,635 people in 2015. This is a decline of 16.7 % compared with 2005.

## 13 CLIMATE ACTION

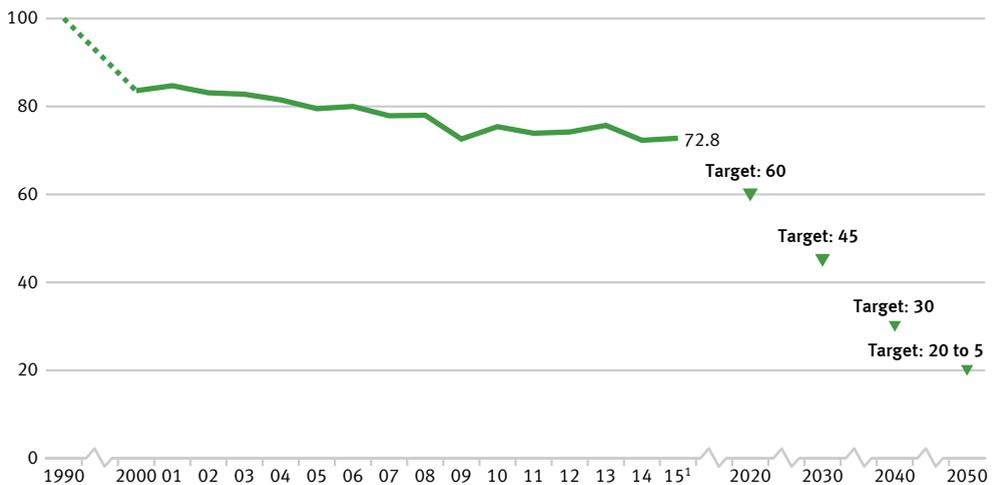
Climate protection – *Reducing greenhouse gases*

### 13.1.a Greenhouse gas emissions



#### Greenhouse gas emissions in CO<sub>2</sub> equivalents

1990 = 100



Greenhouse gases = carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulphur hexafluoride (SF<sub>6</sub>), nitrogen trifluoride (NF<sub>3</sub>), hydrofluorocarbons (HFC) and perfluorocarbons (PFC).

<sup>1</sup> Preliminary near real-time forecast.

Source: German Environment Agency

#### Definition of the indicator

The indicator shows emissions of the following greenhouse gases (substances or substance groups) in CO<sub>2</sub> equivalents: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), nitrogen trifluoride (NF<sub>3</sub>), hydrofluorocarbons (HFC), perfluorocarbons (PFC) as well as sulphur hexafluoride (SF<sub>6</sub>).

#### Target and intention of the indicator

The global average temperature on the surface of the Earth is continuously rising due to the increasing concentration of carbon dioxide and other greenhouse gases in the atmosphere, which is already having detectable effects on the climate system today. The Federal Government therefore aims to lower greenhouse gas emissions in Germany by at least 40% compared with 1990 by 2020. Additional targets are the reduction by at least 55% by 2030, by at least 70% by 2040 and by 80 to 95% by 2050 – in each case compared with 1990.



## Content and progress of the indicator

To summarise the various greenhouse gases into a single index, they are each expressed in “CO<sub>2</sub> equivalents”, which means that they are converted into the quantity of CO<sub>2</sub> that would have a comparable effect on global warming.

The data is provided annually by the German Environment Agency as part of the reporting under the United Nations Framework Convention on Climate Change and the Kyoto Protocol. The determination and reporting of emissions is subject to a comprehensive quality management system.

The calculation is conducted according to the polluter pays and territorial concept, which means that the most important sources of emissions within Germany were determined for all greenhouse gases and air pollutants. For these sources, it was determined how high the emissions were, subject to which conditions. This results in a specific emissions factor, which is then multiplied by the activity data of a polluter to produce the quantity of emissions.

Note that the indicator according to the Kyoto Protocol does not show the carbon dioxide emissions arising from land use, land use change and forestry. Maritime shipping and international aviation are also excluded from the calculation.

A closer look at the development of the last five years shows that the indicator has not developed in a stable manner. In 2011, the emission values of greenhouse gases fell by 2.0% before returning to the level of 2010 in 2013. Then again, they fell significantly by 4.6% in 2014 followed by a slight increase in 2015. In the long run, according to the projection by the German Environment Agency in 2015, a decrease by a total of 27.2% compared with 1990 can be observed. If the trend of the last five years continues, the set target for 2020 – a reduction by 40% compared with 1990 – is unlikely to be achieved.

By far the greatest share of total greenhouse gas emissions in 2014 was carbon dioxide with 87.9%, compared with 84.2% in 1990. Most recently, methane contributed 6.2%, nitrous oxide 4.3%, the hydrofluorocarbons 1.2% and sulphur hexafluoride 0.4% to the greenhouse gases. By far the largest part of the CO<sub>2</sub> emissions is created by the generation of electricity and heat. Methane and nitrous oxide are emitted primarily by agricultural production.

The indicator has numerous cross references, e.g., to indicators 3.2 “Air pollution”, 7.2 “Renewable energies” or 11.2 “Mobility”.

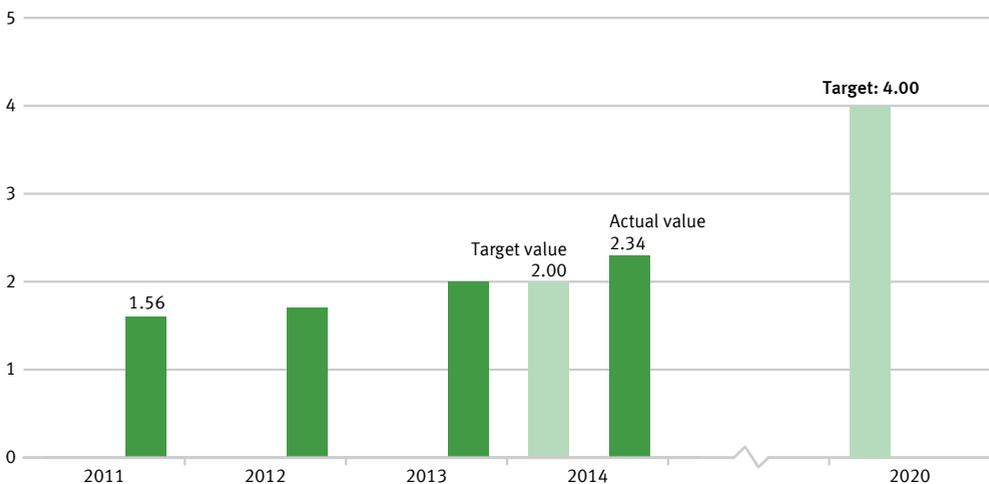
## 13 CLIMATE ACTION

Climate protection – *Germany's contribution to international climate finance*

### 13.1.b International climate finance for the reduction of greenhouse gases and adaptation to climate change



**German funding primarily to developing and emerging countries for climate protection**  
in billions of euros



Source: Federal Ministry for Economic Cooperation and Development

#### Definition of the indicator

The indicator includes the financing of measures for the reduction of greenhouse gases, for the adaptation to climate change, for the protection of biodiversity as well as REDD+ projects primarily in developing and emerging countries from German public funds including the grant elements of development loans, which include public funds.

#### Target and intention of the indicator

The intention of the Federal Government is to double its international climate protection funding by 2020 relative to the target value of EUR 2 billion for 2014. By the United Nations Framework Convention on Climate Change, the industrialised countries committed themselves to provide support to developing and emerging countries in the form of funding, capacity building and technology development to help implement measures for reducing emissions and adapting to climate change.



## Content and progress of the indicator

The data for the indicator is taken from the reporting to the United Nations Framework Convention on Climate Change. The data source of the data collected annually across the EU is the Federal Ministry for Economic Cooperation and Development (BMZ), which in this context also reports on climate protection funding from other federal ministries. The bilateral climate protection funding here is based on commitments, and multilateral climate protection funding and contributions to energy and climate funds are based on payments. Since 2011, the Rio Markers of the development committee of the Organisation for Economic Cooperation and Development are used to identify climate protection projects in the context of German development cooperation. The indicator also includes climate protection funding that is to be attributed proportionately to the bilateral donors. This funding is derived from their contributions to multilateral funds with development banks. As far as the climate protection funding primarily benefits developing countries, it is considered to be part of public development expenditure (see indicator 17.1).

The purely monetary analysis of climate protection funding does not allow any conclusions to be drawn regarding the impact of the financed projects. An impact assessment of how many tonnes of carbon dioxide emissions will be saved in the future through emission-reduction projects or how many people can profit from adaptation projects is attempted by the BMZ, based on the funds earmarked for technical and financial cooperation by the BMZ. Here, both direct (e.g. the expansion of renewable energy) as well as indirect measures (e.g. policy advice) are taken into account. A precise quality assessment of the methodology used in order to measure the impact is not possible due to the information available. However, since impact monitoring is based on financing commitments and therefore also on an ex-ante estimate of the impact of projects, the indicator can lead to overestimates. For instance, consulting aimed at improved adaptation planning is assumed to have an indirect impact so that, presumably, the entire population of a region or country will be reached.

In 2014, Germany committed or provided EUR 2.34 billion of public funds to international climate protection funding for the reduction of greenhouse gases and adaptation to climate change. Compared to the previous year, during which climate protection funding amounted to EUR 1.95 billion, this represents an increase of 20%. 37% of climate protection funding in 2014 was devoted to emission-reduction projects and 42% to adaptation measures. The remaining 21% was used to finance REDD+ as well as biodiversity projects. Since the latter are also relevant to reduction and adaptation, this means that overall in 2014 more funds were spent on adaptation projects (53%) than on emission-reduction projects (47%).

According to statements by the BMZ, the funds for technical and financial cooperation by the BMZ enabled German development cooperation to contribute directly to the reduction of around 413 million tonnes of CO<sub>2</sub> equivalents during the anticipated average impact duration of the investments of 20 years. Indirectly, which means through other stakeholders who are outside the project's immediate sphere of influence, these projects could help bring about a reduction of up to 6 gigatonnes of CO<sub>2</sub> equivalents. Adaptation measures implemented in developing and emerging countries reached 2.3 million people directly. The BMZ estimates that significantly more people – around 300 million – are likely to have benefited indirectly from the measures.

In addition to official climate protection funding from public funds, the Kreditanstalt für Wiederaufbau and the German Investment and Development Corporation also provide climate-related loans with funds from the market. These represent “mobilised public climate protection funding” and are not included in the indicator. In 2014, the resources mobilised through this channel amounted to EUR 2.79 billion compared with EUR 1.47 billion the previous year.

# 14 LIFE BELOW WATER

Protecting the oceans – Protection and sustainable use of oceans and marine resources

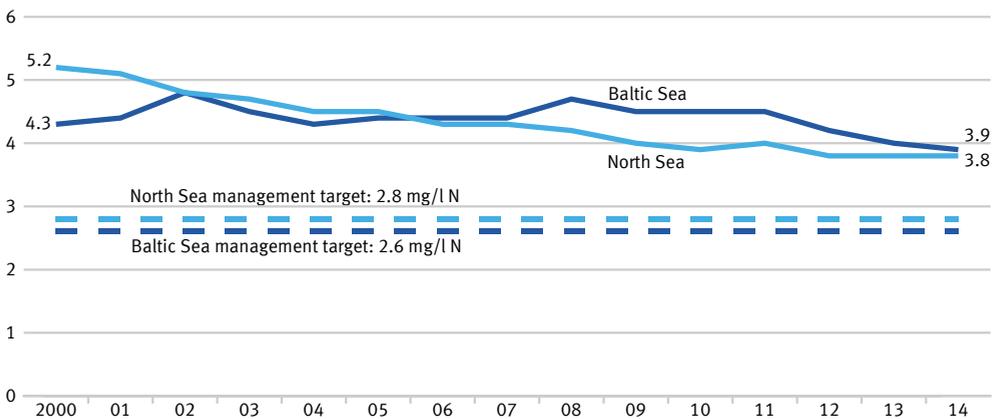
## 14.1a Nitrogen input into Baltic and North Sea via German inflows

Baltic Sea ☁

North Sea ☁

### Total nitrogen input into Baltic/North Seas via selected German inflows

Concentration in mg/l (moving average of the previous 5 years)



Source: Federal Statistical Office, German Environment Agency using information from the Länder and river basin communities

### Definition of indicators

The indicators map the moving five-year average of nitrogen inputs in mg nitrogen per litre of water discharge via the rivers Eider, Elbe, Ems and Weser into the North Sea as well as Peene, Trave and Warnow into the Baltic Sea.

### Target and intension of the indicators

High concentrations of nitrogen in the seas can lead to eutrophication effects such as oxygen depletion, the loss of biodiversity and to the destruction of fish spawning grounds. Therefore, the input of nitrogen should stay below 2.8 mg nitrogen per litre discharge for the rivers flowing into the North Sea and below 2.6 mg N/l for the rivers flowing into the Baltic Sea. This corresponds to the management targets of the Ordinance on the Protection of Surface Waters amended in 2016 that were agreed during the implementation of the Water Framework Directive.



## Content and process of indicators

The indicators are calculated based on measured data regarding nitrogen concentrations and water discharge levels of the Rivers Eider, Elbe, Ems, Peene, Trave, Warnow and Weser, which the German Environment Agency compiles using information from the Länder and the river basin communities. The results are then used to calculate the nitrogen load that these rivers introduce into the North and the Baltic Sea. Since the calculation of both indicators involves aggregating the water discharge volume and the nitrogen loads of the rivers and then expressing the value in relation to one another, the value must not be confused with the average nitrogen concentration of these rivers. On the contrary, it represents a weighted average. Another substance that is carried by rivers into the North Sea and the Baltic Sea where it leads to eutrophication is phosphorous. This is covered by indicator 6.1.a “Total phosphorous in flowing waters”.

To ensure that damaging events such as flooding, which lead to very high nitrogen inputs on an off and on basis, do not distort the representativeness of the trend, the values are analysed as a moving five-year average that includes the five preceding years.

This analysis excludes nitrogen inputs from smaller inflows as well as inputs from Germany into the North and the Baltic Sea via rivers that do not enter these seas in Germany (such as the Rhine and the Oder). The underlying nitrogen input into the Baltic Sea from the Rivers Peene, Trave and Warnow used here, accounts for around 30% of German inputs into the Baltic Sea via rivers and unmonitored coastal catchment areas in 2014.

The Peene, Trave and Warnow rivers exhibit very different nitrogen concentrations. Whereas the 5-year average concentration in the Warnow in 2014 was 3.1 mg/l, the concentration in the Peene was 4.0 mg/l and in the Trave 5.2 mg/l. The trend of nitrogen concentration in these rivers has also developed very differently over the past few years. In 2000, the Warnow, with 3.9 mg/l, displayed a higher and the Trave, with 6.6 mg/l, a still higher concentration. The development in the Peene points into the contrary direction. At 3.9 mg/l, its nitrogen concentration increased slightly compared with the five-year average for 2000.

A slightly different situation applies to the four selected rivers flowing into the North Sea. Here, all four rivers recorded a continuous decline in nitrogen concentrations. The values for the Elbe and Weser reduced in the comparison of 2000 with 2014 on average based in each case on the five preceding years from 4.9 and 5.3 mg/l to 3.6 and 3.8 mg/l respectively. Even the Ems, whose water catchment area includes regions with intensive livestock farming, saw a reduction from 7.6 to 6.0 mg/l. With that, it revealed the highest nitrogen concentration in the 5-year average of all rivers examined both in 2000 as well as in 2014.

Compared with the five-year average for 2000, the nitrogen concentration in the Eider reduced from 6.3 mg/l to 2.4 mg/l in the five-year average for 2014. Therefore, it not only recorded the largest reduction of the seven rivers analysed, it was also the only one of them whose five-year average for 2014 adhered to the corresponding management target. Overall, however, permanent and nationwide adherence to the target values has yet to be achieved.

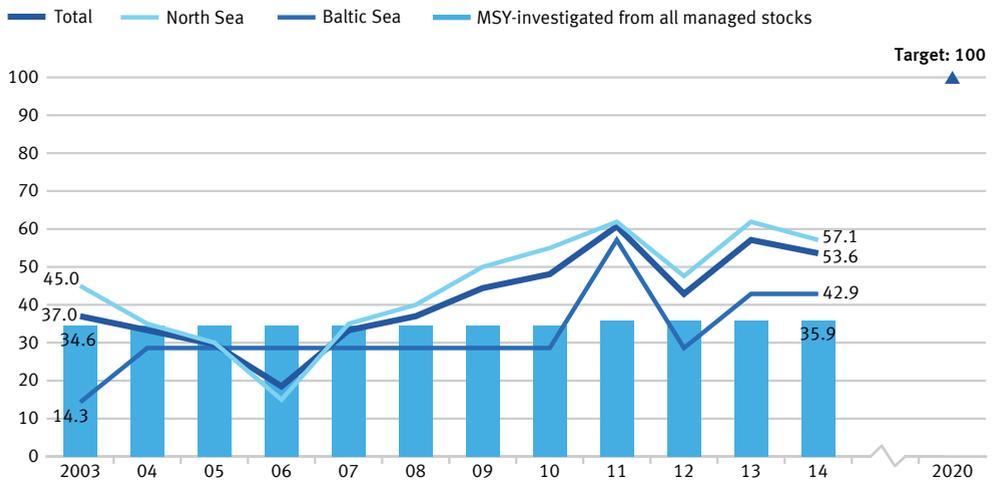
## 14 LIFE BELOW WATER

Protecting the oceans – *Protection and sustainable use of oceans and marine resources*

### 14.1.b Share of sustainably fished fish stocks in the North and Baltic Sea



**Share of sustainably fished fish stocks in the North and Baltic Sea from all MSY stocks**  
in %



Source: International Council for the Exploration of the Sea

#### Definition of the indicator

The indicator specifies the share of sustainably managed fish stocks (according to the Maximum Sustainable Yield [MSY] approach) from the total number of managed fish stocks in the North and Baltic Sea.

#### Target and intention of the indicator

Biological diversity is fundamental to all human life. Only if the natural capital – for example, in the form of fish stocks in the North and Baltic Sea – is protected and maintained it can also provide future generations of humans with critical ecosystem services.

The target of the indicator is to describe the extent to which the goal defined in the Regulation on the Common Fisheries Policy has been achieved. The goal states that fish stocks used for economic purposes must be sustainably managed in accordance with the MSY approach by 2020.



## Content and progress of the indicator

Not all fish stocks are investigated with reference to their sustainable management. Therefore, the number of fish stocks that are sustainably managed according to the MSY approach should always be viewed in relation to overall fish stocks. Although an expansion of the investigation to include as many stocks as possible is desirable, the high cost of these investigations means that the prospect of recording all stocks, even those that are economically less relevant and less fished, is unrealistic.

Stocks are considered to be “sustainably managed” if the actual catch per year and fish stock does not exceed the scientific recommendation based on the MSY approach or meets the requirements of a long-term management plan deemed to be sustainable according to the MSY approach. In this context, a “fish stock” is defined as an independently reproducing population of a specific species of fish. A specific species can therefore have multiple stocks and, depending on the stock, can also have different guideline values regarding the catch quantities. As a rule, each stock is assigned a guideline value according to its previous development.

The guideline values for the managed stocks are calculated by the International Council for the Exploration of the Sea (ICES).

The annual calculation of sustainable catch quantities according to the MSY approach is based on stochastic predictions, which use calculations of historical stock trends. Information about fish quantities landed is based on reported catches. Random samples taken from these catches provide information about the demographic parameters of the stock, such as age and size. Scientific surveys conducted on research ships independently of the fishing industry are another important source of information for estimating fish stocks.

Based on current estimates, a total of 58 stocks in the North Sea and 20 fish stocks in the Baltic Sea are used for economic purposes. The number of stocks investigated according to the MSY approach is currently 7 for the Baltic Sea; for the North Sea, a total of 21 stocks are taken into account from 2011 onwards (previous years: 20 stocks). As a result, just under a third of all managed stocks are fully analysed for sustainable management. All other stocks for which the currently available data is insufficient are still excluded from this indicator.

The share of stocks sustainably fished according to the MSY approach out of the number of stocks investigated according to the MSY approach was 53.6 % in total for the North and Baltic Sea in 2014. For the North Sea, this share was 57.1 % and for the Baltic Sea 42.9 %.

Regarding the development between 2009 and 2014, the overall pattern is positive. In 2012, however, the share of sustainably managed fish stocks was lower than the previous year. Nevertheless, it is difficult to estimate this indicator as it is influenced not only by the development of stocks, but also by the choice of stocks for investigation. In addition, the recommended catch quantities apply internationally and can only be fulfilled indirectly by the efforts of a single country alone.

# 15 LIFE ON LAND

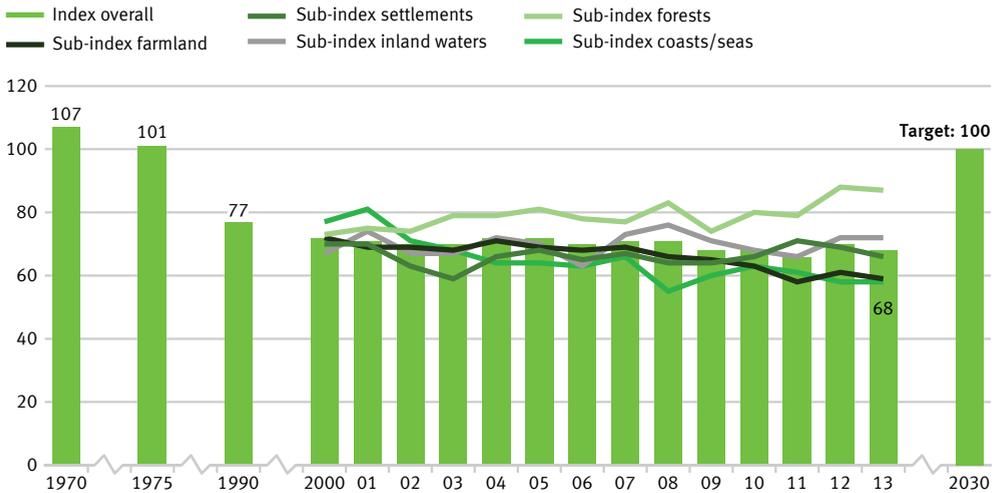
Biodiversity – Conserving species – Protecting habitats

## 15.1 Species diversity and landscape quality



### Species diversity and landscape quality

Index 2030 = 100



The sub-indicator for the Alps is currently suspended across the entire data series. The historical values for 1970 and 1975 are reconstructed. The target values for the sub-indicators and the overall indicator are to be checked by 2020.

Source: Federal Agency for Nature Conservation, April 2016

### Definition of the indicator

The indicator shows the population trend for 51 selected bird species in the form of an index.

### Target and intention of the indicator

A wide diversity of animal and plant species is a fundamental prerequisite for a healthy natural environment and an essential basis for the human livelihood. To preserve biodiversity and at the same time the quality of life of humans, the preliminary target of the Federal Government is an index value of 100 by 2030 – this target was originally supposed to be achieved by 2015. It is foreseen to check the level of this target value by 2020 and to adjust it if necessary.



## Content and progress of the indicator

The calculation of the indicator is based upon changes in the populations of 51 bird species, which together represent the most important types of landscape and habitat in Germany: ten species each for the sub-indicators for farmland, settlements, inland waters, coasts and seas as well as eleven species for forests. Due to the uncertain data situation, the Alpine habitat is currently not taken into account.

An expert committee has stipulated target population values for each bird species – originally for 2015. The population size per species is calculated annually from the results of bird monitoring programmes by the Federation of German Avifaunists (DDA) in cooperation with the Federal Agency for Nature Conservation (BfN) and is specified in relation to the size of the defined target value. The historical values for 1970 and 1975 are reconstructed.

A value for the sub-indicators and the overall indicator is calculated annually based on the degree to which the goals have been achieved. The target values for the sub-indicators and the overall indicator were applied to the target year 2030 unchanged on a preliminary basis. The level of these target values shall be checked by 2020 and adjusted if necessary.

In addition to birds, there are also other species that rely on a richly structured landscape with intact, sustainably used habitats, which means that the indicator also indirectly maps the development of a number of other species in the landscape and the sustainability of land use.

In 1990, the indicator for species diversity and landscape quality was significantly lower than the reconstructed values for 1970 and 1975. In the last ten reporting years (2003 to 2013), the value of the indicator has deteriorated further. In 2013, it was at just 68% of the target value. Should this development continue, the target set for 2030 is unlikely to be achieved.

During the course of the last ten years (from 2003 to 2013), however, the sub-indicators for the individual habitat types have developed differently. In this period, the sub-indicators for farmland (2013: 59.2% of the target value) as well as for coasts and seas (2013: 58.2% of the target value) experienced a downward trend that also has a significant impact on the overall indicator. The progress of the sub-indicators for forests, settlements and inland waters was inconsistent during the reference period.

Except for the sub-indicators for forests and inland waters, all sub-indicators also remained significantly below the comparative values for 1990. In terms of biodiversity and the landscape quality of forests, the situation appeared to have improved significantly recently in comparison with the other habitat types. In 2013, this habitat achieved 86.9% of the target value, which was the highest value compared with the other sub-indicators.

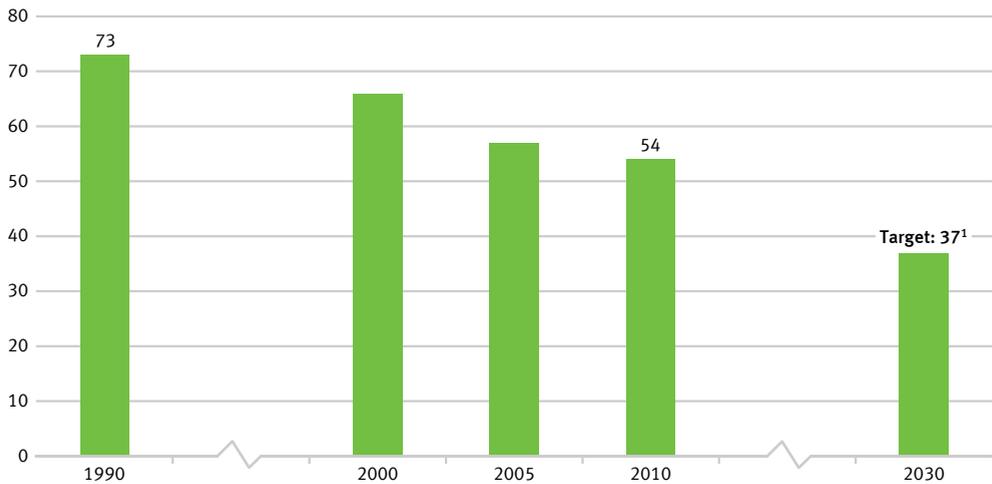
## 15 LIFE ON LAND

---

Ecosystems – *Protecting ecosystems, conserving ecosystem services and preserving habitats*

### 15.2 Eutrophication of ecosystems

**Ecosystems in which critical loads for eutrophication due to nitrogen input are exceeded**  
Share of assessed land containing sensitive ecosystems, in %



<sup>1</sup> The target value of 37% matches a reduction in the share of land by 35% compared with 2005.

Source: European Environment Agency

#### Definition of the indicator

The indicator depicts the share of land containing sensitive ecosystems for which the critical ecological loads have been exceeded due to atmospheric nitrogen inputs, measured against the total evaluated land containing sensitive ecosystems.

---

#### Target and intention of the indicator

The critical ecological loads are a measure of the sensitivity of an ecosystem to the input of a pollutant. If the inputs of air pollutants are above the critical loads, this can cause long-term damage to the structure and function of ecosystems. Almost half of the ferns and flowering plants that are included in the red list in Germany are endangered by nitrogen inputs. By 2030, the share of land with an elevated input of nitrogen is to be reduced by 35% compared with 2005. This corresponds to a reduction on 37% of the land of all ecosystems.



## Content and progress of the indicator

Nitrogen, which escapes into the atmosphere bonded in ammonia and nitrogen oxides is introduced into sensitive ecosystems in gaseous form, dissolved in rain, or as a component of particulate matter. In this context, forests, natural grassland, bogs, marshes and heaths are considered to be ecosystems.

In order to evaluate nitrogen inputs, ecosystem-specific critical loads are determined. Based on the latest knowledge available, long-term damage to the structures and functions as well as to the species communities of an ecosystem can occur if these loads are exceeded. Critical ecological loads are therefore a measure of the sensitivity of an ecosystem and enable spatially differentiated comparisons of the resilience of ecosystems by current atmospheric nitrogen inputs. In total, some 11 million hectares, almost one third of the entire land mass of Germany, are evaluated in this way. The effects of excessive nitrogen input often take several years to manifest themselves. Likewise, the positive effects of reduced input will become apparent only after an extended period.

The eutrophication of ecosystems is related to indicators 2.1.a “Nitrogen surplus”, 3.2.a “Emissions of air pollutants”, 6.1.b “Nitrate in groundwater” and 14.1.a “Nitrogen input via the inflows into the Baltic Sea and North Sea”.

The indicator is currently calculated by the Coordination Centre for Effects (CCE) at intervals of several years based on two data sources. These are the time series for nitrogen inputs in Germany created by the European Monitoring and Evaluation Programme (EMEP) as well as the critical loads calculated nationally and provided by the German Environment Agency. The basic tools for determining critical loads include, among other things, the soil map overview of Germany, the map showing average annual percolation rates from the soil, and the map of land use distribution along with climatic data for Germany.

In 2010, the critical loads for harmful nitrogen input were exceeded on 54 % of the area of all evaluated sensitive ecosystems in Germany. In this instance, transgressions in parts of northern Germany are particularly high, as the agriculture here releases large quantities of reactive nitrogen compounds.

Between 1990 and 2010, the share of areas on which critical loads for nitrogen were exceeded was reduced by 19 percentage points. This can be attributed in particular to the reduction in emissions caused by the downsizing of livestock numbers following the German reunification and measures to control air quality. If the reduction in nitrogen inputs of the previous reporting years continues, the targeted goal of a maximum of 37 % of polluted land in 2030 can be achieved.

## 15 LIFE ON LAND

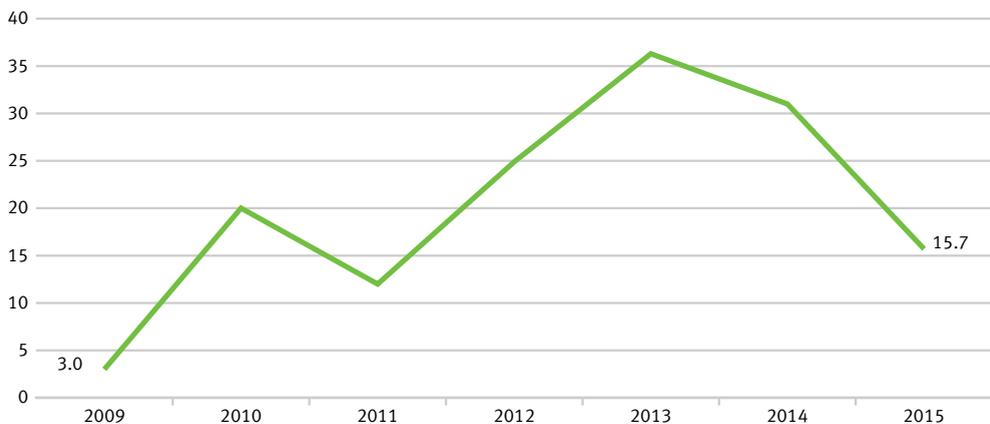
---

Forests – Preventing deforestation

### 15.3 Payments to developing countries for the verified preservation or restoration of forests under the REDD+ rulebook



**Payments to developing and emerging countries for the verified preservation or restoration of forests under the REDD+ rulebook**  
in millions of euros



Financial contributions prior to 2013 were made in anticipation of the REDD+ rulebook.

Source: Federal Ministry for Economic Cooperation and Development

#### Definition of the indicator

The indicator shows the payments by Germany to developing and emerging countries for the verified preservation or restoration of forests under the REDD+ rulebook.

---

#### Target and intention of the indicator

The prevention of deforestation and forest degradation (damage), the use of sustainable forestry management systems as well as the restoration of forests and afforestation contribute directly and indirectly to the reduction of CO<sub>2</sub> emissions and to the storage of carbon. The REDD+ rulebook envisages results-based payments for measurable and verified CO<sub>2</sub> emission reductions. The target is to increase these payments by Germany to developing and emerging countries by 2030.



## Content and progress of the indicator

Reducing Emissions from Deforestation and Forest Degradation, (REDD+) is a financing instrument that is designed to protect forests and their biodiversity, and that was developed by the international community. REDD+ rewards governments and local communities financially for reducing deforestation and thereby demonstrably cutting emissions. The sums paid out are based on the scope of emissions reduced or of carbon stored. REDD+ funds are disbursed only if the reduction in deforestation has been verified – which means they are result-based. Consequently, the indicator may experience fluctuations over time even though the level of committed payments remains unchanged over the years.

The indicator includes only a part of the public development expenditure for the preservation, the sustainable management and the restoration of forests, since the Federal Government is involved in promoting sustainable forest development in developing and emerging countries not only as part of REDD+, but also through other programmes and initiatives.

Payments made under the REDD+ rulebook are also part of climate finance (indicator 13.1.b), as the preservation of forests serves primarily to limit emissions.

The data sources for the indicator are the financial reports compiled by the Federal Ministry for Economic Cooperation and Development and by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety. The data has been collected annually since 2008.

In the review period between 2009 and 2015, the indicator developed in a very uneven manner. Following a sharp increase from EUR 3.0 million in 2009 to EUR 20.0 million in 2010, the payments fell in 2011 to EUR 12.0 million, before increasing to their presently highest level of EUR 36.3 million in 2013. The ensuing years saw a fall-off in payments, and they reached EUR 15.7 million in 2015, well below the level of 2010. Of this amount, EUR 12.4 million flowed into multilateral programmes, and EUR 3.3 million went to bilateral programmes. The development of the indicator since 2010 does not reveal a definitive trend. Following strong growth in payments up to 2013, they settled in 2015 at a level between the values of 2010 and 2011.

# 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

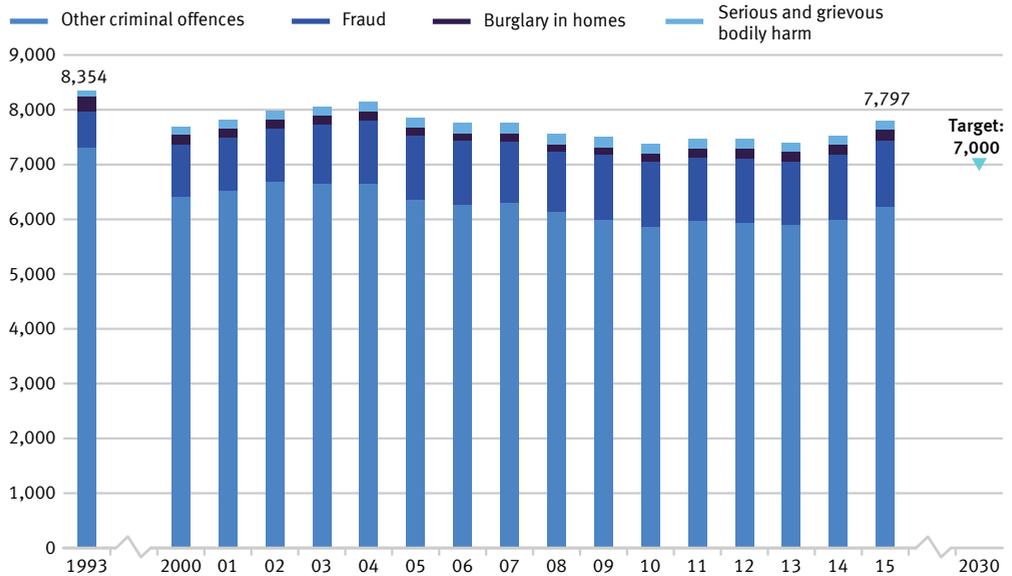
Crime – Further increasing personal security

## 16.1 Criminal offences



### Criminal offences

Recorded cases per 100,000 inhabitants



Source: Federal Criminal Police Office, Federal Statistical Office

### Definition of the indicator

The indicator shows the number of criminal offences reported to the police per 100,000 inhabitants.

### Target and intention of the indicator

A safe neighbourhood in which the citizens of a country can live without fear of ruthlessness and crime is an essential prerequisite for sustainable development. Therefore, the number of recorded criminal offences per 100,000 inhabitants is to be reduced to less than 7,000 by 2030.

### Content and progress of the indicator

The indicator covers all criminal offences recorded in the Police Crime Statistics. These are criminal offences reported to the police and fully processed by them, provided that they do not involve crimes against the state, traffic offences (with the exception of violations of Articles 315, 315b of the German Penal Code (StGB) and Article 22a of the Road Traffic Act (StVG)) or violations of state criminal laws (with the exception of the relevant regulations in the state privacy laws). Likewise, criminal offences committed outside the Federal Republic of Germany as well as offences that are



not within the area of responsibility of the police (e.g. financial and tax offences) or are reported directly to the public prosecutor and are processed exclusively by him/her (e.g. offences relating to testimony) are excluded from the calculations, too.

The Police Crime Statistics publications are compiled annually based on the data available from the criminal investigation offices and the Federal Criminal Police Office. To calculate the criminal offences per 100,000 inhabitants, the (back-extrapolated) population figures based on the 2011 census are used for the entire time series. This enables chronological comparisons as of 1993, although this results in differences in the comparison to the published data of the Police Crime Statistics prior to 2013. Changes in the Police Crime Statistics do not, however, always reflect changes in reality, as the statistics cover only what is called the “bright field”, i. e. criminal offences that officially come to the knowledge of the police. Since statistical data on the “dark field” – the crimes that remain unknown to the police – does not exist, such crimes cannot be represented in the Police Crime Statistics. If, for example, the population changes their behaviour with respect to reporting criminal offences, or if the intensity with which the police pursue particular crimes changes, the boundary between the bright and dark fields can shift without necessarily any change to the amount of actual crime committed.

Between 1993 and 2015, the number of criminal offences decreased by a total of 6.7% to 7,797 per 100,000 inhabitants in 2015. This trend, however, has not been a continuous one. For instance, it increased intermittently from 2000 to 2004, before entering a slight decline up until 2010. The large number of people who entered Germany in 2015 as refugees and asylum-seekers is also reflected in the Police Crime Statistics. For instance, breaches of immigration law (e.g. illegal entry) soared by 157.5% in 2015 compared to 2014. These accounted for 6.4% of all criminal offences. If the sharp increase in criminal offences involving immigration law is removed, the total number of criminal offences registered by police in 2015 is roughly at the same level as in the previous years.

In 2015, the total number of criminal offences was 6.3 million. Looking at examples from various subcategories, 2.6% of the offences registered by the police involved burglaries in homes, 15.3% involved cases of fraud and 2.0% involved serious and grievous bodily harm. While the number of burglaries in homes fell by 26.4% between 1993 and 2015, cases of fraud climbed by 82.9% and cases of serious and grievous bodily harm rose by 45.1%. But focusing exclusively on developments over the last five years only, they deviate from the trend. Between 2010 and 2015, the number of burglaries in homes increased again by a total of 37.7%, whereas cases of fraud fell by 0.2%. Cases of serious and grievous bodily harm also declined between 2010 and 2015 by a total of 10.9%.

The clear-up rate for all offences registered by the police in 2015 was 56.3%, and was therefore roughly at the previous year's level. Significant differences were apparent here depending on the type of criminal offence. The clear-up rate for burglary in homes, for example, was only about 15.2%. By contrast, 76.4% of fraud offences and 82.3% of cases of serious and grievous bodily harm cases were cleared up. The comparatively low clear-up rate for burglaries in homes is related to a high rate of reporting combined with comparatively infrequent solid leads pointing to the perpetrators. This is in sharp contrast to the cases of fraud and bodily injury. These crimes have high clear-up rates because in most cases the identity of the suspect becomes known to the police at the time the crime is reported.

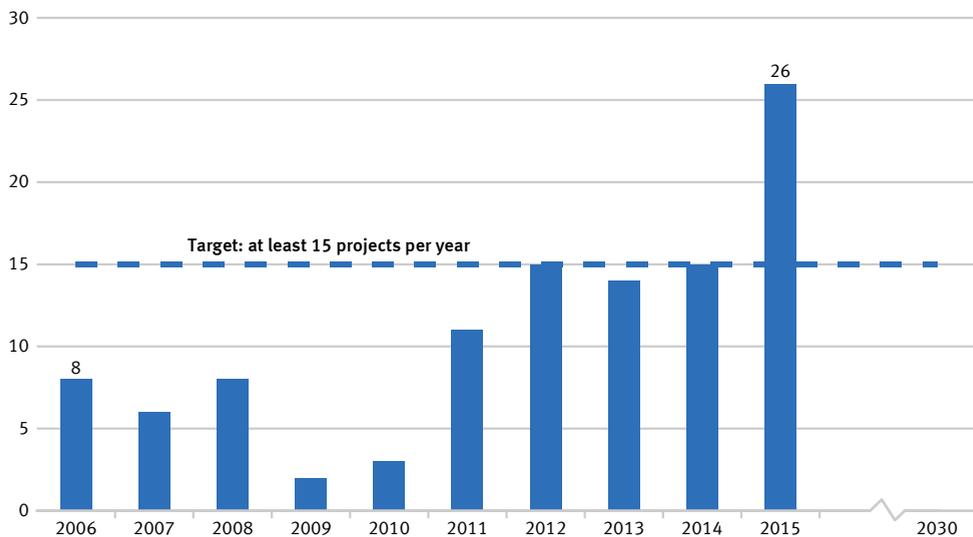
## 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

Peace and security – Practical action to combat proliferation, especially of small arms

### 16.2 Number of projects to secure, register and destroy small arms and light weapons carried out by Germany in affected regions of the world



#### Number of projects to secure, register and destroy small arms and light weapons carried out by Germany in affected regions of the world



Source: Federal Foreign Office

#### Definition of the indicator

The indicator shows the number of projects to secure, register and destroy small arms and light weapons carried out in Africa, Eastern Europe, Latin America and Asia with German financial support.

#### Target and intention of the indicator

There can be no sustainable development without peace and no peace without sustainable development – this is emphasised in the preamble to the 2030 Agenda for sustainable development. With the measures recorded by the indicator, Germany is making a contribution towards peacekeeping in a concrete subcategory. The set target is to have at least 15 projects to secure, register and destroy small arms and light weapons carried out by Germany each year.



## Content and progress of the indicator

In Germany, the Federal Foreign Office is responsible for the realisation of projects to control small arms and light weapons. In addition to the commitment within the United Nations, the group of interested states and the European Union, Germany is also active in a bilateral way – e.g. in a project to strengthen the national small arms commission in Côte d'Ivoire. The bilateral projects are implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH or non-governmental organisations. However, participation in a project says nothing about its scope or success.

Based on the analysed priority needs and the interest expressed by regional organisations and partner countries, the projects are allocated to the above-mentioned regions. An area of focus worldwide is the Sahel Zone, where small arms controls are being improved by, among other things, the strengthening of regional organisations such as the African Union. Projects are implemented by non-governmental organisations. In the Balkan region, in particular, a policy of destroying surplus weapons and of securing official inventories in order to limit the proliferation of small arms is being pursued. Here, Germany cooperates primarily with the Organisation for Security and Cooperation in Europe and with the United Nations development program. In Latin America and Asia, individual projects with a view on regulating private security services and to the universal implementation of the Arms Trade Treaty are financed.

It is worth noting that the projects are not financed solely by the Federal Foreign Office. In some cases, the projects are financed using funds from third parties. Consequently, the indicator does not take into account the scope of German involvement in these projects. Furthermore, note that the indicator maps the total number of projects in the respective year, which can result in projects of several years' duration being counted twice.

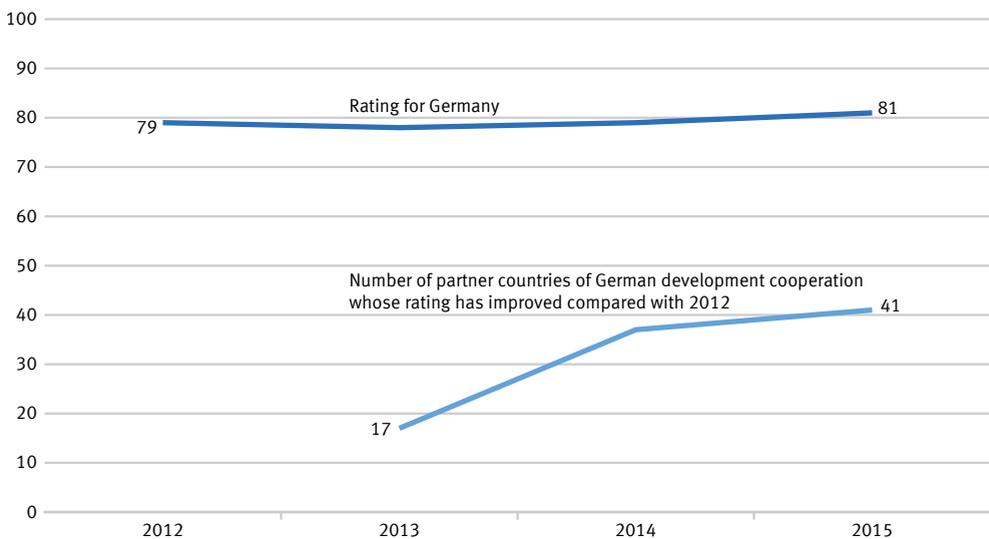
In the period between 2006 and 2015, the number of projects processed per year rose from 8 to 26. The target that Germany should be involved in at least 15 projects annually was already achieved in 2012. Following a decline in 2013, the number of projects in 2015 once again met the target of 15. In the longer-term view, the development of the indicator reveals a positive trend.

Good governance – *Combating corruption*

### 16.3.a, b Corruption Perceptions Index (CPI) in Germany and in partner countries in the German development cooperation

CPI in Germany  Partner countries 

#### Corruption Perceptions Index



Source: Transparency International

#### Definition of indicators

The indicators provide the Corruption Perceptions Index (CPI) from Transparency International for Germany (16.3.a) as well as the number of partner countries in the German development cooperation, whose CPI has improved compared with 2012 (16.3.b). The CPI measures how strongly corruption in the public sector is perceived in a country.

---

#### Target and intention of the indicators

A further improvement in the CPI for Germany is targeted for 2030. In addition, the CPI in the majority of partner countries involved in German development cooperation should also improve. The base year in each case is 2012.



## Content and progress of indicators

The CPI is a composite indicator that is based on various expert as well as corporate surveys on the perception of corruption in the public sector. Depending on the particular survey, different understandings of corruption may serve as a basis and the sources for the calculation may change over time. The index includes countries for which at least three selected surveys are available. As such, the CPI is the most comprehensive overview study on perceived public sector corruption.

The Joint Research Centre of the European Commission refers in its analysis of the CPI to the fact that when the results are interpreted, the statistical significance of the change must also be examined. It emphasises that even in the case of statistically significant differences, the results of this indicator should be interpreted with caution.

Compared to 2012, Germany improved its position from 79 points to 81 points in 2015 and is therefore ranked 10th along with the UK and Luxembourg. Though, compared with 2014, this change should not be viewed as statistically significant (at a significance level of 5%).

The Federal Statistical Office also gathers information on the topic of corruption as part of its satisfaction survey on official services. According to this survey, during their contact with public facilities 4.7% of the population had the impression in 2015 that public service employees were susceptible to corruption. In the corresponding survey of companies, 3.6% of companies had the impression that public service employees were open to corruption.

The Police Crime Statistics record all criminal matters that become known to the police. In 2015, 1,076 cases of accepting/granting an advantage as well as corruptibility and corruption were recorded in the public sector. Furthermore, the Police Crime Statistics also list cases of corruptibility and corruption in commercial practice as well as so-called concomitant offences of corruption such as fraud and acts of embezzlement, document fraud, anti-competitive agreements during tendering procedures, obstruction of justice, incorrect certification and breaches of official secrets acts.

With reference to German development cooperation, a total of 41 of the 82 partner countries evaluated by the CPI improved in 2015 compared with 2012. The number of partner countries developing in a positive direction has increased in the review period each year. However, only one partner country of German development cooperation reported a statistically significant improvement (at a significance level of 5%) in 2015 versus 2012. Compared to that, in 2014 it had been six partner countries that reported a significant improvement.

## 17 PARTNERSHIPS FOR THE GOALS

Development cooperation – *Supporting sustainable development*

### 17.1 Share of expenditure for official development assistance in gross national income



#### Share of expenditure for official development assistance in gross national income in %



<sup>1</sup> Data is preliminary.

Source: Federal Statistical Office, Federal Ministry for Economic Cooperation and Development

#### Definition of the indicator

The indicator comprises public expenditure for development cooperation (Official Development Assistance or ODA) as a percentage of gross national income (GNI).

#### Target and intention of the indicator

Through their development cooperation, industrialised nations contribute to reducing poverty worldwide, securing peace, achieving democracy, shaping globalisation equitably and protecting the environment. In order to live up to this responsibility, the Federal Government aims to achieve the target originally set for 2015 to increase the share of public development expenditure out of gross national income to 0.7% by 2030.



## Content and progress of the indicator

The data basis for the indicator is the statistics on the payments of the German development cooperation, which are compiled by the Federal Statistical Office on behalf of the Federal Ministry for Economic Cooperation and Development.

The eligibility of a payment as ODA is defined by the relevant guidelines issued by the Development Assistance Committee (DAC) of the Organisation for Economic Cooperation and Development (OECD). ODA mainly includes expenditure for financial and technical cooperation with developing and emerging countries, humanitarian aid as well as contributions for development cooperation to multilateral institutions such as the United Nations, the European Union (EU), the World Bank or regional development banks. Furthermore, expenditure for specific peace missions, waivers of debt as well as costs for specific development assistance provided in the donor country, such as the cost of studies for students from developing and emerging countries or expenditure for development-related research, can also be counted as ODA. In 2015, the calculation basis of the German ODA was adjusted to take greater account of the costs of housing, care and education of refugees. A group of independent experts is currently working for the DAC to suggest ways of making it easier to compare the methods used to record expenditure for refugees, as far as these expenditures are ODA-compatible.

The OECD and the DAC also define the list of ODA-compatible developing and emerging countries. This includes the least developed countries (LDCs) on the one hand as well as other countries with low and medium GNI per capita. Members of the G7 and Russia, the EU as well as EU accession candidates with a fixed accession date are excluded. The list is updated every three years. Changes in the indicator can also result from the fact that individual or several countries are added to or removed from the list.

In 2014, the share of public development expenditure of German GNI was 0.42%. According to preliminary values, it rose to 0.52% in 2015. Net ODA payments in 2015 were around EUR 16.0 billion (preliminary value), which marks an increase of 29.5% year on year (EUR 12.5 billion).

In an international comparison, Germany was the third largest donor of ODA funds in absolute terms in 2014 after the USA and the UK. With reference to GNI, the rate of 0.42% achieved by Germany in 2014 is precisely the average value of EU members of the OECD Development Assistance Committee. Viewed in relative terms, Germany as the tenth largest donor therefore only has a middle-ranking position. The international goal of 0.7% was achieved in 2014 by Sweden, Luxembourg, Norway, Denmark and the UK. Corresponding data on donor comparisons for 2015 are not yet available.

In addition to official development cooperation, private organisations such as churches, foundations and associations also make contributions. This private development cooperation, which does not qualify as ODA, amounted to EUR 1.24 billion in 2015, equating to a share of 0.04% of gross national income. Private direct investment in developing and emerging countries totalled EUR 15.0 billion in 2015 (preliminary value).

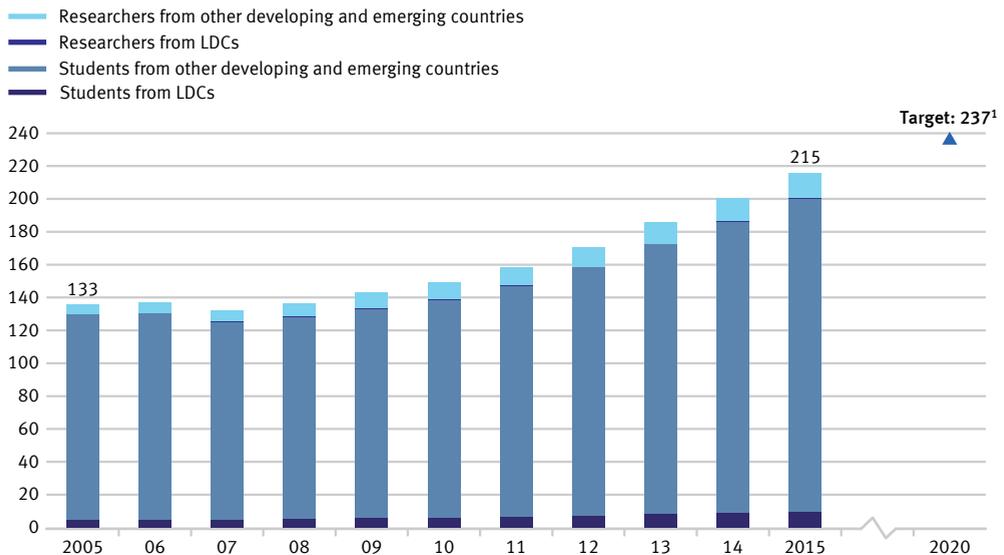
## 17 PARTNERSHIPS FOR THE GOALS

Knowledge transfer, especially in technical areas – *Sharing knowledge internationally*

### 17.2 Number of students and researchers from developing countries and LDCs per year



#### Students and researchers from developing and emerging countries in Germany in thousands



1 The target is to increase the number of students and researchers compared with 2015 by 10% in 2020. LDCs (Least Developed Countries)

Source: Federal Statistical Office

#### Definition of the indicator

The indicator records the number of students and researchers from developing and emerging countries per year or semester. Here, the number of students and researchers from the least developed countries (LDCs) is listed separately.

#### Target and intention of the indicator

Knowledge is a key driver of sustainable development not only at national level but also in terms of the global benchmark. The strengthening of the international exchange of knowledge by Germany is an important measure in this context. For this reason, the target of the Federal Government is to increase the total number of students and researchers from developing and emerging countries by 10% from 2015 until 2020 and to stabilise the number at the same level thereafter.



## Content and progress of the indicator

The data basis of the indicator is both, student statistics as well as statistics for university personnel conducted by the Federal Statistical Office. Both are complete surveys based on the administrative data at the institutions of higher education. The indicator includes the students in the winter semester of each year. Conversely, the researchers are recorded on the reporting date of 1st of December. Researchers in this context are understood to be full-time and part-time scientific personnel at German institutions of higher education (excluding undergraduate assistants). PhD candidates who are enrolled as students at an institution of higher education and who are also working as scientific personnel can lead to duplicate counting in the indicator.

The total number of all students and researchers from developing and emerging countries at German institutions of higher education in 2015 was 215,258. With 93.0%, students by far accounted for the largest share of the value of the indicator.

In the winter semester of 2015/16, 200,149 students from developing and emerging countries were enrolled in German institutions of higher education. This corresponds to 7.3% of all enrollees. The number of students from developing and emerging countries has increased steadily since 2005 (126,672 students) – the only decline recorded was during the crisis year of 2007. The increase in the winter semester of 2015/16, compared to the previous year (186,012 students in the winter semester of 2014/15), was around 7.6%. In the winter semester of 2015/16, a total of 9,746 students came from LDCs, thus 5.4% more than in the previous year.

Of the 200,149 students from developing and emerging countries who were enrolled at German institutions of higher education in the winter semester of 2015/16, 36,530 came from Turkey, 34,643 from China and 13,740 of the students came from India. In total, 43.8% of these were female students. Whereas the European developing and emerging countries at 48.7% send roughly equal numbers of women and men to study in Germany, only a quarter of the students from Oceania are women (25.2%). The proportion of women among students from LDCs was also roughly one quarter (24.2%).

In 2015, 15,109 researchers from developing and emerging countries were part of the scientific personnel at German institutions of higher education. They accounted for 3.9% of all scientific personnel at German institutions of higher education. Compared to the previous year, their numbers have increased by 5.4%, and have more than doubled since 2005. A total of 517 researchers came from LDCs in 2015 (0.1% of all scientific personnel). This compares with a figure of 500 researchers in the previous year. This matches an increase of 3.4%.

Overall, the number of students and researchers from developing and emerging countries has been continuously increasing since 2007. If this trend were continued as it has to date, the target for 2020 could be achieved.

## 17 PARTNERSHIPS FOR THE GOALS

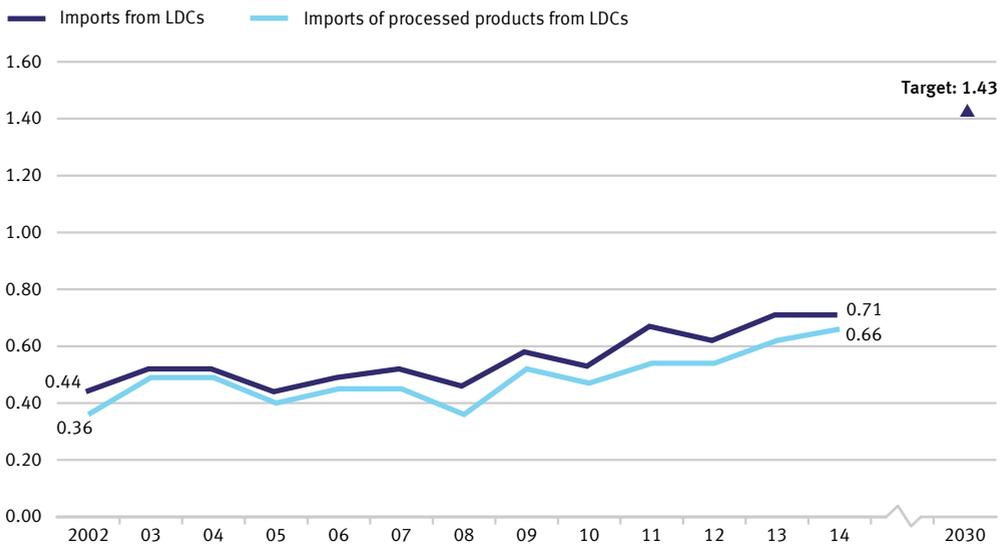
Opening markets – *Improving trade opportunities for developing countries*

### 17.3 Share of imports from LDCs in total imports to Germany



#### Imports from the least developed countries (LDCs)

Share of total imports to Germany, in %



Source: Federal Statistical Office

#### Definition of the indicator

The indicator specifies the share of imports from the least developed countries (LDCs) out of all imports to Germany, measured in EUR.

#### Target and intention of the indicator

To promote global sustainable development, it is important to improve trading opportunities of developing and emerging countries. Developing and emerging countries need an open and fair trading system that will allow them to offer raw materials as well as processed products on the world market. The Federal Government has therefore set itself the target of doubling the share of imports from LDCs between the years 2014 and 2030.

#### Content and progress of the indicator

Information about imports to Germany is compiled from the foreign trade statistics of the Federal Statistical Office. In this case, the type of the imported goods is also recorded in detail in addition to their country of origin, their value and weight.



In addition to the total import figures, imports of processed goods are shown separately. These include all goods not classified as “raw materials” in the classification according to product groups of the food and industrial economy (EGW). Accordingly, goods extracted from nature that undergo no or virtually no processing, which function as source materials for the creation of industrial goods, such as crude oil, ores, logs or vegetable textile fibres, are excluded. Conversely, cereals, fruit, live animals, meat and milk are classified as processed products.

The various countries are classified as LDCs based on the list of recipients of official development assistance from the Development Assistance Committee (DAC) of the Organisation for Economic Cooperation and Development (OECD). The classifications valid in the respective year are used. If the status of a country changes, this will impact the indicator even if the value of imports from this country remains unchanged. However, changes in the status of countries are scarcely relevant to the development of the indicator in the period shown.

With regard to the value and development of the indicator, various factors can play a role. These can include technology transfers or changes in customs duties, but also the political stability of a country or the infrastructure. The focus on processed products here should address, at least to some extent, the question as to whether Germany mainly uses the LDCs as sources of basic materials for industrially created products or whether the LDCs themselves are able to gain benefits from the value added by participating in the production process. However, this is only partially represented by the indicator, as exporting processed products from an LDC does not allow any conclusions on the extent to which an LDC was involved in the value added of these exported goods. Conversely, LDCs can certainly also participate in the value added chain of goods that Germany ultimately imports from a country that is not actually an LDC.

Due to reimports the chance of duplicate counting in the numerator and denominator of the indicator cannot be excluded. The fact that the imports from LDCs are viewed in relation to all German imports must also be taken into account. This means that the value of the indicator depends not only on the absolute quantity of imports from LDCs, but also on the value of all imports.

The share of imports from LDCs out of all imports to Germany in 2014 was 0.71 % or EUR 6.5 billion. This is an increase of almost two thirds compared with 2002, when the share was just 0.44 %. However, the positive development has been observed since 2008. The share of imports of processed products from LDCs rose even more sharply between 2002 and 2014 (+ 85 %). It has now reached 0.66 % of total imports to Germany (2002: 0.36 %), which equates to a value of around EUR 6.0 billion.

Closer analysis of the various countries of origin reveals that almost three quarters of imports from LDCs in 2014 came from Bangladesh (58.63 %) or Cambodia (14.74 %). This can be primarily attributed to the production of clothing there.

Considering not only the LDCs, but all developing and emerging countries, their share of total imports to Germany in 2014 was 20.39 %, and the share of processed products from total imports was 17.72 % (from 13.67 % and 12.17 % in 2002). Consequently, the imports from LDCs both in terms of all goods as well as processed goods accounted for only a very small share of imports from developing and emerging countries. As is shown above, their share of total imports has increased more strongly over time. China plays the most important role among all developing countries. The share of imports from this country alone relative to all German imports was 8.77 %, and 8.73 % for processed goods.

## INDICATOR STATUS SUMMARY

---

### Indicator status summary

As means of providing at-a-glance information on the status of the sustainability indicators, in the report every indicator is assigned, if possible, one of four possible “weather symbols”. This symbol is neither a political appraisal nor a forecast. Instead the symbols provide a first impression of developments, but do not replace a study of the texts with its background information and analyses. The manner, in which the symbols are assigned to the particular indicator, depends on the formulation of the respective target.

In most of the cases an indicator is supposed to reach a concrete absolute or relative target value by a target year (for example indicator 3.1.a). In the case of such a target formulation, firstly the average annual change over the last five years is calculated by means of the last six data points. This value is assumed for the prospective annual development up to the target year. Building on this development, a hypothetical target value is calculated and compared to the predefined target value of the indicator. Based upon the resulting difference between these two values, the indicators are assigned one of the following symbols:



If the development continues, the deviation from the target value will be less than 5 % of the difference between the target value and the current value;



If the trend continues, the indicator will foreseeably miss its target by at least 5 % and at most 20 % of the difference between the target value and the current value;



The indicator is developing in the right direction, but if the trend continuous the target value will be missed by more than 20 % by the target year;



The indicator is not developing in the right direction and therefore the gap to the target value is widening;

If data is not available for every year, the last six points of time for which reliable data is available, are used to calculate the average change. In the case of less than four suitable and available points in time, there will be no calculation.

If the target is not an exact value, but a target interval that is predefined (for example indicator 11.1.a) the weakest of the targets, arising in the target interval, is adopted. If several target values are predefined for one indicator, that are to be reached in varying years (for example indicator 4.2.b), the status is determined by using the respectively next prospective target year.

Based upon this systematics two special cases are treated. If a target value or a threshold is not to be reached in future, but every year (for example indicator 6.2), two information are combined for the evaluation: primarily the last achieved value as well as subordinately the average change over the last five years. If a target value or an even better value was reached in the last year and the average trend does not indicate towards a development in the wrong direction, a sun is pictured. If a target value or an even better value was reached in the last year, but the average trend

indicates towards a development in the wrong direction, a sun is pictured which is, however, partially hidden by a cloud. If the target value has not been reached, but the average development goes in in the right direction, only a cloud is pictured. If the target value is missed and the indicator has developed in the wrong direction on average of the recent changes, a thunderstorm is illustrated. This procedure is used as well if an indicator is supposed to reach a concrete target value by an exact target year, but has reached the goal already, as the standard procedure cannot provide for reliable statements concerning the development.

In the case that only the direction of the supposed development is given for an indicator, but not a concrete target value (for example indicator 1.1.a), two information are combined for the evaluation: primarily the average change over the last five years as well as subordinately the last annual change. If both, the average as well as the last annual change point in the right direction, the symbol shown is a sun. If the average development is going in the right direction, but the last year was characterised by a trend towards the wrong direction or no change at all, the sun is complemented by a cloud. Vice versa, if the average value points towards the wrong direction or stagnates, but the last year appears as a turning point in the desired direction, a cloud is depicted. If neither the average value nor the last change are developing in the right direction, the shown symbol is a thunderstorm.

If several targets are defined for one indicator, that are to be reached at the same time (for example indicator 10.1), the development is evaluated for each target. The most negative individual assessment is then decisive for the weather symbol assigned to the indicator.

The synoptic table also provides information about the evaluation of an indicator in previous years. This indicates whether a weather symbol for an indicator was rather stable or volatile in the past years.

## INDICATOR STATUS SUMMARY

No.	Indicators	Targets	Evaluation in previous years			Current evaluation
<b>1 No poverty</b>						
<b>Poverty – Reducing poverty</b>						
1.1.a	Material deprivation	Indicator significantly below the EU-28 level up to 2030	No evaluation possible	2013 	2014 	2015 
1.1.b	Severe material deprivation	Indicator significantly below the EU-28 level up to 2030	No evaluation possible	2013 	2014 	2015 
<b>2 Zero hunger</b>						
<b>Farming – Environmentally sound production in our cultivated landscapes</b>						
2.1.a	Nitrogen surplus in agriculture	Overall nitrogen surpluses for Germany to be reduced to 70 kilograms per hectare of utilised agricultural land in the annual average from 2028 – 2032	2009 	2010 	2011 	2012 
2.1.b	Organic farming	Share of organic farming on land used for agriculture to be increased 20% in coming years	2012 	2013 	2014 	2015 

No.	Indicators	Targets	Evaluation in previous years				Current evaluation
<b>3 Good health and well-being</b>							
<b>Health and nutrition – <i>Living healthy longer</i></b>							
3.1.a	Premature mortality (cases of death per 100,000 residents under 70): women	To be reduced to 100 cases per 100,000 by 2030	2011 	2012 	2013 	2014 	
3.1.b	Premature mortality (cases of death per 100,000 residents under 70): men	To be reduced to 190 cases per 100,000 by 2030	2011 	2012 	2013 	2014 	
3.1.c	Smoking rate among adolescents (12- to 17-year-old)	To be decreased to under 7% by 2030	2012 	2013 	2014 	2015 	
3.1.d	Smoking rate among adults (15 years and older)	To be decreased to under 19% by 2030	2010 	2011 	2012 	2013 	
3.1.e	Obesity rate among adolescents (11- to 17-year-olds)	Increase to be permanently halted	No evaluation possible				
3.1.f	Obesity rate among adults (18 years and older)	Increase to be permanently halted	2010 	2011 	2012 	2013 	

## INDICATOR STATUS SUMMARY

No.	Indicators	Targets	Evaluation in previous years				Current evaluation
<b>Air pollution – Keeping the environment healthy</b>							
3.2.a	Emissions of air pollutants	Emissions of 2005 to be reduced to 55 % by 2030	2011	2012	2013	2014	
3.2.b	Share of the population with excessive exposure to PM <sub>10</sub>	WHO particulate matter benchmark of an annual average of 20 micrograms/ cubic metre for PM <sub>10</sub> to be achieved as widely as possible by 2030	2011	2012	2013	2014	
<b>4 Quality education</b>							
<b>Education – Continuously improving education and vocational training</b>							
4.1.a	Early school leavers (18- to 24-year-olds)	To be reduced to less than 10 % by 2020	2012	2013	2014	2015	
4.1.b	30- to 34-year-olds with a tertiary or post-secondary non-tertiary level of education	To be increased to 42 % by 2020	2012	2013	2014	2015	
<b>Prospects for families – Improving the compatibility of work and family life</b>							
4.2.a	All-day care provision for children 0- to 2-year-olds	To be increased to 35 % by 2030	2013	2014	2015	2016	
4.2.b	All-day care provision for children 3- to 5-year-olds	To be increased to 60 % by 2020 and 70 % by 2030	2013	2014	2015	2016	

No.	Indicators	Targets	Evaluation in previous years				Current evaluation
<b>5 Gender equality</b>							
<b>Equality – Promoting equal opportunities in society</b>							
5.1.a	Gender pay gap	To be reduced to 10% by 2030	2012 	2013 	2014 	2015 	
5.1.b	Women in management positions in business	30% women in supervisory boards of listed and fully co-determined companies by 2030	No evaluation possible				
<b>Equality – Strengthening the economic participation of women globally</b>							
5.1.c	Vocational qualification of girls and women through German development cooperation	To be successively increased by a third by 2030 compared to 2015 as the base year	No evaluation possible				
<b>6 Clean water and sanitation</b>							
<b>Water quality – Reducing the pollution of water with substances</b>							
6.1.a	Phosphorus in flowing waters	The benchmark values	2011 	2012 	2013 	2014 	
6.1.b	Nitrate in groundwater	„50 mg/l“ of nitrate in groundwater to be complied with by 2030	2011 	2012 	2013 	2014 	
<b>Drinking water and sanitation – Better access to drinking water and sanitation worldwide, higher (safer) quality</b>							
6.2	Development cooperation for drinking water and sanitation	10 million people per year to gain access to water until 2030	No evaluation possible			2015 	

## INDICATOR STATUS SUMMARY

No.	Indicators	Targets	Evaluation in previous years				Current evaluation
<b>7 Affordable and clean energy</b>							
<b>Resource conservation – Using resources economically and efficiently</b>							
7.1.a	Final energy productivity	To be increased by 2.1 % per year from 2008 to 2050	2012 	2013 	2014 	2015 	
7.1.b	Primary energy consumption	To be reduced by 20 % by 2020 and 50 % by 2050 compared to 2008	2012 	2013 	2014 	2015 	
<b>Renewable energy – Strengthening a sustainable energy supply</b>							
7.2.a	Share of renewable energies in gross final energy consumption	To be increased to 18 % by 2020, to 30 % by 2030 and 60 % by 2050	2012 	2013 	2014 	2015 	
7.2.b	Share of renewable energy sources in electricity consumption	To be increased to at least 35 % by 2020, to at least 50 % by 2030, to at least 65 % by 2040 and to at least 80 % by 2050	2012 	2013 	2014 	2015 	

No.	Indicators	Targets	Evaluation in previous years			Current evaluation
<b>8 Decent work and economic growth</b>						
<b>Resource conservation – Using resources economically and efficiently</b>						
8.1	Raw material input productivity	Trend of 2000 – 2010 to be maintained until 2030	2008 	2009 	2010 	2011 
<b>Government debt – Consolidating public finances – creating intergenerational equity</b>						
8.2.a	Government deficit	Ratio of government deficit to GDP less than 3 %	2012 	2013 	2014 	2015 
8.2.b	Structural deficit	Structurally balanced public spending, total national structural deficit of no more than 0.5 % of GDP	2012 	2013 	2014 	2015 
8.2.c	Government debt	Ratio of government debt to GDP no more than 60 %	2012 	2013 	2014 	2015 
<b>Provision for future economic stability – Creating favourable investment conditions – Securing long-term prosperity</b>						
8.3	Gross fixed capital formation in relation to GDP	Appropriate development of the ratio	2012 	2013 	2014 	2015 
<b>Economic output – Combining larger economic output with environmental and social responsibility</b>						
8.4	Gross domestic product per capita	Steady and appropriate economic growth	2012 	2013 	2014 	2015 
<b>Employment – Boosting employment levels</b>						
8.5.a	Employment rate (total) (20- to 64- year-olds)	To be increased to 78 % by 2030	2012 	2013 	2014 	2015 
8.5.b	Employment rate (older people) (60- to 64- year-olds)	To be increased to 60 % by 2030	2012 	2013 	2014 	2015 
<b>Global supply chains – Enabling decent work worldwide</b>						
8.6	Number of members of the Textile Partnership	To be significantly increased by 2030	No evaluation possible			

## INDICATOR STATUS SUMMARY

No.	Indicators	Targets	Evaluation in previous years				Current evaluation
<b>9 Industry, innovation and infrastructure</b>							
<b>Innovation – Shaping the future with new solutions</b>							
9.1	Private and public spending on research and development	At least 3% of GDP by 2030	2011 	2012 	2013 	2014 	
<b>10 Reduced inequalities</b>							
<b>Equal educational opportunities – Educational success of foreigners in German schools</b>							
10.1	Foreign school graduates	Proportion of foreign school leavers with at least a Hauptschule certificate (lower secondary schooling) is to be increase by 2030	2012 	2013 	2014 	2015 	
		Their graduation rate to be raised to that of German school leavers by 2030	2012 	2013 	2014 	2015 	
<b>Distributive justice – Preventing too-great inequality within Germany</b>							
10.2	Gini coefficient of equivalised disposable income	Coefficient to be below the EU-28 figure by 2030	2011 	2012 	2013 	2014 	

No.	Indicators	Targets	Evaluation in previous years				Current evaluation
<b>11 Sustainable cities and communities</b>							
<b>Land use – Sustainable land use</b>							
11.1.a	Built-up area and transport infrastructure expansion	To be reduced to 30 ha minus x per day by 2030	2011 	2012 	2013 	2014 	
11.1.b	Loss of open space	Reduction in the loss of open space per inhabitant	2011 	2012 	2013 	2014 	
11.1.c	Settlement density	No reduction in settlement density	2011 	2012 	2013 	2014 	
<b>Mobility – Guaranteeing mobility – Protection the environment</b>							
11.2.a	Final energy consumption in freight transport	Target range minus 15 to minus 20 % up to 2030	2011 	2012 	2013 	2014 	
11.2.b	Final energy consumption in passenger transport	Target range minus 15 to minus 20 % up to 2030	2011 	2012 	2013 	2014 	
11.2.c	Population-weighted average travel time with public transport from each stop to the next medium-sized/ large city	Reduction	No evaluation possible				
<b>Housing – Affordable housing for all</b>							
11.3	Housing cost overload	Proportion of the population to decline that spend more than 40 % of their disposable income on living expenses to 13 % by 2030	No evaluation possible	2013 	2014 	2015 	

## INDICATOR STATUS SUMMARY

No.	Indicators	Targets	Evaluation in previous years				Current evaluation
<b>12 Responsible consumption and production</b>							
<b>Sustainable consumption – Making consumption environmentally and socially compatible</b>							
12.1.a	Market share of goods certified by independently verified sustainability labelling schemes	Market share to be increased by 34 % by 2030	No evaluation possible				
12.1.b	Energy consumption and CO <sub>2</sub> emissions from private household consumption	Continuous reduction of energy consumption	2010 	2011 	2012 	2013 	
<b>Sustainable production – Increasing the proportion of sustainable production</b>							
12.2	EMAS eco-management	5,000 organisation locations by 2030	2012 	2013 	2014 	2015 	
<b>13 Climate action</b>							
<b>Climate protection – Reducing greenhouse gases</b>							
13.1.a	Greenhouse gas emissions	To be reduced by at least 40 % by 2020, by at least 55 % by 2030, by at least 70 % by 2040 and by 80 % to 95 % by 2050, in each case compared to 1990	2012 	2013 	2014 	2015 	
<b>Climate protection – Germany's contribution to international climate finance</b>							
13.1.b	International climate finance for the reduction of greenhouse gases and adaptation to climate change	Financing to be doubled by 2020 compared to 2014	No evaluation possible				2014 

Nr.	Indikatoren	Ziele	Bewertung in den Vorjahren				Aktuelle Bewertung
<b>14 Life below water</b> <b>Protecting the oceans – Protection and sustainable use of oceans and marine resources</b>							
14.1.a	Nutrient inputs in coastal waters and marine waters – nitrogen input via the inflows into the Baltic Sea and the North Sea	Adherence of a good quality according to the Ordinance on the Protection of Surface Waters					
14.1.aa	Baltic Sea	Annual averages for total nitrogen shall not exceed 2.6 milligrams per litre	2011 	2012 	2013 	2014 	
14.1.ab	North sea	Annual averages for total nitrogen shall not exceed 2.8 milligrams per litre	2011 	2012 	2013 	2014 	
14.1.b	Share of sustainably fished fish stocks in the North and Baltic Sea	Fish stocks used for economic purposes must be sustainably managed in accordance with the MSY approach by 2020	2011 	2012 	2013 	2014 	

## INDICATOR STATUS SUMMARY

No.	Indicators	Targets	Evaluation in previous years				Current evaluation
<b>15 Life on Land</b>							
<b>Biodiversity – Conserving species – Protecting habitats</b>							
15.1	Species diversity and landscape quality	To be increased to the index value of 100 by 2030	2010 	2011 	2012 	2013 	
<b>Ecosystems – Protecting ecosystems, conserving ecosystem services and preserving habitats</b>							
15.2	Eutrophication of ecosystems	To be reduced the share of land with an elevated input of nitrogen is by 35 % by 2030 compared with 2005	No evaluation possible				
<b>Forests – Preventing deforestation</b>							
15.3	Payments to developing countries for the verified preservation or restoration of forests under the REDD+ rulebook	To be increased the German payments by 2030	2012 	2013 	2014 	2015 	

No.	Indicators	Targets	Evaluation in previous years				Current evaluation
<b>16 Peace, justice and strong institutions</b>							
<b>Crime – Further increasing personal security</b>							
16.1	Criminal offences	To be reduced in number of recorded cases per 100,000 inhabitants to under 7,000 by 2030	2012 	2013 	2014 	2015 	
<b>Peace and security – Practical action to combat proliferation, especially of small arms</b>							
16.2	Number of projects to secure, register and destroy small arms and light weapons carried out by Germany in affected regions of the world	At least 15 projects per year by 2030	2012 	2013 	2014 	2015 	
<b>Good governance – Combating corruption</b>							
16.3.a	Corruption Perceptions Index in Germany	To be improved by 2030	No evaluation possible			2015 	
16.3.b	Corruption Perceptions Index in partner countries in the German development cooperation	To be improved by 2030	No evaluation possible			2015 	

## INDICATOR STATUS SUMMARY

No.	Indicators	Targets	Evaluation in previous years			Current evaluation
<b>17 Partnerships for the goals</b>						
<b>Development cooperation – Supporting sustainable development</b>						
17.1	Share of expenditure for official development assistance in gross national income	To be increased to 0.7% by 2030	2012 	2013 	2014 	2015 
<b>Knowledge transfer, especially in technical areas – Sharing knowledge internationally</b>						
17.2	Number of students and researchers from developing countries and LDCs per year	To be increased by 10% by 2020, then stabilised	2012 	2013 	2014 	2015 
<b>Opening markets – Improving trade opportunities for developing countries</b>						
17.3	Share of imports from LDCs in total imports to Germany	To be doubled between 2014 and 2030	2011 	2012 	2013 	2014 



## DATA ANNEX

<b>1 No poverty</b>							
<b>Poverty – Reducing poverty</b>							
No.	Indicator	2010	2011	2012	2013	2014	2015
		Share of persons, in %					
<b>1.1.a</b>	<b>Material deprivation</b>						
	Germany	11.1	12.4	11.3	11.6	11.3	10.7
	EU-28 <sup>1</sup>	17.8	18.5	19.7	19.5	18.5	16.9
<b>1.1.b</b>	<b>Severe material deprivation</b>						
	Germany	4.5	5.3	4.9	5.4	5.0	4.4
	EU-28 <sup>1</sup>	8.4	8.8	9.9	9.6	8.9	8.1

<sup>1</sup> Estimated values for EU-28.

Source: Federal Statistical Office. Eurostat

<b>2 Zero hunger</b>						
<b>Farming – Environmentally sound production in our cultivated landscapes</b>						
No.	Indicator	2010	2011	2012	2013	2014
		in kilograms per hectare				
<b>2.1.a</b>	<b>Nitrogen surplus</b>					
	Moving five-year average <sup>1</sup>	96	95	95	...	...
	Calculated annual values <sup>2</sup>	92	109	95	97	84

<sup>1</sup> Moving five-year average, referring to the middle year.

<sup>2</sup> 2014 some values estimated.

... = Data will be available later

Source: Institute for Crop and Soil Science, Julius Kühn Institute (JKI) and Institute of Landscape Ecology and Resources Management, University of Giessen

No.	Indicator	2010	2011	2012	2013	2014	2015
		Land used as proportion of total farming land, in %					
<b>2.1.b</b>	<b>Organic farming</b>						
	Data from the Federal Statistical Office	5.6	–	5.8	6.0	6.2	6.3
	Data from the Federal Ministry of Food and Agriculture	5.9	6.1	6.2	6.4	6.3	6.5

– = No figures or magnitude zero

Source: Federal Statistical Office. Federal Ministry of Food and Agriculture

### 3 Good health and well-being

#### Health and nutrition – Living healthy longer

No.	Indicator	2010	2011	2012	2013	2014
		Cases of death per 100,000 residents under 70 <sup>1</sup>				
<b>Premature mortality</b>						
3.1.a	Women	155	157	153	156	149
3.1.b	Men	301	299	293	292	281

1 “Old” standardised European population below 70 years (excluding those less than 1 year old).

Source: Federal Statistical Office

No.	Indicator	2009	2010	2011	2012	2013	2014	2015
		Share in %						
<b>Smoking rate</b>								
3.1.c	Adolescents	–	13	12	12	–	10	8
	Girls	–	12	12	13	–	9	8
	Boys	–	14	11	12	–	11	8
3.1.d	Adults	26	–	–	–	24	–	–
	Women	21	–	–	–	20	–	–
	Men	31	–	–	–	29	–	–

– = No figures or magnitude zero

Source: Orth, B. (2016). Die Drogenaffinität Jugendlicher in der Bundesrepublik Deutschland 2015. Rauchen, Alkoholkonsum und Konsum illegaler Drogen: aktuelle Verbreitung und Trends. BZgA-Forschungsbericht. Köln: Bundeszentrale für gesundheitliche Aufklärung.

Federal Statistical Office. Federal Centre for Health Education

No.	Indicator	2003 – 2006	2009 – 2012
		in % of those polled	
3.1.e	Obesity rate among adolescents (11- to 17-year-olds)	8.9	10.0
	Girls	9.6	10.3
	Boys	8.4	9.6
	Excess weight among adolescents	9.9	8.9
	Girls	9.7	7.6
	Boys	10.1	10.2

Source: Robert Koch Institute

## DATA ANNEX

No.	Indicator	2009	2013
		in % of adults <sup>1</sup>	
3.1.f	Obesity rate among adults (18 years and older) <sup>2</sup>	13.3	14.1
	Women	12.4	12.8
	Men	14.2	15.4
	Excess weight among adults <sup>3</sup>	36.7	34.0
	Women	29.1	26.2
	Men	44.4	41.5

1 Age-standardised results based on the new European population.

2 People with a BMI of 30 are classified as "obese".

3 People with a BMI of 25 and above are classified as "overweight".

Source: Federal Statistical Office

### Air pollution – Keeping the environment healthy

No.	Indicator	2010	2011	2012	2013	2014
		Index 2005 = 100				
3.2.a	Emissions of air pollutants <sup>1</sup>	91.8	90.5	87.3	87.5	83.9
	SO <sub>2</sub>	91.2	90.3	87.1	86.6	81.9
	NO <sub>x</sub>	84.1	81.9	79.4	79.0	75.5
	NH <sub>3</sub>	100.5	106.7	103.9	107.6	109.1
	NMVOC	91.1	85.0	81.9	79.4	73.2
	PM <sub>2,5</sub>	92.1	88.5	84.2	84.9	79.9

1 Average index of measurement data.

Source: German Environment Agency

No.	Indicator	2010	2011	2012	2013	2014
		Share of total population, in %				
3.2.b	Population with increased exposure to PM <sub>10</sub>	28.9	36.6	12.2	14.3	12.4

Source: German Environment Agency

## 4 Quality education

### Education – Continuously improving education and vocational training

No.	Indicator	2010	2011	2012	2013	2014	2015
<b>Share of all 18- to 24-year-olds, in %</b>							
4.1.a	Early school leavers	11.9	11.6	10.4	9.8	9.5	9.8
	Women	11.0	10.6	9.7	9.3	9.0	9.5
	Men	12.7	12.5	11.0	10.3	10.0	10.1
<b>Share of all 30- to 34-year-olds, in %</b>							
4.1.b	30- to 34-year-olds with a tertiary or post-secondary non-tertiary level of education	41.3	42.2	43.4	44.5	45.7	46.8
	Women	42.7	44.4	46.0	46.8	48.4	50.5
	Men	40.0	40.1	40.9	42.2	42.9	43.1
	Tertiary total <sup>1</sup>	29.8	30.7	31.9	33.1	31.4	32.3

1 Until 2013: ISCED 97; the indicator refers to ISCED-categories 5A.B and 6. As of 2014: revised ISCED; the indicator refers to ISCED-categories 5, 6, 7 and 8.

Source: Federal Statistical Office

### Prospects for families – Improving the compatibility of work and family life

No.	Indicator	2010	2011	2012	2013	2014	2015	2016
Proportion of all children of the same age group, in %								
<b>All-day care provision for children<sup>1</sup></b>								
4.2.a	0- to 2-year-olds	10.2	11.3	12.7	13.7	15.3	15.9	16.2
4.2.b	3- to 5-year-olds	32.1	34.7	36.9	39.1	41.4	43.7	44.5

1 Childcare provision of more than seven hours in day-care facilities, excluding day care in private homes.

Source: Federal Statistical Office

## 5 Gender equality

### Equality – Promoting equal opportunities in society

No.	Indicator	2010	2011	2012	2013	2014	2015
in % of earnings by men							
5.1.a	Gender pay gap	22	22	22	22	22	21

Source: Federal Statistical Office

## DATA ANNEX

No.	Indicator	January 2015	September 2016
		Share of women, in %	
5.1.b	Women in management positions in business	22.9	27.3

Source: Frauen in Aufsichtsräten e. V.

No.	Indicator	2013
		Share of seats occupied by women, in %
	Women in parliaments – Federal German Parliament	36.3

Source: Federal Statistical Office

### Equality – Strengthening the economic participation of women globally

No.	Indicator	2015
		in thousands
5.1.c	Vocational qualification of girls and women through German development cooperation	355

Source: Federal Ministry for Economic Cooperation and Development. Centrum für Evaluation GmbH. Deutsche Gesellschaft für internationale Zusammenarbeit GmbH

## 6 Clean water and sanitation

### Water quality – Reducing the pollution of water with substances

No.	Indicator	2010	2011	2012	2013	2014
		Share of monitoring point, in %				
6.1.a	<b>Phosphorous in flowing waters</b> Benchmark value for a good ecological status for total phosphorous in flowing waters is met	31.9	37.5	35.4	35.9	34.8

Source: German Environment Agency according to information from the German Working Group on water issues of the Länder and the Federal Government represented by the Federal Environment Ministry

No.	Indikator	2010	2011	2012	2013	2014
		Proportion of monitoring point, in %				

### 6.1.b Nitrate in groundwater

the threshold <sup>1</sup> is met	81.7	82.0	81.0	81.4	81.8
-----------------------------------	------	------	------	------	------

1 Monitoring points at which the threshold 50 milligrams of nitrate per litre per year is met on average. – 2014 excluding data for Berlin and Mecklenburg-Western Pomerania..

Source: German Environment Agency and Länder Initiative for a Set of Core Indicators (LIK) based on data from the German Working Group on water issues of the Länder and the Federal Government represented by the Federal Environment Ministry

## Drinking water and sanitation – Better access to drinking water and sanitation worldwide. higher (safer) quality

No.	Indicator	2012	2013	2014	2015
		Persons reached in millions			
6.2	Access to drinking water and sanitation subsidised by Germany	10.6	11.6	31.0	11.0

Source: Kreditanstalt für Wiederaufbau

## 7 Affordable and clean energy

### Resource conservation – Using resources economically and efficiently

No.	Indicator	2010	2011	2012	2013	2014	2015 <sup>1</sup>
		2008 = 100					
7.1.a	Final energy productivity	96.6	105.0	105.0	102.3	109.7	109.3
7.1.b	Primary energy consumption	98.9	94.6	93.5	96.1	91.7	92.4

1 Preliminary data.

Source: Federal Statistical Office. Energy Balance Association in Berlin (AGEB)

### Renewable energies – Strengthening a sustainable energy supply

No.	Indicator	2010	2011	2012	2013	2014	2015
		in %					
7.2.a	Share of renewable energies in gross final energy consumption	10.9	11.8	12.8	13.1	13.6	14.9
7.2.b	Share of renewable energy sources in gross electricity consumption	17.0	20.3	23.5	25.1	27.3	31.6

Source: Working Group on Renewable Energies Statistics. Federal Ministry for Economic Affairs and Energy

## 8 Decent work and economic growth

### Resource conservation – Using resources economically and efficiently

No.	Indicator	2000	2010	2011
		2000 = 100		
8.1	Value of final use (price-adjusted) relative to raw material extraction and imports in raw material equivalents	100	116.8	119.6
	Raw material extraction and imports in raw material equivalents	100	102.8	105.0
	Value of final use (price-adjusted) <sup>1</sup>	100	120.1	125.5

<sup>1</sup> Equivalent to price-adjusted gross domestic product plus the value of imports.

Source: Federal Statistical Office

### Government debt – Consolidating public finances – Creating intergenerational equity

No.	Indicator	2010	2011	2012	2013	2014	2015
<b>Share of gross domestic product at current prices, in %</b>							
8.2.a	Funding balance	-4.2	-1.0	-0.0	-0.2	0.3	0.7
8.2.b	Structural funding balance	-2.2	-1.4	-0.1	0.1	0.8	0.9
<b>Year-on-year changes, in %</b>							
	Gross domestic product (price-adjusted) <sup>1</sup>	4.1	3.7	0.5	0.5	1.6	1.7

<sup>1</sup> Previous year's prices indexed. 2010 = 100.

Source: Federal Statistical Office. Federal Ministry of Finance

No.	Indicator	2010	2011	2012	2013	2014	2015
Share of gross domestic product at current prices, in %							
8.2.c	Government debt	81.0	78.7	79.9	77.5	74.9	71.2

Source: Federal Statistical Office. German Bundesbank

### Provision for future economic stability – Creating favourable investment conditions – Securing long-term prosperity

No.	Indicator	2010	2011	2012	2013	2014	2015
Share of gross domestic product at current prices, in %							
8.3	Gross fixed capital formation	19.4	20.3	20.1	19.7	20.0	19.9

Source: Federal Statistical Office

### Economic output – Combining larger economic output with environmental and social responsibility

No.	Indicator	2010	2011	2012	2013	2014	2015
		Thousands of euros					
8.4	Gross domestic product (price-adjusted) per capita	32.1	33.3	33.4	33.5	33.9	34.2

Source: Federal Statistical Office

### Employment – Boosting employment levels

No.	Indicator	2010	2011	2012	2013	2014	2015
		Shares of population of the same age, in %					
<b>Employment rate</b>							
8.5.a	Total (20- to 64-year-olds)	75.0	76.5	76.9	77.3	77.7	78.0
	Women	69.7	71.3	71.6	72.5	73.1	73.6
	Men	80.4	81.7	82.1	82.1	82.2	82.3
8.5.b	Older people (60- to 64-year-olds)	41.1	44.3	46.6	50.0	52.6	53.3
	Women	33.1	36.5	38.8	42.8	46.2	47.9
	Men	49.4	52.4	54.9	57.7	59.4	59.1

Source: Federal Statistical Office, Eurostat

### Global supply chains – Enabling decent work worldwide

No.	Indicator	4/2014	4/2015	4/2016
		Number of members		
8.6	Partnership for Sustainable Textiles	59	172	188

Source: Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ) GmbH

## 9 Industry, innovation and infrastructure

### Innovation – Shaping the future with new solutions

No.	Indicator	2010	2011	2012	2013	2014
		Expenditure in % of gross domestic product				
9.1	Private and public spending on research and development	2.7	2.8	2.9	2.8	2.9

Source: Federal Statistical Office

## 10 Reduced inequalities

### Equal educational opportunities – Educational success of foreigners in German schools

No.	Indicator	2010	2011	2012	2013	2014	2015
		in %					
10.1	Share of foreign school graduates						
	Total	87.2	88.2	88.6	89.3	88.1	88.2
	Foreign young women	89.5	90.3	90.6	91.1	89.4	90.3
	Foreign young men	85.0	86.2	86.7	87.6	86.8	86.2
	Share of German school graduates total						
	Total	94.6	95.0	95.1	95.4	95.1	95.0

Source: Federal Statistical Office

### Distributive justice – Preventing too-great inequality within Germany

No.	Indicator	2010	2011	2012	2013	2014
10.2	Gini coefficient of equivalised disposable income					
	Germany	0.29	0.29	0.28	0.30	0.31
	EU-28	0.31	0.31	0.30	0.31	0.31
	Gini coefficient of equivalised income before social transfers <sup>1</sup>					
	Germany	0.36	0.36	0.35	0.36	0.37
	Gini coefficient of market income					
	Germany	0.49	0.51	0.50	0.51	...
	Gini coefficient of wealth					
	Germany	0.76	–	–	–	0.76
	EU-28	0.68	–	–	–	...

<sup>1</sup> Social transfers do not include pensions.

... = Data will be available later

– = No Figures or magnitude zero

Source: Federal Statistical Office, Eurostat, German Bundesbank, European Central Bank, German Institute for Economic Research

## 11 Sustainable cities and communities

### Land use – Sustainable land use

No.	Indicator	2010	2011	2012	2013	2014
		hectares per day				
11.1.a	Built-up area and transport infrastructure expansion					
	Moving four-year average <sup>1</sup>	87	81	74	73	69
	Annual value	77	74	69	71	63
	Transport land	21	17	11	19	23
	Buildings and open land. commercial/industrial land <sup>2</sup>	33	30	40	29	22
	Recreational land. cemetery	23	27	18	23	18

1 The moving four-year average is determined in each case by the development of the annual value of the indicator in the relevant year and the preceding three years.

2 Excluding mining.

Source: Federal Statistical Office

No.	Indicator	2010	2011	2012	2013	2014
		Moving four-year average in square metres per year				
11.1.b	Change in open space per capita					
	Total	- 4.0	- 4.2	- 3.8	- 3.6	- 3.5
	Non-rural areas	- 1.5	- 1.4	- 1.2	- 1.2	- 1.1
	Rural areas	- 5.9	- 6.3	- 5.7	- 5.5	- 5.3

Source: Federal Statistical Office. Federal Institute for Research on Building, Urban Affairs and Spatial Development

No.	Indicator	2010	2011	2012	2013	2014
		Index 2000 = 100				
11.1.c	Settlement density <sup>1</sup>					
	Total	92	89	89	89	89
	Non-rural areas	96	94	94	95	95
	Rural areas	89	87	86	86	86

1 Inhabitants per square kilometre of built-up area and transport land.

Source: Federal Statistical Office. Federal Institute for Research on Building, Urban Affairs and Spatial Development

## DATA ANNEX

### Mobility – Guaranteeing mobility – Protecting the environment

No.	Indicator	2010	2011	2012	2013	2014 <sup>1</sup>
		2005 = 100				
11.2.a	Final energy consumption for the carriage of goods	103.3	106.2	103.5	104.4	107.2
	Goods transport performance	108.6	111.4	109.5	111.5	113.1
	Final energy consumption per tonne-kilometre	95.2	95.4	94.6	93.7	94.8
11.2.b	Final energy consumption in passenger transport	97.4	98.0	97.2	96.9	97.6
	Passenger transport performance	100.8	104.0	104.3	105.1	106.7
	Final energy consumption per passenger-kilometre	94.6	94.2	93.2	92.2	91.5

1 Some values estimated.

Source: Federal Ministry of Transport and Digital Infrastructure. Institute for Energy and Environmental Research

No.	Indicator	2012	2016
		In minutes	
11.2.c	Travel time by public transport to the nearest medium-sized or large city	23.5	22.4

Source: Federal Institute for Research on Building. Urban Affairs and Spatial Development

### Housing – Affordable housing for all

No.	Indicator	2010	2011	2012	2013	2014	2015
		Share of all persons, in %					
11.3	People in households that spend more than 40% of their disposable income on living expenses	14.5	16.1	16.6	16.4	15.9	15.6

Source: Federal Statistical Office

## 12 Responsible consumption and production

### Sustainable consumption – Making consumption environmentally and socially compatible

No.	Indicator	2012 <sup>1</sup>	2013 <sup>1</sup>	2014 <sup>1</sup>
		in %		
12.1.a	Market share of products certified by independently verified sustainability labelling schemes	3.8	4.5	6.0

1 Preliminary data.

Source: Gesellschaft für Konsumforschung, the Federal Motor Transport Authority, Agrarmarkt Informations-Gesellschaft mbH, the Organic Food Production Alliance, the Association for Sustainable Mobility, the German Environment Agency

No.	Indicator	2010	2011	2012	2013
		2005 = 100			
12.1.b	Energy consumption by private households	101.9	97.8	96.6	99.1
	Direct energy consumption	41.1	37.4	37.7	39.7
	Indirect energy consumption	60.7	60.4	58.9	59.4
	CO <sub>2</sub> emissions	104.9	102.7	102.1	103.8

Source: Federal Statistical Office

### Sustainable production – Increasing the proportion of sustainable production

No.	Indicator	2010	2011	2012	2013	2014	2015
		Number					
12.2	<b>EMAS eco-management</b>						
	EMAS Organisational locations	1,913	1,903	1,834	1,877	1,925	2,031
	Employees	780,757	764,736	772,774	787,525	785,432	800,635

Source: Deutscher Industrie und Handelskammertag e.V., the German EMAS Advisory Board, the German Environment Agency

## 13 Climate action

### Climate protection – Reducing greenhouse gases

No.	Indicator	2010	2011	2012	2013	2014	2015 <sup>1</sup>
		1990 = 100					
13.1.a	Greenhouse gas emissions <sup>2</sup> in CO <sub>2</sub> -equivalents	75.4	73.9	74.2	75.7	72.3	72.8

<sup>1</sup> Preliminary near real-time forecast.

<sup>2</sup> Greenhouse gases = carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulphur hexafluoride (SF<sub>6</sub>), nitrogen trifluoride (NF<sub>3</sub>), hydrofluorocarbons (HFC) and perfluorocarbons (PFC).

Source: German Environment Agency

### Climate protection – Germany's contribution to international climate finance

No.	Indicator	2011	2012	2013	2014	2014 target
		billions of euros				
13.1.b	German funding primarily to developing and emerging countries for climate protection	1.56	1.66	1.95	2.34	2.00

Source: Federal Ministry for Economic Cooperation and Development

## 14 Life below water

### Protecting the oceans – Protection and sustainable use of oceans and marine resources

No.	Indicator	2010	2011	2012	2013	2014
		Concentration in mg/l (moving average of the previous 5 years)				
	Total nitrogen input via selected German inflows					
14.1.aa	Baltic Sea <sup>1</sup>	4.5	4.5	4.2	4.0	3.9
14.1.ab	North Sea <sup>2</sup>	3.9	4.0	3.8	3.8	3.8

<sup>1</sup> Rivers are Peene, Trave and Warnow.

<sup>2</sup> Rivers are Eider, Elbe, Ems and Weser.

Source: Federal Statistical Office, German Environment Agency using information from the Länder and river basin communities

No.	Indicator	2010	2011	2012	2013	2014
		in %				
14.1.b	Share of sustainably fished fish stocks in the North and Baltic Sea from all MSY stocks					
	North Sea	48.1	60.7	42.9	57.1	53.6
	Baltic Sea	55.0	61.9	47.6	61.9	57.1
	MSY-investigated from all managed stocks	28.6	57.1	28.6	42.9	42.9
		34.6	35.9	35.9	35.9	35.9

Source: International Council for the Exploration of the Sea

## 15 Life on land

### Biodiversity – Conserving species – Protecting habitats

No.	Indicator	2010	2011	2012	2013
		Index 2030 = 100			
15.1	Species diversity and landscape quality (stocks of selected bird species)	68.2	66.1	70.1	68.5
	Sub-index forests	79.8	79.3	87.9	86.9
	Sub-index settlements	66.5	70.8	69.2	66.2
	Sub-index farmland	62.6	58.2	61.3	59.2
	Sub-index inland waters	68.2	66.2	71.5	71.9
	Sub-index coasts/seas	62.9	61.5	57.9	58.2
	Sub-index Alps	/	/	/	/

/ = No data because the numerical value is not sufficiently reliable.

Source: Federal Agency for Nature Conservation

### Ecosystems – Protecting ecosystems, conserving ecosystem services and preserving habitats

No.	Indicator	2000	2005	2010
		Share of land, in %		
15.2	Ecosystems in which critical loads for eutrophication due to nitrogen input are exceeded	66	57	54

Source: European Environment Agency

### Forests – Preventing deforestation

No.	Indicator	2010	2011	2012	2013	2014	2015
		In millions of euros					
15.3	Payments to developing and emerging countries for the verified preservation or restoration of forests under the REDD+ rulebook	20.0	12.0	24.9	36.3	31.0	15.7

Source: Federal Ministry for Economic Cooperation and Development

## 16 Peace, justice and strong institutions

### Crime – Further increasing personal security

No.	Indicator	2010	2011	2012	2013	2014	2015
		Recorded cases per 100,000 inhabitants					
16.1	Criminal offences total	7,385	7,468	7,466	7,404	7,530	7,797
	including:						
	Fraud	1,198	1,157	1,186	1,165	1,200	1,190
	Burglary in homes	151	165	179	186	188	206
	Serious and grievous bodily harm	178	173	169	159	156	157

Source: Federal Criminal Police Office, Federal Statistical Office

## DATA ANNEX

### Peace and security – Practical action to combat proliferation, especially of small arms

No.	Indicator	2010	2011	2012	2013	2014	2015
		Number of projects					
16.2	Number of projects to secure, register and destroy small arms and light weapons carried out by Germany in affected regions of the world	3	11	15	14	15	26

Source: Federal Foreign Office

### Good governance – Combating corruption

No.	Indicator	2012	2013	2014	2015
16.3	Corruption Perceptions Index (100 corresponds to „no perception of corruption“)				
	Rating for Germany	79	78	79	81
	Number of partner countries of German development cooperation whose rating has improved compared with 2012	.	17	37	41

. = Numerical value unknown or not to be disclosed

Source: Transparency International

## 17 Partnerships for the goals

### Development cooperation – Supporting sustainable development

No.	Indicator	2010	2011	2012	2013	2014	2015 <sup>1</sup>
		in %					
17.1	Share of expenditure for official development assistance in gross national income	0.39	0.39	0.37	0.38	0.42	0.52

<sup>1</sup> Preliminary data.

Source: Federal Statistical Office, Federal Ministry for Economic Cooperation and Development

### Knowledge transfer, especially in technical areas – *Sharing knowledge internationally*

No.	Indicator	2010	2011	2012	2013	2014	2015 <sup>1</sup>
		Number in thousands					
17.2	Students and researchers from developing and emerging countries	149.4	158.7	170.7	185.9	200.3	215.3
	Students from LDCs	6.3	6.9	7.6	8.3	9.2	9.7
	Students from other developing and emerging countries	132.3	140.3	150.9	164.1	176.8	190.4
	Researchers from LDCs	0.4	0.5	0.5	0.6	0.5	0.5
	Researchers from other developing and emerging countries	10.3	10.9	11.7	12.9	13.8	14.6

<sup>1</sup> Preliminary data.

Source: Federal Statistical Office

### Opening markets – *Improving trade opportunities for developing countries*

No.	Indicator	2010	2011	2012	2013	2014
		Share of total imports to Germany, in %				
17.3	Imports from LDCs	0.53	0.67	0.62	0.71	0.71
	Imports of processed products from LDCs	0.47	0.54	0.54	0.62	0.66

Source: Federal Statistical Office

---

---



[www.destatis.de](http://www.destatis.de)

Central Information Service  
Phone: +49 (0) 611 / 75 24 05  
[www.destatis.de/contact](http://www.destatis.de/contact)

[www.destatis.de/publications](http://www.destatis.de/publications)