Economy and Use of Environmental Resources

Tables on Environmental-Economic Accounting
Part 1: Macroeconomic overview tables, Economic indices

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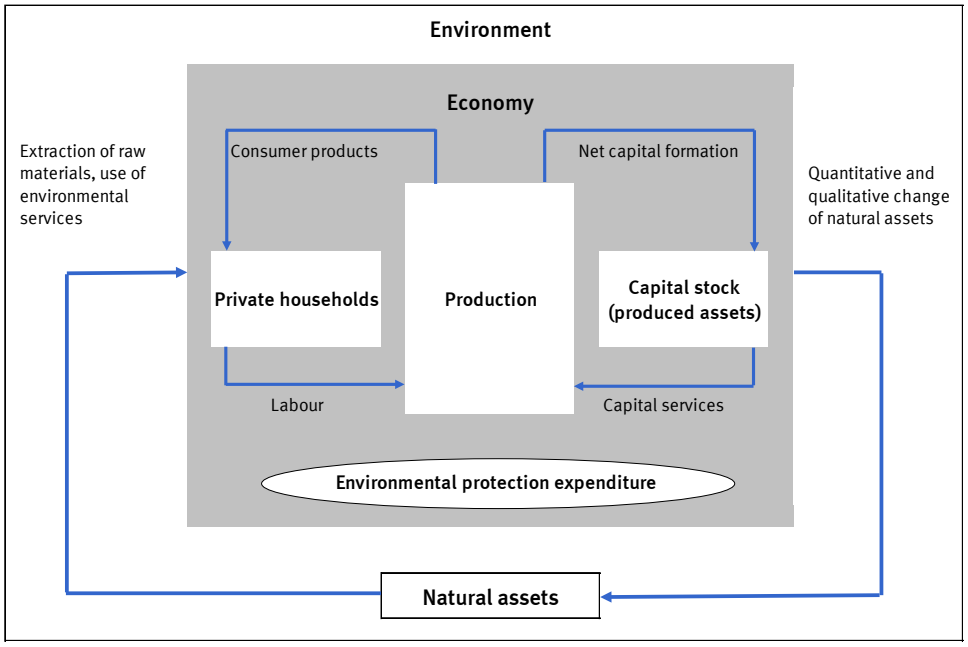
1 Environmental-Economic Accounting of the Federal Statistical Office

Environmental-Economic Accounting (EEA) describes the **interrelationship between the economy and the environment.** For its economic activities, production and consumption an economy not only uses labour and produced assets but also natural assets. Natural assets include raw materials such as sources of energy, ores, other minerals and water as well as land that serves as a location for production, consumption and various leisure activities. These parts of natural assets are used directly. Other components of natural assets are ecosystems and other natural systems such as the atmosphere. They support economic activities by absorbing and eliminating residues and pollutants arising from production and consumption, such as atmospheric emissions, waste and effluent.

Figure 1 shows the interrelationship between economy[1] and environment. On the one hand natural assets are used as input for the economic process. On the other hand the economy discharges residues and pollutants.

Figure 1: Interrelationship economy environment



The use of natural assets – similar to the produced capital stock – generally involves depletion, which means that the burden or **impact on the environment** causes changes in its state and/or natural assets. On the one hand, these changes are of a quantitative nature (e.g. a decreasing amount of non-renewable raw materials); on the other, they have many qualitative aspects (deteriorating air quality due to emissions of pollutants, diminished biodiversity etc.). Attempts are being made to prevent these negative changes with targeted, appropriate environmental protection measures, such as by avoiding environmental burden (e.g. desulphurising flue gas) or remedying damage that has already been done (e.g. cleaning up polluted sites). The interdependencies between the economy and the environment therefore are not restricted to showing the burdens on the environment; in fact the pattern also includes changes to the state of

1 Both are shown the in simplified form in the diagram.

the environment brought about by pollution and the steps taken to avoid it or repair the damage.

The EEA aims to describe all three forms of interdependence between economy and environment – environmental burden, the environmental state and environmental measures. The description of these interdependencies takes as its starting point the fact, mentioned above, that a national economy not only uses labour and capital but also nature. Therefore, the basic idea is to take the commonly accepted definition of a national economy and expand it by a "factor nature". The System of National Accounts (SNA) provides a comprehensive and systematic definition of economic activity. Principally, they show monetary transactions (flows) and assets using standardised classifications. EEA were conceived as a satellite system for the national accounts, the objective of which is to extend the presentation of the economic process by a depiction of the interrelationship between the economic system and the environment. The environmental flows and inventories are almost always presented in physical units. For example, air emissions are expressed in tonnes, energy consumption in Terajoules, area used for transport and settlement purposes (land use) in square metres.

An important feature is the full compatibility of both systems – the national accounts and the EEA. The underlying concepts, definitions, distinctions, and classifications in both systems match as far as this is logically sensible and possible. This also applies and particularly so for the economic classifications used in the EEA and the SNA. Because of these common concepts, definitions, distinctions and classifications the results of the EEA can be linked internally and to the identically categorised SNA data and they can be analysed jointly. Compatibility with the national accounts permits for example to relate the environmental parameters, which are mostly shown in physical units (such as in tonnes), to the economic indices (in euros). Of particular importance here are the data on the efficiency of environmental use, expressed as an arithmetical ratio of the figure of interest (such as raw materials consumption) to the gross value added (GVA) or to the gross domestic product (GDP). With regard to the details of calculating productivities and intensities see the notes on the tables in Part 1.

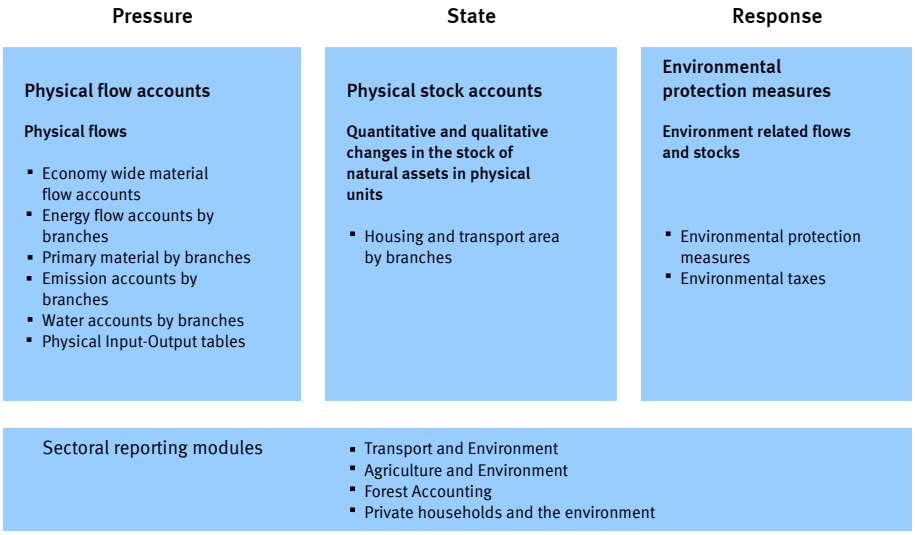
The concept underlying the EEA is to express the status quo and the change in natural assets in units of money, so as to be able to determine what is known as corrected macro-economic aggregates, such as the ecological domestic product. Particularly insofar as such evaluations do not assess the quantitative decrease of resources, but refer to qualitative changes of other components, they are problematic in many respects with regard to the methods used (valuation/aggregation problems, restricted knowledge about correlation between cause and effect and considerable regional differences). That is why such calculations tend not to be carried out by the Federal Statistical Office but by scientific research institutes. Consequently, when presenting environmental pollution and the state of the environment EEA of the Federal Statistical Office is restricted to physical data.

Environmental economic accounts and national accounts describe two dimensions of sustainable development– economy and environment – and their interrelationship. Therefore they provide an important and useful data base for political discussions concerning sustainability.

Figure 2 shows the different reporting **modules of the EEA** of the Federal Statistical Office. They reflect the internationally recognized pressure-state-response model, used to statistically show correlations between the environment and the economy. The **environmental pressures** reporting module shows the material flows listed behind it: the amount of raw materials extracted per year, the amount of pollutants emitted per year etc. This reporting module does not include produced goods or services, but raw materials extracted from nature and residual materials and hazardous substances emitted back into nature. The respective flows for each type of material are booked as

consolidated quantities, in what is known as the material account, which charts the flows of material between a national economy and both the natural environment and the world's other national economies.

Figure 2: Modules of German Environmental-Economic Accounting



At present, the **state of the environment** reporting module of the German EEA only expresses the component of the natural capital presented by land area. Especially land use by housing and transport are in the focus of this reporting module. Looking at how much land area is used by which economic stakeholder, however, can not be realised for the time being. Landscapes and ecosystems form yet another essential component of the natural capital, which should principally be included by accounting. In Germany these aspect are dealt with by Agency for Nature Protection, not by environmental economic accounts. Displaying the stocks of mineral resources – a third aspect of the natural assets, which may be of great importance for countries rich in raw materials – has a fairly low priority as far as German EEA is concerned and has so far not been considered. A reporting module has so far only been developed for forest.

In the module **environmental protective measures**, components already included in the monetary transactions of the national accounts are shown separately and, as a rule, broken down further. Here, for example, environmentally relevant taxes, such as vehicle tax or fuel tax, are shown. Another important part of environmental protective measures consist of investment and ongoing expenditure for environmental protection in the government and manufacturing industry sectors, as well as privatised public enterprises. Contrary to the physical electric power accounts of the material and energy flow accounts and the physical asset accounts describing the state of the environment, the EEA shows the environmental protective measures in the form of monetary accounts.

The **sectoral reporting modules**, presently used for the transport, agriculture, forestry, and private households sectors, enable extending the EEA standard programme by single items for politically significant topics. For such sectors, these reporting modules provide a much more detailed picture of the complete range of interdependencies between the environment and the economy, across the EEA components mentioned above.

Typical of EEA is considering the environmental impact (removing raw materials, land use, services of the environment) of economic activities from two angles: the first question is to what extent an environmental factor enters the economic cycle or is adversely affected in production or consumption of private households. Apart from this it is however also important to know what quantities of environmental factors are being employed and for what final purpose. This second assessment not only assigns directly consumed factor components to a specific category of use (such as the consumption activities of private households), but also those quantities needed to manufacture all the goods consumed by the households (at all stages of the production process) and therefore consumed, as it were, "indirectly" by the households. This contrasting of **direct and indirect parameters** is comparable with the presentation of origin and use in the national accounts, and applies to numerous subjects of EEA.

"Upstream" indirect consumption cannot be derived from the accounting system directly. Allocation takes place through a model approach based on input-output tables (IOT). IOTs are central elements of the national accounts; they include details of the upstream interdependencies between the individual production sectors, to name just one example.

The concept of Environmental Economic Accounts was established and further developed at **international level** by the United Nations, in particular, and adopted in February 2012 as an international statistical standard "System of Integrated Environmental and Economic Accounting (SEEA Central Framework 2012)"[2]. In Germany substantial sections of the environmental economic accounts are drawn up based on these conceptual proposals in the SEEA.

[2] European Commission/Food and Agriculture Organisation/International Monetary Fund/Organisation for Economic Co-Operation and Development/ United Nations/World Bank (2012): System of Environmental-Economic Accounting – Central Framework, White cover publication, pre-edited text subject to official editing.

2 Overview on classification

2.1 Classification of homogeneous branches

No.	Branches	Classification of products by activity (CPA) in the European Community	
		Designation	No.
1	Products of agriculture, forestry and fishing	Products of agriculture, forestry and fishing	A
2	Products of agriculture, hunting and related services	Products of agriculture, hunting and related services	01
3	Products of forestry, logging and related services	Products of forestry, logging and related services	02
4	Fish and other fishing products; aquaculture products	Fish and other fishing products; aquaculture products; support services to fishing	03
5	Mining and quarrying	Mining and quarrying	B
6	Coal and lignite	Coal and lignite	05
7	Crude petroleum and natural gas	Crude petroleum and natural gas	06
8	Metal ores, other mining and quarrying products	Metal ores, other mining and quarrying products; mining support services	07 – 09
9	Manufactured products	Manufactured products	C
10	Food products; beverages; tobacco products	Food products; beverages; tobacco products	10 – 12
11	Textiles; wearing apparel; leather and related products	Textiles; wearing apparel; leather and related products	13 – 15
12	Wood and products of wood and cork, except furniture	Wood and products of wood and cork, except furniture; articles of straw and plaiting materials	16
13	Paper and paper products	Paper and paper products	17
14	Printing and recording services	Printing and recording services	18
15	Coke and refined petroleum products	Coke and refined petroleum products	19
16	Coke oven products	Coke oven products	19.1
17	Refined petroleum products	Refined petroleum products	19.2
18	Chemicals and chemical products	Chemicals and chemical products	20
19	Basic pharmaceutical products and pharmaceutical preparations	Basic pharmaceutical products and pharmaceutical preparations	21

No.	Branches	Classification of products by activity (CPA) in the European Community	
		Designation	No.
20	Rubber and plastic products	Rubber and plastic products	22
21	Other non-metallic mineral products	Other non-metallic mineral products	23
22	Glass and glass products	Glass and glass products	23.1
23	Refractory products, cut, shaped and finished stone	Refractory products; clay building materials; other porcelain and ceramic products; cement, lime and plaster; articles of concrete, cement and plaster; cut, shaped and finished stone; other non-metallic mineral products	23.2 – 23.9
24	Basic metals	Basic metals	24
25	Basic iron and steel and ferro-alloys, other products of steel	Basic iron and steel and ferro-alloys; tubes, pipes, hollow profiles and related fittings of steel; other products of the first processing of steel	24.1 – 24.3
26	Basic precious and other non-ferrous metals	Basic precious and other non-ferrous metals	24.4
27	Casting services of metal	Casting services of metal	24.5
28	Fabricated metal products, except machinery and equipment	Fabricated metal products, except machinery and equipment	25
29	Computer, electronic and optical products	Computer, electronic and optical products	26
30	Electrical equipment	Electrical equipment	27
31	Machinery and equipment n. e. c.	Machinery and equipment n. e. c.	28
32	Motor vehicles, trailers and semi-trailers	Motor vehicles, trailers and semi-trailers	29
33	Other transport equipment	Other transport equipment	30
34	Furniture, other manufacture goods	Furniture, other manufacture goods	31 – 32
35	Repair and installation services of machinery and equipment	Repair and installation services of machinery and equipment	33
36	Electricity, gas, steam and air conditioning	Electricity, gas, steam and air conditioning	D
37	Electricity, transmission and distribution services, steam	Electricity, transmission and distribution services; steam and air conditioning supply services	35.1, 35.3

No.	Branches	Classification of products by activity (CPA) in the European Community	
		Designation	No.
38	Manufactured gas	Manufacture gas; distribution services of gaseous fuels through mains	35.2
39	Water supply; sewerage, waste management and remediation services	Water supply; sewerage, waste management and remediation services	E
40	Natural water; water treatment and supply services	Natural water; water treatment and supply services	36
41	Sewerage services; waste collection and material recovery services	Sewerage services; waste collection and material recovery services	37 – 39
42	Sewerage services, sewerage sludge	Sewerage services, sewerage sludge	37
43	Waste collection, treatment and disposal services	Waste collection, treatment and disposal services; materials recovery services; remediation services and other waste management services	38 – 39
44	Constructions and construction works	Constructions and construction works	F
45	Building and building construction works	Building and building construction works	41 – 42
46	Specialised construction works	Specialised construction works	43
47	Wholesale and retail trade services; repair services of motor vehicles	Wholesale and retail trade services; repair services of motor vehicles and motorcycles	G
48	Wholesale and retail trade and repair services of motor vehicles	Wholesale and retail trade and repair services of motor vehicles and motorcycles	45
49	Wholesale trade services, except of motor vehicles and motorcycles	Wholesale trade services, except of motor vehicles and motorcycles	46
50	Retail trade services, except of motor vehicles and motorcycles	Retail trade services, except of motor vehicles and motorcycles	47
51	Transportation and storage services	Transportation and storage services	H
52	Passenger rail transport services, freight rail transport services	Passenger rail transport services, interurban; freight rail transport services	49.1 – 49.2
53	Other passenger land transport services, transport services via pipeline	Other passenger land transport services; freight transport services by road and removal services; transport services via pipeline	49.3 – 49.5

No.	Branches	Classification of products by activity (CPA) in the European Community	
		Designation	No.
54	Water transport services	Water transport services	50
55	Air transport services	Air transport services	51
56	Warehousing and support services for transportation	Warehousing and support services for transportation	52
57	Postal and courier services	Postal and courier services	53
58	Accommodation and food services	Accommodation and food services	I
59	Information and communication services	Information and communication services	J
60	Financial and insurance services	Financial and insurance services	K
61	Real estate services	Real estate services	L
62	Professional, scientific and technical services	Professional, scientific and technical services	M
63	Administrative and support services	Administrative and support services	N
64	Public administration and defence services	Public administration and defence services	O
65	Education services	Education services	P
66	Human health and social work services	Human health and social work services	Q
67	Other services	Arts, entertainment and recreation services; other services; services of households as employers; undifferentiated goods and services produced by households for own use	R – T
68	**All homogeneous branches**	**All homogeneous branches**	

2.2 Classification of industries

No.	Industries	Classification of economic activities, 2008 edition	
		Designation	No.
1	Agriculture, forestry and fishing	Agriculture, forestry and fishing	A
2	Crop and animal production, hunting and related services	Crop and animal production, hunting and related services	01
3	Forestry and logging	Forestry and logging	02
4	Fishing and aquaculture	Fishing and aquaculture	03
5	Mining and quarrying	Mining and quarrying	B
6	Mining of coal and lignite	Mining of coal and lignite	05
7	Extraction of crude petroleum and natural gas	Extraction of crude petroleum and natural gas	06
8	Mining of metal ores, other mining and quarrying	Mining of metal ores; other mining and quarrying; mining support service activities	07 – 09
9	Manufacturing	Manufacturing	C
10	Manufacture of food products, beverages and tobacco products	Manufacture of food products; manufacture of beverages and manufacture tobacco products	10 – 12
11	Manufacture of textiles, wearing apparel, leather	Manufacture of textiles; manufacture of wearing apparel; manufacture of leather and related products	13 – 15
12	Manufacture of wood and products of wood and cork, except furniture	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	16
13	Manufacture of paper and paper products	Manufacture of paper and paper products	17
14	Printing and reproduction of recorded media	Printing and reproduction of recorded media	18
15	Manufacture of coke and refined petroleum products	Manufacture of coke and refined petroleum products	19
16	Manufacture of coke oven products	Manufacture of coke oven products	19.1
17	Manufacture of refined petroleum products	Manufacture of refined petroleum products	19.2
18	Manufacture of chemicals and chemical products	Manufacture of chemicals and chemical products	20

No.	Industries	Classification of economic activities, 2008 edition	
		Designation	No.
19	Manufacture of basic pharmaceutical products	Manufacture of basic pharmaceutical products and pharmaceutical preparations	21
20	Manufacture of rubber and plastic products	Manufacture of rubber and plastic products	22
21	Manufacture of other non-mineral products	Manufacture of other non-mineral products	23
22	Manufacture of glass and glass products	Manufacture of glass and glass products	23.1
23	Manufacture of refractory products, cutting, finishing of stone	Manufacture of refractory products; manufacture of clay building materials; manufacture of other porcelain and ceramic products; manufacture of cement, lime and plaster; manufacture of articles of concrete, cement and plaster; cutting, shaping and finishing of stone; manufacture of abrasive products and non-metallic mineral products n. e. c.	23.2 – 23.9
24	Manufacture of basic metals	Manufacture of basic metals	24
25	Iron and steel	Manufacture of basic iron and steel and ferro-alloys; manufacture of tubes, pipes, hollow profiles and related fittings of steel; manufacture of other products of first processing of steel	24.1 – 24.3
26	Manufacture of basic precious and non-ferrous metals	Manufacture of basic precious and other non-ferrous metals	24.4
27	Casting of metals	Casting of metals	24.5
28	Manufacture of fabricated metal products, except machinery	Manufacture of fabricated metal products, except machinery and equipment	25
29	Manufacture of computer, electronic and optical products	Manufacture of computer, electronic and optical products	26
30	Manufacture of electrical equipment	Manufacture of electrical equipment	27
31	Manufacture of machinery and equipment n. e. c.	Manufacture of machinery and equipment n. e. c.	28
32	Manufacture of motor vehicles, trailers and semi-trailers	Manufacture of motor vehicles, trailers and semi-trailers	29

No.	Industries	Classification of economic activities, 2008 edition	
		Designation	No.
33	Manufacture of other transport equipment	Manufacture of other transport equipment	30
34	Manufacture of furniture; other manufacturing	Manufacture of furniture; other manufacturing	31 – 32
35	Repair and installation of machinery and equipment	Repair and installation of machinery and equipment	33
36	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning	D
37	Electric power generation, transmission and distribution, steam	Electric power generation, transmission and distribution; steam and air conditioning supply	35.1/ 35.3
38	Manufacture of gas; distribution of gaseous fuels through mains	Manufacture of gas; distribution of gaseous fuels through mains	35.2
39	Water supply, sewerage, waste management and remediation activities	Water supply, sewerage, waste management and remediation activi-ties	E
40	Water collection, treatment and supply	Water collection, treatment and supply	36
41	Sewerage, waste collection, treatment and disposal activities	Sewerage, waste collection, treatment and disposal activities; material recovery; remediation activities and other waste management services	37 – 39
42	Sewerage	Sewerage	37
43	Waste collection, treatment and disposal activities	Waste collection, treatment and disposal activities; material recovery; remediation activities and other waste management services	38 – 39
44	Construction	Construction	F
45	Construction of buildings, civil engineering	Construction of buildings, civil engineering	41 – 42
46	Specialised construction activities	Specialised construction activities	43
47	Wholesale and retail trade; repair of motor vehicles and motorcycles	Wholesale and retail trade; repair of motor vehicles and motorcycles	G
48	Wholesale and retail trade and repair of motor vehicles	Wholesale and retail trade and repair of motor vehicles and motorcycles	45
49	Wholesale trade, except of motor vehicles and motorcycles	Wholesale trade, except of motor vehicles and motorcycles	46

No.	Industries	Classification of economic activities, 2008 edition	
		Designation	No.
50	Retail trade, except of motor vehicles and motorcycles	Retail trade, except of motor vehicles and motorcycles	47
51	Transportation and storage	Transportation and storage	H
52	Passenger rail transport, interurban; freight rail transport	Passenger rail transport, interurban; freight rail transport	49.1 – 49.2
53	Other passenger land transport; transport via pipeline	Other passenger land transport; freight transport by road and removal services; transport via pipeline	49.3 – 49.5
54	Water transport	Water transport	50
55	Air transport	Air transport	51
56	Warehousing and support activities for transportation	Warehousing and support activities for transportation	52
57	Postal and courier activities	Postal and courier activities	53
58	Accommodation and food service activities	Accommodation and food service activities	I
59	Information and communication	Information and communication	J
60	Financial and insurance activities	Financial and insurance activities	K
61	Real estate activities	Real estate activities	L
62	Professional, scientific and technical activities	Professional, scientific and technical activities	M
63	Administration and support service activities	Administration and support service activities	N
64	Public administration and defence; compulsory social security	Public administration and defence; compulsory social security	O
65	Education	Education	P
66	Human health and social work activities	Human health and social work activities	Q
67	Other service activities	Arts, entertainment and recreation; other service activities; activities of households and employers; undifferentiated goods and service producing activities of households for own use	R – T
68	**All industries**	**All industries**	

3 Abbreviations and symbols

Abbreviations – general

NH_3	=	ammonia
CH_4	=	methane
CO_2	=	carbon dioxide
NO_2	=	nitrogen dioxide
NO_x	=	nitric oxides (= nitrogen dioxide + nitrogen monoxide)
N_2O	=	nitrous oxide (= laughing gas)
NMVOC	=	volatile organic compounds (not including methane)
SO_2	=	sulphur dioxide
SF_6	=	sulphur hexafluoride
PFCs	=	perfluorocarbons
HFCs	=	hydrofluorocarbons
H_2O	=	water

NE	=	Non-ferrous metals
No.	=	number
Incl.	=	including
EB	=	Energy balance
EEA	=	Environmental-Economic Accounting
SNA	=	System of National Accounts

Abbreviations – units of measure

Equ.	=	equivalent		
EUR	=	Euro		
J	=	Joule	1 J	= 1 watt seconds (Ws)
kJ	=	kilojoules	1 kJ	= 10^3 J
MJ	=	megajoules	1 MJ	= 10^6 J
GJ	=	gigajoules	1 GJ	= 10^9 J
TJ	=	terajoules	1 TJ	= 10^{12} J

PJ	=	petajoule	1 PJ	=	10^{15} J
Kg	=	kilogram			
t	=	tonnes			
mn	=	million			
bn	=	billion			
MWh	=	megawatt hour			
h	=	hour			
m^3	=	cubic metre			
%	=	per cent			
m^2	=	square metre			
km^2	=	square kilometre			
ha	=	hectare	1 ha	=	10 000 m^2
t-km	=	ton-kilometre			
p-km	=	passenger-kilometre			
o. b.	=	without bark			

Explanation of symbols

0	=	less than half of 1 in the last digit occupied, but more than zero
...	=	data will be available later
X	=	cell blocked for logical reasons
.	=	numerical value unknown or not to be disclosed
-	=	no figures or magnitude zero

Deviations in the totals may occur because of rounding off.

Note

Since the release of the tables in 2011 homogeneous branches (WZ 2008) are presented in a break down comparable to the statistical classification of economic activities of the European Community. Until 2010, the tables were calculated according the WZ 1993 respectively on the basis of the WZ 2003.

The intensities are shown in the tables 2011 only for the years from 2000 onwards, as data on gross value added by homogeneous branches after the revision of the national accounts are available only as from the reference year 2000.

General notes

Macroeconomic overview tables

The goal of Environmental-Economic Accounting is to describe in particular the interaction between the economy and the environment. The starting point are the national accounts, which are supplemented by the Environmental-Economic Accounting by the environmentally-relevant elements.

In the analysis of the state of the economy, a major role is played by the contribution of the production factors labour and capital to production. Environmental-Economic Accounting additionally includes the production inputs from the environment. This comprises not only material inputs (raw materials) from the environment, but also services from the the environment such as the absorption of residuals and pollutants, and the provision of land on which to perform economic activities. A direct measurement of the input of services from the environment at macroeconomic level is currently possible neither in monetary nor in physical units. For this reason, this input is measured indirectly, i. e. approximately using the residuals and the volume of pollutants which are absorbed by the environment and the area used. Since the contribution made by the environment cannot be summarised in one single number, productivity figures for important individual elements of nature are formed. The services from the envitonment for economic purposes is as a rule a burden on the environment which is closely linked to a quantitative or qualitative worsening of the state of the environment.

For the economic use of the following direct input factors in the production process and in consumption, volume trends and productivity figures are depicted in Environmental-Economic Accounting:

<u>The environment as a source of resources</u>

Energy	Energy consumption as consumption of primary energy (petajoules, (PJ))
Raw materials	Consumption of raw materials as withdrawal of abiotic raw materials used from the domestic environment plus imported abiotic goods (million tonnes)
Water withdrawal	Consumption of water as withdrawal of water from the environment (million m^3)

<u>The environment as a sink for residuals and pollutants</u>

Greenhouse gases	Burden on the environment caused by the emission of greenhouse gases, here: Carbon dioxide (CO_2), Methane (CH_4), Nitrous oxide ("laughing gas", N_2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Sulphur hexafluoride (SF_6) (million tonnes CO_2 equivalents)
Air pollutants	Burden on the environment caused by the emission of Sulphur dioxide (SO_2), Nitric oxides (NO_x), Ammonia (NH_3) and volatile organic compounds not including methane (NMVOC) (1,000 tonnes)
Water discharge	Burden on the environment caused by the discharge of used water into the environment (million m^3)
Waste	Burden on the environment caused by the deposit of waste (1,000 tonnes)

<u>Structural use of the environment</u>

Land	Land use in the form of housing and transport area (km^2)

<u>Use of economic factors</u>

Labour	Volume of labour measured by hours worked (billion hours)
Capital	Use of capital as depreciation (billion Euro)

In order to analyse the links between the economy and the environment it is necessary both to present the absolute parameters and to assess further indicators through which the various parameters are interrelated. It is common practice in the economy to relate economic performance (gross value added) to the use of labour or capital as production factors. In the same way, in Environmental-Economic Accounting economic capacity is related to the individual volumes of environmental input factors measured in physical units. In this wa, so-called productivities can be used as a measure of the efficiency of the use of various elements of the environment as a production factor.

Productivity, Intensity – indicators on the efficiency of the use of factor input

The productivity of an input factor indicates how much economic capacity is produced with the use of a unit of this factor.

$$produktivity = \frac{gross\ domestic\ product}{input\ factor}$$

Productivity expresses how efficiently an economy uses the input of labour, capital and environmental inputs. For example, with an increase in gross domestic product and constant use of an input factor results in an productivity increase. These factors are not directly comparable with one another because of their different characteristics and functions. The analysis for longer periods may however indicate how the ratio of these factors changes to one another .

Furthermore, one should note that by calculating productivities in this way total output from the economic activity is exclusively related to the respective production factor, although the product is the result of the interaction of all production factors. The productivities ascertained can hence only serve as a rough aid to orientation.

At the level of industries gross value added (GVA) is referred to in order to calculate the efficiency of factor utilisation. If the economic performance appears in the fraction as the denominator it is an "intensity figure", if the gross value added is in the numerator the ratio is a "productivity figure". For raw materials and energy the relevant (macroeconomic) productivity is used as an indicator within the context of the sustainable development strategy of the German Federal Government. Intensities are calculated in EEA in order to facilitate comparison between the use of environmental factors of different sectors.

If productivity or intensity is observed for a longer period it is necessary to carry out a price adjustment of the monetary figures at current prices. Since 2005 the method of price adjustment has changed in the calculations of the national accounts. Following the revision of the SNA the previous fixed-price basis was abolished in favour of a previous year price basis. Data given in constant prices (e. g. "in 1995 prices") therefore belong to the past. Price-adjusted details in the national accounts since then have been provided in the form of chained data, in which volume indicators on a previous year price basis are linked to one another for a range of years and chained to a reference year. Price adjusted figures of gross value added of industries have been estimated for purposes of the Environmental-Economic Accounting.

Environmental data on private households has been compiled annually in a comprehensive way since 2006 in the sectoral reporting module "Private households and environment". Based on the results of Environmental-Economic Accounting and other official and unofficial data sources details are provided for consumer expenditure, housing area, energy use, carbon dioxide emissions, water and sewage water. Table 1.3 of the EEA table volume provides an overview of all the household related data.

The data presented is a result of various calculations within the material and energy flow accounts: the energy flow accounts, the water accounts, emission calculations, area survey and waste statistics. In special accounts for assessing energy use by private households by areas of application recourse is made to parameters such as the number of residents and the number of private households. The level of private consumption expenditure (price-adjusted) is another important parameter both for direct use of environmental factors by private households and as a basic for determining indirect environmental use.

For tables 1.4 and 1.5 see notes in part 4 "Raw materials".

The national strategy for sustainable development adopted by the German Federal Government measures the effectiveness of policy measures to implement the strategy using a set of sustainability indicators. These indicators concern 21 selected subject areas aimed at describing aspects of intergeneration equity, quality of life, social cohesion and society's international responsibility. Most of the indicators are linked to target values and target years specified by policy. At two-year intervals the trend of the indicators is described and analysed in an Indicator Report published by the Federal Statistical Office (last 2012) and an accompanying data compendium. The data

compendium includes calculation rules and additional background data on the indicators. The major portion of the data material the indicators are based on is taken from official statistics (e. g. national accounts, environmental-economic accounts, land survey, education statistics, traffic statistics, agricultural statistics, microcensus, children and young people's support statistics etc.). Information from other external sources like federal ministries and their associated offices, from special working groups and other bodies, are added.

Table 1.6 includes the time series of 17 selected indicators of sustainability strategy relating to aspects of the environment and the economy. For the majority of these indicators the Federal Statistical Office has a fairly comprehensive database from national and environmental economic accounts available, which facilitates more extensive analyses. The indicators for this table are also updated between the years of publication of the Indicator Reports, and updates are made available on the Internet also.

The time series appear in various dimensions, partly as indices with indicators for various starting years (1990, 1994, 1999), partly as proportions in %, partly in physical units and partly on a monetary basis. With the exception of details of the GDP itself, composed indicators (such as energy or raw material productivity) also appear in the Indicator Report as segmented rows (for example energy consumption or resource consumption and GDP), to ensure the highest possible level of transparency.

Additional calculations to table 1.6 on the success of the strategy can be taken from the appendix of the aforementioned Indicator Report. These calculations take into account the trend development of the indices towards the fixed targets. The Indicator Report and the data compendium are available at DESTATIS: www.destatis.de/EN/Publications/Specialized/EnvironmentalEconomicAccounting/Sustainability

Economic indices

The calculation of gross value added (GVA) for industries was converted to the WZ 2008 (Classification of Economic Activities, 2008 edition) (previously WZ-93 or 2003). For homogeneous branches results at current prices are available for the years 2000 to 2007. For 2008 to 2011, gross value added was taken from the input-output tables. For the year 2012 an estimate was made based on data for industries.

For the years 2000 to 2012 price-adjusted values for GVA for homogeneous branches were calculated by means of a single deflator for the GVA. The deflator was compiled with reference to total GVA at current prices and total volume of GVA. Volume data for individual homogeneous branches were calculated by dividing the figures on GVA at current prices with the deflator of total GVA.

Glossary

Air pollution

The following substances or substance classes are considered to be air pollutants for the purpose of this indicator: sulphur dioxide (SO_2), nitrogen oxides (NO_x), ammonia (NH_3), non-methane volatile organic compounds (NMVOC). Unweighted average of the indices of the four air pollutants referred to.

Built-up area and transport infrastructure, expansion

Average daily built-up area and transport infrastructure expansion. Determination by the division of the built-up area and transport infrastructure expansion (in hectares) in a defined period of time (one year or four years) by the number of days (365/366 or 1,461). The moving four-year average is determined in each case by the development of this area in the relevant year and the preceding three years. The data for one year is currently influenced by external effects (the public land survey registers are being reorganised), so that the moving four-year average gives a better picture.

Depreciation

Loss in value of fixed assets due to normal wear and out of economic reasons.

Domestic final consumption expenditure of households

Household final consumption expenditure consists of the expenditure, including expenditure whose value must be estimated indirectly, incurred by resident households on individual consumption goods and services, including those sold at prices that are not economically significant and including consumption goods and services acquired abroad.

Energy consumption

Energy consumption is the difference between the quantity of energy used in an economic sector and the quantity passed on by that sector to downstream sectors. Generally, the quantity of energy used is entirely consumed in the process of production and consumption activities of the sector (e.g. to run machines, equipment and vehicles or for room heating) and finally discharged into the environment in the form of heat.

Energy productivity

Energy productiviy expresses how much gross domestic product (in euros adjusted for price changes) is generated per unit of primary energy used (in petajoules).

Exports

Exports of goods and services consist of sales, barter, or gifts and grants, of goods and services from residents to non-residents.

Government debt

The national debt level as defined in the Maastricht Treaty as a measure of government debt in relation to the nominal GDP.

Greenhouse gas emissions

Emissions of the following greenhouse gases (substances or substance groups) compliant with the Kyoto Protocol (excluding emissions from land use changes and forestry (LULUCF) and excluding emissions from the energy utilisation of biomass): carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), partly hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulphur hexafluoride (SF6). The base year is 1990 for CO_2, CH_4, N_2O and 1995 for HFC, PFC, and SF6. Calculations are based on the database Zentrales System Emissionen (Central System of Emissions - ZSE) of the Federal Environment Agency taking additional statistical energy information into account. Indicators are calculated in accordance with territorial principle (emissins on German territory, in other words including foreign companies located in Germany and excluding emissions from German companies located abroad.

Gross domestic product

The gross domestic product (GDP) is a measure of the economic performance of a national economy over a given period.

Gross fixed capital formation

Gross fixed capital formation (at current prices) in relation to the nominal gross domestic product (GDP) also referred to as investment ratio. This includes investments in buildings (residential buildings, non-residential buildings), equipment (machinery, vehicles, tools) and other assets (intangible assets, such as software and copyrights, property transfer costs, production livestock).

Gross value added

Gross Value Assed (GVA) describes the added value of goods produced in the production process (gross output minus intermediate consumption).

Homogeneous branches	Economic sectors in the input-output tables. Homogeneous branches are constructed in the input-output accounts by pure functional criteria. They are defined by the output of a certain commodity group. Homogeneous branches rely solely on the production of a certain commodity group and vice versa all of it is produced only by one homogeneous branch.
Housing and transport area	The housing and transport area includes building and adjacent open area, operating area (except exploitation area), recreation area, cemetery and transport area. Housing and transport area and sealed area cannot be considered identical since housing and transport area may also include areas that are neither housing nor sealed. Estimates reveal a degree of sealing of 43% to 50% for housing and transport areas. Even recreation areas have sealed areas, for example sports grounds.
Imports	Imports of goods and services consist of purchases, barter, or receipts of gifts or grants, of goods and services by residents from non-residents.
Intensity of goods transport	Specification: Domestic goods transport performance (in tonne-kilometres) / gross domestic product (price-adjusted). The term transport covers any conveyance of items and all supplementary domestic services (including air transport and local transport by German lorries up to 50 km).
Intensity of passenger transport	Specification: Passenger transport performance (in passenger kilometres) / gross domestic product (price-adjusted). The term transport covers any conveyance of persons and all supplementary domestic services (including air transport).
National deficit	Annual national deficit (or national financing balance), calculated from national revenue less national expenditure (by the Federal Government, the *Länder* , municipalities and social security funds), itemised under national accounts as a percentage of the nominal gross domestic product. Proceeds from UMTS auctions in the year 2000 are not included.
Nitrogen surplus	Nitrogen surplus in kilogram per hectare of land used for agriculture, calculated from nitrogen input (from fertilisers, atmospheric deposition, biological nitrogen fixation, seed and plant material, feedstuff from domestic production and from imports) minus nitrogen output (through crop and animal market products leaving the agricultural sector). The overall balance is calculated on the basis of the "farm-gate model". Nitrogen flows in the domestic cycle - with the exception of domestic feed production - are not shown. The moving three-year average is calculated from the total balance of the given year, the previous year and the following year.
Organic farming	Farmland used for organic farming subject to the control procedure of the EU regulations on organic farming (EC Regulation No. 834/2007 and provisions concerningits implementation in EC Regulation No. 889/2008), as a proportion of all the farmland in Germany. It includes both the areas completely devoted to organic farmings as well as those still under conversion. The results of official statistics are use. For methodological reasons (among other things data collection thresholds, time of survey) they differ slightly from the data provided annually by the Federal Office for Agriculture and Food.
Primary energy consumption	Domestic primary energy consumption is calculated from the sum of all primary energy sources generated domestically and all imported energy sources less energy exports (and excluding offshore bunkering). In terms of use, this is equivalent to total energy used for energy purposes (final energy consumption and own consumption by energy sectors) and for non-energy purposes (e. g. in the chemical industry), losses incurred through domestic energy conversion, losses from flaring and distribution, as well as statistical differences reported in energy balance sheet.
Rail transport and inland freight water transport	Share of rail transport as well as share of inland freight water transport in the total domestic goods transport performance excluding local haulage by German lorries up to 50 km.
Raw materials	In Environmental-Economic Accounts (EEA) raw materials are those materials are those materials occuring unprocessed by humans in the natural environment.

Raw material productivity	Raw material productivity expresses how much gross domestic product (in euros, adjusted for price changes) is obtained per tonne of abiotic primary material. The (non-renewable) raw materials withdrawn from the domestic environment – not counting agricultural and forestry products – as well as all imported abiotic materials (raw materials, semi-finished and finished products) are considered to be abiotic primary material.
Renewable energy	Renewables include, among others, hydropower, wind power on land and at sea, solar energy and geothermal energy, but also biomass such as biogenic solid fuels, biogas and biogenic wastes. *Share of renewable energy sources in final energy consumption:* Final energy is generated subject to energy loss through conversion from primary energy and is directly available to the consumer. *Share of electricity from renewable energy sources in electricity consumption:* (comprising net electricity supply of the country, exchange balance with other countries, own electricity consumption of power plants and grid losses).
Resident concept	The resident concept is a concept used in the National Accounts and the Environmental Economic Accounting (EEA) for the recording of economic activities. In that concept the residents of a certain territory are determined as recording units. In the EEA this concept for example is used for the recording of energy consumption or air emissions.
Species diversity and landscape quality	With reference to the projected target value of 100 that is to be reached by 2015, the indicator shows the state of development for 51 selected bird species in the form of an index (measured in % of target value, degree of target achievement). The bird species represent the most important landscape and ecosystem types in Germany (10 species each for the sub-indicators agricultural land, settlements, inland waters, coasts and seas, 11 species for forest; temporarily excluding the Alps due to the unreliable data basis). The stock per species is calculated annually from the results of bird monitoring programmes and related to the size of the defined target value. The results of the spatially representative and statistically reliable monitoring of common breeding species started in 2004 is incorporated in the calculation. More than 1,400 sample areas were recorded in 2011. The historical values for 1979 and 1975 in comparison, have been reconstructed. The indicator is also adopted for the National Strategy on Biological Diversity.
Structural deficit	Annual structural deficit as a percentage of GDP. This is the part of annual national deficit which cannot be attributed to economic fluctuations and temporary effects. The principle of the structurally balanced budget (debt brake) is laid down in German Basic Law (*Grundgesetz*) (Articles 109 and 115) and relates to the European Stability and Growth Pact.
Waste	Solid waste covers discarded materials that are no longer required by the owner or user.
Waste water	Waste water is used water, typically discarded into the sewage system. It contains matter and bacteria in solution or suspension.
Waste water discharged into nature	Water discharged into nature includes direct and indirect water discharge of industries and private households as well as water losses, evaporation and rain and infiltration water.
Withdrawal of water from nature	Withdrawal of water from nature is the direct abstraction of ground water, surface water or spring water and bank filtrate.

Table 1.1: Population*) and economy

No.	Specification	Unit	1991	1995
1	Inhabitants 1)	mn	80.0	81.7
2	Active population	mn	41.0	41.1
3	Persons in gainful employment (national concept)	mn	38.9	37.9
4	Unemployed	mn	2.2	3.2
5	in % of active population	%	*5.3*	*7.8*
6	Domestic final consumption expenditure of households at current prices	EUR bn	857.9	1,021.6
7	Domestic final consumption expenditure of households	Index 2005 = 100	85.6	90.6
8	Hours worked	bn hours	60.3	58.0
9	per person in gainful employment (domestic concept)	hours	1,553.5	1,528.0
10	Consumption of fixed capital at current prices	EUR bn	246.0	307.4
11	Consumption of fixed capital in 2005 prices	EUR bn	237.2	275.4
12	Gross domestic product total, price-adjusted, chain-linked index	Index 2005 = 100	84.0	88.4
13	per person in gainful employment (domestic concept)	Index 2005 = 100	85.2	91.6
14	per hour worked	Index 2005 = 100	77.4	84.6
15	per inhabitants	Index 2005 = 100	86.6	89.3
	Memorandum item:			
16	Persons in gainful employment (domestic concept)	mn	38.8	38.0

*) Annual averages are used for the data on population and employment.
1) Data on the population projection are based on previous censuses.

Table 1.1: Population*) and economy

2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	No.
82.2	82.5	82.4	82.3	82.1	81.9	81.8	81.8	81.9	82.1	82.4	1
42.9	43.7	43.7	43.7	43.8	43.9	43.8	43.9	44.2	44.5	44.7	2
39.8	39.2	39.6	40.3	40.8	40.8	41.0	41.5	42.0	42.3	42.6	3
3.1	4.5	4.1	3.5	3.0	3.1	2.8	2.4	2.2	2.2	2.1	4
7.3	*10.3*	*9.4*	*7.9*	*6.9*	*7.1*	*6.4*	*5.5*	*5.0*	*4.9*	*4.7*	5
1,144.7	1,258.5	1,294.3	1,314.3	1,343.2	1,340.4	1,372.9	1,418.5	1,451.0	1,475.5	1,502.2	6
98.1	100.0	101.8	101.6	102.1	102.4	103.0	104.4	105.2	105.7	106.6	7
58.0	55.5	56.5	57.4	58.0	56.1	57.0	57.9	57.8	57.6	58.3	8
1,452.0	1,411.3	1,424.7	1,424.4	1,418.4	1,372.7	1,389.9	1,392.8	1,375.3	1,361.7	1,366.4	9
354.4	392.8	402.8	423.0	440.3	450.8	459.7	475.5	492.2	505.1	517.8	10
320.6	358.4	365.1	373.5	382.5	388.6	392.8	398.5	404.8	410.1	415.2	11
97.2	100.0	103.7	107.1	108.2	102.2	106.3	110.2	110.7	111.0	112.8	12
95.8	100.0	102.9	104.4	104.2	98.2	101.9	104.3	103.5	103.1	103.9	13
93.1	100.0	101.9	103.5	103.7	101.0	103.5	105.6	106.2	106.9	107.3	14
97.5	100.0	103.8	107.3	108.7	102.9	107.2	111.1	111.4	111.5	112.9	15
39.9	39.3	39.6	40.3	40.9	40.9	41.0	41.6	42.1	42.3	42.7	16

Table 1.2: Use of environmental resources for economic purposes

No.	Specification	Unit	1990	1991	1995	2000	2005	2006
			Production factors					
1	Primary energy consumption (EB, domestic concept)	petajoule	14,905	14,610	14,269	14,401	14,558	14,837
2	Extraction of raw materials and imports 2)	mn tonnes	.	1,443	1,455	1,412	1,303	1,365
3	Water withdrawal from nature 3)	mn m^3	.	51,245	48,831	44,929	.	.
4	Greenhouse gases	1,000 t CO_2 equiv.	.	.	1,168,371	1,104,598	1,108,009	1,128,196
5	including: CO2	1,000 tonnes	.	.	986,223	959,632	981,362	1,005,952
6	N2O	1,000 t CO_2 equiv.	.	.	63,532	44,846	45,403	45,122
7	CH4	1,000 t CO_2 equiv.	.	.	87,757	74,860	58,708	55,376
8	HFCs	1,000 t CO_2 equiv.	.	.	8,354	8,013	9,581	9,784
9	PFCs	1,000 t CO_2 equiv.	.	.	2,086	957	838	669
10	SF6	1,000 t CO_2 equiv.	.	.	263	158	113	113
11	Air pollutants							
12	SO2	1,000 tonnes	.	.	1,890	732	803	753
13	NOx	1,000 tonnes	.	.	2,432	2,081	2,110	2,081
14	NMVOC	1,000 tonnes	.	.	2,054	1,620	1,380	1,366
15	NH3	1,000 tonnes	.	.	680	698	672	672
16	Water discharge into nature 4)	mn m^3	.	51,041	48,642	44,766	.	.
17	including: waste water	mn m^3	.	43,962	40,756	37,356	.	.
18	Waste 5)	1,000 tonnes	.	354,179	365,421	406,663	331,876	372,906
19	Housing and transport area 6)	km^2	.	.	.	43,939	46,050	46,436
20	Hours worked	bn hours	.	60.3	58.0	58.0	55.5	56.5
21	Consumption of fixed capital at current prices	EUR bn	.	246	307	354	393	403
22	Consumption of fixed capital in 2005 prices	EUR bn	.	237	275	321	358	365
	memorandum item:							
	Renewable sources of energy							
23	Share of primary energy consumption	%	1.9	-	2.2	3.7	7.2	8.1
24	Share of electricity consumption	%	3.4	3.1	4.7	6.2	10.2	11.6
25	Gross domestic product at current prices	EUR bn	.	1,580	1,899	2,116	2,301	2,393
26	Gross domestic product, price-adjusted	Index 2005 = 100	.	84.0	88.4	97.2	100.0	103.7
			Index					
27	Primary energy consumption (EB, domestic concept)	1990 = 100	100	98.0	95.7	96.6	97.7	99.5
28		2005 = 100	102.4	100.4	98.0	98.9	100	101.9
29	Extraction of raw materials and imports 2)	1994 = 100	.	95.3	96.1	93.2	86.0	90.1
30		2005 = 100	.	110.8	111.7	108.4	100	104.8
31	Water withdrawal from nature 3)	2000 = 100	.	114.1	108.7	100	.	.
32	Greenhouse gases	1995 = 100	-	-	100	94.5	94.8	96.6
33		2005 = 100	-	-	105.4	99.7	100	101.8
34	including: CO2	1995 = 100	-	-	100	97.3	99.5	102.0
35		2005 = 100	-	-	100.5	97.8	100	102.5
36	N2O	1995 = 100	-	-	100	70.6	71.5	71.0
37		2005 = 100	-	-	139.9	98.8	100	99.4
38	CH4	1995 = 100	-	-	100	85.3	66.9	63.1
39		2005 = 100	-	-	149.5	127.5	100	94.3
40	HFCs	1995 = 100	-	-	100	95.9	114.7	117.1
41		2005 = 100	-	-	87.2	83.6	100	102.1
42	PFCs	1995 = 100	-	-	100	45.9	40.2	32.1
43		2005 = 100	-	-	249.0	114.2	100	79.9
44	SF6	1995 = 100	-	-	100	59.9	42.8	43.1
45		2005 = 100	-	-	233.7	139.9	100	100.8
46	Air pollutants							
47	SO2	1995 = 100	-	-	100	38.7	42.5	39.8
48		2005 = 100	-	-	235.5	91.2	100	93.8
49	NOx	1995 = 100	-	-	100	85.5	86.7	85.6
50		2005 = 100	-	-	115.3	98.6	100	98.6
51	NMVOC	1995 = 100	-	-	100	78.9	67.2	66.5
52		2005 = 100	-	-	148.9	117.4	100	99.0
53	NH3	1995 = 100	-	-	100	102.7	98.8	98.9
54		2000 = 100	-	-	101.2	103.9	100	100.1
55	Water discharge into nature 4)	2000 = 100	.	114.0	108.7	100	.	.
56	including: waste water	2000 = 100	.	117.7	109.1	100	.	.
57	Waste 5)	1996 = 100	.	.	.	105.5	86.1	96.8
58		2005 = 100	.	.	.	122.5	100	112.4
59	Housing and transport area 6)	1992 = 100	.	.	.	109.0	114.3	115.2
60		2005 = 100	.	.	.	95.4	100	100.8
61	Hours worked	1991 = 100	.	100.0	96.2	96.2	92.1	93.7
62		2005 = 100	.	108.6	104.5	104.4	100	101.7
63	Consumption of fixed capital in 2005 prices	1991 = 100	.	100.0	116.1	135.2	151.1	153.9
64		2005 = 100	.	66.2	76.8	89.4	100	101.9
65	Gross domestic product, price-adjusted (chain-linked index)	1991 = 100	.	100.0	96.2	96.2	92.1	93.7
66		2005 = 100	.	108.6	104.5	104.4	100	101.7

Table 1.2: Use of environmental resources for economic purposes

2007	2008	2009	2010	2011	2012	2013 [1)]	2014 [1)]	No.
14,197	14,380	13,531	14,217	13,599	13,447	13,822	13 132	1
1,344	1,326	1,212	1,251	1,332	1,291	1,305	1 322	2
37,747	.	.	38,104	.	.	...	.	3
1,122,395	1,135,478	1,066,012	1,117,340	1,093,834	1,091,697	1,114,803	...	4
1,000,142	1,013,140	946,456	1,006,912	982,664	980,235	1,003,592	...	5
47,179	47,677	46,759	38,405	39,707	38,890	39,262	...	6
53,313	52,640	50,760	50,039	49,131	49,813	49,304	...	7
9,885	10,081	10,660	10,242	10,485	10,710	10,742	...	8
588	566	407	347	284	248	264	...	9
124	134	130	140	157	160	158	...	10
								11
879	945	798	821	740	806	825	...	12
2,204	2,216	1,980	2,030	1,904	1,960	1,980	...	13
1,312	1,264	1,173	1,282	1,209	1,178	1,179	...	14
667	674	684	647	679	659	675	...	15
37,626	.	.	37,984	.	.	...	.	16
30,473	.	.	30,741	.	.	...	.	17
386,946	382,818	359,387	373,011	386,690	380,576	385,729	...	18
46,789	47,137	47,422	47,702	47,971	48,225	48,482	...	19
57.4	58.0	56.1	57.0	57.9	57.8	57.6	58.3	20
423	440	451	460	476	492	505	518	21
374	383	389	393	399	405	410	415	22
9.7	9.1	10.1	10.9	11.8	12.8	13.2	13.5	23
14.2	15.1	16.3	17.0	20.4	23.7	25.2	27.4	24
2,513	2,562	2,460	2,580	2,703	2,755	2,821	2,916	25
107.1	108.2	102.2	106.3	110.2	110.7	111.0	112.8	26
95.2	96.5	90.8	95.4	91.2	90.2	92.7	88.1	27
97.5	98.8	92.9	97.7	93.4	92.4	94.9	90.2	28
88.7	87.5	80.0	82.6	87.9	85.2	86.1	87.2	29
103.1	101.7	93.0	96.0	102.2	99.0	100.1	101.4	30
84.0	.	.	84.8	.	.	...	.	31
96.1	97.2	91.2	95.6	93.6	93.4	95.4	...	32
101.3	102.5	96.2	100.8	98.7	98.5	100.6	...	33
101.4	102.7	96.0	102.1	99.6	99.4	101.8	...	34
101.9	103.2	96.4	102.6	100.1	99.9	102.3	...	35
74.3	75.0	73.6	60.5	62.5	61.2	61.8	...	36
103.9	105.0	103.0	84.6	87.5	85.7	86.5	...	37
60.8	60.0	57.8	57.0	56.0	56.8	56.2	...	38
90.8	89.7	86.5	85.2	83.7	84.8	84.0	...	39
118.3	120.7	127.6	122.6	125.5	128.2	128.6	...	40
103.2	105.2	111.3	106.9	109.4	111.8	112.1	...	41
28.2	27.2	19.5	16.7	13.6	11.9	12.6	...	42
70.2	67.6	48.6	41.5	33.9	29.6	31.5	...	43
47.0	50.8	49.5	53.2	59.5	60.7	59.9	...	44
109.9	118.7	115.6	124.4	139.0	141.9	140.0	...	45
								46
46.5	50.0	42.2	43.4	39.1	42.7	43.7	...	47
109.5	117.8	99.4	102.3	92.2	100.5	102.8	...	48
90.6	91.1	81.4	83.5	78.3	80.6	81.4	...	49
104.4	105.0	93.8	96.2	90.2	92.9	93.9	...	50
63.9	61.5	57.1	62.4	58.9	57.3	57.4	...	51
95.1	91.6	85.0	92.9	87.6	85.3	85.5	...	52
98.2	99.1	100.6	95.1	99.8	96.9	99.2	...	53
99.3	100.3	101.9	96.3	101.0	98.1	100.4	...	54
84.0	.	.	84.9	.	.	...	.	55
81.6	.	.	82.3	.	.	...	.	56
100.4	99.4	93.3	96.8	100.4	98.8	100.1	...	57
116.6	115.3	108.3	112.4	116.5	114.7	116.2	...	58
116.1	117.0	117.7	118.4	119.0	119.6	120.3	...	59
101.6	102.4	103.0	103.6	104.2	104.7	105.3	...	60
95.3	96.2	93.1	94.6	96.1	96.0	95.6	96.8	61
103.5	104.4	101.1	102.7	104.3	104.2	103.9	105.1	62
157.5	161.3	163.8	165.6	168.0	170.7	172.9	175.1	63
104.2	106.7	108.4	109.6	111.2	112.9	114.4	115.8	64
95.3	96.2	93.1	94.6	96.1	96.0	95.6	96.8	65
103.5	104.4	101.1	102.7	104.3	104.2	103.9	105.1	66

Table 1.2: Use of environmental resources for economic purposes

No.	Specification	Unit	1990	1991	1995	2000	2005	2006
			Gross domestic product relation to production factors					
67	Primary energy consumption (EB, domestic concept)	2005 = 100	-	83.7	90.2	98.3	100	101.8
68		1990 = 100	100	106.7	114.8	126.1	129.7	132.0
69	Extraction of raw materials and imports 2)	2005 = 100	.	75.8	79.2	89.7	100	99.0
70		1994 = 100	.	101.5	105.9	120.0	133.8	132.4
71	Water withdrawal from nature 3)	1991 = 100	.	100	110.4	132.0	-	-
72		2000 = 100	.	75.8	83.7	100.0	-	-
73	Greenhouse gases	1995 = 100	-	-	100	116.3	119.3	121.5
74		2005 = 100	-	-	83.8	97.5	100	101.8
75	including: CO2	1995 = 100	-	-	100	113.0	113.7	115.0
76		2005 = 100	-	-	88.0	99.4	100	101.2
77	N2O	1995 = 100	-	-	100	155.8	158.3	165.2
78		2005 = 100	.	-	63.2	98.4	100	104.3
79	CH4	1995 = 100	-	-	100	128.9	169.1	185.9
80		2005 = 100	.	-	59.1	76.2	100	109.9
81	HFCs	1995 = 100	-	-	100	114.6	98.6	100.2
82		2005 = 100	.	-	101.4	116.2	100	101.6
83	PFCs	1995 = 100	-	-	100	239.7	281.7	365.5
84		2005 = 100	.	-	35.5	85.1	100	129.8
85	SF6	1995 = 100	-	-	100	183.6	264.4	272.1
86		2005 = 100	.	-	37.8	69.5	100	102.9
87	Air pollutants	1995 = 100	-	-	100	151.2	160.8	169.9
88		2005 = 100	.	-	62.2	94.1	100	105.7
89	SO2	1995 = 100	-	-	100	284.1	266.4	294.5
90		2005 = 100	.	-	37.5	106.6	100	110.5
91	NOx	1995 = 100	-	-	100	128.5	130.4	137.1
92		2005 = 100	.	-	76.7	98.6	100	105.1
93	NMVOC	1995 = 100	-	-	100	139.5	168.4	176.5
94		2005 = 100	.	-	59.4	82.8	100	104.8
95	NH3	1995 = 100	-	-	100	107.1	114.5	118.6
96		2005 = 100	.	-	87.3	93.5	100	103.6
97	Water discharge into nature 4)	1991 = 100	.	100	110.4	131.9	-	-
98		2000 = 100	.	75.8	83.7	100	-	-
99	including: waste water	1991 = 100	.	100	113.5	136.2	-	-
100		2000 = 100	.	73.4	83.4	100	.	.
101	Waste 5)	1996 = 100	.	.	.	103.3	130.3	120.2
102		2005 = 100	.	.	.	79.3	100	92.3
103	Housing and transport area 6)	1992 = 100	.	.	.	95.5	101.0	100.2
104		2005 = 100	.	.	.	101.9	100	102.8
105	Hours worked	1991 = 100	.	100	109.3	120.3	129.2	131.7
106		2005 = 100	.	77.4	84.6	93.1	100	101.9
107	Consumption of fixed capital in 2005 prices	1991 = 100	.	100	90.6	85.6	78.8	80.2
108		2005 = 100	.	127.0	115.1	108.7	100	101.8

1) Some values estimated.

2) Used withdrawal of abiotic raw materials and imported abiotic goods.

3) Including infiltration and rain water.

4) Including infiltration and rain water, loss occuring with water distribution and evaporation.

5) The comparison of the results from 1996 onwards with earlier results is only partially possible because of the conversion of the primary statistics. Until 2005 calculation based on net principle, since 2006 calculation according to the gross principle.

6) The reference data is 31.12. The data for 1997, 1998 and 1999 are based on a project by the Federal Office for Building and Regional Planning.

Table 1.2: Use of environmental resources for economic purposes

2007	2008	2009	2010	2011	2012	2013 [1)]	2014 [1)]	No.
109.8	109.6	109.9	108.9	118.0	119.8	116.9	125.0	67
143.3	143.1	142.8	141.7	153.4	155.9	152.1	162.5	68
103.9	106.4	109.9	110.8	107.8	111.7	110.9	111.2	69
139.0	142.3	147.0	148.2	144.2	149.5	148.3	148.8	70
173.0	-	-	170.2	-	-	...	.	71
131.1	-	-	129.0	-	-	...	.	72
126.1	126.0	126.7	125.8	133.2	134.0	131.6	...	73
105.7	105.6	106.2	105.4	111.6	112.3	110.3	...	74
119.4	119.2	120.4	117.8	125.1	126.0	123.4	...	75
105.1	104.8	105.9	103.6	110.1	110.8	108.5	...	76
163.1	163.2	157.0	199.0	199.5	204.5	203.2	...	77
103.1	103.1	99.2	125.7	126.0	129.2	128.4	...	78
199.4	204.1	199.8	210.9	222.7	220.5	223.5	...	79
117.9	120.7	118.2	124.7	131.7	130.4	132.2	...	80
102.4	101.5	90.6	98.1	99.3	97.7	97.7	...	81
103.8	102.9	91.8	99.5	100.7	99.0	99.0	...	82
429.8	450.9	591.8	722.1	915.5	1 054.1	992.6	...	83
152.6	160.1	210.1	256.4	325.0	374.2	352.4	...	84
257.5	241.2	233.6	226.0	209.6	206.2	209.6	...	85
97.4	91.2	88.4	85.5	79.3	78.0	79.3	...	86
168.9	169.5	175.9	177.6	194.2	191.9	190.2	...	87
105.0	105.4	109.4	110.4	120.7	119.3	118.2	...	88
260.5	244.8	273.7	276.8	318.5	293.4	287.6	...	89
97.8	91.9	102.7	103.9	119.5	110.1	107.9	...	90
133.7	134.4	142.0	144.1	159.3	155.4	154.2	...	91
102.5	103.1	108.9	110.5	122.1	119.1	118.3	...	92
189.7	199.0	202.4	192.7	211.9	218.4	218.7	...	93
112.6	118.2	120.2	114.4	125.8	129.7	129.9	...	94
123.4	123.6	114.8	126.5	124.9	129.2	126.5	...	95
107.8	108.0	100.3	110.4	109.1	112.8	110.5	...	96
172.9	-	-	170.1	-	-	...	.	97
131.1	-	-	128.9	-	-	...	.	98
183.9	-	-	181.0	-	-	...	.	99
135.0	.	.	132.9	.	.	...	.	100
119.6	122.2	122.9	123.2	123.2	125.7	124.4	...	101
91.8	93.8	94.3	94.6	94.6	96.5	95.5	...	102
98.7	99.2	99.3	102.3	105.1	105.7	99.2	...	103
105.4	105.7	99.2	102.6	105.8	105.7	105.4	...	104
133.7	134.0	130.5	133.8	136.5	137.2	138.1	138.6	105
103.5	103.7	101.0	103.5	105.6	106.2	106.9	107.3	106
80.9	79.9	74.2	76.4	78.1	77.2	76.4	76.7	107
102.8	101.4	94.2	97.0	99.1	98.0	97.0	97.4	108

Table 1.3: Population, consumption expenditure and direct use of environmental resources by private households

No.	Specification	Unit	1990	1991	1995	2000
			Production factors			
1	Inhabitants 1) of private households (reference data 31.12.)	1,000	.	80,275	81,817	82,260
2	Number of households (reference data 31.12.) 1)	1,000	.	35,367	37,024	38,207
3	Housing area (reference data 31.12.)	km^2	.	-	-	13,457
4	Residential area used	km^2	.	-	-	9,309
5	Living space (reference data 31.12.)	mn m^2	.	2,742	2,891	3,234
6	Flats (reference data 31.12.) 2)	1,000	33,856	34,174	35,954	38,384
7	Domestic final consumption of households (current prices)	EUR mn	.	857,850	1,021,579	1,144,713
8	Domestic final consumption of households (price-adjusted)	Index (2005=100)	.	85.6	90.6	98.1
	including:					
9	Actual rent (current prices)	EUR mn	.	50,112	77,454	92,166
10	Imputet rent (Current prices)	EUR mn	.	58,040	86,786	103,517
11	Actual rent (price-adjusted)	Index (2005=100)	.	76	90	98
12	Imputet rent (price-adjusted)	Index (2005=100)	.	72	85	93
13	Use of water	mn m^3	.	3,550	3,313	3,233
14	including: water withdrawal from nature	mn m^3	.	83	47	32
15	including: water received from other industries	mn m^3	.	3,467	3,266	3,200
16	Water consumption per inhabitants	m^3	.	43	40	39
17	Energy consumption	petajoule	.	3,635	3,944	4,147
18	including: energy consumption for mobility	petajoule	1,247	1,326	1,392	1,384
19	including: energy consumption for housing	petajoule	.	2,309	2,551	2,763
20	memorandum item: energy consumption for housing	petajoule	.	2,436	2,655	2,584
21	Energy consumption per inhabitants	terajoule	.	45	48	50
22	Energy consumption per households	terajoule	.	103	107	109
23	Energy consumption relevant to emissions	petajoule	.	3,159	3,341	3,296
24	including: energy consumption relevant to emissions for mobility	petajoule	1,247	1,326	1,392	1,384
25	including: energy consumption relevant to emissins for housing	petajoule	.	1,833	1,949	1,912
26	Emissions of carbon dioxide	mn tonnes	.	.	236	233
27	including: emissions of carbon dioxide for mobility	mn tonnes	.	.	102	101
28	including: emissions of carbon dioxide for housing	mn tonnes	.	.	134	131
29	N2O	1,000 tonnes	.	.	8	7
30	CH4	1,000 tonnes	.	.	77	67
31	SO2	1,000 tonnes	.	.	139	79
32	NOx	1,000 tonnes	.	.	730	567
33	NMVOC	1,000 tonnes	.	.	989	743
34	NH3	1,000 tonnes	.	.	22	34
35	Waste water total	mn m^3	.	3,349	3,176	3,284
36	including: waste water directly discharged	mn m^3	.	274	246	205
37	including: waste water indirectly discharged	mn m^3	.	3,075	2,930	3,079
			Index			
38	Inhabitants of private households (reference data 31.12.)	2005 = 100	.	97.4	99.2	99.8
39	Number of households (reference data 31.12.)	2005 = 100	.	90.3	94.5	97.5
40	Housing area (reference data 31.12.)	2000 = 100	.	-	-	100.0
41	Residential area used	2000 = 100	.	-	-	100.0
42	Living space (reference data 31.12.)	2005 = 100	.	80.3	84.6	94.7
43	Flats (reference data 31.12.)	2005 = 100	85.6	86.4	90.9	97.0
44	Domestic final consumption of households (current prices)	2005 = 100	.	68.2	81.2	91.0
45	Domestic final consumption of households (price-adjusted)	2005 = 100	.	85.6	90.6	98.1
	including:					
46	Actual rent (current prices)	2005 = 100	.	50.4	77.9	92.7
47	Imputet rent (Current prices)	2005 = 100	.	49.4	73.9	88.1
48	Actual rent (price-adjusted)	2005 = 100	.	75.7	89.6	98.0
49	Imputet rent (price-adjusted)	2005 = 100	.	72.5	85.1	93.1
50	Use of water	2000 = 100	.	109.8	102.5	100
51	including: water withdrawal from nature	2000 = 100	.	256.3	145.2	100
52	including: water received from other industries	2000 = 100	.	108.3	102.1	100
53	Water consumption per inhabitants	2000 = 100	.	111.0	102.6	100
54	Energy consumption	2005 = 100	.	93.0	100.8	106.1
55	including: energy consumption for mobility	2005 = 100	88.5	94.1	98.8	98.2
56	including: energy consumption for housing	2005 = 100	.	92.3	102.0	110.5
57	Energy consumption per inhabitants	2005 = 100	.	95.5	101.6	106.3
58	Energy consumption per households	2005 = 100	.	103.0	106.7	108.8
59	Energy consumption relevant to emissions	2005 = 100	.	96.4	101.9	100.6
60	including: energy consumption relevant to emissions for mobility	2005 = 100	88.5	94.1	98.8	98.2
61	including: energy consumption relevant to emissins for housing	2005 = 100	.	98.1	104.3	102.4
62	Emissions of carbon dioxide	2005 = 100	.	.	102.5	101.0
63	including: emissions of carbon dioxide for mobility	2005 = 100	.	.	98.5	97.9
64	including: emissions of carbon dioxide for housing	2005 = 100	.	.	105.8	103.5
65	Waste water total	2000 = 100	.	102.0	96.7	100
66	including: waste water directly discharged	2000 = 100	.	133.7	120.2	100
67	including: waste water indirectly discharged	2000 = 100	.	99.9	95.2	100

Table 1.3: Population, consumption expenditure and direct use of environmental resources by private households

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	No.
Production factors										
82,438	82,315	82,218	82,002	81,802	81,752	81,844	80,524	80,768	81,198	1
39,178	39,767	39,722	40,076	40,189	40,301	40,439	39,707	39,933	40,222	2
-	-	-	15,430	-	-	-	-	-	-	3
-	-	-	10,201	-	-	-	-	-	-	4
3,416	3,446	3,473	3,494	3,513	3,530	3,551	3,571	3,595	...	5
39,551	39,754	39,918	40,057	40,184	41,223	41,374	40,806	40,995	41,221	6
1,258,469	1,294,263	1,314,268	1,343,244	1,340,434	1,372,877	1,418,510	1,450,985	1,475,511	1,502,229	7
100.0	101.8	101.6	102.1	102.4	103.0	104.4	105.2	105.7	106.6	8
99,469	100,753	102,007	103,274	104,307	105,368	106,701	108,057	109,583	111,327	9
117,483	120,160	122,870	125,575	127,977	130,518	133,677	136,803	140,176	143,922	10
100	100	100	100	100	100	100	100	100	100	11
100	101	102	103	104	105	106	107	109	110	12
-	-	3,103	-	-	3,004	-	-	...	-	13
-	-	28	-	-	23	-	-	...	-	14
-	-	3,075	-	-	2,981	-	-	...	-	15
-	-	37	-	-	36	-	-	...	-	16
3,911	3,876	3,821	3,816	3,793	3,758	3,784	3,675	3,744	...	17
1,409	1,367	1,359	1,326	1,329	1,333	1,346	1,327	1,349	...	18
2,501	2,508	2,462	2,491	2,464	2,425	2,438	2,348	2,395	...	19
2,591	2,622	2,259	2,558	2,478	2,676	2,333	2,427	2,556	...	20
47	47	46	47	46	46	46	46	46	...	21
100	97	96	95	94	93	94	93	94	...	22
3,277	3,273	2,912	3,169	3,092	3,267	2,989	3,042	3,177	...	23
1,409	1,367	1,359	1,326	1,329	1,333	1,346	1,327	1,349	...	24
1,868	1,906	1,553	1,843	1,763	1,934	1,643	1,715	1,828	...	25
230	230	205	223	218	232	213	214	226	...	26
104	100	100	98	99	99	100	98	100	...	27
127	130	105	125	119	133	113	116	126	...	28
4	4	4	4	4	4	4	3	4	...	29
59	58	56	57	57	66	62	57	57	...	30
48	52	37	50	42	50	47	38	40	...	31
412	390	348	319	291	292	262	251	246	...	32
516	352	333	309	309	353	313	294	296	...	33
27	27	25	24	23	21	20	19	18	...	34
-	-	3,182	-	-	3,086	-	-	...	-	35
-	-	203	-	-	202	-	-	...	-	36
-	-	2,979	-	-	2,884	-	-	...	-	37
Index										
100	99.9	99.7	99.5	99.2	99.2	99.3	97.7	98.0	...	38
100	101.5	101.4	102.3	102.6	102.9	103.2	101.4	101.9	...	39
-	-	-	114.7	-	-	-	...	...	-	40
-	-	-	109.6	-	-	-	...	...	-	41
100	100.9	101.7	102.3	102.8	103.4	103.9	104.6	105.2	...	42
100	100.5	100.9	101.3	101.6	104.2	104.6	103.2	103.7	...	43
100	102.8	104.4	106.7	106.5	109.1	112.7	115.3	117.2	...	44
100	101.8	101.6	102.1	102.4	103.0	104.4	105.2	105.7	...	45
100	101.3	102.6	103.8	104.9	105.9	107.3	108.6	110.2	...	46
100	102.3	104.6	106.9	108.9	111.1	113.8	116.4	119.3	...	47
100	100.2	100.2	100.2	100.1	100.1	100.1	100.1	100.1	...	48
100	101.1	102.1	103.2	104.1	105.0	106.3	107.4	108.7	...	49
-	-	96.0	-	-	92.9	-	-	...	-	50
-	-	87.1	-	-	71.0	-	-	...	-	51
-	-	96.1	-	-	93.2	-	-	...	-	52
-	-	96.1	-	-	93.7	-	-	...	-	53
100	99.1	97.7	97.6	97.0	96.1	96.8	94.0	95.7	...	54
100	97.0	96.4	94.1	94.3	94.6	95.5	94.2	95.7	...	55
100	100.3	98.4	99.6	98.5	96.9	97.5	93.9	95.8	...	56
100	99.3	98.0	98.1	97.8	96.9	97.5	96.2	97.7	...	57
100	97.6	96.4	95.4	94.6	93.4	93.7	92.7	93.9	...	58
100	99.9	88.8	96.7	94.4	99.7	91.2	92.8	97.0	...	59
100	97.0	96.4	94.1	94.3	94.6	95.5	94.2	95.7	...	60
100	102.0	83.1	98.7	94.4	103.5	88.0	91.8	97.9	...	61
100	100.0	88.8	96.8	94.6	100.5	92.4	93.1	98.1	...	62
100	97.0	96.5	94.4	95.2	95.3	96.3	95.0	96.6	...	63
100	102.6	82.5	98.8	94.2	104.7	89.2	91.5	99.2	...	64
-	-	96.9	-	-	94.0	-	-	...	-	65
-	-	98.9	-	-	98.4	-	-	...	-	66
-	-	96.8	-	-	93.7	-	-	...	-	67

Table 1.3: Population, consumption expenditure and direct use of environmental resources by private households

No.	Specification	Unit	1990	1991	1995	2000
			Factors in relation to household final consumption expenditure (price-adjusted)			
68	Actual rent (price-adjusted)	2005 = 100	.	88.5	98.9	99.9
69	Imputet rent (price-adjusted)	2005 = 100	.	84.7	93.9	94.9
70	Use of water	2000 = 100	.	125.9	111.0	100
71	including: water withdrawal from nature	2000 = 100	.	293.9	157.2	100
72	including: water received from other industries	2000 = 100	.	124.2	110.5	100
73	Water consumption per inhabitants	2000 = 100	.	127.3	111.1	100
74	Energy consumption	2005 = 100	.	108.7	111.3	108.1
75	including: energy consumption for mobility	2005 = 100	.	110.0	109.0	100.1
76	including: energy consumption for housing	2005 = 100	.	107.9	112.6	112.6
77	Energy consumption per inhabitants	2005 = 100	.	111.6	112.1	108.3
78	Energy consumption per households	2005 = 100	.	120.4	117.8	110.9
79	Energy consumption relevant to emissions	2005 = 100	.	112.7	112.5	102.5
80	including: energy consumption relevant to emissions for mobility	2005 = 100	.	110.0	109.0	100.1
81	including: energy consumption relevant to emissins for housing	2005 = 100	.	114.7	115.1	104.3
82	Emissions of carbon dioxide	2005 = 100	.	.	113.2	102.9
83	including: emissions of carbon dioxide for mobility	2005 = 100	.	.	108.7	99.8
84	including: emissions of carbon dioxide for housing	2005 = 100	.	.	116.8	105.5
85	Waste water total	2000 = 100	.	116.9	104.7	100
86	including: waste water directly discharged	2000 = 100	.	153.4	130.2	100
87	including: waste water indirectly discharged	2000 = 100	.	114.5	103.0	100
			Factors in relation to household final consumption expenditure (current prices)			
88	Use of water	2000 = 100	.	146.5	114.8	100
89	including: water withdrawal from nature	2000 = 100	.	342.0	162.6	100
90	including: water received from other industries	2000 = 100	.	144.6	114.4	100
91	Water consumption per inhabitants	2000 = 100	.	148.1	115.0	100
92	Energy consumption	2005 = 100	.	136.4	124.2	116.6
93	including: energy consumption for mobility	2005 = 100	.	138.1	121.7	108.0
94	including: energy consumption for housing	2005 = 100	.	135.4	125.7	121.5
95	Energy consumption per inhabitants	2005 = 100	.	140.0	125.2	116.8
96	Energy consumption per households	2005 = 100	.	151.1	131.5	119.6
97	Energy consumption relevant to emissions	2005 = 100	.	141.4	125.6	110.6
98	including: energy consumption relevant to emissions for mobility	2005 = 100	.	138.1	121.7	108.0
99	including: energy consumption relevant to emissins for housing	2005 = 100	.	143.9	128.5	112.5
100	Emissions of carbon dioxide	2005 = 100	.	.	126.3	111.0
101	including: emissions of carbon dioxide for mobility	2005 = 100	.	.	121.3	107.6
102	including: emissions of carbon dioxide for housing	2005 = 100	.	.	130.4	113.7
103	Waste water total	2000 = 100	.	136.1	108.4	100
104	including: waste water directly discharged	2000 = 100	.	178.5	134.7	100
105	including: waste water indirectly discharged	2000 = 100	.	133.3	106.6	100

1) Population projections based on the 1987 census (West) and 1990 (East) - Technical Series 1, Series 1.3 - 2011 (reporting date 31.12 of the year); 2012: population projections based on the census of 2011.

2) Housing stock in Germany - apartments in residential and non-residential buildings: Fachserie 5, Series 3, 2012; Results for 2010 on basis of the census of building and housing 2011 (Status as of 31.05.2013).

Table 1.3: Population, consumption expenditure and direct use of environmental resources by private households

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	No.
Factors in relation to household final consumption expenditure (price-adjusted)										
100	98.4	98.6	98.1	97.8	97.1	95.9	95.2	94.7	...	68
100	99.4	100.5	101.0	101.6	101.9	101.8	102.2	102.8	...	69
-	-	92.7	-	-	88.5	-	-	...	-	70
-	-	84.0	-	-	67.6	-	-	...	-	71
-	-	92.8	-	-	88.7	-	-	...	-	72
-	-	92.8	-	-	89.3	-	-	...	-	73
100	97.4	96.1	95.6	94.7	93.3	92.7	89.4	90.6	...	74
100	95.4	94.9	92.1	92.1	91.8	91.5	89.5	90.6	...	75
100	98.6	96.9	97.5	96.2	94.1	93.4	89.3	90.6	...	76
100	97.5	96.4	96.1	95.5	94.1	93.4	91.5	92.5	...	77
100	96.0	94.8	93.4	92.3	90.7	89.8	88.2	88.9	...	78
100	98.2	87.4	94.7	92.1	96.8	87.4	88.3	91.8	...	79
100	95.4	94.9	92.1	92.1	91.8	91.5	89.5	90.6	...	80
100	100.3	81.8	96.6	92.1	100.5	84.3	87.3	92.6	...	81
100	98.3	87.4	94.8	92.4	97.5	88.5	88.5	92.8	...	82
100	95.3	94.9	92.5	93.0	92.6	92.3	90.4	91.4	...	83
100	100.8	81.2	96.7	91.9	101.6	85.5	87.0	93.9	...	84
-	-	93.5	-	-	89.5	-	-	...	-	85
-	-	95.5	-	-	93.7	-	-	...	-	86
-	-	93.4	-	-	89.2	-	-	...	-	87
Factors in relation to household final consumption expenditure (current prices)										
-	-	83.6	-	-	77.5	-	-	...	-	88
-	-	75.8	-	-	59.2	-	-	...	-	89
-	-	83.7	-	-	77.7	-	-	...	-	90
-	-	83.7	-	-	78.2	-	-	...	-	91
100	96.4	93.5	91.4	91.1	88.1	85.8	81.5	81.7	...	92
100	94.3	92.3	88.1	88.6	86.7	84.7	81.7	81.6	...	93
100	97.5	94.2	93.3	92.5	88.9	86.5	81.4	81.7	...	94
100	96.5	93.8	91.9	91.8	88.8	86.5	83.4	83.4	...	95
100	94.9	92.3	89.4	88.8	85.6	83.2	80.4	80.1	...	96
100	97.1	85.1	90.6	88.6	91.4	80.9	80.5	82.7	...	97
100	94.3	92.3	88.1	88.6	86.7	84.7	81.7	81.6	...	98
100	99.2	79.6	92.4	88.6	94.9	78.0	79.6	83.5	...	99
100	97.3	85.0	90.7	88.8	92.1	82.0	80.7	83.6	...	100
100	94.3	92.4	88.5	89.4	87.4	85.4	82.4	82.4	...	101
100	99.7	79.0	92.5	88.4	96.0	79.1	79.4	84.6	...	102
-	-	84.4	-	-	78.3	-	-	...	-	103
-	-	86.2	-	-	82.1	-	-	...	-	104
-	-	84.3	-	-	78.1	-	-	...	-	105

Table 1.4: Detailed classification of material inputs*)

mn tonnes

No.	Specification	1994	1995	2000	2005	2006	2007
1	Domestic extraction (used) 1)	1,334.4	1,283.1	1,218.4	1,081.9	1,102.2	1,109.4
2	Abiotic raw material (used)	1,122.5	1,061.9	972.3	834.3	867.9	847.1
3	Energy sources	278.0	265.5	220.7	220.9	215.7	219.0
4	Hard coal	52.4	53.6	33.6	24.9	20.9	21.5
5	Brown coal (lignite)	207.1	192.8	167.7	177.9	176.3	180.4
6	Crude (mineral) oil	2.9	3.0	3.1	3.6	3.5	3.4
7	Natural gas, pit gas and petroleum gas	15.0	15.7	15.7	14.2	14.6	13.4
8	Other energy sources 2)	0.5	0.5	0.5	0.3	0.3	0.3
9	Minerals	844.5	796.4	751.7	613.4	652.2	628.0
10	Ores	0.1	0.1	0.5	0.4	0.4	0.4
11	Industrial and construction minerals	844.3	796.3	751.2	613.0	651.8	627.6
12	Construction minerals	780.5	737.9	691.9	550.4	587.6	565.5
13	Sand and gravel	322.5	200.7	170.7	132.6	139.4	132.9
14	Raw and unbroken natural stones, crude earth 3)	374.4	451.3	429.2	343.0	368.9	351.2
15	Other construction minerals 4)	83.6	85.9	92.0	74.9	79.3	81.4
16	Industrial minerals	63.9	58.5	59.3	62.6	64.2	62.1
17	Special sand and clays	16.8	18.0	15.4	13.4	13.8	14.2
18	Minerals for chemestry and fertilization	11.5	8.4	8.2	8.9	9.1	9.3
19	Salts	14.8	13.0	14.6	19.0	19.5	15.7
20	Other industrial minerals 5)	20.8	19.2	21.1	21.3	21.8	22.9
21	Biomass (used)	211.9	221.1	246.1	247.6	234.3	262.3
22	Biomass from agriculture (harvest)	194.9	204.0	221.4	220.7	204.2	226.1
23	Cereals and pulses	36.6	40.2	45.7	46.4	43.8	40.9
24	Roots and tubers	36.4	38.4	42.2	37.5	31.3	37.4
25	Oil crops, hops and tobacco	3.2	3.3	3.7	5.2	5.4	5.4
26	Vegetables and fruits	7.0	6.2	9.0	7.6	8.0	8.7
27	Straw	16.8	18.7	20.4	20.5	19.8	18.1
28	Intercrops and turnip leavers	9.6	9.9	8.8	6.4	5.9	6.8
29	Fodder plants and grazing on permanent pastures	84.7	86.8	90.9	96.6	89.4	108.2
30	Other crops	0.6	0.6	0.5	0.6	0.6	0.6
31	Biomass from forestry (coniferous and non-coniferous wood) 6)	16.8	16.9	24.5	26.6	29.8	35.8
32	Biomass from animals	0.2	0.2	0.2	0.3	0.3	0.3
33	Biomass from fishing 7)	0.2	0.2	0.2	0.3	0.3	0.3
34	Biomass from hunting	0.0	0.0	0.0	0.1	0.0	0.1
35	Memorandum items for balancing	1,086.0	1,088.3	1,045.3	1,022.6	1,035.3	1,001.4
36	Oxygen for combustion	998.7	1,001.7	961.6	942.6	956.5	922.4
37	Oxygen for respiration 8)	86.1	85.4	82.7	79.1	78.0	78.2
38	Nitrogen for emissions from combustion	1.2	1.2	1.0	0.8	0.8	0.8
39	Air for other industrial processes	0.0	0.0	0.0	0.0	0.0	0.0
40	Imports	463.1	463.6	521.2	563.5	600.9	607.5
41	Raw materials	277.3	275.0	305.5	326.4	337.1	336.1
42	Energy sources	172.5	169.6	194.5	227.7	232.6	224.6
43	Minerals	82.7	82.7	86.0	72.5	76.2	80.0
44	Ores	47.0	47.3	51.9	47.0	49.6	52.3
45	Other minerals	35.7	35.5	34.1	25.5	26.6	27.8
46	Biomass	22.1	22.7	25.0	26.2	28.3	31.5
47	Semi-manufactured products	105.6	105.6	112.2	113.7	122.0	119.4
48	from energy sources	48.5	48.4	53.5	52.3	54.7	48.1
49	from minerals	37.5	38.0	36.0	34.1	36.9	38.6
50	from ores	9.6	9.7	13.0	17.2	19.4	21.1
51	from other minerals	27.9	28.3	23.0	16.8	17.5	17.5
52	from biomass	19.7	19.2	22.7	27.3	30.3	32.7
53	Finished products	80.3	83.0	103.2	121.7	140.4	150.0
54	mostly out of energy sources	15.5	15.9	20.3	25.2	28.4	30.3
55	mostly out of minerals	35.8	38.7	49.7	57.1	68.7	74.8
56	mostly out of ores	30.6	33.5	42.1	48.4	59.1	64.4
57	mostly out of other minerals	5.2	5.2	7.5	8.7	9.7	10.4
58	mostly out of biomass	28.9	28.4	33.3	39.4	43.3	44.8
59	Packaging materials imported with products	0.0	0.0	0.0	0.0	0.0	0.0
60	Waste imported for final treatment and disposal	0.0	0.0	0.2	1.7	1.4	2.0
61	Unused domestic extraction	2,346.2	2,205.1	2,043.1	2,174.0	2,105.2	2,198.7
62	Unused extraction from mining and quarrying of fossil fuels	1,920.4	1,807.7	1,565.0	1,758.2	1,690.9	1,763.2
63	including: overburden from brown coal	1,870.0	1,754.9	1,531.4	1,727.1	1,663.5	1,736.4
64	Unused extraction from mining and quarrying of fossil fuels 3)	121.6	119.0	115.5	107.5	110.6	110.2
65	Unused extraction of biomass 9)	198.6	179.8	201.2	201.5	193.3	212.6
66	Excavated earth 10), 11)	105.6	98.6	161.3	106.8	110.4	112.7
67	Indirect flows associated to imports	0.0	0.0	0.0	0.0	0.0	0.0

*) Some preliminary results. - From 2001 onwards imports are collected according to SITC. A comparison of the figures with earlier results is hence only partially possible.

1) Totalling not including oxygen, nitrogen and air. - 2) Energetic peat and other products of mineral oil and natural gas.

3) Partially revised in comparison to the previous editions of this publication. - 4) These include unbroken natural stones, limestone and dolomit and crude earth.

5) These include other industrial minerals and peat for agricultural use. - 6) Methodological differences compared to the results of forest accounting.

7) Catches from the high seas and from coastal fishing, including landings abroad. - 8) Including respiration of humans and farm animals.

9) Up to 2005 the unused extraction of timber biomass in minor extent comprises other positions (e.g. woodchips). - 10) Since 2002 including dangerous waste.

11) Since 2004 without reused materials from excavation, construction and recultivation activities.

Table 1.4: Detailed classification of material inputs*)

mn tonnes

2008	2009	2010	2011	2012	2013	No.
1,090.9	1,047.0	1,021.3	1,115.3	1,086.4	1,057.9	1
827.6	779.1	772.1	833.5	803.8	798.0	2
209.1	199.1	196.1	202.1	208.7	202.1	3
17.2	13.8	12.9	12.1	10.8	7.6	4
175.3	169.9	169.4	176.6	185.4	182.8	5
3.1	2.8	2.5	2.7	2.6	2.6	6
13.2	12.4	10.9	10.3	9.4	8.7	7
0.3	0.3	0.4	0.4	0.5	0.4	8
618.5	580.0	576.0	631.4	595.0	595.9	9
0.5	0.4	0.4	0.5	0.5	0.4	10
618.1	579.6	575.6	630.9	594.6	595.5	11
558.2	522.0	511.4	566.8	535.1	534.5	12
132.8	123.8	120.3	135.7	127.8	124.9	13
348.3	332.7	322.4	357.8	335.0	338.3	14
77.1	65.6	68.7	73.2	72.3	71.3	15
59.9	57.6	64.2	64.2	59.5	61.0	16
13.9	11.8	12.4	13.6	13.0	12.7	17
8.7	5.2	7.8	8.3	8.1	8.0	18
15.3	18.9	19.7	17.4	14.8	17.4	19
21.9	21.7	24.3	24.8	23.5	22.9	20
263.4	267.9	249.2	281.8	282.6	260.0	21
236.5	244.7	223.0	252.5	255.3	232.1	22
50.3	50.0	44.3	42.1	45.6	47.9	23
34.9	38.1	33.9	41.7	38.6	32.8	24
5.3	6.4	5.8	4.0	4.9	5.9	25
8.5	9.0	7.5	8.3	8.5	7.6	26
22.2	22.4	19.5	17.9	19.8	19.8	27
6.7	7.2	6.6	7.7	7.4	6.5	28
108.2	111.1	104.9	130.3	129.9	111.1	29
0.6	0.6	0.5	0.5	0.5	0.5	30
26.5	23.0	26.0	29.0	27.1	27.6	31
0.3	0.3	0.3	0.3	0.3	0.3	32
0.3	0.2	0.2	0.2	0.2	0.2	33
0.1	0.0	0.1	0.0	0.1	0.1	34
1,010.3	950.3	985.7	955.3	966.0	992.8	35
930.9	870.9	907.3	877.6	887.4	913.8	36
78.7	78.7	77.8	77.1	78.0	78.4	37
0.7	0.7	0.7	0.7	0.7	0.7	38
0.0	0.0	0.0	0.0	0.0	0.0	39
606.9	539.2	592.5	615.9	603.8	627.4	40
337.5	304.1	322.8	334.2	335.2	352.7	41
228.1	213.2	214.1	222.3	230.1	244.8	42
78.0	57.3	73.4	76.1	68.8	68.5	43
51.2	33.6	47.8	47.1	44.4	45.2	44
26.9	23.8	25.6	29.0	24.4	23.3	45
31.4	33.5	35.3	35.9	36.2	39.5	46
122.1	111.2	127.1	131.1	123.6	129.3	47
52.8	51.2	57.2	56.8	52.1	58.1	48
37.4	29.8	36.6	39.3	36.5	35.3	49
20.2	13.3	18.0	20.2	18.1	18.3	50
17.2	16.5	18.7	19.2	18.4	17.1	51
31.9	30.2	33.2	35.0	35.0	35.9	52
144.9	121.4	140.0	147.7	142.2	142.3	53
29.1	25.6	29.3	30.5	29.8	31.0	54
73.0	55.4	68.1	73.8	69.5	69.0	55
62.2	45.9	57.2	62.5	59.0	58.2	56
10.9	9.5	10.9	11.3	10.6	10.8	57
42.7	40.4	42.6	43.4	42.8	42.3	58
0.0	0.0	0.0	0.0	0.0	0.0	59
2.5	2.6	2.7	2.9	2.8	3.1	60
2,220.6	2,082.2	2,088.6	2,078.2	1,979.4	2,019.6	61
1,812.2	1,697.0	1,723.3	1,703.2	1,597.2	1,639.8	62
1,791.0	1,680.3	1,706.8	1,690.5	1,586.2	1,630.4	63
106.8	88.9	98.8	106.0	102.3	102.3	64
190.3	188.5	158.3	156.5	167.3	161.9	65
111.2	107.9	108.4	112.4	112.6	115.5	66
0.0	0.0	0.0	0.0	0.0	0.0	67

Table 1.5: Detailed classification of material outputs*)

mn tonnes

No.	Specification	1994	1995	2000	2005
1	Domestic processed output	1,538.4	1,541.1	1,484.3	1,442.8
2	Air emissions of mass pollutants 1)	958.1	955.9	913.2	877.1
3	Carbon dioxide (CO2) 2)	938.9	938.0	899.4	865.9
4	Carbon monoxide (CO)	6.8	6.4	4.8	3.7
5	Nitrogen oxide (NOx)	2.2	2.2	1.9	1.6
6	Sulphur dioxide (SO2)	2.4	1.7	0.6	0.5
7	Nitrous oxide (N2O) 2)	0.2	0.2	0.1	0.1
8	Ammonia (NH3)	0.7	0.7	0.7	0.7
9	Methane (CH4) 2)	4.3	4.2	3.6	2.8
10	Dust	0.5	0.5	0.4	0.4
11	Volatile organic compounds, not including methane (NMVOC)	2.0	2.0	1.6	1.3
12	Emissions to water 3)	4.5	4.0	3.2	0.0
13	Dissipative use of products	33.7	35.3	35.1	35.1
14	Farmyard manure 4)	26.5	27.2	27.2	25.6
15	Mineral fertilisers	4.7	4.7	4.9	4.4
16	Pesticides	0.0	0.0	0.0	0.0
17	Seeds	1.6	1.7	1.8	1.7
18	Thawing salt	0.9	1.6	1.1	3.4
19	Dissipative losses 5)	0.1	0.1	0.1	0.1
20	Memorandum items of balancing	542.1	545.8	532.7	530.5
21	Water vapour from combustion 6)	395.4	400.0	390.5	393.2
22	Respiration of humans and livestock (CO2) 7)	118.4	117.4	113.7	108.7
23	Water vapour (H2O) 8)	28.2	28.3	28.5	28.6
24	Exports	223.2	224.7	289.2	357.0
25	Raw materials	55.3	55.9	74.4	78.1
26	Energy sources	5.0	7.2	13.4	15.1
27	Minerals	34.9	32.2	38.1	41.5
28	Ores	0.2	0.2	0.2	0.1
29	Other minerals	34.7	32.1	37.9	41.3
30	Biomass	15.5	16.5	22.9	21.5
31	Semi-manufactured products	86.1	83.5	98.6	130.1
32	from energy sources	23.8	21.5	26.9	37.6
33	from minerals	43.6	41.8	46.1	61.8
34	from ores	15.0	13.8	14.7	15.2
35	from other minerals	28.6	28.1	31.4	46.6
36	from biomass	18.7	20.2	25.6	30.7
37	Finished products	81.8	85.2	116.2	148.8
38	mostly out of energy sources	20.6	20.9	26.8	34.7
39	mostly out of minerals	42.3	44.6	61.7	75.8
40	mostly out of ores	36.8	38.9	52.5	64.1
41	mostly out of other minerals	5.5	5.7	9.2	11.7
42	mostly out of biomass	18.9	19.7	27.7	38.3
43	Packaging materials exported with products	0.0	0.0	0.0	0.0
44	Disposal of unused domestic extraction 9)	2,346.2	2,205.1	2,043.1	2,174.0
45	Indirect flows associated to exports	0.0	0.0	0.0	0.0
46	Balance input/output 10)	1,122.0	1,069.2	1,011.4	868.2
47	including: landfilled waste	111.0	94.8	67.1	45.7
	Memorandum item:				
48	Water withdrawal from nature 11)	49,199.9	48,830.9	44,929.3	0.0
49	Water discharged to nature 12)	49,007.6	48,642.5	44,765.8	0.0
50	Balance export and import of water	-8.0	-7.8	-7.2	0.0
51	Balance water	184.4	180.6	156.3	0.0

*) Some preliminary results. - From 2001 onwards imports are collected according to SITC. A comparison of the figures with earlier results is hence only partially possible.

1) Not including CFCs and halons. - 2) Source: www.unfccc.int

3) Emissions of nitrogen, phosphor and other substances and (organic) material behind sewage plant. Up to 2001 estimation.

4) Slurry, manure, etc. (industrial fertilisers) in dry substances.

5) Including only brake and tyre losses.

6) Partially revised in comparison to the previous editions of this publication.

7) Including respiration emissions (CO_2) of humans and farm animals.

8) Including only water evaporation by humans by respiration and persipiration via the skin.

9) Value corresponds to unused domestic extraction.

10) As of 2002 emissions to water are not included.

11) Including infiltration and rain water.

12) Including infiltration and rain water, loss occuring with water distribution and evaporation.

Table 1.5: Detailed classification of material outputs*)

mn tonnes

2006	2007	2008	2009	2010	2011	2012	2013	No.
1,458.5	1,412.7	1,421.8	1,336.2	1,390.6	1,351.0	1,362.7	1,397.4	1
888.8	861.4	864.4	798.7	843.2	822.6	827.3	850.0	2
878.0	850.9	854.1	789.1	833.1	812.7	817.9	840.6	3
3.7	3.6	3.5	3.1	3.5	3.5	3.1	3.1	4
1.6	1.5	1.4	1.3	1.3	1.3	1.3	1.3	5
0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	6
0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	7
0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	8
2.7	2.6	2.5	2.4	2.4	2.4	2.4	2.4	9
0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	10
1.3	1.3	1.2	1.1	1.2	1.2	1.1	1.1	11
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12
34.0	32.5	33.0	34.2	36.2	34.0	33.3	34.2	13
24.7	25.0	25.4	25.1	24.5	24.4	24.6	23.7	14
4.5	4.8	4.1	4.2	4.8	4.7	4.9	5.3	15
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
1.7	1.6	1.7	1.7	1.6	1.6	1.6	1.6	17
3.1	1.0	1.7	3.1	5.3	3.2	2.2	3.6	18
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	19
535.5	518.7	524.4	503.3	511.1	494.3	502.0	513.2	20
399.8	382.7	387.7	366.7	375.8	360.0	366.4	376.9	21
107.2	107.5	108.2	108.2	106.9	106.0	107.2	107.8	22
28.6	28.5	28.5	28.4	28.3	28.4	28.4	28.5	23
379.6	396.2	388.0	338.5	365.3	378.4	377.1	384.5	24
82.0	83.6	85.4	78.1	80.5	86.8	84.6	90.2	25
11.4	11.1	11.5	9.9	15.0	21.7	25.6	30.9	26
48.0	51.0	53.1	46.6	44.5	46.3	40.1	37.4	27
0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	28
47.9	50.8	53.0	46.4	44.3	46.1	39.8	37.1	29
22.5	21.5	20.8	21.6	21.0	18.8	18.8	21.9	30
134.7	141.7	131.7	116.7	120.4	121.8	123.4	125.3	31
39.9	41.5	38.6	31.8	27.7	27.7	33.5	35.5	32
61.9	65.8	57.4	49.7	55.8	56.4	53.1	53.3	33
16.7	18.1	17.8	15.0	18.9	20.0	18.8	18.1	34
45.2	47.7	39.6	34.7	36.8	36.4	34.3	35.1	35
32.8	34.4	35.7	35.2	36.9	37.6	36.8	36.5	36
163.0	170.9	170.9	143.8	164.4	169.8	169.1	169.0	37
37.0	38.8	33.6	34.7	38.0	38.0	38.2	38.5	38
85.7	90.1	92.6	68.9	82.5	89.2	87.7	87.2	39
72.7	76.4	79.0	57.4	68.6	75.0	74.2	72.9	40
13.0	13.6	13.5	11.5	13.9	14.3	13.5	14.3	41
40.3	42.0	44.7	40.2	44.0	42.7	43.2	43.4	42
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43
2,105.2	2,198.7	2,220.6	2,082.2	2,088.6	2,078.2	1,979.4	2,019.6	44
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45
900.2	909.4	898.3	861.8	843.7	957.0	916.4	896.3	46
38.7	43.2	41.6	35.4	34.0	36.9	37.0	42.1	47
0.0	37,747.2	0.0	0.0	38,103.8	0.0	0.0	...	48
0.0	37,625.6	0.0	0.0	37,984.0	0.0	0.0	...	49
0.0	-1.0	0.0	0.0	-1.0	0.0	0.0	...	50
0.0	120.5	0.0	0.0	118.7	0.0	0.0	...	51

Table 1.6: Indicators on environment and economy of the national Strategy for Sustainable Development*)

No.	Indicator	Unit	1990	1991	1994	1995	1996
1	Energy productivity (1a)	1990 = 100	100.0	104.5	111.3	112.5	109.8
2	Primary energy consumption (1b)	1990 = 100	100.0	98.0	95.2	95.7	98.9
3	Raw material productivity (1c)	1994 = 100	-	-	100.0	105.9	108.4
4	Greenhouse gas emissions (2)	1990 = 100	100.0	96.3	90.0	89.8	91.2
5	Share of renewable energy sources in final energy consumption (3a)	%	*1.9*	.	.	*2.2*	*2.1*
6	Share of renewable energy sources in electricity consumption (3b)	%	*3.4*	*3.1*	*4.3*	*4.7*	*4.8*
7	Increase in land use for housing and transport (4)	ha per day a)	-	-	-	-	119.6
8	Species diversity and landscape quality (5)	2015 = 100	76.5	72.3	76.6	73.1	76.0
9	General government deficit (6a)	%	-	*3.2*	*2.5*	*2.9*	*3.5*
10	Structural deficit (6b)	%	-	-	-	-	-
11	Government debt (6c)	%	-	*39.2*	*47.5*	*54.8*	*57.6*
12	Gross fixed capital formation in relation to GDP (7)	%	-	*24.9*	*24.0*	*23.4*	*22.8*
13	Gross domestic product per capita (price-adjusted) (10)	EUR 1,000	-	25.5	25.9	26.3	26.4
14	Intensity for goods transport (11a)	1999 = 100	-	-	-	-	-
15	Intensity for passenger transport (11b)	1999 = 100	-	-	-	-	-
16	Share of rail transport in goods transport performance (11c)	%	-	-	-	-	-
17	Share of inland water transport in goods transport performance (11c)	%	-	-	-	-	-
18	Nitrogen surplus (12a)	kg/ha b)	-	130.3	114.7	114.0	112.6
19	Organic farming (12b)	%	-	-	-	-	-
20	Air pollution (13)	1990 = 100	100.0	85.2	66.0	63.2	61.0

*) Numbers in brackets according to the numbers in the German Strategy for Sustainable Development.

a) Moving four-year average, reference to the relevant year and the preceding three years.

b) Moving three-year average, reference to the second year.

Table 1.6: Indicators on environment and economy of the national Strategy for Sustainable Development*)

1999	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	No.
119.7	122.6	124.8	127.0	137.0	136.7	137.2	135.9	147.2	149.5	146.6	156.4	1
96.1	96.6	97.7	99.5	95.2	96.5	90.8	95.4	91.2	90.2	92.3	87.9	2
115.7	120.0	133.8	132.4	139.0	142.3	147.0	148.2	144.2	149.5	148.3	148.8	3
83.8	83.7	79.5	80.2	78.0	78.2	72.8	75.6	74.0	74.5	76.3	...	4
3.4	*3.7*	*7.2*	*8.1*	*9.7*	*9.1*	*10.1*	*10.9*	*11.8*	*12.8*	*13.2*	*13.5*	5
5.2	*6.2*	*10.2*	*11.6*	*14.2*	*15.1*	*16.3*	*17.0*	*20.4*	*23.7*	*25.2*	*27.4*	6
126.3	129.1	114.3	113.3	112.8	103.8	93.9	86.6	80.9	74.4	72.6	69.2	7
74.8	71.9	71.8	70.2	70.5	70.5	67.5	67.6	63.4	...	...	...	8
1.7	*1.5*	*3.4*	*1.7*	*-0.2*	*0.2*	*3.2*	*4.2*	*1.0*	*0.1*	*0.1*	*-0.3*	9
-	-	*2.0*	*1.5*	*0.6*	*0.7*	*0.6*	*2.2*	*1.4*	*0.2*	*-0.2*	*-0.8*	10
60.0	*58.9*	*66.9*	*66.4*	*63.6*	*65.0*	*72.5*	*81.0*	*78.4*	*79.7*	*77.4*	*74.9*	11
22.9	*23.0*	*19.1*	*19.8*	*20.1*	*20.3*	*19.2*	*19.4*	*20.3*	*20.2*	*19.8*	*20.1*	12
27.9	28.7	29.4	30.6	31.6	32.0	30.3	31.6	32.7	32.8	32.8	33.2	13
100.0	99.9	110.2	114.2	115.4	114.8	108.6	112.2	110.9	108.8	...	...	14
100.0	96.0	97.2	94.7	92.0	91.7	97.8	93.9	91.7	91.7	...	...	15
16.5	*17.2*	*17.2*	*17.9*	*18.4*	*18.5*	*17.2*	*17.8*	*18.5*	*18.2*	...	...	16
13.5	*13.8*	*11.6*	*10.7*	*10.4*	*10.2*	*10.0*	*10.4*	*9.0*	*9.7*	...	...	17
114.6	112.5	103.4	104.2	103.5	94.7	92.2	94.8	99.9	100.6	...	...	18
2.9	.	*4.6*	.	*5.1*	.	.	*5.6*	.	*5.8*	*6.0*	*6.2*	19
55.7	53.5	46.8	46.6	45.3	44.5	43.1	43.0	43.3	42.0	42.5	...	20

Table 2.1: Gross value added*) 2000 to 2012 (at current prices)

EUR mn

No.	CPA 1)	Homogeneous branches	2000	2001	2002	2003	2004	2005
1	A	Products of agriculture, forestry and fishing	20,109	22,690	18,911	17,446	20,683	15,818
2	B	Mining and quarrying	5,370	5,233	5,551	4,711	4,883	4,893
3	C	Manufactured products	383,846	388,090	382,142	385,649	400,044	404,575
4	D (35)	Electricity, gas, steam and air conditioning	21,887	21,945	23,949	23,331	28,335	29,093
5	E	Water supply; sewerage, waste management and remediation services	19,325	19,163	19,514	20,425	21,472	22,360
6	F	Constructions and construction works	101,578	96,393	92,928	88,940	86,401	84,414
7	G	Wholesale and retail trade services; repair services of motor vehicles	213,549	228,024	231,465	234,947	236,050	240,653
8	H	Transportation and storage services	79,451	83,511	85,813	86,995	88,619	92,691
9	I	Accommodation and food services	31,549	32,446	31,784	31,337	31,485	31,946
10	J	Information and communication services	88,415	97,556	100,923	92,257	98,623	98,229
11	K	Financial and insurance services	81,854	85,121	92,126	96,262	108,296	106,227
12	L	Real estate services	221,789	231,807	239,346	239,328	241,764	247,732
13	M	Professional, scientific and technical services	151,113	157,646	157,960	159,391	155,930	158,915
14	N	Administrative and support services	80,191	82,043	83,725	86,038	88,987	93,856
15	O	Public administration and defence services	124,277	126,180	128,708	129,938	129,917	130,278
16	P	Education services	81,378	83,498	86,326	86,597	88,484	89,425
17	Q	Human health and social work services	118,023	121,559	129,328	131,728	134,906	137,076
18	R-T	Other services	82,548	83,982	84,831	86,709	89,704	90,842
19		**All homogeneous branches**	1,906,252	1,966,887	1,995,330	2,002,029	2,054,583	2,079,023

*) Source: Results 2000 -2011: Input-Output Accounts; 2012: Estimation EEA.

1) Statistical Classification of Products by Activity (CPA) of the European Union (2008 edition).

Table 2.1: Gross value added*) 2000 to 2012 (at current prices)

EUR mn

2006	2007	2008	2009	2010	2011	2012	No.
16,879	18,622	20,563	16,279	16,705	19,001	18,180	1
6,055	6,305	7,484	6,989	7,846	8,267	8,861	2
435,277	462,959	449,062	371,955	446,690	475,429	482,135	3
31,651	34,307	41,419	43,386	43,833	35,990	41,185	4
22,666	23,543	24,833	23,709	25,034	26,658	27,079	5
86,974	92,012	96,213	96,771	105,833	112,884	117,779	6
247,883	255,593	264,982	261,454	251,374	273,656	266,865	7
98,338	103,550	106,223	102,806	106,124	106,947	110,006	8
32,190	34,219	33,908	32,519	34,311	36,749	39,011	9
104,265	110,900	112,265	107,777	107,282	117,351	121,872	10
105,790	99,916	91,246	100,612	102,507	95,511	97,881	11
257,754	274,488	286,270	282,293	283,744	299,420	294,742	12
165,964	175,056	180,628	164,069	170,141	176,181	184,126	13
96,752	106,420	109,130	101,668	108,201	113,952	117,206	14
131,623	133,275	137,671	142,953	146,337	148,661	151,893	15
89,000	91,061	93,391	96,785	100,598	104,893	108,183	16
139,689	141,177	147,247	154,993	162,587	168,790	176,863	17
93,146	94,790	98,404	96,571	98,181	100,985	102,488	18
2,161,896	2,258,193	2,300,939	2,203,589	2,317,328	2,421,325	2,466,354	19

Table 2.2: Gross value added*) 2000 to 2012 (at current prices)

in percent

No.	CPA 1)	Homogeneous branches	2000	2001	2002	2003	2004
1	A	Products of agriculture, forestry and fishing	*1.1*	*1.2*	*0.9*	*0.9*	*1.0*
2	B	Mining and quarrying	*0.3*	*0.3*	*0.3*	*0.2*	*0.2*
3	C	Manufactured products	*20.1*	*19.7*	*19.2*	*19.3*	*19.5*
4	D (35)	Electricity, gas, steam and air conditioning	*1.1*	*1.1*	*1.2*	*1.2*	*1.4*
5	E	Water supply; sewerage, waste management and remediation services	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
6	F	Constructions and construction works	*5.3*	*4.9*	*4.7*	*4.4*	*4.2*
7	G	Wholesale and retail trade services; repair services of motor vehicles	*11.2*	*11.6*	*11.6*	*11.7*	*11.5*
8	H	Transportation and storage services	*4.2*	*4.2*	*4.3*	*4.3*	*4.3*
9	I	Accommodation and food services	*1.7*	*1.6*	*1.6*	*1.6*	*1.5*
10	J	Information and communication services	*4.6*	*5.0*	*5.1*	*4.6*	*4.8*
11	K	Financial and insurance services	*4.3*	*4.3*	*4.6*	*4.8*	*5.3*
12	L	Real estate services	*11.6*	*11.8*	*12.0*	*12.0*	*11.8*
13	M	Professional, scientific and technical services	*7.9*	*8.0*	*7.9*	*8.0*	*7.6*
14	N	Administrative and support services	*4.2*	*4.2*	*4.2*	*4.3*	*4.3*
15	O	Public administration and defence services	*6.5*	*6.4*	*6.5*	*6.5*	*6.3*
16	P	Education services	*4.3*	*4.2*	*4.3*	*4.3*	*4.3*
17	Q	Human health and social work services	*6.2*	*6.2*	*6.5*	*6.6*	*6.6*
18	R-T	Other services	*4.3*	*4.3*	*4.3*	*4.3*	*4.4*
19		**All homogeneous branches**	***100***	***100***	***100***	***100***	***100***

1) Statistical Classification of Products by Activity (CPA) of the European Union (2008 edition).

Table 2.2: Gross value added*) 2000 to 2012 (at current prices)

in percent

2005	2006	2007	2008	2009	2010	2011	2012	No.
0.8	*0.8*	*0.8*	*0.9*	*0.7*	*0.7*	*0.8*	*0.7*	1
0.2	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.4*	2
19.5	*20.1*	*20.5*	*19.5*	*16.9*	*19.3*	*19.6*	*19.5*	3
1.4	*1.5*	*1.5*	*1.8*	*2.0*	*1.9*	*1.5*	*1.7*	4
1.1	*1.0*	*1.0*	*1.1*	*1.1*	*1.1*	*1.1*	*1.1*	5
4.1	*4.0*	*4.1*	*4.2*	*4.4*	*4.6*	*4.7*	*4.8*	6
11.6	*11.5*	*11.3*	*11.5*	*11.9*	*10.8*	*11.3*	*10.8*	7
4.5	*4.5*	*4.6*	*4.6*	*4.7*	*4.6*	*4.4*	*4.5*	8
1.5	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.6*	9
4.7	*4.8*	*4.9*	*4.9*	*4.9*	*4.6*	*4.8*	*4.9*	10
5.1	*4.9*	*4.4*	*4.0*	*4.6*	*4.4*	*3.9*	*4.0*	11
11.9	*11.9*	*12.2*	*12.4*	*12.8*	*12.2*	*12.4*	*12.0*	12
7.6	*7.7*	*7.8*	*7.9*	*7.4*	*7.3*	*7.3*	*7.5*	13
4.5	*4.5*	*4.7*	*4.7*	*4.6*	*4.7*	*4.7*	*4.8*	14
6.3	*6.1*	*5.9*	*6.0*	*6.5*	*6.3*	*6.1*	*6.2*	15
4.3	*4.1*	*4.0*	*4.1*	*4.4*	*4.3*	*4.3*	*4.4*	16
6.6	*6.5*	*6.3*	*6.4*	*7.0*	*7.0*	*7.0*	*7.2*	17
4.4	*4.3*	*4.2*	*4.3*	*4.4*	*4.2*	*4.2*	*4.2*	18
100	***100***	***100***	***100***	***100***	***100***	***100***	***100***	19

Table 2.3: Gross value added*) 2000 to 2012 (price-adjusted)

2005=100

No.	CPA 1)	Homogeneous branches	2000	2001	2002	2003	2004	2005
1	A	Products of agriculture, forestry and fishing	*133.3*	*148.8*	*122.6*	*112.0*	*131.4*	*100*
2	B	Mining and quarrying	*115.1*	*110.9*	*116.3*	*97.7*	*100.3*	*100*
3	C	Manufactured products	*99.5*	*99.5*	*96.8*	*96.8*	*99.4*	*100*
4	D (35)	Electricity, gas, steam and air conditioning	*78.9*	*78.2*	*84.4*	*81.4*	*97.9*	*100*
5	E	Water supply; sewerage, waste management and remediation services	*90.6*	*88.9*	*89.5*	*92.7*	*96.5*	*100*
6	F	Constructions and construction works	*126.2*	*118.4*	*112.9*	*107.0*	*102.9*	*100*
7	G	Wholesale and retail trade services; repair services of motor vehicles	*93.1*	*98.3*	*98.6*	*99.1*	*98.6*	*100*
8	H	Transportation and storage services	*89.9*	*93.4*	*94.9*	*95.3*	*96.1*	*100*
9	I	Accommodation and food services	*103.6*	*105.3*	*102.0*	*99.6*	*99.1*	*100*
10	J	Information and communication services	*94.4*	*103.0*	*105.3*	*95.3*	*100.9*	*100*
11	K	Financial and insurance services	*80.8*	*83.1*	*88.9*	*92.0*	*102.5*	*100*
12	L	Real estate services	*93.9*	*97.0*	*99.0*	*98.1*	*98.1*	*100*
13	M	Professional, scientific and technical services	*99.7*	*102.9*	*101.9*	*101.8*	*98.6*	*100*
14	N	Administrative and support services	*89.6*	*90.7*	*91.4*	*93.1*	*95.3*	*100*
15	O	Public administration and defence services	*100.0*	*100.4*	*101.3*	*101.2*	*100.2*	*100*
16	P	Education services	*95.4*	*96.8*	*99.0*	*98.3*	*99.5*	*100*
17	Q	Human health and social work services	*90.3*	*92.0*	*96.7*	*97.6*	*98.9*	*100*
18	R-T	Other services	*95.3*	*95.9*	*95.7*	*96.9*	*99.3*	*100*
19		**All homogeneous branches**	***96.2***	***98.1***	***98.4***	***97.8***	***99.3***	***100***

*) Source: Estimation EEA.

1) Statistical Classification of Products by Activity (CPA) of the European Union (2008 edition).

Table 2.3: Gross value added*) 2000 to 2012 (price-adjusted)

2005=100

2006	2007	2008	2009	2010	2011	2012	No.
106.5	116.8	128.0	99.3	101.0	113.8	107.4	1
123.5	127.8	150.7	137.9	153.4	160.1	169.2	2
107.3	113.5	109.3	88.8	105.6	111.3	111.3	3
108.5	117.0	140.2	144.0	144.2	117.2	132.2	4
101.1	104.5	109.4	102.4	107.1	113.0	113.1	5
102.8	108.1	112.3	110.7	120.0	126.7	130.3	6
102.8	105.4	108.5	104.9	*99.9*	107.7	103.6	7
105.9	110.8	112.9	107.1	109.5	109.3	110.9	8
100.5	106.3	104.5	98.3	102.8	109.0	114.1	9
105.9	112.0	112.6	105.9	104.5	113.2	115.9	10
99.4	93.3	84.6	91.4	92.3	85.2	86.1	11
103.8	109.9	113.8	110.0	109.6	114.5	111.1	12
104.2	109.3	112.0	*99.7*	102.4	105.0	108.2	13
102.9	112.5	114.5	104.6	110.3	115.0	116.7	14
100.8	101.5	104.1	105.9	107.5	108.1	108.9	15
99.3	101.0	102.9	104.5	107.6	111.1	113.0	16
101.7	102.2	105.8	109.2	113.5	116.7	120.5	17
102.3	103.5	106.7	102.6	103.4	105.3	105.4	18
103.8	**107.8**	**109.0**	**102.3**	**106.6**	**110.3**	**110.8**	19