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SUSTAINABLE DEVELOPMENT IN GERMANY

Indicator Report 2006

Federal Statistical Office of Germany

Nachhaltigkeits-
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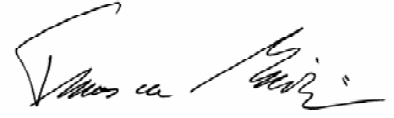
Preface

What do inland water shipping, local public transport and the size of the national debt or our expenditure for education have to do with each other? Not very much at first sight. Each subject is important per se. On closer inspection, however, it becomes apparent that these topics may serve as a yardstick for the extent to which we manage to secure the prosperity and quality of life of the generations to come. Fixed reference values for inland waterway shipping, the intensity of passenger transport, national debt or education spending enable us to define targets in the first place. Reduction targets in the case of carbon dioxide emissions or national debt, for instance, or growth targets for e.g. more transport of goods by ship or a growing expenditure for education. For a national Strategy for Sustainable Development to be used as a thread for action of the Federal Government is only credible if it measures up to concrete targets. We need indicators for these targets and reference values, to be able to recognise improvements upwards or downwards and determine future action. In an adaptation of the words of writer Hans Barbier: we cannot burn the wood that our children need to build their cabins with. Sustainability, therefore, cannot remain a phrase, but must become tangible: in indicators, figures and targets.

It requires a reliable and transparent performance control. The report in hand compares the values of the sustainability indicators to the targets set in the strategy of 2002. I am pleased that the federal statistical office has taken upon itself the task of analysing these values. The elaboration in hand shows: Significant progress was made in numerous areas. Overall, however, further efforts are needed.

The continuity of targets and indicators is an important prerequisite for attaining results of long-term significance and making the long-term trends that are decisive for sustainable development visible. Still, it is about time that current targets and indicators are checked, prior to the next progress report of the strategy in the year 2008. Are there better and more significant indicators? How to deal with targets that have already been reached, e. g. the target for the reduction of completed burglaries or the share of renewable energy in primary energy production that has doubled? What about targets that are desirable as such, for which, however, in view of current developments, one must question the time-frame set for their actual attainment (e. g. for organic farming)? The forthcoming inspection process will address these and other issues. This independent analysis by the Federal Statistical Office provides a sound basis not only for determining where we stand right now, but also for carefully

monitoring the further development of indicators and targets.



Dr. Thomas de Maizière
Federal Minister, Head of
the Federal Chancellery,
Chairman of the Committee of State
Secretaries for Sustainable Development

In April 2002, the Federal Government published its national Strategy for Sustainable Development under the title "Perspectives for Germany". Core of the strategy are 21 indicators. The sustainability of the development of the economy, the environment and the society is to be monitored using these indicators. For most of these indicators quantitative targets were set to serve as yardsticks.

The first progress report was published in 2004. The Federal Government charged the Federal Statistical Office with the task of writing the indicator report for 2006 presented here.

The indicators are based on data that were largely provided by official statistics in the first place. With its *Umweltökonomische Gesamtrechnungen* (Environmental Economic Accounting) statistics moreover has an outstanding set of instruments at its disposal for examining systematically how economic, environmental and social indicators of the strategy affect each other.

Looking at developments integrally particularly enables keeping track of the different and partially counteracting goals of the Strategy for Sustainability at the same time.

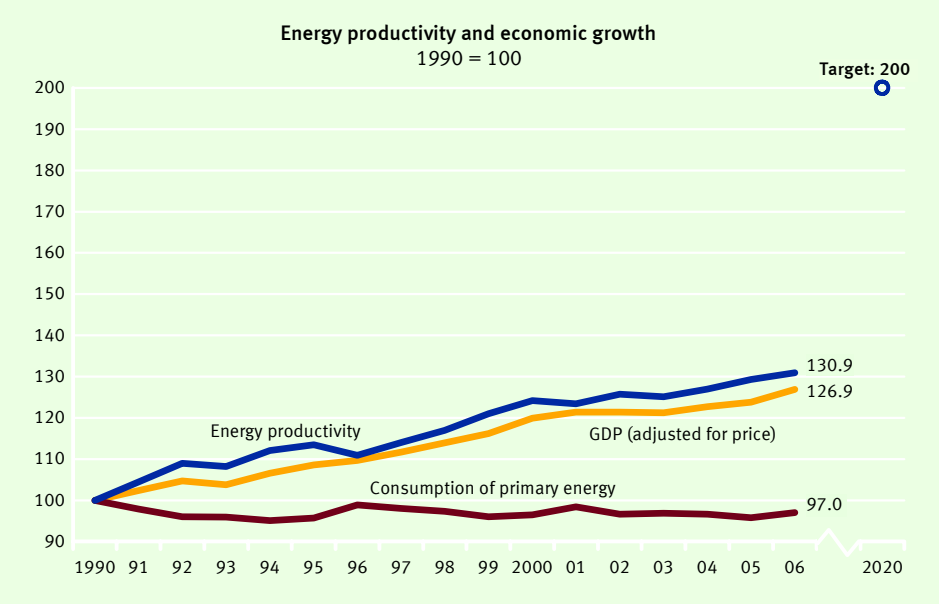
The Federal Statistical Office wrote this report in an independent capacity. It is based upon principles of neutral and independent reporting. The elucidations for individual indicators are therefore limited to statistical analysis and do not constitute any political statement.

The Federal Statistical Office supports a fact-based sustainability policy by providing data and statistical analyses on the status of the German sustainability indicators as well as by providing the professional experience needed to further develop the indicators methodically.

Walter Radermacher
President of the Federal Statistical Office

Resource protection

Using resources economycally and efficiently



Source: Federal Statistical Office and Energy Balances Working Group.

1a Energy productivity

In the economical process, the use of energy occupies a key position, for nearly every production activity either directly or indirectly involves the consumption of energy. Private households also directly consume energy, particularly in heating their homes and using electrical appliances as well as in using motor vehicles. At the same time, consuming energy may have various environmental impacts, such as the impairment of landscapes, ecological systems, soil, water bodies and ground water due to the depletion of natural resources of energy, ensuing emissions into the air, waste as well as the use of cooling water involved in converting and consuming energy sources. And, last but not least, the consumption of non-renewable resources is of special importance when it comes to safeguarding the basis of existence for future generations.

The Sustainability Strategy of the Federal Government takes account of the major importance of the energy issue, both from an economical and an environmental

perspective, by including an indicator "Energy Productivity" (gross domestic product, adjusted for price, per unit energy consumption). The Federal Government strives to double the energy productivity by 2020 compared to that of 1990.

Energy productivity in Germany between 1990 and 2006 has increased by almost 31 %. Although this rise in productivity does indicate a more efficient use of energy, it has only led to a comparatively insignificant drop in energy consumption of 3 %, as the increased efficiency was absorbed nearly wholly by an economic growth of approx. 27 %. The increase of the energy productivity has slowed down during the last six years (2000 through 2006). Going on at the average development rate up to now would not suffice to reach the target of doubling energy productivity by 2020.

In 2005, over 42 % of German energy consumption could be allocated to the production of goods and services, 29 % to the private households and the remaining 29 % to the transport sector.

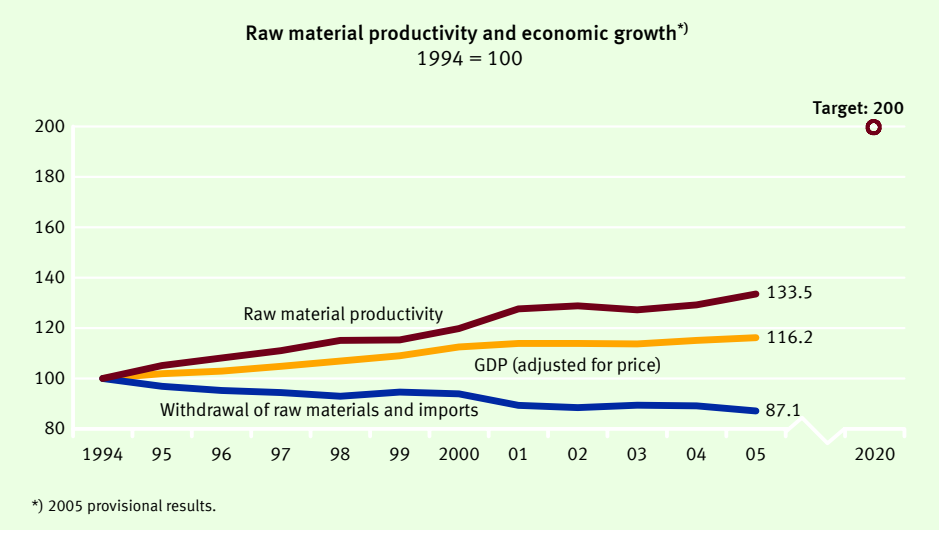
In the case of private households, the direct consumption of energy between 1990 and 2005 has gone up by about 11 %. This can be attributed particularly to an increased demand due to the trend towards larger living space and a sharp rise in the use of electrical appliances. In transport, energy consumption levels in 2005 exceeded those in 1990 by well more than 10 %, in spite of a slight decrease since 2000.

In the period from 1990 to 2005, an overall decrease of 17 % of energy consumption could be seen in the industries producing goods and services sector. Apart from improved energy efficiency in areas of production, a change in industry structures towards less energy-intensive production processes has also led to a positive development in energy productivity.

The German energy industry is characterised by increasing international interdependencies. For energy, the dependence upon import rose significantly. In 2005 74 % of energy used in Germany was imported, compared to 57 % in 1990.

Resource protection

Using resources economically and efficiently



Source: Federal Statistical Office.

1b Raw material productivity

The use of raw materials is indispensable to economic development. It however also entails environmental burdens. Apart from that, non renewable resources that are consumed today will not be available to future generations. It therefore is imperative to use raw materials more economically. A target has been set to double the raw material productivity by 2020, based on the year 1994.

The raw material productivity expresses the amount of abiotic primary material (in tonnes) that is used to generate one unit of gross domestic product (in EUR, adjusted for price). Raw materials withdrawn in Germany – not counting agricultural and forestry products – and all imported abiotic materials (raw materials, semi-finished products and finished products) constitute abiotic primary material.

Raw material productivity has increased by 33.5 % between 1994 and 2005. While use of materials is decreasing (– 13 %), the gross domestic product has gone up by

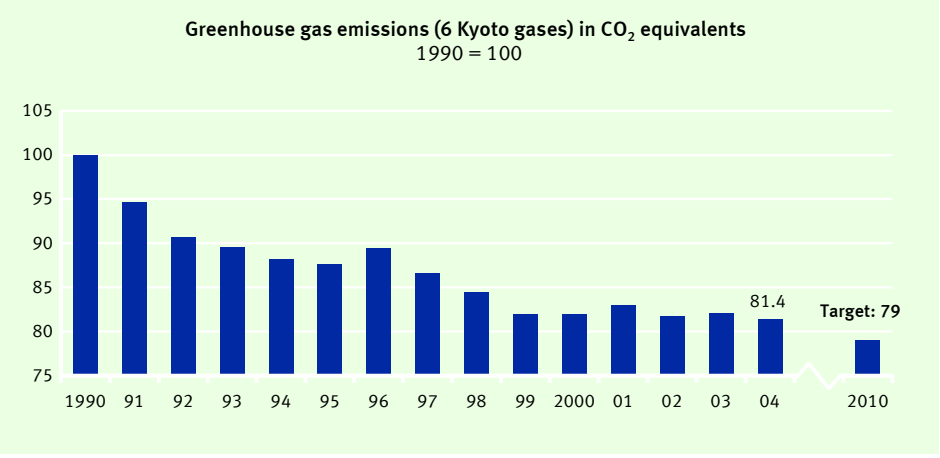
16 %. The increase in productivity has slowed down during the last five years (2000 through 2005). Although this indicator shows a trend in the right direction, its growth rate up to now would not be high enough to achieve the set target.

The favourable development of raw material productivity over the last years is solely due to a structural change towards less raw-material-intensive industries and not to a more economical use of raw materials: the industries that depend less on materials (particularly services) have grown, while industries with a high consumption of materials, such as construction (which accounts for 45 % of total primary material use) or other areas in the field of manufacturing rather have shrunk (cf. indicator 10 "GDP per capita"). The significant drop in construction activity (cf. indicator 7 "Ratio between gross fixed capital investment and GDP") and the decreased use of raw materials for building (– 28 %) as a consequence of this development played a major role. Use of ores and related products significantly went up (+ 29 %) in the surveyed period.

What should be taken into account when interpreting the development of the raw material indicator is that the demand for materials is increasingly covered by imports. Whereas the import of raw materials as well as that of semi-finished and finished products went up by 73 million tonnes (+ 19 %) between 1994 and 2005, withdrawal of raw materials in Germany dropped by 267 million tonnes (– 24 %) in the same period. Thus, the share of the overall use of primary materials made up by imported goods increased from 26 % in 1994 to almost 36 % in 2005. Of quantitative importance in this shift are particularly the increased imports of metallic semi-finished and finished products (+ 49 %) and the replacement of domestic coal and brown coal by imported sources of energy (cf. indicator 1a "Energy productivity"). Domestic nature is thus increasingly protected and the environmental burdens entailed in withdrawing and subsequently processing raw materials into semi-finished and finished goods were shifted abroad.

Climate protection

Reducing greenhouse gases



Source: Federal Environment Agency.

2 Greenhouse gas emissions

The impending climatic change is a great challenge for mankind. Therefore, Germany has committed to cut its emission of the six greenhouse gases specified in the Kyoto protocol by 21 % until the period 2008 – 2012, compared with 1990.

The Kyoto Protocol defines the following substances as greenhouse gases: Carbon dioxide (CO_2), methane (CH_4), nitrous oxide = laughing gas (N_2O), halogenated fluorocarbons (HFC), perfluorinated hydrocarbons (PFC), and sulphur hexafluoride (SF_6). These gases are mainly emitted during the combustion of fossil energy sources, such as coal, crude oil and natural gas. Other significant sources of emission are agricultural activity and the use of solvents.

Germany has distinctly reduced its greenhouse gas emissions since 1990. Compared to the reference years set out in the Kyoto Protocol (1990/1995), aggregate

carbon dioxide equivalent emissions by 2004 had fallen by approx. 232 million tonnes or 18.6 %. That leaves 2.4 percentage points to be achieved by 2008 – 2012 in order to reach the Kyoto target. However, the main part of the reduction - 153 million tonnes (– 12.3 %) - was already achieved in the years 1990 to 1995. The sharp fall of emissions in this period can be mainly attributed to the transitional process in the federal states that joined Germany in 1989 (and the accompanying increase in energy efficiency, change to lower-emission energy sources and closure of outdated plants) and to the increased efficiency of power plants as well as to changes in the energy mix that increasingly employed emission-free or low-emission sources of energy.

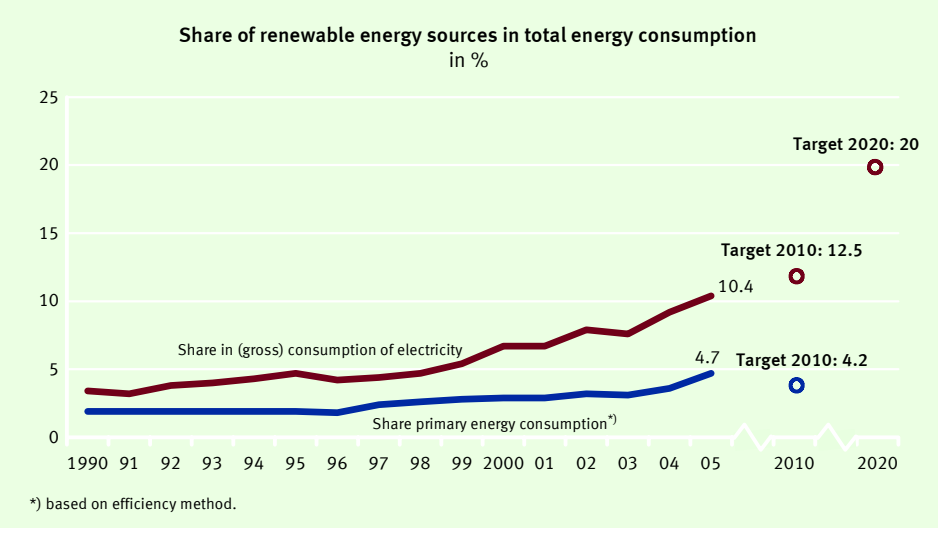
In the period from 1995 until 2004, emissions decreased only by 79 million tonnes (– 7.2 %). In 2004, the share of carbon dioxide in greenhouse emissions amounts to about 87 %. Emissions of carbon dioxide since 1995 have gone down by 34 million tonnes. Well over half of the reduction by 7.2 % can be allocated to other greenhouse gases (– 45 million tonnes).

The relatively modest decrease in carbon dioxide emission since 1995 is first and foremost caused by an only slight decrease of 16 million tonnes in the producing industries. As part of this development, a particularly sharp rise in emission by the industry branch "generation and distribution of energy (electrical power, gas)" can be observed, which is associated with the general increase in power generation. Thanks to an increased efficiency of fossil fuel power plants carbon dioxide emissions connected with the production of one kilowatt electricity decreased by about 7 % since 1995. In contrast, emissions in most other industries have constantly fallen in the same period – in some industries even significantly.

The overall trend in carbon dioxide emissions in production areas in the period between 1995 and 2004 is the result of opposing factors. It can be derived from the general economic growth of 14 % between 1995 and 2004 that this has caused a rise in emission of 98 million tonnes. In contrast, the shift towards services – the share of which in the total economy has clearly risen – has caused a decrease of emissions of 99 million tonnes. The services sector average emission per EUR added value amounts to only one-tenth of the amount emitted by manufacturing industry. The factors 'more efficient use of energy' and 'use of energy sources with lower carbon content' also effected a positive change in carbon dioxide emission of respectively – 6 million tonnes and – 9 million tonnes.

Renewable energy

Strengthening a sustainable energy supply



Source: Federal Ministry of Economics and Technology, Juli 2006.

3 Share of renewable energy sources in total energy consumption

Fossil energy sources such as oil, natural gas, and coal are finite and their use causes greenhouse gas emission. Therefore, the sustainability strategy of the Federal Government sets out to promote the further development of renewable energy sources. Renewable energy is energy that is derived from natural processes that are replenished constantly. Sources of renewable energy include electricity and heat generated from hydropower, wind, solar and geothermal resources, but also biomass such as firewood and biodegradable domestic refuse.

How the use of renewable energy is developing, is measured with the aid of the indicators “Share of renewable energy in overall primary energy consumption” and “Share of electrical power from renewable sources in total power generation”. The aim is to increase the share of renewable energy in primary energy consumption to 4.2 % by the year 2010 and its share in power

generation to 12.5 %. In addition, its share in power generation is to rise to at least 20 % by 2020.

In the period 1990 up to 2005, the share of renewable energy in primary consumption rose from 0.9 % to 4.7 %. The share in energy consumption increased from 3.4 % to 10.4 %. The upward trend has been notably more pronounced in the last four years, since the adoption of Directive 2001/77/EC of the European Parliament and of the Council of 27 October 2001 on the promotion of the electricity produced from renewable energy sources in the internal electricity market and the amendment to the German Renewable Energy Sources Act (EEG) of 21.07.2004 that oblige producers of electricity to preferentially purchase electricity generated from renewable energy sources. In the case of the indicator "Share of renewable energy in overall primary energy consumption" the 2010 target value (4.2 %) has already been surpassed by 0.5 percentage points.

In 2005 there were strong differences between the shares of individual renewable energy sources in the overall amount of energy produced from renewable sources. 67 % of renewable energy in 2005 was made up of bioenergy, 16 % of wind and 13 % of hydropower. Renewable energy was mainly utilised for generating electricity (38 %) and heat (48 %). In the area of fuels, biodiesel made up 14% of the overall energy from renewable sources.

The share of wind power and photovoltaics in the subfield of electricity generation was 17 %, of hydropower it was 13 % and biogenous solid fuels constituted a share of 3 %. Other renewable energy made up 5 %. Biogenous solid fuels constituted the largest group for heat generation with 40 %. Solar and geothermal resources made up 3 % and other resources accounted for 6 %.

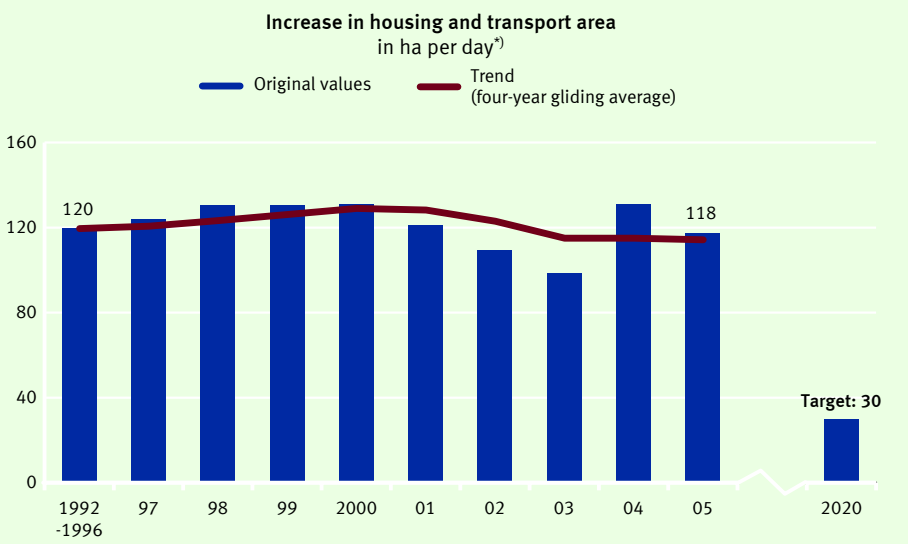
The accelerated increase of the share of renewable energy in electricity generation since 2000 is due to the growing significance of wind power and the use of biomass. Electricity generation from wind power, for instance, went up from 7,550 GWh in 2000 to 27,229 GWh in 2005 (+ 250 %) In 1995 it still was 1,800 GWh.

Power generation from biomass increased fivefold in the period 2000 to 2005. A precipitation-related decline of 13 % could be noted in the waterpower-induced supply of energy in the same period. The contribution of water power to total electricity generation from renewable energies was at 21,524 GWh in 2005.

Renewable energies significantly contribute to cutting emission. Figures of the Arbeitsgruppe Erneuerbare Energien – Statistik (working group renewable energy – statistics) showed that use of renewable energy in 2005 accounted for a drop of 77 million tonnes (about 9 %) in greenhouse gas emission for that year (cf. indicator 2 "Greenhouse gas emissions").

Land use

Sustainable usage of land



*) This land use survey is based on the evaluation by the real estate cadastres of the *Laender*. Due to the transition the official cadastres are currently going through (reclassification of types of use in the course of digitalisation), the representation of land use increase is distorted with regard to the current situation.

Source: Federal Statistical Office, Federal Office for Building and Regional Planning.

4 Increase in housing and transport area

Land that is undeveloped, not fragmented and unpopulated constitutes a finite resource. Beside the direct environmental impact an expansion of housing and transport areas would have – e. g. the loss of soil function due to sealing off the surface, the loss of fertile land or areas close to nature as well as the loss in biodiversity – each new instance of the preparation for development of land abutting urban areas or land outside present settlement clusters generates more traffic, burdening the environment with noise, energy consumption and emission of pollutants. Apart from ecological problems, land use increasingly causes economic and social problems such as high levels of vacant flats. The Federal Government therefore endeavours to limit development of land for housing and transport purposes to 30 hectares per day up to 2020.

Although the increasing development of land for housing and transport probably has slowed down in recent years, allowing the current trend to continue would not

suffice to reach the targets set by the Federal Government.

The rate at which housing and transport areas are currently increasing cannot be accurately assessed using the results of the land survey, due to their discontinuous nature. The results shown for the years 2001 to 2003 presumably overstate the actual decline in these years. This effect was subsequently evened out. It may be assumed that the increase in land use has actually been slowing down steadily throughout the whole period starting in the year 2000 (cf. the trend expressed as a four-year gliding average). Such a trend would approximate the development of building investments, which in the period 2000 to 2005 showed a total decrease of 18 %, adjusted for price (cf. indicator 7 "Ratio between gross fixed capital investment and GDP").

In the period 1992 to 2004, the area of land developed for housing and transport went up 13.2 %. This means an average daily increase of 121 hectares. Housing areas increased by 18.1 % (98 ha per day), while transport areas went up by 6.1 % (23 ha per day). The amount of kilometres travelled by car went up by 18.2 %, whereas the road surfaces showed a rise of 5.2 %. This means that existing roads were used more intensively each year.

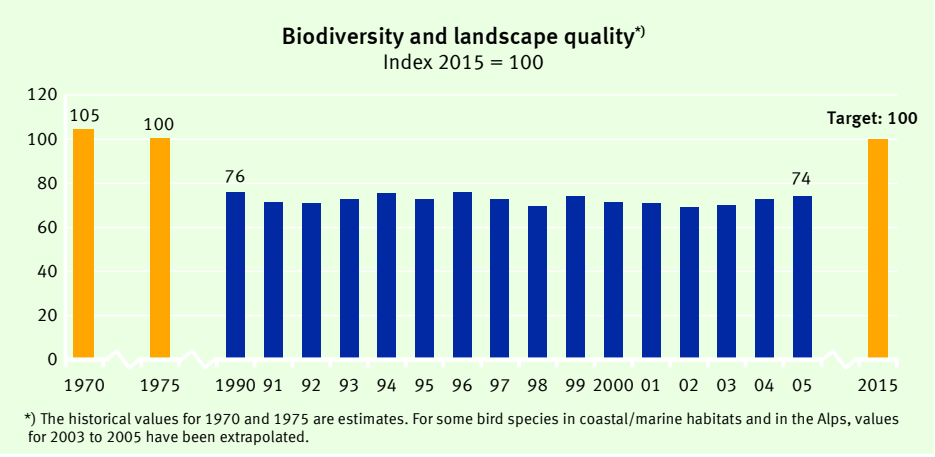
In 2004, about 52 % of the overall housing area was taken up by private households, mainly for residential purposes. Areas used for production activities made up 43 % and well over 5 % of the housing area was unoccupied.

Housing area used by private households went up 22.1 % in the period between 1992 and 2004 (61 ha per day). This increase was substantially higher than the rise in population (+ 1.9 %). An essential reason for this is a significant increase in the demand for living space per capita. This is also the reason why living space has increased by 18.6 % since 1992.

On the other hand, more value was added on continuously decreasing housing area. Area intensity fell by 5.8 %, because the increase in area used for production was lower that the increase in economic performance. The divergence of overall economic production and use of housing area, however, cannot be ascribed to a more economical use of land by individual industries, but solely to the transition of the economy as a whole towards less land-intensive production activities.

Biodiversity

Preserving species - protecting habitats



*) The historical values for 1970 and 1975 are estimates. For some bird species in coastal/marine habitats and in the Alps, values for 2003 to 2005 have been extrapolated.

Source: Federal Agency for Nature Conservation.

5 Biodiversity and landscape quality

A wide diversity of animal and plant species is a fundamental pre-requisite for a strong natural environment and is essential for our lives. Nature and landscape in Germany bear the marks of centuries of human use. Conserving nature in well-protected areas alone will not suffice to preserve the biodiversity created by these types of use. Sustainable forms of land utilisation in the overall landscape, limitation of emissions and a considerate treatment of nature are required in order to preserve biodiversity while at the same time safeguarding the quality of life.

The present indicator sheds light on biodiversity, landscape quality and the sustainability of land use. In order to calculate the indicator, 59 bird species were chosen that represent the state of Germany's most important landscapes and habitats (agricultural land, forests, settlements, inland water, coasts and

oceans as well as the Alps), whereupon records were kept of how their populations developed. A committee of experts has determined target values for the population of each of these species that can be reached if the legal provisions for nature conservation and the guidelines for a sustainable development are implemented. Every year an overall indicator is determined by calculating the degree to which all 59 bird species have reached the target values. By completing data series and integrating the Alp region, the pool of the data used as the basis for the indicator was improved compared to the 2004 progress report.

Whereas the 1990 value for biodiversity was well under the values estimated for the years 1970 and 1975, the indicator value hardly changed in the following 15 years. In 2005, it was at 74 % of the target value set for 2015. In view of its development in the last few years, it is unlikely to reach this target without additional efforts.

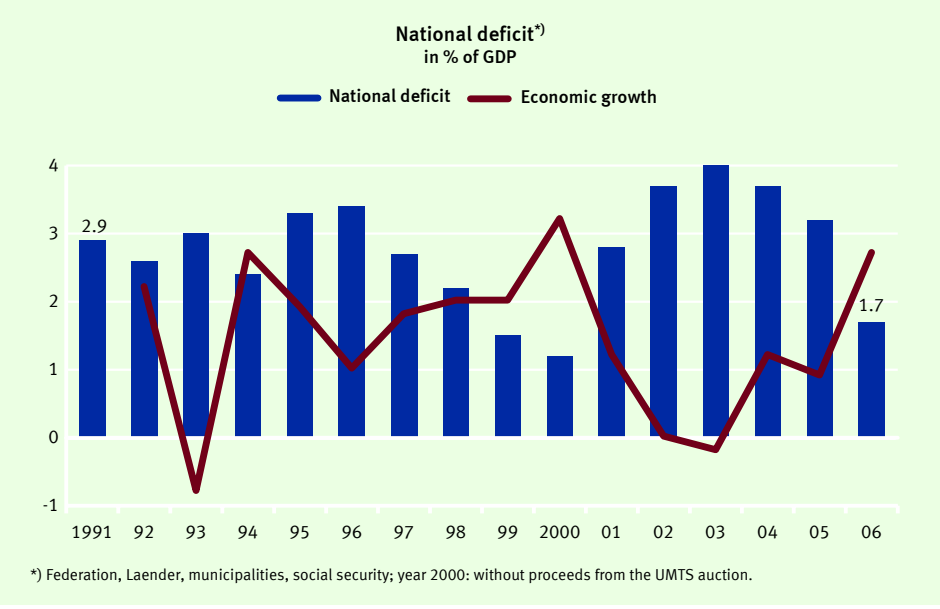
Chief factors in the decline in biodiversity are intensified exploitation through agriculture and forestry, the fragmentation of the landscape, the sealing of soil as well as introduction of substances (e. g. acidifiers or nutrients). Consistent with observations made in other European countries, the value of the sub-indicator for agricultural land showed a particularly steep fall in the period 1970 until 1990, caused by an intensified agriculture. Sub-indicators for other habitat types showed significantly smaller changes in the same period.

The sub-indicators for agricultural land, forests and coasts/oceans have been stagnating since 1990. The sub-indicators for settlements and the Alps have been showing a slight downward trend since 1990. The negative trend for settlements can be ascribed to the loss of natural areas and rural structures due to building activities and soil sealing. In the Alps, increasing settling activities, intensified farming and farmers abandoning traditional forms of farming (e. g. on mountain pastures) also had negative effects. The sub-indicator for inland water slightly tended upward, which is associated with the significantly improved quality of water in many places.

Climate change, essentially the result of the emission of greenhouse gases, is already causing geographic ranges of many species to shift and is starting to transform the landscapes in Germany, due in particular to the hot and dry summers. The climate change brought about by humans could significantly change the biodiversity and the spectrum of species induced by the migration and extinction of animal and plant species. Landscapes and biodiversity are likely to change because of the demographic change (ceasing agricultural activities in migration regions) or the increased growing of energy crops.

National debt

Consolidating the budget – intergeneration equity



Source: Federal Statistical Office.

6 National deficit

Long-term sound public finances and a sustainable and fair system of duties and taxation serve the aim of intergeneration equity and promote economic growth and employment. An essential element of sustainable financial policy is the consolidation of public budgets.

The amount of national debt is limited on a European level by, amongst others, the so-called Maastricht criteria, which the Member States of the Euro zone have agreed to observe. They provide a reference value of maximum three percent of the gross domestic product (GDP) for the annual deficit (expenditure less revenue).

In 2006, Germany's deficit amounted to almost EUR 40 bn (1.7 %). This corresponds to a net new indebtedness of about EUR 480 per capita. Thus, the deficit criterion was met. During the period 2002 to 2005, by contrast, the deficit limit was regularly exceeded. An important reason for the development in this period was the persistent recession and an insufficient

growth that led to growing burdens on state expenditure due to, amongst others, increasing unemployment and falling state revenues because of the loss in taxes and social security contributions. Following a price-adjusted increase of the GDP of 3.2 % in 2000, economic growth rates plummeted to between – 0.2 and + 1.2 % in the subsequent years (cf. indicator 10 "GDP per capita").

In the period 2000 to 2005, the GDP rose by 8.7 % according to the respective price-levels. Revenues in the public budgets went up by 1.9 % to EUR 976 bn. Tax revenues decreased by 1.2 % in total. While income from production and import duties – consisting mainly of VAT revenues – still showed an increase of 8.3 %, revenues from income taxes and taxes on assets decreased by 10.4 %. Taxes paid by corporations even dropped by 28.7 %. Both tax relief measures and the recession affected the development of income taxes and property taxes.

The rise of 4.9 % in revenues from social contributions fell behind the increase of the GDP in the respective period. Due to the shortfall of revenues from taxes and social contributions, the share of total state revenue in the GDP went down by 3 percentage points to 43.5 % in the period under review.

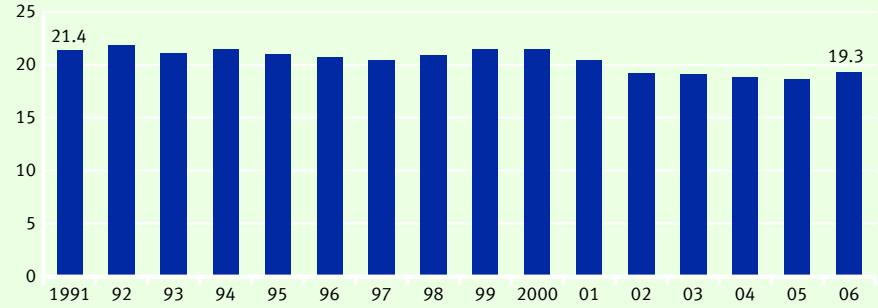
Between 2000 and 2005, state expenditure increased by 6.9 % to EUR 1,048 bn (not counting the proceeds from the UMTS auction which constitutes a special item), slightly lagging behind the GDP increase. Thus, the share of the state expenditure in the GDP decreased by 0.8 percentage points to 46.8 % in this period.

In 2005, approximately 57 % of state expenditure consists of social benefits, such as payments made under the statutory pension scheme or the health care fund, unemployment benefits or social welfare. This expenditure item went up by 12.2 % in the period 2000 to 2005. In view of risen unemployment rates by about one million (+ 25 %) and a substantial increase in the number of people drawing pensions, increased expenditure would have been considerably higher without the fundamental reforms of the system of social benefits, such as the structural reforms of the Agenda 2010, the reform of the health care system and the limitation of pension adjustment rates.

Spending is also curbed in the case of subsidies, which have decreased by 23.2 %, and expenditure for personnel, which only rose by 0.8 %. Gross investments also fell sharply (– 16.5 %).

Provision for the future economic stability

Creating favourable investment conditions – Securing long-term prosperity



*) Gross domestic product, adjusted for price.

Source: Federal Statistical Office.

7 Ratio between gross fixed capital formation and GDP

Gross fixed capital formation is composed of investments in buildings (residential and non-residential), machinery and equipment (machinery, vehicles, and devices) and other assets (intangible assets such as software and intellectual property rights, property transfer costs, production livestock).

Economic performance and competitiveness decisively depend on the investments by companies and the state. Investments in new equipment and intangible assets in particular serve to realise new products and more efficient production methods, thereby securing existing markets and opening up new ones. At the same time, investments contribute to increasing the energy and resource efficiency of the economy, e. g. by energy saving measures in buildings, realising environmentally efficient production methods or manufacturing environmentally efficient goods. On the other hand, investments in buildings, as far as expansion investments are concerned,

particularly entail substantial consumption of material and additional demands placed on housing and transport areas (cf. environment indicators, e. g. 1b "Raw material productivity" and 4 "Increase in housing and transport area").

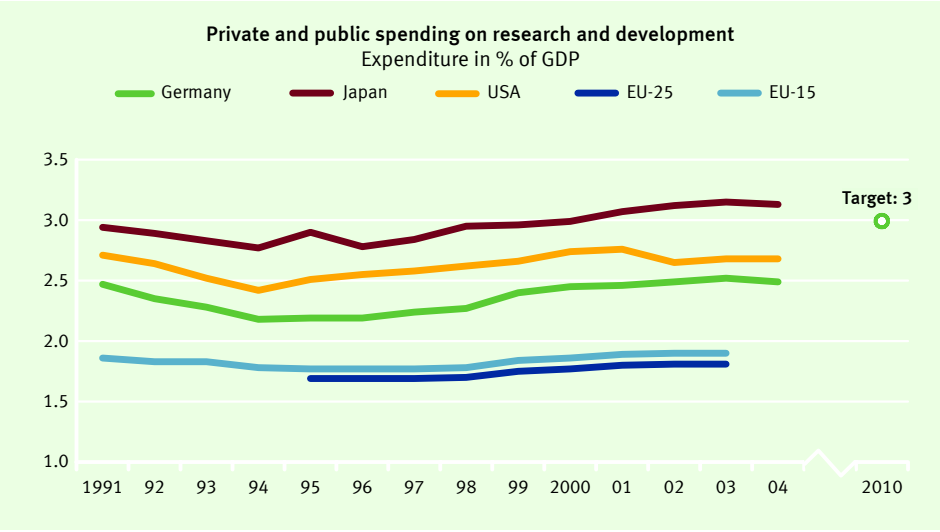
The rate of investment (ratio between gross fixed capital formation and gross domestic product) in Germany was about 21 % in the period between 1991 and 2000. In subsequent years, the rate hovered around 19 %, reaching an absolute low of 18.7 % in 2005.

In 2006, however, the trend reversed: capital investments (adjusted for price), for the first time since 1999, rose stronger – 5.6 % compared to the previous year – than the GDP (2.7 % on previous year), continuing the upswing, which in the case of machinery and equipment could already be seen in 2004. Machinery and equipment purchases have increased sharply since 2004: 4.2 % in 2004, 6.1 % in 2005 and 7.3 % in 2006 (change on respective previous years). Dynamic investments in data processing devices and vehicles particularly contributed to this trend. Machinery investments in 2004 also showed a significant increase compared to previous years. In 2006, building investments also experienced an upward trend – 4.2 % on the previous year – the first time since 1999. Both investments in residential and commercial properties contributed to this rise. Since 1991, intangible assets have shown steady growth, which in 2006 was particularly strong with a 5.9 % increase on the previous year.

In how far this emerging increase in investments might entail additional environmental burdens with respect to land and material use as well as transport volume, will depend on whether investments focus on expansion as such or on improving quality.

Innovation

Shaping the future with new solutions



Source: OECD Main Science and Technology Indicators 2006/1.

8 Private and public spending on research and development

Expenditure on research and development (R&D) is a significant parameter, even if not the only one, in determining the pace of innovation of an economy. The higher this kind of expenditure is, the higher chances are that productivity will develop dynamically, that the economy will grow, that competitiveness will improve and, not least, that our production and consumer patterns will show a trend towards more sustainability.

The present indicator encompasses the spending on research and development within industry, public institutions and institutions of higher education in relation to the gross domestic product (GDP). In 2002, the Council of Barcelona set a European target for a three percent share of R&D expenditure by 2010. The Federal Government incorporated this target into its National Sustainability Strategy.

In 2004, overall R&D expenditure in Germany was at EUR 55.2 bn, which

corresponds to 2.5 % of the gross domestic product. In the USA and Japan comparative ratios in 2004 were at 2.7 % and 3.1 % respectively. However both the EU-15 and EU-25 showed significantly smaller ratios of R&D expenditure to the GDP (1.9 % and 1.8 % resp. in 2003). The ratio in Germany has increased by approx. 0.3 percentage points since the mid 1990s, the increase since 2000 being marginal however.

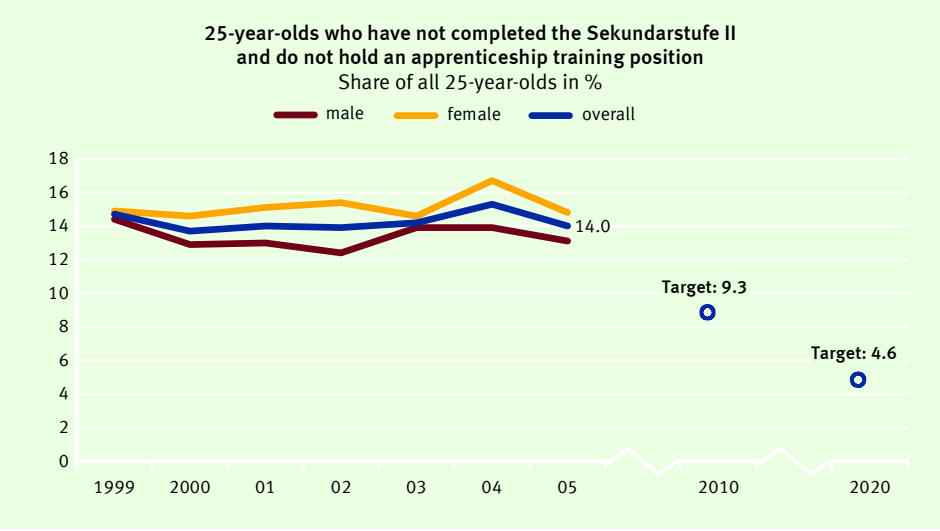
Internal research within industry accounted for by far the largest share of R&D expenditure with about 70 % in 2004, well over 16 % were spent by institutions of higher education, and some 14 % by public as well as private non-profit research institutes. Two thirds of the R&D expenditure was financed by companies, 30 % from public funds. The remainder was financed from abroad.

With regard to the research purposes in public and private non-profit research institutes, development of productivity and technology play a major role (about EUR 2 bn). For research in the areas of environment, health protection and an efficient energy use EUR 2.4 bn were spent in total. EUR 1.7 bn were spent on what is known as non-goal-oriented research and a total of EUR 1.4 bn on other research areas such as space research, defence, social structures or infrastructure.

R&D activities in businesses focus on the sectors vehicle construction, electronics, chemical industries (incl. pharmaceutical industries) and mechanical engineering – together they make up about 84 % of private economy R&D expenditure. The automotive industry alone spent approx. EUR 12.5 bn on research and development in 2004 (Source: Wissenschaftsstatistik des Stifterverbandes).

Education

Continuously improving education and vocational qualification



Source: Federal Statistical Office.

9a 25-year-olds without a leaving certificate

The national educational system and the dual professional training system are the cornerstones of a future-oriented qualification for young people in Germany. Lacking school leaving certificates and interrupted professional training entail a risk of poverty. The Federal Government has made it its avowed goal that all young people attain a school leaving certificate, are hired as apprentices or complete a course of studies.

The present indicator describes education deficits by showing the (age-group-specific) ratio of 25-year-olds who have neither entered the dual system of vocational training (and thus hold no apprenticeship training position) nor completed *Sekundarstufe II* (upper secondary school or *Abitur*) to the whole of 25-year-olds in a year. That is counting young people both with and without a *Hauptschule* leaving certificate (*Sekundarstufe I*). In cooperation with the *Laender* the Federal Government aims at

reducing this ratio to 9.3 % by 2010 and further to 4.6 % by 2020.

Developments since 1999 have shown that the according percentage of 25-year-olds has decreased only marginally. In 2005, 14 % of all 25-year-olds (i. e. 139,000 of 993,000 in total) did not hold an apprenticeship training position or an equivalent leaving certificate. It will not possible to meet the targets set, if efforts are not stepped up.

Quotas according to gender since 1999 have shown fluctuating variations from the overall value. Most recently, the female quota of 14.8 % exceeded the 13.1 % male quota.

Not limiting the scope to the age-group of 25-year-olds in particular, school statistics for Germany show that the number of school leavers (not counting vocational qualification schools) rose by 23 % (to 958,000) between 1992 and 2005. In 2005, 78,000 or 8 % of these 958,000 left school without a *Hauptschule* leaving certificate. This ratio has not decreased compared to 1992. Women are less represented in this group; their share slightly fell to 6 %, while the share of men without a leaving certificate slightly increased (to 10.2 %). Foreigners leave the *Hauptschule* considerably more often without a certificate than German students (see indicator 19 "Foreign school-leavers not gaining the first secondary school-leaving").

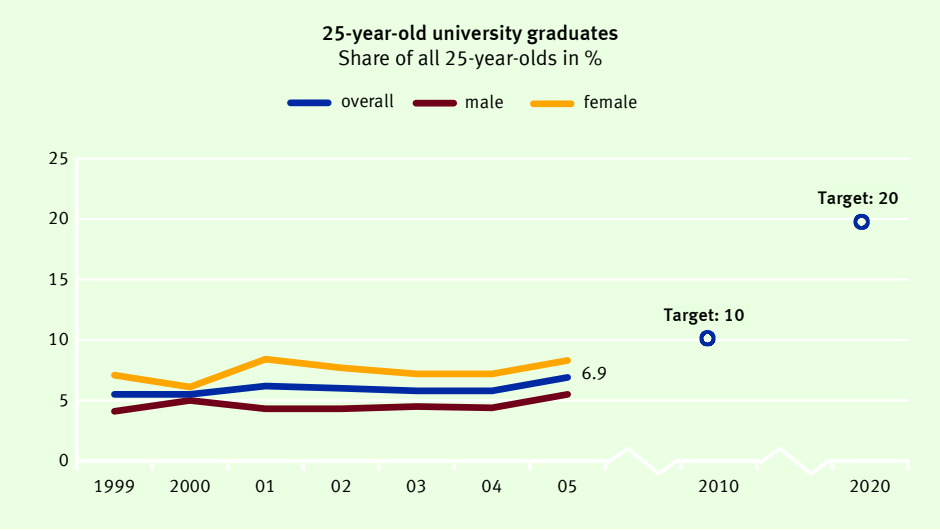
In 2005, almost 25 % of all school leavers attained a *Hauptschule* leaving certificate, 42 % a *Realschule* leaving certificate, 1.3 % an entrance qualification for universities of applied sciences and 24 % a general entrance qualification for universities. Whereas the share of *Hauptschule* leavers went down by 2.2 percentage points, the share of other leaving certificates went up slightly.

Educational success of young people is influenced by a variety of factors. The family background also plays a part in educational development and as such has consequences for the professional career and social status. In addition, a decline in available apprenticeship training positions affects the chances of success negatively. In 2005 (as at September), the number of apprenticeship training contracts dropped by 4 % (to an overall 550,180 new contracts) compared to the previous year, the largely unfavourable development of the last few years thus continuing (in 1999 there still were 631,000 new contracts). According to figures of the *Berufsbildungsbericht* 2006 (vocational education report 2006), supply only covered 95 % of the demand. A total of 41,000 applicants could not be placed. Besides fixed occupational preferences of the candidates, this may also be attributed to a lack of qualifications.

In view of current demographic developments, i. e. dropping birth rates and a consequently smaller future workforce, extending efforts to improve education opportunities for a broad population strata is imperative in order to fully exploit the education potential.

Education

Continuously improving education and vocational qualification



Source: Federal Statistical Office.

9b 25-year-olds with a tertiary education

Higher developed economies such as the German, of which the centre of gravity is shifting from the industry towards the services sector, require a sufficiently large workforce that shows the highest possible level of qualification. The share of young people having completed a tertiary education by the age of 25 in the total age-group of 25-year-olds therefore serves as a further indicator for the education level. The aim is to raise this share to 10 % by 2010 and to 20 % by 2020.

Between 1999 and 2005, the indicator went up from 5.4 % to 6.9 %. Looking at the gender distribution, the share of 25-year-old women (8.3 %) having completed a tertiary education exceeded the contemporary male share (5.5 %), which is related to, amongst others, periods of military or alternative civilian service. The indicator shows a positive trend. However, the pace at which it develops is insufficient to attain the goal set.

The significance of the indicator for the German situation is currently limited insofar as the average age of German first-time graduates in 2005 was at 28 years (graduation year 2005), which is higher than in other countries. Thus, the comparatively low figures are determined by factors as school enrolment age, duration of school and duration of studies rather than by the finally attained degree in tertiary education. The average age of first-time graduates has changed only marginally since the mid-nineties. On completing their studies, women are one year younger than men in average, which again is related to periods of military or alternative civilian service. The average age of graduates from universities of applied sciences was 27.8, slightly under the general average of 28 years. According to field of study, law students are among the youngest and medical students and teachers among the oldest graduates.

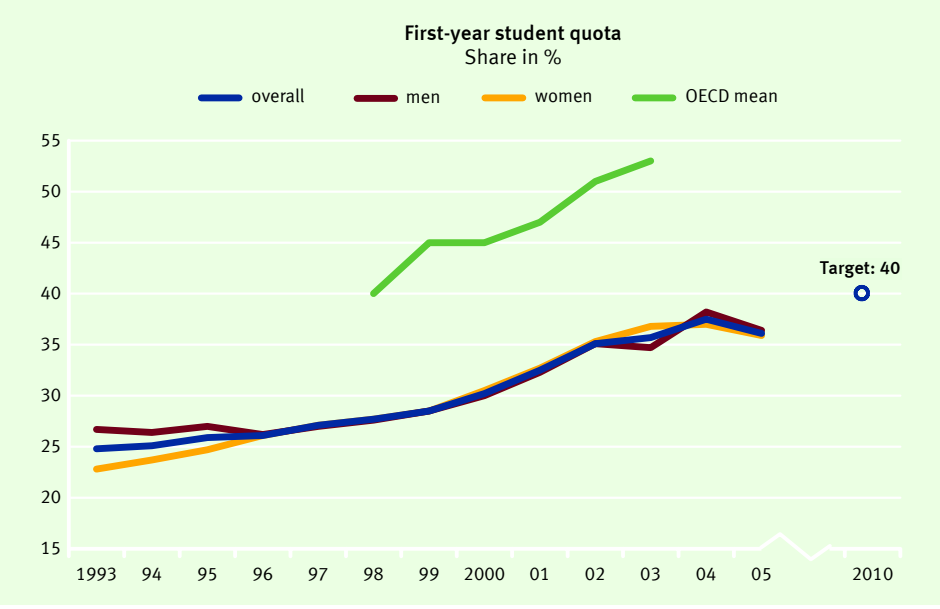
The overall number of graduates – not limiting the indicator to any age-group – increased to 252,000 in 2005, which constituted a new high. This continuing rise is chiefly the result of the growing number of first-time female graduates in the decade between 1995 and 2005, the number of male graduates experienced a decrease of 9 % in the same period. This trend is mainly caused by to the fall in first-time enrolments by men between the middle and the end of the nineties, which affects the graduate years from 2000.

The political discussion on tertiary education revolves around the duration of studies and the average age of graduates, as the financial cost of studies rise along with their duration and both these factors in addition constitute important criteria for successfully taking up a professional career. Since, in line with the EU decisions of Bologna, the offer of bachelor and master programmes has been extended, positive effects on the number of graduates can be observed. Bachelor and master programmes offer a shorter path to graduation and are intended to create a greater international equivalence of studies than the system of *Diplom* and *Magister* programmes used up to now. In 2005, a few years after the introduction of the two-stage degree programme some 24 % of all first-time students enrolled into bachelor programmes. Comparing the figures it can be seen however that students still preferred the traditional *Diplom* and *Magister* programmes (40 %). 21 % of all first-time students enrolled into *Diplom* programmes at universities of applied sciences Master programmes, making up a share of 2 % – unchanged on the previous year – were taken up chiefly by foreign students, who, although first-time enrollers in Germany, had often already completed programmes abroad.

First-time graduates (graduation year 2005) from universities (e. g. *Diplom* or *Magister*) took 11.1 semesters in average to complete their studies, whereas their contemporaries from universities of applied sciences only required 8.4 semesters to complete a *Diplom* programme and 6.1 semesters to complete a bachelor programme.

Education

Continuously improving education and vocational qualification



Source: Federal Statistical Office (calculations according to international OECD standards).

9c First-year student quota

An education policy enabling qualified education for as many young people as possible will improve the chances of a society to tackle future challenges. The first-year student quota indicator shows how large the share of a specific age-group is that takes up studies at an institution of higher education. This indicator was specifically conceived for purposes of international comparison. The Federal Government aims to increase this quota to 40 % by 2010.

The indicator showed a value of 37.5 % in 2004, which fell to 36 % in 2005. Over the entire period, the indicator shows an upward tendency. If the average annual change can be sustained, the goal is within reach.

First-year student quotas in other countries are much higher than in Germany as a rule. In Sweden, for instance, the 2004 quota was 79 %, in Finland 73 %, the OECD

countries averaging at 53 %. However, due to differences in structure and scope of the educational systems on an international scale, values for Germany are comparable only to a certain extent; for one thing, people in Germany are vocationally trained within the dual system, whereas in other countries vocational qualification partly takes place within institutions of higher education.

In terms of figures, developments may be described as follows; the number of first-year students (both German and foreign) increased from 252,000 in 1995 to 363,000 in 2004, a total rise of 44 %. The increase of the share made up by women (+ 52 %) was larger than that made up by men (+ 37 %) in this period. The share of female first-year students went up from 46 % to 49 % in the academic year 2004/2005.

Remarkably high are the shares of women enrolled in human medicine programmes (66 % in 2004, incl. health care sciences programmes) and in law, economics and social studies programmes (51 %). In mathematics and natural sciences, women made up 40 %, in engineering sciences a modest 21 %.

In 2004, about one third (36 %) of all students in Germany holding an *Abitur* school leaving certificate took up studies directly after they finished school. Others first completed a vocational qualification or fulfilled their military service or alternative civilian service. In 2004, the "transfer quota" of the *Abitur* year 2000 to a course of studies amounted to almost three fourths or 73 %. In contrast, students holding entrance qualifications to universities of applied sciences are less inclined to take up studies.

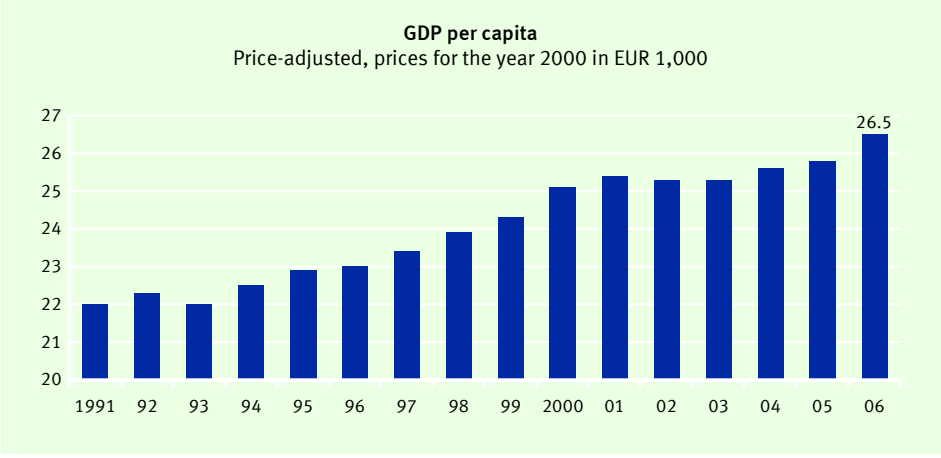
The comparatively high share of foreign students in Germany can be taken to show the international appeal and competitiveness of Germany's institutions of higher education. In 2004, 19 % (70,300) of all first-year students attending university were from abroad. Following Australia, the United Kingdom, Switzerland and Austria, Germany took fifth position with respect to countries' foreign first-year student quota.

Appeal and quality of a programme of studies depend on, amongst others, the financial resources of institutions of higher education. In 2003, the institutions spent EUR 7,100 per student (or EUR 11,800 including research and development). The share of total public expenditure for education at institutions of higher education (including research expenditure) in the gross domestic product (GDP) was 1.2 %, which was just under the OECD states average of 1.3 %.

Due to the reduction of the number of years leading up to the *Abitur* (12 years instead of 13) and a number of consecutive age-groups with a high birth rate (cf. birth rate specifics in indicator 17 "Full-time day–care facilities") completing their secondary education, the number of students is expected to increase until 2010.

Economic prosperity

Raising economic output by environmentally and socially compatible means



Source: Federal Statistical Office, national accounts.

10 GDP per capita

The gross domestic product (GDP) expresses the total, domestically generated, economic output. It is considered an important indicator of the economic cycles and growth of a national economy. A variety of aspects link the development of the GDP to the other topical fields within the National Sustainability Strategy. Social factors such as the population structure, the available workforce, the educational system, the child care system and social cohesion play an important role in society with regard to international economic competitiveness. Raising the economic output is desirable when it comes to safeguarding welfare. Moreover, sufficient economic growth would secure jobs and facilitate restructuring the social system, which is due for an "ageing society" and necessary to attain the goal of intergeneration equity. On the other hand, a growing GDP tends to burden the environment. The sustainability strategy aims at resolving such conflicts through appropriate initiatives.

The GDP per capita has risen by 20.3 % in total since 1991. After the recession of 1993, the ensuing economic revival lasted until 2000, showing average growth rates of almost 2 %. In the period 2001 until 2005, growth rates slowed down significantly. In 2006, the GDP per capita showed a strong increase of 2.8 % compared to the previous year.

In Germany, economic growth has varied considerably depending on the industry. Between 1999 and 2005, the manufacturing industry (without the construction sector) merely showed a real growth of just 10 %, whereas the services sector experienced an increase of well over 35 %. While industry in 1991 still accounted for 30.6 % of total gross value added (at the prices of the respective year), this had dropped to under 25 % by 2003. In 2005, this sector's share recovered slightly to just over 25 % due to a comparatively large growth of 4.4 % on the previous year. In the period 1991 to 2005, in the services sector, growths well above average were achieved in the health care and welfare sector (+75 %), transport and telecommunications (+61 %) and real estate, renting and business services (+56 %).

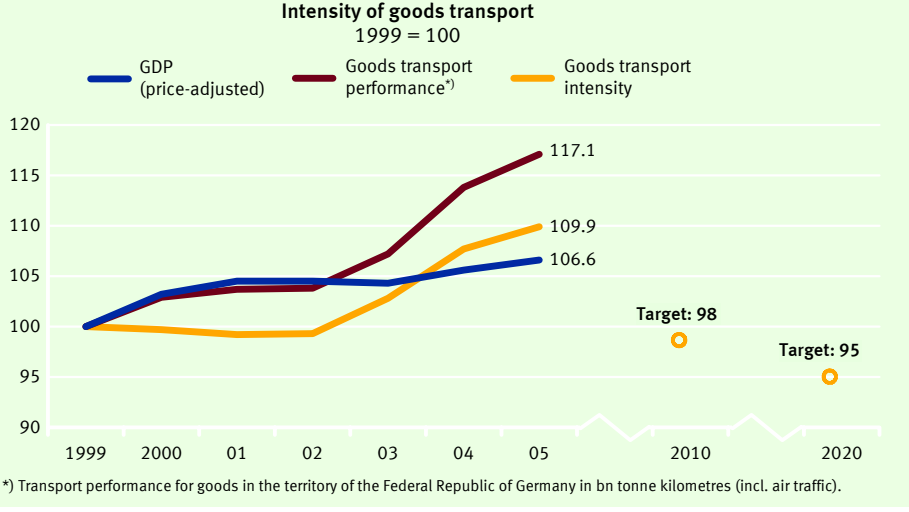
The economic transition – marked by a shift of economic activity towards the services sector and a decline in significance of industry, mining and construction – contributed to a decoupling of economic growth and environmental burdens. Especially with respect to the consumption of raw material, energy and land use and in the case of CO_2 emissions, this structural change has either fully or largely compensated the negative effects of general economic growth. A more efficient use of energy in individual sectors (the so-called intensity effect) has contributed to further relieving the environment (cf. environment indicators, e. g. 1a, 1b, 2, and 4).

The development of economic performance varied considerably from one region to the other. The new *Laender* (without Berlin) managed to almost double their economic output per capita between 1991 and 2005 (+89 %). The gross domestic product was up almost 73 %, at a population decrease of 8.5 %. In former West Germany (without Berlin), in contrast, the economic output per capita in the whole period went up by a modest 11 %, while the GDP increased by 18 % and population rates were up 6.1 %.

However, their higher economic growth did not suffice for the new *Laender* to weather economic transition without suffering a loss in jobs. Between 1991 and 2005, the number of people holding employment in the new *Laender* decreased by a total of almost 18 % or 1.2 million people, while employment rates in the old *Laender* went up slightly (by 0.4 %). An insufficient economic growth and the drop in employment have given rise to serious social problems in the new *Laender*, causing unemployment and migration from the East to the West. In the new *Laender*, this has led to a great threat of poverty. The survey 'Leben in Europa', which means 'Living in Europe' (Federal Statistical Office, December 2006), established that in 2004 17 % of the new *Laender* population were threatened of poverty and had to subsist on less than 60 % of the average income. In former West Germany this was 12 % of the population.

Mobility

Guaranteeing mobility – protecting the environment



*) Transport performance for goods in the territory of the Federal Republic of Germany in bn tonne kilometres (incl. air traffic).

Source: The Federal Minister of Transport (Ed.): Verkehr in Zahlen, Edition 2006/2007.

11a Intensity of goods transport

The Federal Government monitors the sustainability of the development of goods transport by means of the indicator Intensity of goods transport. The intensity is measured as the ratio of the performance of domestic goods transport expressed in tonne kilometres to the – price-adjusted – gross domestic product (GDP). The objective of the Federal Government is to reduce intensity, compared to its reference value of 1999, by 2 % before the end of 2010 and by another 3 % before the end of 2020.

In the period between 1999 and 2005, the intensity of goods transport has increased by 9.9 %. Thus the indicator shows a development contrary to the desired trend. The sharp rise of the intensity is composed of a comparatively strong increase of the goods transport performance (in tonne kilometres) of 17.1 % and an increase of the economic performance of 6.6 %, adjusted for price.

This development is the result of partly opposing factors. The growing division of

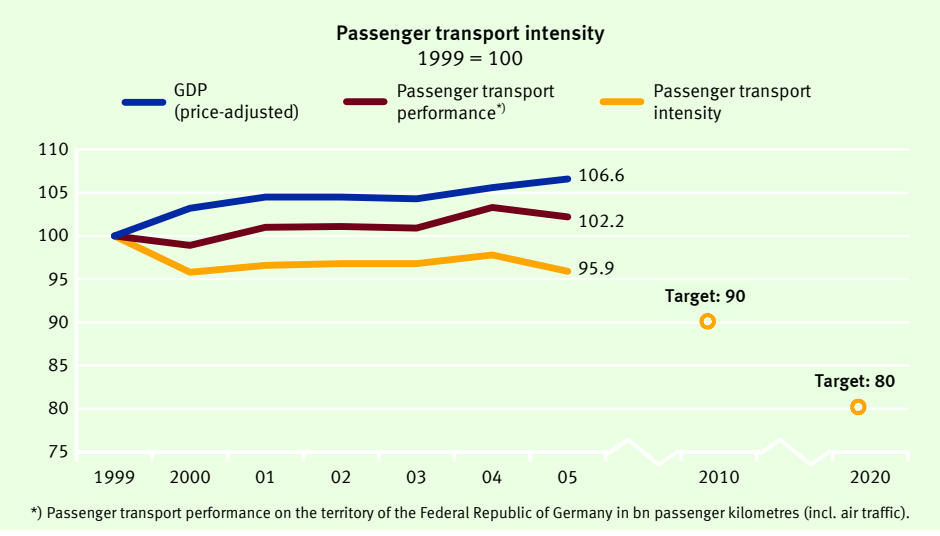
labour burdened transport intensity. This factor expresses the degree of vertical integration of companies. A declining vertical integration as a rule causes transport to increase due to enhanced shipping by suppliers. The degree of division of labour can be approximated by determining the ratio of the overall volume of goods (domestically produced as well as imported goods and services) to the GDP. An increase of the ratio indicates that companies increasingly buy preliminary products from other companies in Germany or abroad. In terms of figures, this factor accounted for 7 % of the rise in transport intensity.

The changed composition of the goods volume due to a shift of the demand structure towards less material intensive goods (e. g. an increasing share of services, a significant fall in construction activities) had a relieving effect (– 7 percentage points) on the development of transport intensity. In addition, the distances between production sites and the places of use of goods have gone up in average. This increasing geographical differentiation of production and consumer activities had an augmenting effect of 9 percentage points.

It should be noted that the indicator for the goods transport performance only takes domestic transport into account. It therefore does not reflect the influence of the growing integration in foreign trade of the German economy adequately (globalisation). Amongst others, the overall domestic goods transport performance in 2005 amounted to 581 bn tonne kilometres. Compared to which the goods transport performance of sea traffic via German harbours of 1,612 bn tonne kilometres alone is almost three times as much. Moreover, in the course of globalisation, the goods transport performance by sea has outgrown the domestic land transport performance by far with a rise of 45 % between 1999 and 2005.

Mobility

Guaranteeing mobility – protecting the environment



*) Passenger transport performance on the territory of the Federal Republic of Germany in bn passenger kilometres (incl. air traffic).

Source: The Federal Minister of Transport (Ed.): Verkehr in Zahlen, Edition 2006/2007.

11b Passenger transport intensity

The availability of adequate, flexible and inexpensive passenger transport options is important as it is considered an essential achievement under aspects of prosperity (and in particular of personal mobility) as well as imperative for the functioning and the international competitiveness of a modern economy that is based on a division of labour. On the other hand, passenger transport can lead to substantial environmental burdens, particularly through the consumption of fossil energy sources, pollutants emitted into the air, the utilisation of areas of land and noise. It therefore is the objective of the Federal Government to disconnect economic growth, the increase in passenger transport performance and the development of traffic-induced environmental burden.

The Federal Government monitors the sustainability of passenger traffic development by means of the indicator for passenger transport intensity. The intensity is measured as the ratio of passenger

transport performance in passenger kilometres to the price-adjusted gross domestic product (GDP). The objective of the Federal Government is to reduce intensity, compared to its reference value of 1999, by 10 % before the end of 2010 and by another 10 percentage points before the end of 2020.

In the period 1999 to 2005, the intensity has dropped by 4.1 %. The intensity experienced a marked fall in 2005 (– 1.9 percentage points). Thus, the indicator showed a favourable trend with respect to the set target. The passenger transport performance increased slightly, by 2.2 %, in the period under consideration, while the gross domestic product went up by 6.6 %. The comparatively favourable development of the indicator was probably chiefly caused by the significant rise in prices for fuels (petrol + 43 %, diesel + 67 %).

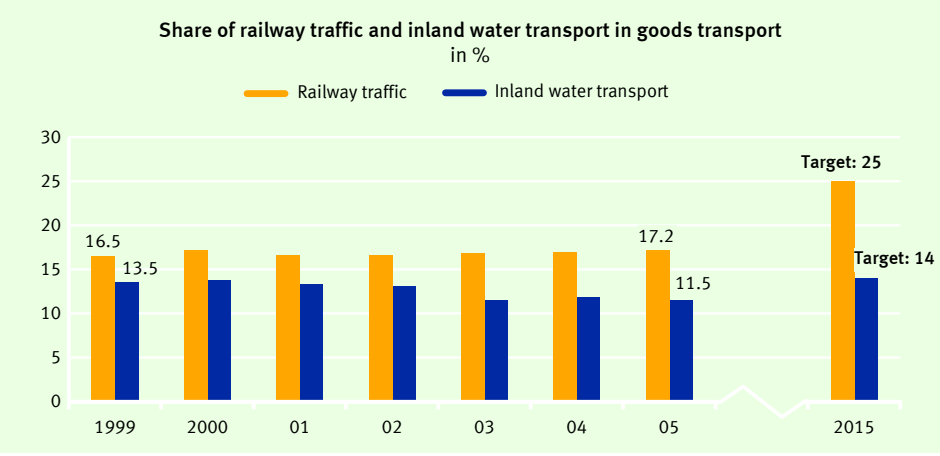
Whereas the transport performance of individual motorised traffic, with a share of 80.5 % in overall passenger transport performance, showed a modest increase of 0.4 % since 1999, the performance of passenger transport by rail and public transportation experienced a total growth of 5.1 %. The performance of the domestic air traffic rose by 6.5 %.

Individual motorised traffic serves several purposes. Leisure traffic in 2004 with 35 % constituted the largest share in trips by far. The share of commuter traffic amounted to 19.4 %, followed by shopping traffic (18.7 %) and business trips with 12.9 %.

Fuel consumption per km of individual motorised traffic dropped by 8.2 %, due in particular to technological improvements and the growing share of diesel-fuelled vehicles.

Mobility

Guaranteeing mobility – protecting the environment



Source: The Federal Minister of Transport (Ed.): Verkehr in Zahlen, Edition 2006/2007.

11c Share of railway traffic and inland water transport

Goods transport by rail or via inland waterways has a distinctly lower environmental impact per tonne kilometre than transport by road or air. The Federal Government therefore strives to significantly increase the share of transportation by rail and inland waterway shipping. The share of the railways is to rise from 16.5 % in 1999 to 25 % in 2015 and the share of inland waterway shipping is to increase from 13.5 % to 14 % in the same period.

The trend of both these indicators in the period between 1999 and 2005 shows that the market share of rail transport was somewhat improving, but had not increased significantly yet. The share of inland waterway shipping even experienced a marked decrease of two percentage points.

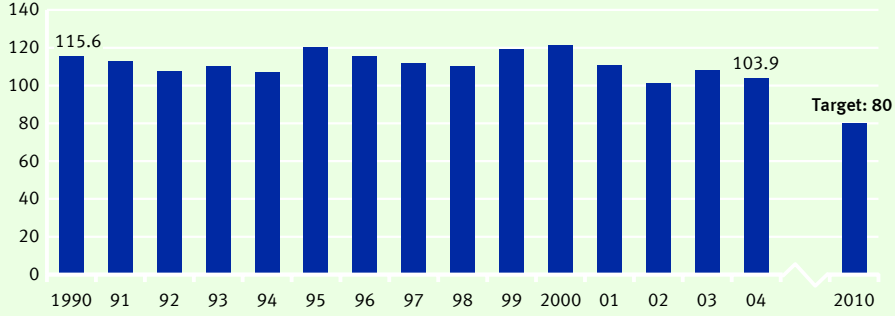
Compared to the transport performance by domestic companies, rail transport managed to increase its market share for

most types of goods. Specific data on goods transport performance by foreign carriers according to type of goods are not available. The share transported by rail went up considerably in the case of crude oil (+85%), ore (+20%), stone (+35%) and other goods, such as vehicles, equipment and other semi-finished and finished goods (+15%). The share of foreign carriers in the overall goods transport performance went up from 18.6% to 22.8% in the period under review, which means the aforesaid gains in market share can be expected to be accordingly smaller for railway traffic compared to the overall relevant transport.

Compared to rail transport, inland waterway shipping, also with respect to the transport performance by domestic carriers, in the period from 1999 to 2005 sustained losses in sectors in which it is traditionally strong, such as solid fuels (–4%), crude oil (–14%), ore (–6%) and fertilisers (–13%). The declining share of such types of goods that are traditionally handled by inland waterway in the overall goods transport performance formed an additional negative effect of a more structural nature. The goods transport performance of inland waterway shipping rose by 1.4 bn tonne kilometres in the period 1999 to 2005. For calculation purposes this may be broken down into the following factors for individual goods "Goods transport performance by domestic carriers", "Structure of goods transport performance according to type of goods" and "Market share of inland waterway shipping", which in terms of figures show the following: The overall increase of the goods transport performance caused the volume transported by inland waterway to rise by 7.1 bn tonne kilometres, which however was run counter by the effects of the changed composition in transported goods, negatively affecting inland waterway shipping by –3.1 bn tonne kilometres and the loss in market share for individual types of goods of –2.7 bn tonne kilometres.

Nutrition

Environmentally sound production of healthy foodstuffs



*) Value for 1990 uncertain, value for 2004 provisional. Different methods of data ascertainment still to be aligned.

Source: Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Federal Environment Agency/Justus Liebig University in Giessen (Institute of Landscape Ecology and Resources Management).

12a Nitrogen surplus

Introduction of substances in the course of agricultural production must not burden the environment. The same applies to nitrogen, which, besides phosphor, calcium and potassium, is used as a plant nutrient. An excess of nitrogen in many cases has far-reaching environmental consequences, such as pollution of ground water, over-fertilising of water bodies, emissions of greenhouse gases (nitrogen oxides) and acidifying gases (ammonia, largely originating from farming) as well as the reduction of biodiversity in low-nutrient biotopes.

The present indicator takes into account nitrogen production (by mineral fertilisation, sludge, compost, animal feed as well as through the air) and its removal (through crop and animal products intended for the market) in the agricultural sector. It balances supply and removal using the farm-gate method. The surplus, shown in kg/ha per year, is used to represent the degree of environmental burden. Targets

are to reduce the surplus to 80 kg per ha and year by 2010.

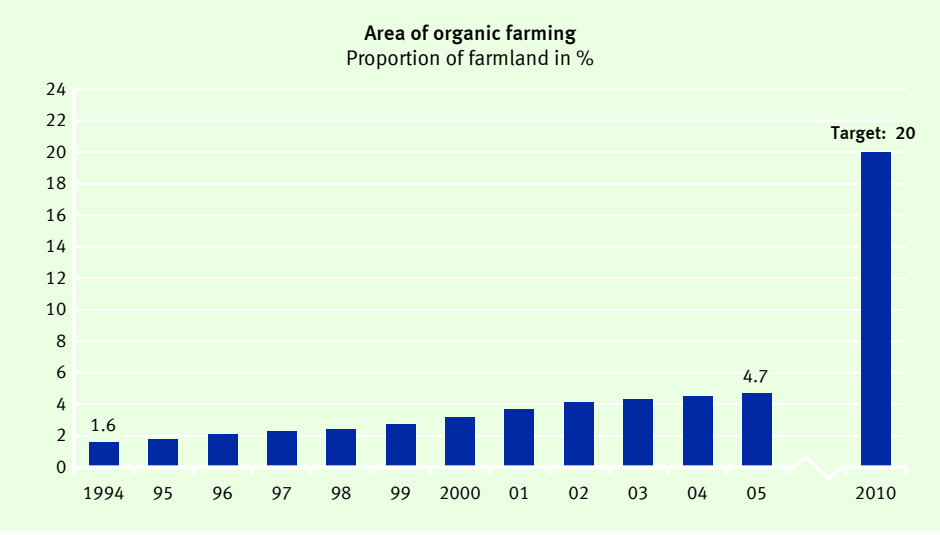
The surplus fell by 8 % in total since 1991. It will only be possible to reach the set target by 2010 if there is an average yearly reduction of the surplus of 4 % starting 2004. The new fertiliser regulation (*Düngeverordnung*), which came into effect in 2006 and sets out requirements for the use of fertilisers, can be expected to reduce the nitrogen surplus in future.

According to figures of the Federal Environment Agency, 66 % of nitrogen discharge in the German agricultural sector in 2004 stemmed from mineral fertilisers and 21 % from animal forage. 6 % were discharged by air (deposition e. g. by traffic exhaust fumes) and biological N-fixation by legumes (e. g. clover or peas), which are capable of fixing air-supplied nitrogen to a considerable extent, accounted for the remainder. Between 1991 and 2004, annual N-supply slightly increased (made up of a 7 kg/ha decrease of forage-based supply and 13 kg/ha increase of fertiliser-based supply), while N-removal by crops went up by 10 kg/ha (20 %). This is mainly due to yield increases in plant production and an increased nutrient uptake efficiency at falling numbers of livestock. All this leads to the conclusion that nitrogen was handled more efficiently.

The overall balance provides no information as to where and why the determined N surplus occurs. Analysis of operational systems therefore forms an important further step towards mapping spatial and operational distribution of the N surplus and thus be able to determine the potential areas for future improvements. Analyses based on operational data show that a high surplus occurs chiefly in farm businesses with a high rate of livestock, but also in other farm businesses that show poor fertilising management. Nevertheless, results indicated that even for cattle farms with a similar production structure, N-surplus values vary considerably. It seems that there is still potential to reduce N surplus without reducing the scale of agricultural production by optimising nutrient management.

Nutrition

Environmentally sound production of healthy food



Source: Federal Ministry of Food, Agriculture and Consumer Protection (according to data under Council Regulation (EEC) No 2092/91).

12b Organic farming

Sustainability is an inherent aspect of organic farming. It preserves natural resources to a high degree and has a variety of positive effects on nature and the environment. Doing without highly soluble mineral fertilisers and synthetic crop protecting agents as well as genetically modified organisms are among the principles of this type of farming. Higher prices to a certain extent make up for lower crop yields. Demand for organic farming products has experienced a surge recently, its main source of increase are consumers with a high nature and health awareness.

The present indicator shows the area under cultivation of organically producing farms that are subject to the inspection system of the EU regulation on organic production of agricultural products, as a proportion of the total area under agricultural cultivation in Germany.

In the period 1994 to 2005, the share in German farmland of area cultivated by organic farms increased from 1.6 % to

4.7 %. In 2002, the Strategy for Sustainability set out to raise the share of this area to 20 % by 2010. In the years since 2001, a steady rise could be observed but the increase was lower than during the end of the 1990ies.

As keeping livestock is a significant part of organic farming and the purchase of additional forage is subjected to heavy restrictions, there is a high proportion of rangeland in this sector. According to official statistical figures, the percentage of permanent rangeland in the overall area cultivated organically by 2005 increased to 51 %, while 47.8 % of the area was used for arable farming. In farmland overall however, arable land dominated with 70 %, while rangeland accounted for 29 % (1 % was taken up by permanent crops).

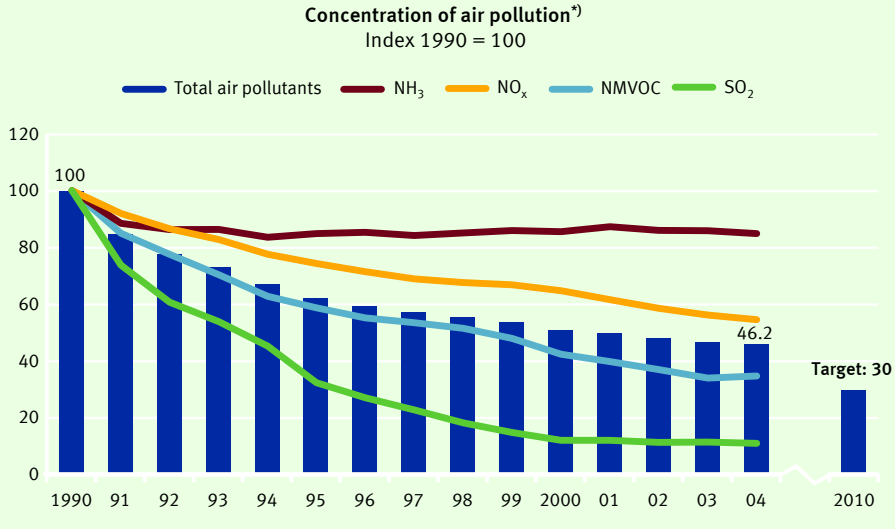
As their large share of area used as rangeland indicates, organic farms chiefly keep cattle (76 % of all farms in 2003), but also sheep (18 % of the farms). Pig husbandry plays a smaller part in organic farming than it does in conventional agriculture.

With 57 ha, operational areas in organic farming exceed the overall average area used per farm (43 ha) and they are particularly large in the new *Laender* (182 ha).

The underlying principle of organic farming is to produce in harmony with nature. Organic farming has a positive effect on the diversity of species and habitats in agriculturally developed land and in the ground (cf. indicator 5 “Biodiversity and landscape quality”). Thanks to a more moderate use of fertilisers and energy from fossil sources as opposed to conventional farming nitrate surplus (cf. indicator 12a “Nitrogen surplus”), energy use (indicator 1a “Energy productivity”) and CO_2 emissions (indicator 2 “Greenhouse gas emissions”) are reduced. It cannot be ruled out that there will be competition for areas where biomass crops may be grown with public support (cf. indicator 3 “Share of renewable energy sources in total energy consumption”).

Air quality

Keeping the environment healthy



*) Sulphur dioxide (SO_2), nitrogen oxide (NO_x), ammonia (NH_3) and the volatile organic compounds (NMVOC), averaged index of measurement data.

Source: Federal Environment Agency.

13 Concentration of air pollution

The original idea behind environmental protection was to protect the human health since respiratory diseases were soon linked to air pollutants. Initially, protective measures were directed at reducing air pollutant emissions to counter the dangers to human health. The effects of air pollution gravely burden the ecological systems and biodiversity. This is particularly true for acidifying air pollutants and air pollutants causing over-fertilisation (eutrophication). Although the integration of desulphurisation and denitrogenisation installations in power plants and the wide application of catalyser technology in petrol engines have served to reduce emissions in Germany significantly since the 1980ies, further efforts are still needed. Four essential pollutants were combined in the indicator "Concentration of air pollution" of the national Strategy on Sustainability of the Federal Government: sulphur dioxide (SO_2), nitrogen oxide (NO_x), ammonia (NH_3) and the non methane volatile organic compounds (NMVOC).

The goal of the Federal Government is to cut emissions of these air pollutants by 70 % of the rate of the reference year 1990 by the year 2010.

Up to 2004, the indicator showed a decrease of 54 % and thus is developing in the right direction. In order to achieve the targeted value, emissions would have to be reduced by another 16 percentage points in the six years up to 2010. Significant decreases could be noted in the first half of the 1990ies in particular. By 2000, emissions of air pollutants had dropped to almost half of the original rate (– 49 %) but decrease slowed down considerably. The following years up to 2004 showed a mere decrease of 5 percentage points. This is not sufficient to achieve the set target of reduction of the overall index to 30 %.

The contributions to the development in the period 1990 to 2004 by individual type of emission varied. A reduction of 89.2 % in the emission of sulphur dioxide was accomplished. Thus the target value of 70 % reduction has been exceeded clearly for this type of emission. Part of this reduction was accomplished by the desulphurisation of the exhaust gases of power plants, by the partial replacement of high-sulphur domestic brown coal with low-sulphur fuels as well as legal limitations for sulphur contents in liquid fuels.

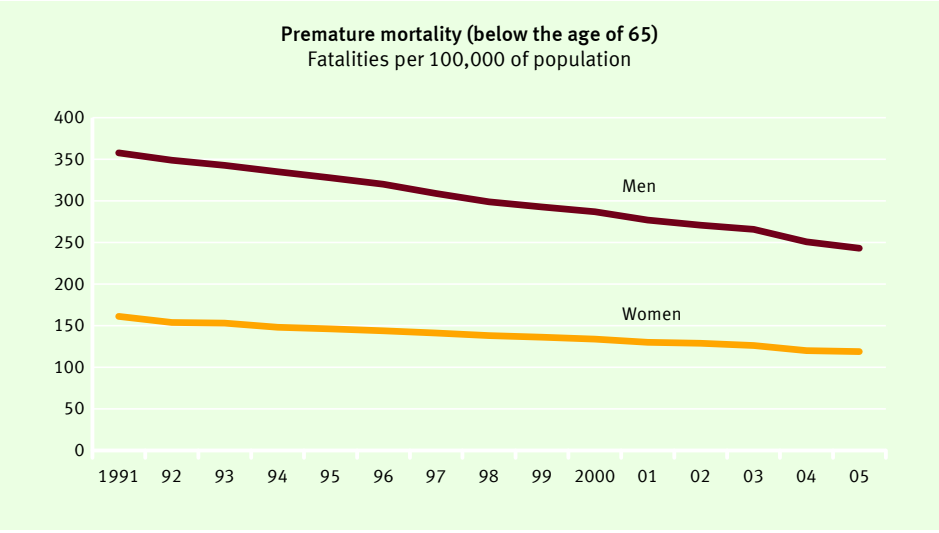
Emissions of non-methane volatile organic compounds (NMVOC) were successfully cut by 65.5 % in the period under consideration. That means the target value of 70 % reduction is nearly achieved. The growing application of catalyser technology in automobiles has proved decisive in the reduction of NVOMC emissions in the transport area.

Nitrogen oxide emissions fell by 45.6 % compared to 1990. The use of catalyser technology in transport mentioned before was a significant factor in this development as well. In addition, the growing use of exhaust gas denitrogenisation installations in power plants resulted in a significant decrease.

In the period under review, ammonia emissions, caused almost entirely by agriculture, fell by 15.2 %. This decrease is mainly due to the reduction of livestock during the first years after the German reunification when emissions all but stagnated.

Health

Healthier and longer living



Source: Federal Statistical Office.

14a Premature mortality

Health and life expectancy in Germany are determined largely by the following factors: social status, education, personal lifestyle (tobacco, alcohol, physical exercise and diets), working conditions and environmental factors (air pollution and noise). These factors offer numerous opportunities for prevention and health promotion. When a high number of fatalities in a population arise at an age under the average life expectancy, this is an indication for increased health risks. Deaths up to the age of 65 years are deemed premature and avoidable in many cases. The indicator shows the fatalities in the population below the age of 65 per 100,000 of population.

The present indicator for premature mortality steadily decreased between 1991 and 2005, a little more in fact in the case of men (– 32.2 %) than in the case of women (– 26.2 %). In 2005, in terms of absolute figures, 243 men and 119 women deceased per each 100,000 inhabitants before reaching the age of 65. Although changing mortality rates over the years

predominantly reflect the health condition of the population, the growing share of old people within the age group under 65 years has slowed down the improvement of the indicator in the period under review. When not taking the effect of the changed age-group structure into account, the decrease of the share of men in premature mortality rises by 7.9 percentage points and of women by 5.8 percentage points.

All in all, Germans grow older and older. In the three years period between 2002 and 2004, average life expectancy (for a new-born child) was 81.6 years for women and 76.0 years for men. Thus, life expectancy since 1990 increased by 2.8 years for women and 3.8 years for men, the gap between the sexes having narrowed to 5.6 years. Life expectancy in Germany is below the European average (EU-15), but is gaining ground.

Generally speaking, the most common death cause in 2004 were heart and circulatory diseases (45 %), followed by malignant tumours (26 %), illnesses of the respiratory system (6.4 %) or the digestive system (5.2 %) and injuries and poisoning (4.1 %).

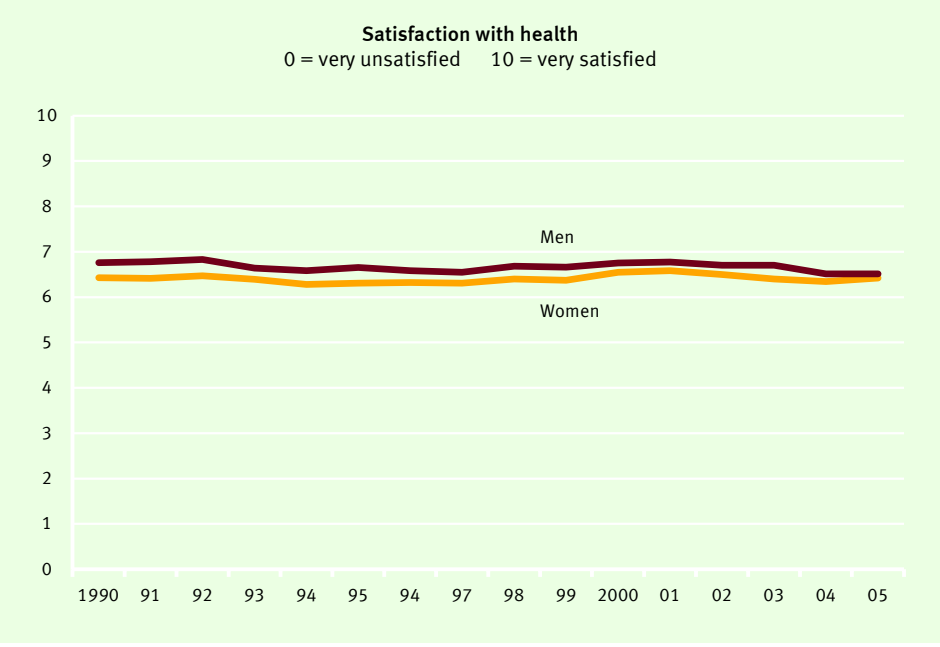
The significance of death causes varies depending on age and gender. Whereas heart and circulatory diseases cause most deaths above the age of 65, malignant tumours dominate the age-group of 40 to 64, but also the group of children up to 15, where they occur almost as much as injuries and poisonings. Most deaths among 1 to 39-year-olds were attributable to non-natural causes (injuries and poisonings). In spite of the great progress made in accident prevention, in the case of 18 to 25-year-olds, accidents continue to take first place in death cause statistics. Among 35 to 55-year-olds, death caused by diseases of the digestive organs (such as alcohol-induced diseases of the liver) occur more frequently than among other age-groups.

While malignant tumours in the bronchia or lungs constituted the most common lethal type of cancer in the case of men, it was mammary cancer for women. Although smoking among men has decreased slightly in the last years, it has increased among women and continues to be one of the most significant risks to health.

In 2003, 11 % of the gross domestic product was spent on health which is a high figure on an international scale. The resulting improved medical care, along with better living and environmental conditions, has contributed to improving the indicator.

Health

Healthier and longer living



Source: Federal Ministry of Health/Robert Koch Institute.

14b Satisfaction with health

It is the wish of many people to live long lives. Along with the steady rise of average life expectancy comes the desire to spend the years gained in health. Health by any rate is a decisive requisite for a high quality of life. However, where does health end and sickness begin? In addition to medical values that are measurable, the degree of personal satisfaction with health provides an overall picture that is just as important a basis for determining the wellbeing and also the proposed political course of action with regard to health as individual indicators on specific clinical pictures or health problems. For instance, individual activities, behaviour and disposition also play a major role in the satisfaction of people with their health, besides the state of health, medical care, prevention, treatment and rehabilitation.

The present indicator is based on representative surveys and shows the degree of satisfaction with health on a scale of 0 (very unsatisfied) to 10 (very satisfied). The subjective judgement not only reflects

actual complaints but also health-related dispositions, social comparisons or fears. Social developments can also take effect on self-perception, even if the state of health that is medically measurable has remained the same. There are no target values for this indicator.

Most Germans are on the whole satisfied with their health, men even slightly more so than women. In 2005, the degree of satisfaction of men was at 6.5, that of women at 6.4. Since 1990 the level has been stable.

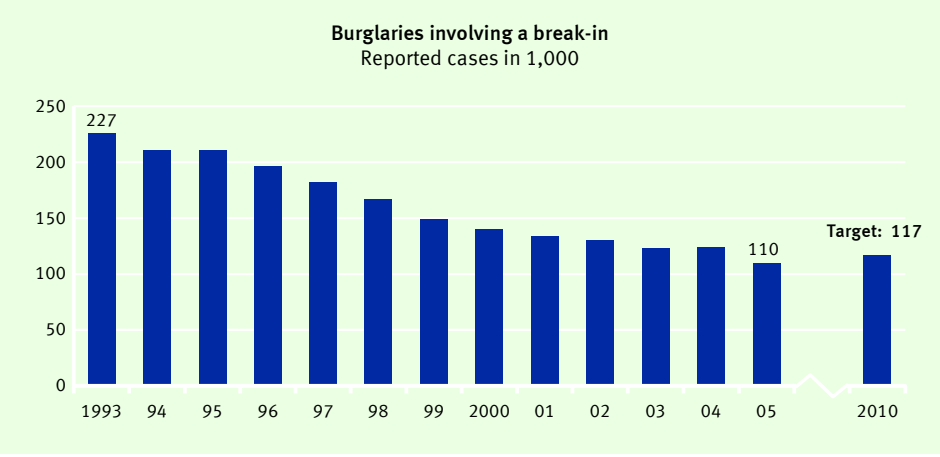
As age increases, satisfaction with health, by nature, gradually declines. The difference between the under-40-year-olds and the over-60-year-olds was around two assessment points. People with a higher or intermediate education value their health state more positively than people with a *Hauptschule* leaving certificate or no leaving certificate at all. Similarly, fully employed people and people with a higher personal income are satisfied with their health to a greater degree than unemployed people and people in lower income groups.

On a regional scale, people in western Germany are more satisfied with their health than people in eastern Germany.

Satisfaction with health is only one factor of the satisfaction with life in general. In eleven surveyed areas of life, Germans were most satisfied with their residential circumstances, their leisure time and their standard of living. They were less satisfied with the available range of goods and services and their income. Health satisfaction occupied the eighth place.

Crime

Further increasing personal security



Source: Federal Criminal Police Office, Police Crime Statistics.

15 Burglaries involving a break-in

A secure environment, which allows the citizens of a state to live without fear of crime or arbitrariness, is an essential prerequisite for properly functioning social systems and social sustainability. The number of burglaries is regarded as an important indicator of the personal security against crime. As burglaries constitute situations in which a stranger invades the privacy of a victim, citizens perceive this offence as especially threatening. It is possible for the individual citizen however to contribute actively to burglaries prevention by taking appropriate security measures.

The indicator covers all burglaries that were reported to the police. A target was set to cut the total number of burglaries per year to 117,000 by 2010, a reduction of 10 % compared to 2002.

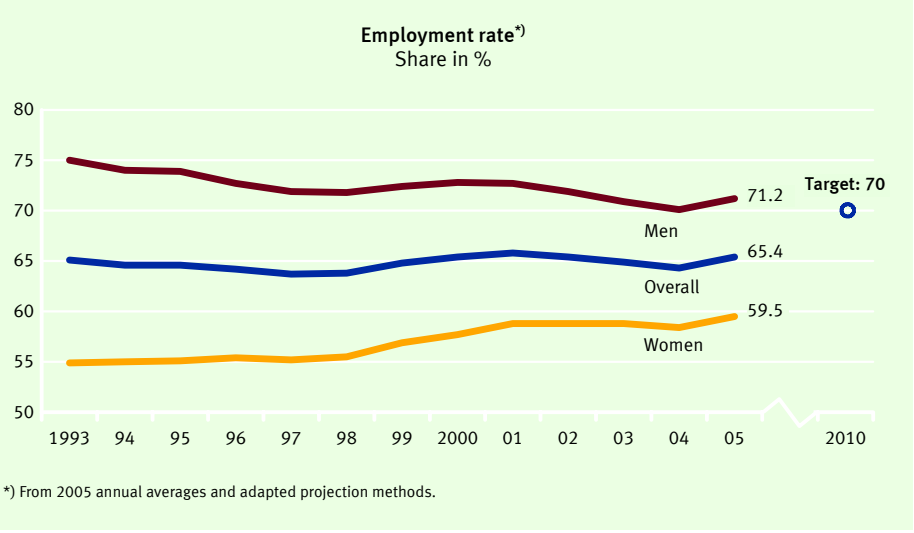
Recordings of burglaries have been falling continuously during the last decade. Since 1993 the number of recorded cases has dropped to under 50 %. With around 110,000 cases in 2005, burglary accounted for 1.7 % of the overall number of 6.4 million offences that were recorded by the police. That means that the target set for 2010 has been reached and even exceeded ahead of schedule.

The success is primarily based on increased public awareness. Citizens have raised their security against burglaries by having alarm systems or particularly secure windows or doors installed.

It must, of course, not be forgotten that the number of burglaries is only one of so many indicators of personal security against crime. Theft under aggravating circumstances (which also includes burglary) in 2005 accounted for around 21 % of all recorded offences, 15 % were cases of fraud and assault and bodily injury made up 8% of the total. Running counter to the falling trend seen with burglaries (also seen with other types of theft), the reported cases of both fraud and bodily injury increased compared to the previous years.

Employment

Boosting employment levels



*) From 2005 annual averages and adapted projection methods.

Source: Federal Statistical Office, Microcensus.

16 Employment rate

Due to the demographic change ("ageing society"), there will be a long-term labour shortage in Germany. In addition, the social security systems threaten to become under-financed, due to the proportional shift between retired persons and contributors. It therefore is necessary to better exploit the labour potential available.

As a consequence, the Federal Government aims to increase the share of employed people in the employable age-group (15 to 64 years, employment rate) to 70% by 2010. Yet, up to now employment rates have gone up only slightly – by 0.3 percentage points from 65.1 % in 1993 to 65.4 % in 2005. However, after an interim of falling rates, they made a recovery of 1.1 percentage points between 2004 and 2005 alone. This marked increase above all reflects the newly designed method used for the Microcensus, which serves as a source of data in determining the employment rates. The transition to a concept of

ascertaining data for periods less than one year since 2005 allows the Microcensus to supply average annual results that are only comparable to a certain extent with the results prior to 2004, which were obtained in review periods of a single week in spring. By using the new method of ascertaining, data on irregular employments (e. g. seasonal work), which are to be included under the internationally accepted definitions for employment, can be collected more thoroughly. From 2005, the changed method of projecting the obtained data, besides the changed period of reference, also enhances employment rates of the Microcensus. The developments presented in the ensuing time series may show similar ruptures due to the methods used.

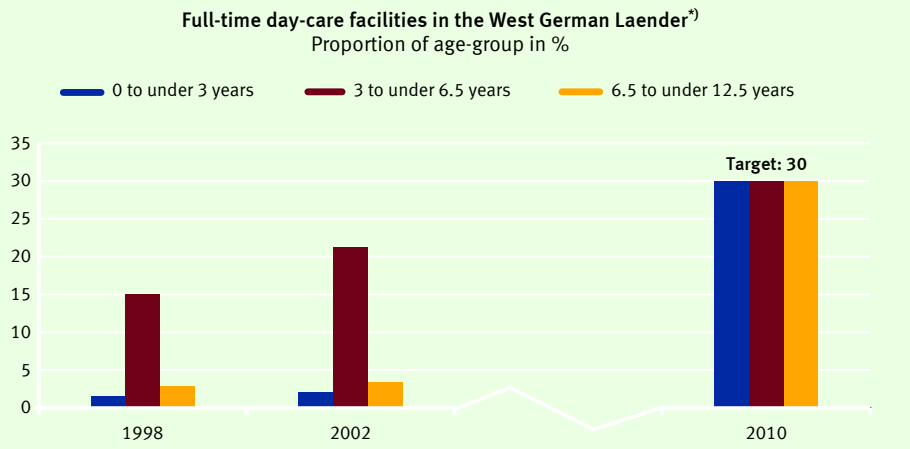
The increased propensity to work clearly exceeded the increased employment rates in the period between 1993 and 2005. For in this period there was a rise in the number of unemployed people of 780,000. The total available labour force (employed people plus unemployed people), as a share in the total population in the employable age-group, has increased by 1.8 percentage points to 73.7 %.

The employment rates of men and women have developed in opposite directions since 1993. The rate of employed men dropped by 3.8 percentage points to 71.2 % in the reviewed period while the women's rate rose by 4.6 percentage points to 59.5 %. The fact that the increased rate entailed a clear extension of part-time employment (+ 2.1 million women), while the number of full-time employed women went down by 1.1 million should be taken into account in evaluating the increase in the female employment rate. This means that the actual goal of better exploiting the female labour potential is not yet attained.

In the period 1993 to 2005, upon consideration of the employment rates according to age-group, varying trends come to light. In the group of 15-year-olds to persons under the age of 24, rates dropped by 10.5 percentage points to 42.5 %. This decrease in particular reflects the longer average educational periods in schools and universities, caused by the augmented qualification that education offers (cf. indicator 9c "First-year student quota"). A slight rise of the quota (+ 0.5 percentage points) could be noted in the intermediate age-groups (25 to 55-year-olds). In the group of 55-year-olds to persons under the year of 65, rates went up over this period by 10.0 percentage points to 45.4 %. Thus, efforts to step up the integration of older people into the labour market have been fruitful. The available potential is, however, far from being exploited to the full. The two previous years have seen a particularly distinct rise of rates in this age-group (+ 6.0 percentage points), which however, is partially accounted for by the overstating effect of the methodical rupture described above. With 13.9 percentage points, female employment rates in this age-group have experienced a larger increase since 1993 than the male equivalent (+ 6.0 percentage points) but starting at a lower level.

Perspectives for families

Improving the compatibility of work and family life



*) Without full-time day-care, without all-day schooling. Excluding Berlin. Results for 2006 were not available by the editorial deadline.

Source: Federal Statistical Office as well as calculations by the Dortmund working group for Child and Juvenile Aid Statistics at the University of Dortmund.

17 Full-time day-care facilities

Making available a range of day-care possibilities that meets existing needs is essential in improving the compatibility of family life and work. Especially women are still barred from pursuing an occupation because of lacking day-care places. Couples may also decide against having children because they lack the financial security needed to provide for children. A better balance between family work and professional work might also contribute to a rising birth rate in Germany. Advancing children's development within a framework of all-day child care programmes would however also be a step in the direction of equal opportunities and integration of foreign children and juveniles.

The range of available all-day child care places is of a substantially better quality in the eastern *Laender* than in the western, due to historical reasons. Therefore, one of the aims set out in the Strategy on Sustainability is to make all-day child care places available for at least 30 % of children in all

age-groups in the old *Laender* (without Berlin) by the year 2010. In 2002, all-day places were available for 21.3 % of the 3 to 6.5 year-olds (kindergarten age-group) in former West Germany (without Berlin). This rate was at 3.4 % for children between 6.5 and 12.5 years old (age-group requiring after-school care places), for children younger than three (crèche) the rate was 2 %. Thus, considerable headway has been made since 1998 in the area of all-day child care in kindergartens, which shows an increase of 6.3 percentage points, while the rise in available crèche and after-school care places was marginal (+ 0.4 percentage points and + 0.6 percentage points respectively). To attain the defined goal for crèches and after-school care programmes, efforts to create more places must be stepped up considerably.

In the new *Laender* (without Berlin) in 2002, all-day places were available for all children in the kindergarten age-group, while in the after-school care age-group places were available for 29 %, and 36 % for the crèche age-group.

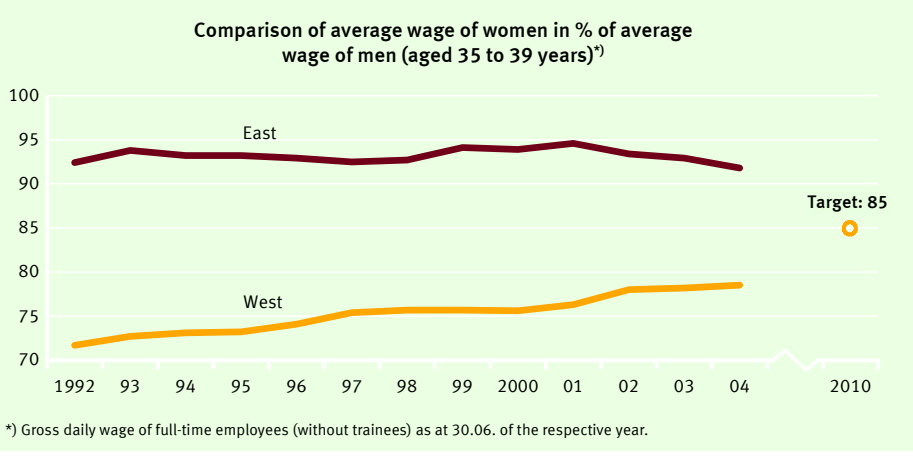
The number of all-day places in former West Germany in 2002 lay at around 697,000, vis-à-vis 1.7 million part-time care places in total. In the new *Laender*, there were around 572,000 all-day care places and almost 65,000 part-time places.

The ratio of child care places to the number of children depends on the overall number of children and the birth-rate, besides the number of available places. As substantial discrepancies between the east and the west of Germany can also be observed in this area, overall German results do not reflect the fundamentally different challenges. In the west, the yearly number of births between 1978 and 1997 went up from 600,000 to 700,000. Since 1997, birth rates have been falling here, which can be currently seen in the dropping number of children in the crèche and kindergarten age-groups. Birth rates in 2005 were at around 560,000 and the number of live births at 8.5 per 1,000 inhabitants.

In the east part of Germany, birth rates from 1978 to 1987 ranged between 220,000 and 250,000. In the course of German reunification, yearly birth rates dropped dramatically. Between 1989 and 1991, they fell by 50 %. Up to 1994, the number of children in the crèche age-group decreased strongly as a consequence, subsequently followed by a decreasing number of children in the kindergarten age-group up to 1998 and of children in after-school child care since 1998. Since 1994, birth rates in the east of Germany have been rising again, which was reflected in the rising number of children in the crèche age-group and since 1998 in the increasing number in the kindergarten and after-school child care age-groups. Birth rates in 2005 were at almost 97,000 and the number of live births at 7.2 per 1,000 inhabitants, birth rates thus being significantly lower than west German equivalents (8.5).

Equal opportunities

Promoting equal opportunities in society



Source: Institute for Employment Research of the Federal Employment Services, Employment Sample.

18 Average wage of women

"Men and women have equal rights. The state shall promote the de facto equality of women and men and shall counteract existing inequalities." This goal set out in the Basic Law is also the goal of a sustainable society. Social inequalities such as those between women and men must be avoided in order to create equal opportunities.

In the working part of modern societies, the difference in wages is a significant source of social inequality. A closing wage gap can be used as an indicator of progress towards equal rights. In 2004, full-time employed women between the ages of 35 and 39 in former West Germany (without Berlin) in average earned only 78.5 % of what men in the same age-group earned, compared to 91.8 % in the new *Laender*. That means there are substantial differences between the east and the west part of Germany. The Federal Government therefore endeavours

to accomplish a rise of this share to 85 % by the year 2010.

Since 1992, the new *Laender* have shown slight fluctuations of the indicator – at a comparatively high level – whereas former West Germany has experienced a continuing increase of 6.8 percentage points. Although the annual increase in the years since 2000 has been slightly higher than before, the goal set for 2010 will not be attained at the current rate.

Considering the average earnings of all full-time employees in east and West Germany in addition to the indicator, 2005 shows that female employees in average earned EUR 2,539, which is 20 % less than their male colleagues.

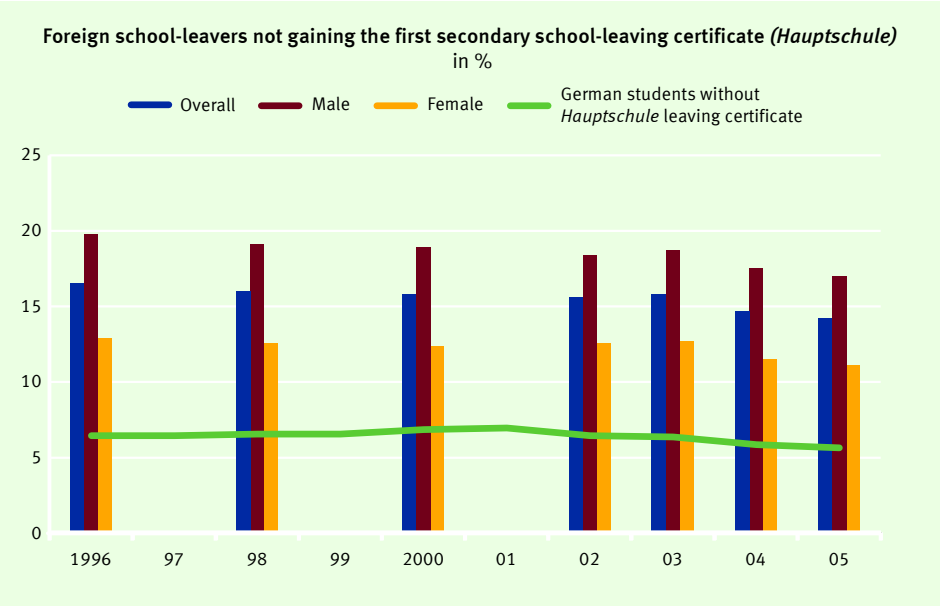
Differences in pay between men and women – as between other groups – are often based on the type of profession, the professional experience and the position within a company but they are also affected by the distribution among economic areas or companies of different sizes as well as the differences in the career paths taken.

Women more often work in industries or hold jobs that pay less. Industries with a comparatively large share of female employees are, for instance, the clothing trade, retail, health care, the veterinary sector and social services as well as other services (each with a female share of between 70 and 80 %). Men, on the other hand, are more represented in areas that offer better pay such as engineering or vehicle construction. Women make up less than 20 % of the employees in these industries. In 2005, for instance, gross monthly earnings of full-time employed women in retail were EUR 2,114, whereas in vehicle construction they were 3,082. Men in these industries in average made EUR 2,694 and EUR 3,534 a month respectively.

In the course of the last 15 years, formal qualification of women has substantially improved (cf. indicators 9a and 9b "concerning education"). This can be expected to have contributed to closing the wage gap between women and men. However, even while formally equally qualified, women are often paid lower wages. The differences in the professional careers of women and men play an important part in this, as women more often interrupt their career or hold part-time employment due to, amongst others, child care or care for relatives. These factors can impede a career and by doing so stifle the development of remuneration. Although the range of child care institutions has also widened (cf. indicator 17 "Full-time day-care facilities"), it is by no means sufficient, at least not for former West Germany, to alleviate the problems encountered in combining a professional career with raising children and thus at least avoid ruptures in careers of mothers.

Integration

Integration instead of exclusion



Source: Federal Statistical Office.

19 Foreign school-leavers not gaining the first secondary school-leaving certificate

Integration of foreigners living in our country is an important prerequisite for social cohesion. A fundamental condition for a successful integration is an academic qualification that opens up higher educational and professional opportunities. The national Strategy on Sustainability therefore aims to reduce the share of young foreign school leavers that do not hold a *Hauptschule* leaving certificate and by 2020 align it with the equivalent quota of German youths.

In the period 1996 to 2005 the share fell from 16.5 % to 14.2 %, which means progress was made for foreign youths. Still, the share of school leavers without a certificate in this group is twice as high as that of German youths, whose share was at 5.6 % in 2005. In the period 1996 to 2005, the quota for German youths has improved by 0.8 percentage points. Therefore, efforts have to be kept up in view of the objective set. More so as an additional objective is to

reduce the share of all youths without a leaving certificate (cf. indicator 9a "25-year-olds without a leaving certificate").

With respect to the attained leaving certificates of young foreigners, it can be observed that 39 % of the school leavers in 2005 held a *Hauptschule* leaving certificate, 32 % left school holding a *Realschule* leaving certificate and 15 % attained either the entrance qualifications for universities of applied sciences or those for universities. The equivalent shares of German school leavers were 21 %, 40 % and 34 %. Thus, foreign youths are significantly underrepresented in the "higher" educational leaving certificates in particular, compared to their German counterparts.

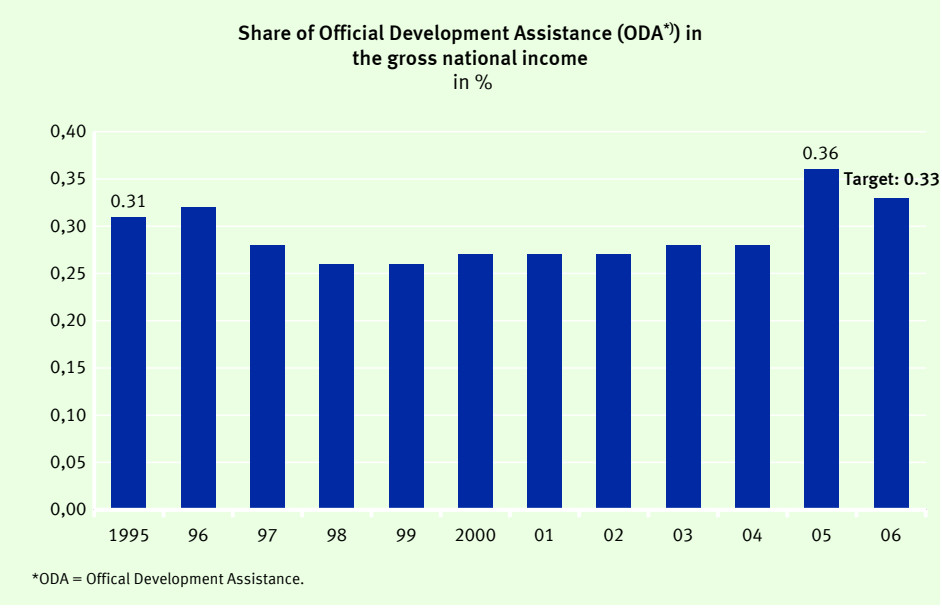
At the same time, the overall level of education of foreign young women has improved, as has that of German young women. In 2005, only 11.1 % of them did not hold a leaving certificate, compared to 17 % of the foreign young men.

Besides academic education, vocational qualification also plays an important part in the social integration of foreign citizens. In 2005, almost half (48.5 %) the young foreign adults (ages 25 to 29) did not hold a vocational qualification or a leaving certificate of an institution of higher education whereas for their German contemporaries, this was 22 %. More foreign women than men hold a school leaving certificate, while the opposite is true for vocational qualifications. In 2005, almost 53 % of the foreign young women in this age-group did not hold vocational qualifications or a leaving certificate of an institution of higher education, compared to 44% of the foreign young men.

At the end of 2005, around 7.3 million citizens living in Germany held a foreign passport that is 8.8 % of the population. In the school year 2005/2006, approx. 930,000 foreigners attended general education schools. 191,400 foreign students were enrolled in vocational schools. That means foreigners in general education schools made up a share of 9.8 % and in vocational schools they constituted a share of 6.9 %.

Development cooperation

Supporting sustainable development



Source: Federal Statistical Office and Federal Ministry for Economic Co-operation and Development.

20 Share of Official Development Assistance in the gross national income

With their development policies, industrial nations contribute to reducing global poverty, securing peace and realising democracy, to shaping globalisation in a fair way and protecting the environment. With respect to these responsibilities, German development policy is guided by the idea of sustainable development that is expressed in economic competitiveness, social equity, ecological sustainability and political stability alike.

The present indicator shows the public expenditure for development co-operation (so-called Official Development Assistance – ODA) in relation to the gross national income. The ODA is chiefly composed of the expenditure for financial and technological cooperation with developing countries and the contributions to multilateral institutions for development co-operation (e. g. to the United Nations, the European Union, the World Bank and regional development banks). Besides these, debt relief and

certain expenditure for development purposes within donor countries as, for instance, costs of studying for students from developing countries or expenditure for research which is specific for developing countries also qualify as ODA. Within the framework of the UN Conference on Financing for Development in Monterrey, the Federal Government has undertaken to spend 0.33 % of the gross national income on development cooperation. This goal was adopted in the German Strategy on Sustainability.

The common obligation of the European Union for a phased raise of expenditure on official development assistance (ODA) means that Germany has to increase the share of the ODA in gross national income to 0.51 % by 2010 and to 0.7 % by 2015. In a protocol statement on the decision of the European Council, the Federal Government has put on record that, due to the extremely difficult financial and budgetary state the country is in and due to obligations within the Stability and Growth Pact, the main contribution to attaining these goals must be provided by innovative financial instruments.

In 2005, the share of the ODA in the gross national income was 0.36 %, compared to 0.28 % in the year before. Thus, the target set for 2006 in the Sustainability Strategy of spending 0.33 % of the gross national income on development cooperation, had already been reached in 2005. ODA payments in 2005 amounted to EUR 8.1 bn. The distinct rise compared to 2004 can be ascribed to a higher-than-average share of debt relief.

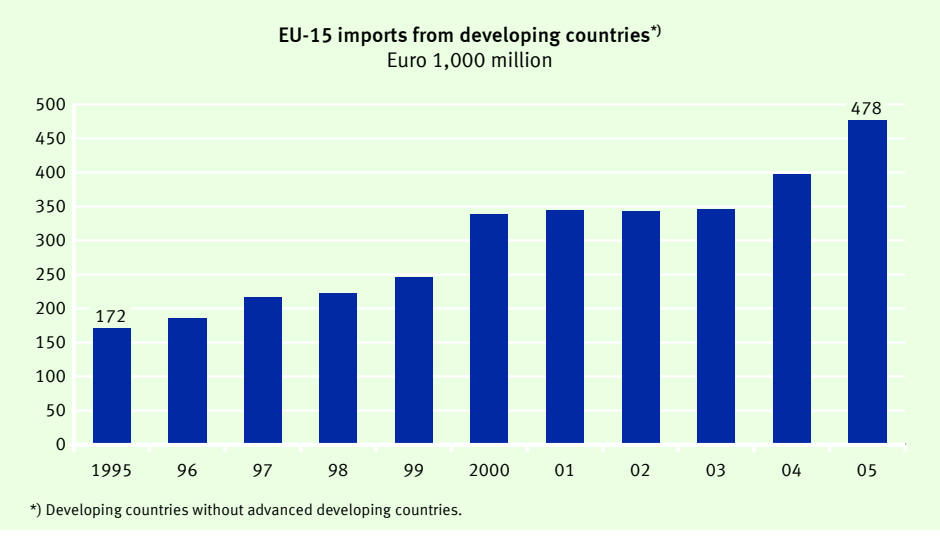
In 2005, well over two-thirds of the funds for official development assistance were spent on technological or financial cooperation with chosen partner countries, on food aid, on development-orientated emergency and refugee aid as well as on debt relief. Funds were also used to support non-governmental development cooperation (e.g. non-governmental organisations, political foundations, church relief organisations, private sector) The rest of the funds go to the United Nations, the European Union, the World Bank or regional development banks.

On an international level, Germany as a donor of ODA means ranked fourth in 2005, behind the US, Japan, and the United Kingdom. Compared to the gross national income, however, smaller countries spent larger shares on development cooperation. Norway, Sweden, Luxembourg, the Netherlands and Denmark reached or exceeded the 0.7 % mark in 2005.

Besides official development assistance, the private sector (e. g. churches, foundations and associations) also contributes a share in donations and funds to development assistance. Private development assistance in the years 1999 to 2004 was at a steady EUR 900 bn and increased to 1.2 bn in 2005, which was the equivalent of 0.05 % of the gross national income. Economic development is also supported by direct investments in the developing countries. In 2005, these investments amounted to EUR 10.4 bn.

Opening markets

Improving trade opportunities for developing countries



Source: Eurostat.

21 EU-15 imports from developing countries

For their economic and social development, developing countries rely on open and fair trade systems that enable them to offer raw materials as well as finished products on the markets of the industrialised and emerging countries. The import quotas into the EU-15 of developing countries are an indicator for the extent to which this goal has been attained. Figures for the so-called advanced developing countries such as Korea, Israel or Singapore are not included in this indicator.

In the second half of the nineties and since 2003, import figures distinctly rose from EUR 172 bn in 1995 to EUR 478 bn in 2005. The increase of almost 180 % clearly exceeds the rise in total imports of the EU-15 (+ 128 %). Thus the share of imports from developing countries in total imports of the EU-15 went up from 31.5 % in 1995 to 38.0 % in 2005. Germany's share in the

EU imports from developing countries amounted to 17.6 % or EUR 84.3 bn.

Half of imports from developing countries came from Asia, 9 % from countries in the Middle East, almost 19 % from Africa and 14 % from Central and South America. The rest was accounted for by the European developing countries (e. g. Albania, Turkey, and Belarus) and Oceania. The most significant developing country with respect to imports into the EU was China. Imports from this country in 2005 amounted to EUR 148 bn, having increased fivefold since 1995 (by contrast: In 2005 imports from Japan into the EU-15 totalled EUR 68.8 bn and EUR 54.3 bn in 1995).

Imports from China therefore have a great influence on how the indicator develops. If imports from China are not taken into account in imports from the developing countries for the entire period between 1995 and 2005, the share of developing countries in European imports can be seen to have hardly changed, steadily hovering around a quarter (2005: 26.5 %). In this respect, the trade of these countries with the EU-15 does not show any increase.

Also of interest is the higher-than-average percentage of the goods groups in total imports from developing countries in 2005. Most noteworthy are foodstuffs and livestock (59 %), beverages and tobacco (47 %), raw materials (without mineral fuels; 52 %), animal and vegetable oils and fats (89 %), processed goods (44 %) as well as a variety of finished products (56 %). Under the average of 38 % were imports of mineral fuels (36 %), engineering products, and electrical appliances and – despite the increase since 1995 mentioned further on – vehicles (30 %), chemical products (16 %) and other goods (15 %).

Comparing the developing countries imports in the period 1995 to 2005 according to category of goods shows that the share of foodstuffs and livestock has dropped (from 14.7 % to 8.1 %), whereas the share of engineering products, electrical appliances and vehicles has sharply risen (from 14.7 % to 27.2 %). Both in 1995 and in 2005, raw materials and mineral fuels together made up a quarter of the imports into the EU-15. However, the share in this taken up by raw material imports decreased (from 9 % to 5.3 %) while the share of mineral fuels went up (from 15.8 % to 19.4 %). It should be borne in mind that the shown changes can be the result of both an increasing volume of imports and price appreciations for the imported goods. The share of other goods categories (various finished goods, processed goods, chemical products, beverages and tobacco and animal and vegetable oils and fats) in the total import from the developing countries hardly changed.