

Environment and energy

1. Energy consumption

Denmark self-sufficient as regards energy

Since 1997, Denmark has been self-sufficient as regards energy thanks to the increased extraction of crude oil and natural gas from the North Sea. In 2003 the production of oil and gas was 44 per cent higher than the total consumption of energy.

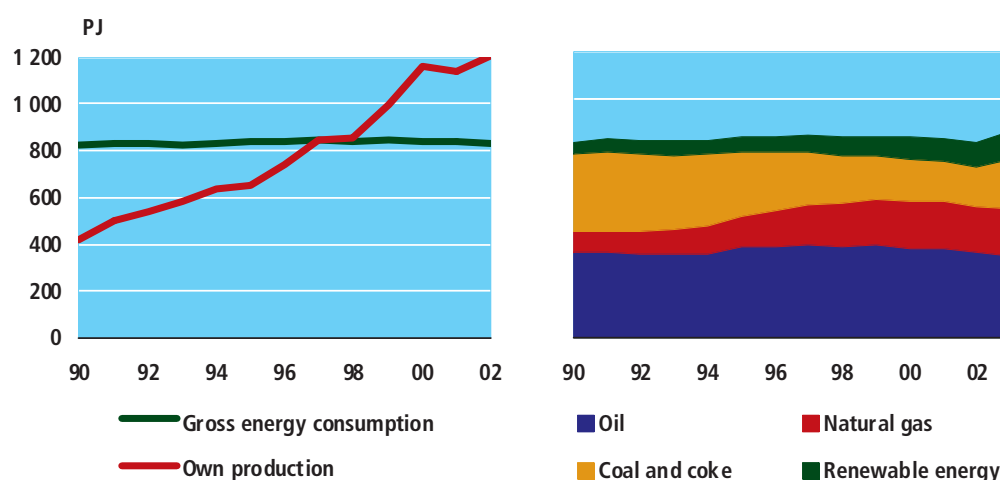
More renewable energy sources

The consumption of oil and natural gas fell 5 per cent 2000 to 2001, while the consumption of natural gas remained constant during the same period. The consumption of renewable energy had a 9 per cent increase. This plays a particularly important part as regards environmental issues, as an increase in the use of such energy can cause a reduction in carbon dioxide emissions by replacing the use of fossil fuels such as coal and oil. Renewable energy sources include the carbon-dioxide free types of energy such as wind power and solar power as well as carbon-dioxide neutral fuels such as hay and wood, which absorb carbon dioxide from the atmosphere during growth, only to release it again when burnt.

Stable energy consumption in recent years

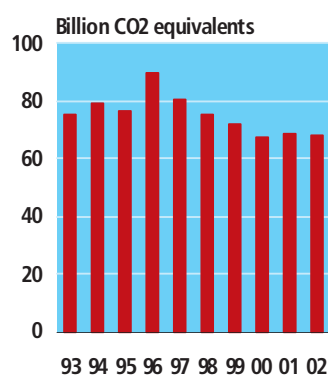
Gross energy consumption comprises the consumption of oil, natural gas, coal and renewable energy. When calculating gross energy consumption, adjustments are made to take into account imports and exports of electricity. Total gross energy consumption has remained stable in recent years, whereas the composition of fuels has changed markedly, resulting in an increase in the consumption of natural gas and renewable energy and a subsequent decrease in coal consumption.

Gross energy consumption 1990-2003



2. Air pollution

Figure 2
Emissions of greenhouse gases 1993-2002



Greenhouse gases

The air and the environment are subjected to a significant pressure created by humans from the burning of fossil fuels, which entails emissions of greenhouse gases such as carbon dioxide (CO₂), laughing gas (N₂O), methane (CH₄), and chlorofluorocarbons (CFCs). Carbon dioxide is the most important of these substances. Greenhouse gases are not dangerous in themselves for human beings, but in greater quantities they are assumed to contribute to a gradual increase in average global temperatures.

Fall in emissions of greenhouse gases in recent years

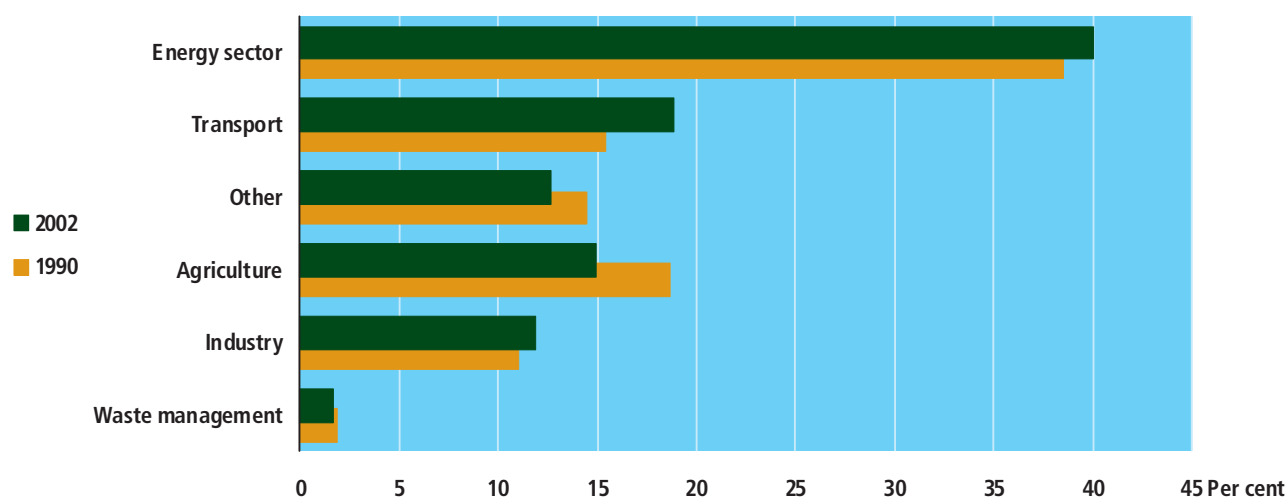
Denmark's emissions of carbon dioxide vary over the years, a fact which is partly due to the net exports of electricity. In the years where Denmark has a large export of electricity, carbon-dioxide emissions increase as power generation increases. However, reductions in the emissions of carbon dioxide have been achieved by replacing fossil fuels, such as coal, by natural gas and renewable energy and by an increase in energy effectiveness. The effect of the various greenhouse gases on the atmosphere varies. They are therefore converted to the so called CO₂-equivalents. 1 CO₂-equivalent indicates the effect of the various greenhouse gases converted to the quantity of carbon dioxide that would have the same climatic impact – 1 kg carbon dioxide corresponds to 1 CO₂-equivalent. The emission of greenhouse gases peaked in 1996 with 90 mia. CO₂-equivalents.

The energy sector is the main source of emissions

In 2002 the energy sector accounted for 40 per cent of the total greenhouse gases measured in CO₂-equivalents compared to 39 per cent in 1990. The transport sector was also a large contributor accounting for 19 per cent of the total emissions in 2002. The majority of emissions of methane (CH₄) come from agriculture and nature (e.g. emissions from ruminant animals and bogs). Emissions of laughing gas (N₂O) result mainly from the use of nitrogenous fertilisers. Agriculture contributed with 15 per cent of total emissions of greenhouse gases in 2002 measured in CO₂-equivalents.

Figure 3

Emissions of greenhouse gases (CO₂-equivalents) by sectors

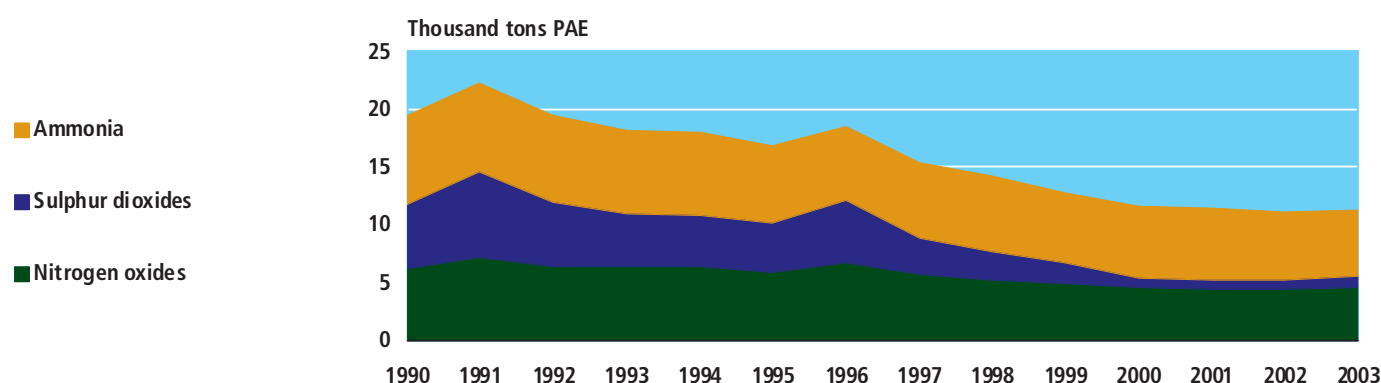


Acidification

The environment is also subjected to significant pressure from the increased acidity of the air. Acidification occurs when emissions of nitrogen and sulphur fall with precipitation in the form of ammonia (NH_3), nitrogen oxides (NO_x) and sulphur dioxides (SO_2). Sulphur and nitrogen combine to form acidic chemical compounds which cause buildings to deteriorate and are harmful to plants and the aquatic environment. Acidification is calculated by means of Potential Acidification Equivalents (PAEs), which is a common acidification unit for all acidifying substances, and is used to compare the effect of the various substances on the environment.

Figure 4

Acidification from Danish activities 1990-2003



Source: National Environmental Research Institute of Denmark

The total emission of ammonia, sulphur dioxides and nitrogen oxides has fallen from 20.000 tons PAE in 1990 to 11.000 tons in 2003. The largest fall has been for sulphur dioxides. The acidifying substances come mainly from agriculture, from energy conversion within the energy sector, and from the transport sector. In 1990, agriculture was the largest contributor, accounting for 40 per cent of the total Danish emissions. Energy conversion accounted for 31 per cent and the transport sector for 15 per cent. In 2003, agriculture accounted for the greater share of emissions, 50 per cent, while the transport sector and energy conversion accounted for 17 per cent of emissions.

The environmental strain caused by the transport sector

Transport interlinks a society, but is also a strain on the environment. Construction of roads, railways, ports and airports is the prerequisite of transport, which may have a negative impact on our recreational natural resorts. The strain caused by transport in urban areas is, e.g. noise, particulates, laughing gas, nitrogen oxides, carbon monoxide, sulphur dioxide, volatile hydrocarbons (NMVOC), etc. In the present context, the transport sector is defined as overall road transport, railway transport, air and sea transport in Denmark.

A decrease in the environmental strain caused by the transport sector

One method in which to estimate the environmental strain caused by the transport sector is to look at the trends in emissions of the most important substances from the transport sector and the transport sector's energy consumption, compared to the social and economic activities in terms of the Gross National Product (GDP). If an index in the figure below is less than 100 over time, a so called decoupling effect from the energy consumption is taking place.

Environment and energy

Figure 5

Relaxation indicators for the transport sector 1990-2002

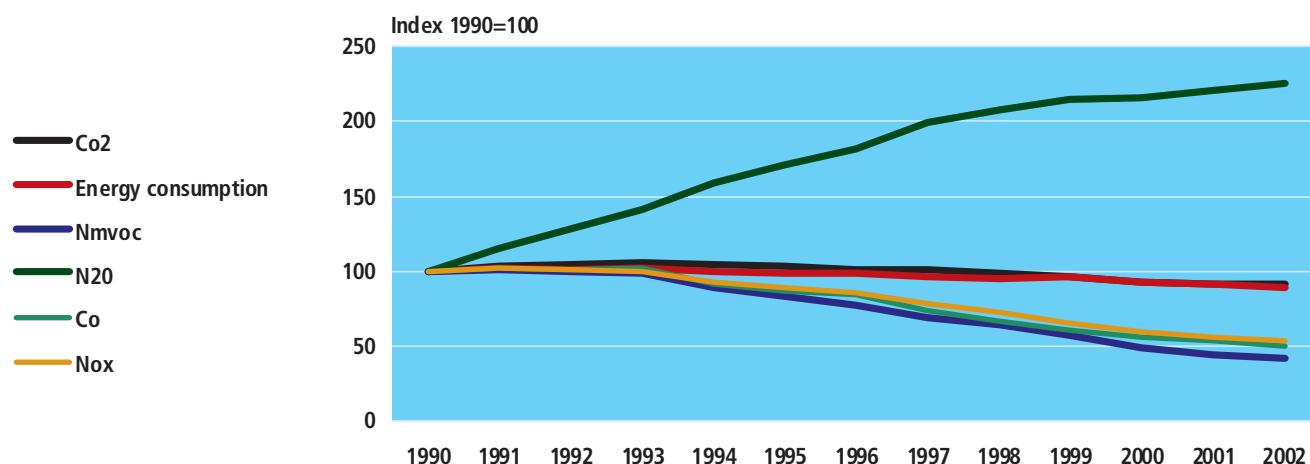
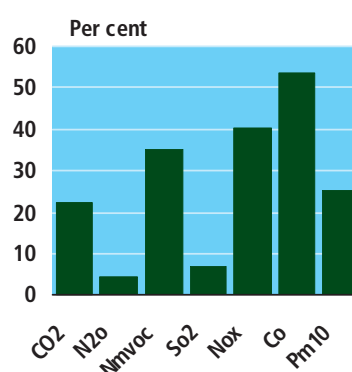


Figure 6

Percentage of all national emissions accounted for by the transport sector, 2002



Source: National Environmental Research Institute

The period 1990 to 2002 saw a considerable relaxation of the most important environmental emissions from the transport sector. The greatest relaxation is attributed to volatile hydrocarbons, when emissions in 2002 only reached 42 per cent of the 1990 level. Since 1997 there has been a steady relaxation in emissions of carbon dioxide, whereas emissions of laughing gas accounted for a considerably higher increase in emissions from the transport sector than the increase in economic growth.

The transport sector accounts for the highest share of emissions of carbon monoxide

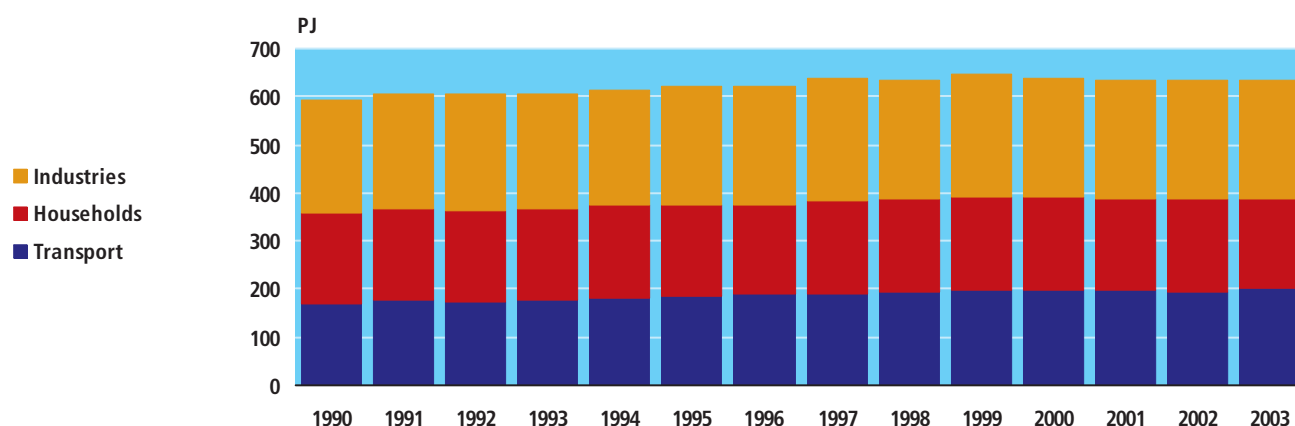
The transport sector's share of total national emissions in 2002 was the highest for carbon monoxide reaching 52 per cent and the lowest for laughing gas reaching 5 per cent. The largest contributor to emissions of carbon monoxide is the transport sector. The shares do not reflect absolute emissions measured in tonnes or the damaging effects on the environment.

The transport sector accounts for an increasing share of energy consumption

Comparisons of energy consumption in terms of energy units by the transport sector with energy consumption by households and industries over the period 1990 to 2003 show that there is a minor increase in the transport sector's share of total energy consumption, whereas the share of industries and households shows a minor fall. The transport sector's share has increased from 29 per cent of total energy consumption in 1990 to 31 per cent in 2003.

Figure 7

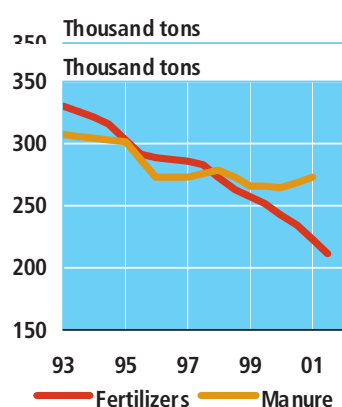
Final energy consumption by sector 1990-2003



Source: Danish Energy Authority

3. Agriculture

Figure 8
Nitrogen in manure and commercial fertilizers 1993-2003



Declining use of fertilizers in agriculture

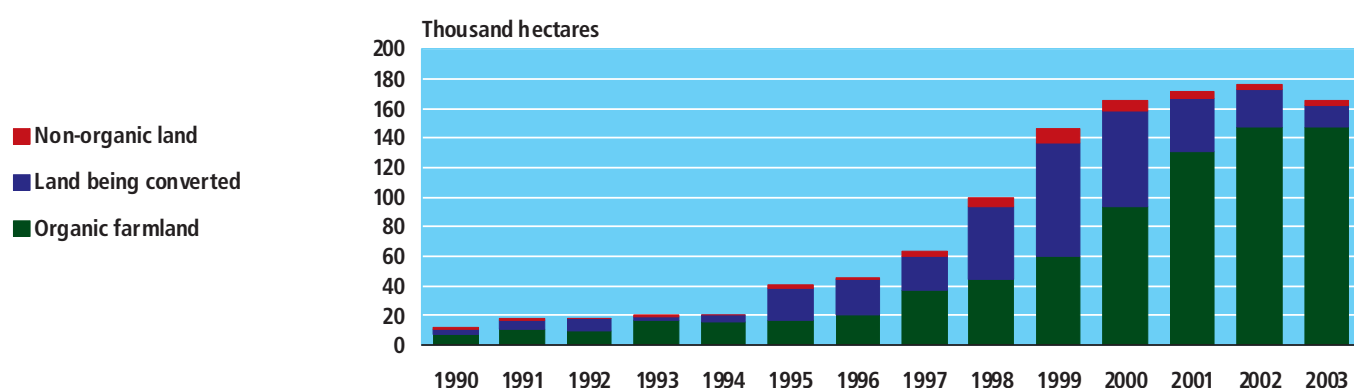
Agricultural production of animal and vegetable products involves the use of manure and commercial fertilizers. This causes large quantities of nitrogen and small quantities of phosphorus to be discharged into the soil. Some nitrogen and phosphorus is not received by plants and as a consequence is leached from the soil, leading to a discharge of these substances into the ocean via the water run offs. The adverse effects include undesirable algae growth, resulting in an undesirable environmental state. The use of especially commercial fertilizers has declined over a long period, but has shown a minor increase in the crop year 2003/2004.

More organic farmland

The proportion of organic farmland has increased significantly during recent years. For example, the amount of land used for organic farming doubled from 1994 to 1995 and again from 1997 to 1999. The area of organic farmland was more than trebled from 1998 to 2002, while 2003 saw a stagnation landing at 147.000 hectare. In addition 15.000 hectare is being relaying to organic production. Thus, organic farming accounted for 6 per cent of all Danish farmland in 2003.

Figure 9

Total areal extent of organic farms 1990-2003



Source: Plant Directorate. Note: the areal extent includes forests.

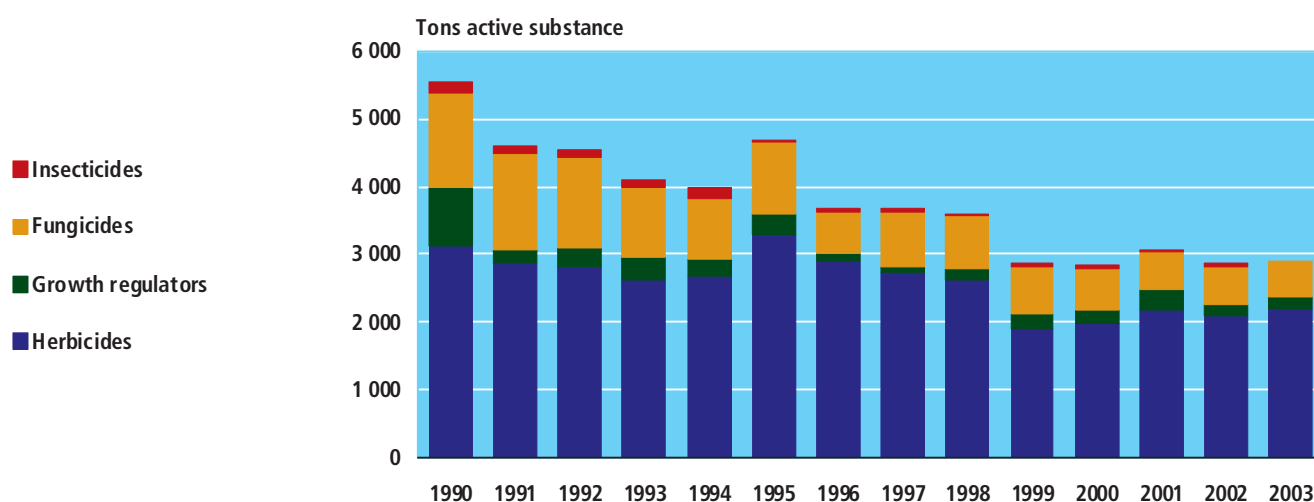
Environment and energy

Combat of weeds, pests, and fungi is harmful for the environment

Pesticides are chemical products which are mainly used within agriculture to combat weeds, fungi, and insects. Effective control of pests, weeds, and fungi in fields has had an indirect effect on the number of animals, which feed on insects. The effect might be fatal or entail a reduction in the reproductive abilities of the relevant animals. Pesticides are divided into products, which protect crops against weeds, herbicides, against fungus infection, fungicides, and against insects, insecticides. There are also products, which shorten crops, growth regulators.

Figure 10

Pesticide sales to agriculture 1990-2003



Source: Danish Environmental Protection Agency

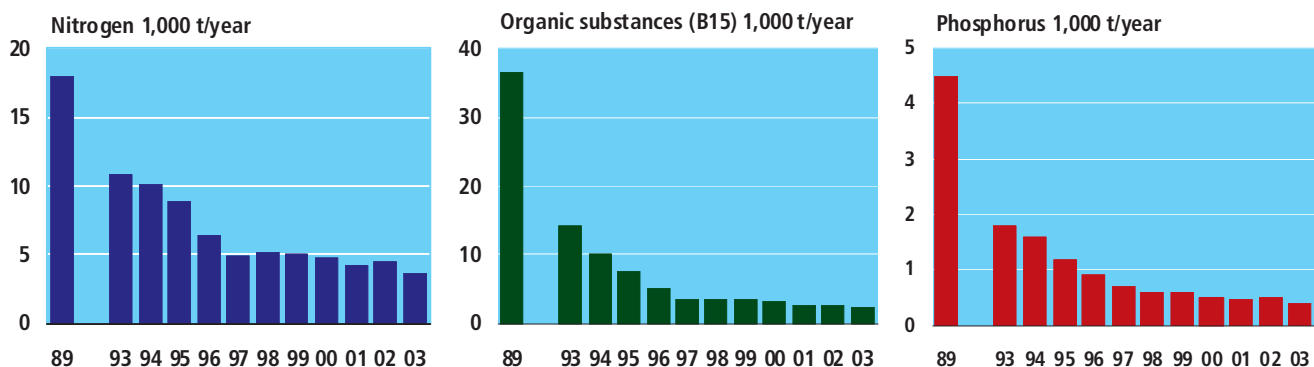
4. Waste water

Emissions of nitrogen, organic substances, and phosphorus

Almost 90 per cent of all Danish residential properties are connected to a municipal sewerage system. In the sewers, waste water from households is mixed with industrial effluents and water from the special drains for rainwater before being discharged into lakes, watercourses, or the ocean. A few enterprises have their own discharge points because of their distant location. Discharges of organic substances from sewage treatment plants were reduced in the 1990s.

Figure 11

Discharges from sewage treatment plants 1993-2003



Source: Danish Environmental Protection Agency

Yearly variations appear when rainfall goes up, water quantities in sewage treatment plants also rises. This entails a reduction in the effectiveness of the measures to remove nitrogen and organic substances, whereas the removal of phosphorus is not affected.

5. Waste

Household waste has decreased 4 per cent

In 2003, the Danes produced 3.0 million tons of household waste. This corresponds to 580 kg per citizen. The total waste quantities were 12.8 million tons. This constituted a minor decrease of 2 per cent in relation to 2002. Changes were seen in several sectors. Manufacturing produced 20 per cent less waste in 2003 compared to 2002, and the services sector produced 22 per cent more. The power plants produced 20 per cent more waste from 2002 to 2003, while the construction industry generated 6 per cent less waste in the same period.

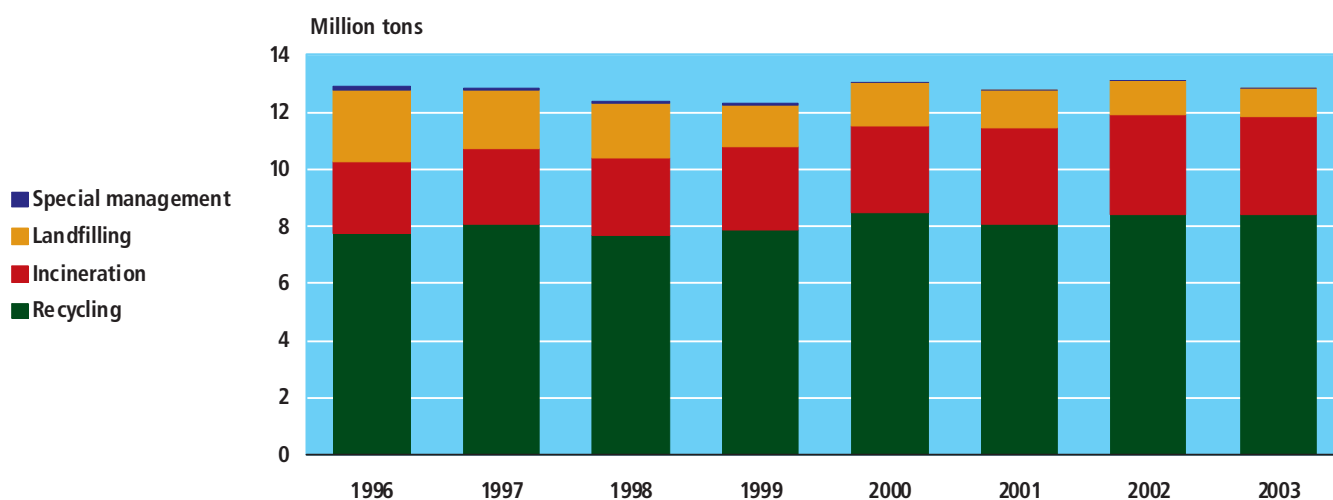
The most commonly used treatment of waste is recycling

In 2003, 66 per cent of the total amount of waste was recycled. The amount of incinerated waste made up 26 per cent, and 8 per cent of the waste was deposited in refuse dumps and the like. Less than 1 per cent of the waste was subjected to special treatment. When it was decided to stop the depositing of waste suitable for incineration, the power plants were granted an exemption to make use of a temporary possibility of "storing" the waste until the refuse incineration plants had idle capacity. 108.000 tons or 1 per cent of the total amount of waste was stored.

The construction industry accounted for the highest amount of waste

The majority of waste was collected from the construction industry, i.e. 30 per cent of total waste in 2003. This was closely followed by the household sector with 23 per cent. Manufacturing produced 14 per cent, wholesale trade and the services sector produced 13 per cent. The sewage-treatment plants produced 8 per cent, while the power plants produced 12 per cent of the total amount of waste.

Figure 12 Total waste quantities 1996-2003



Note: improved data input is one of the causes of the significant increase up until 1996.

Source: Danish Environmental Protection Agency

Environment and energy

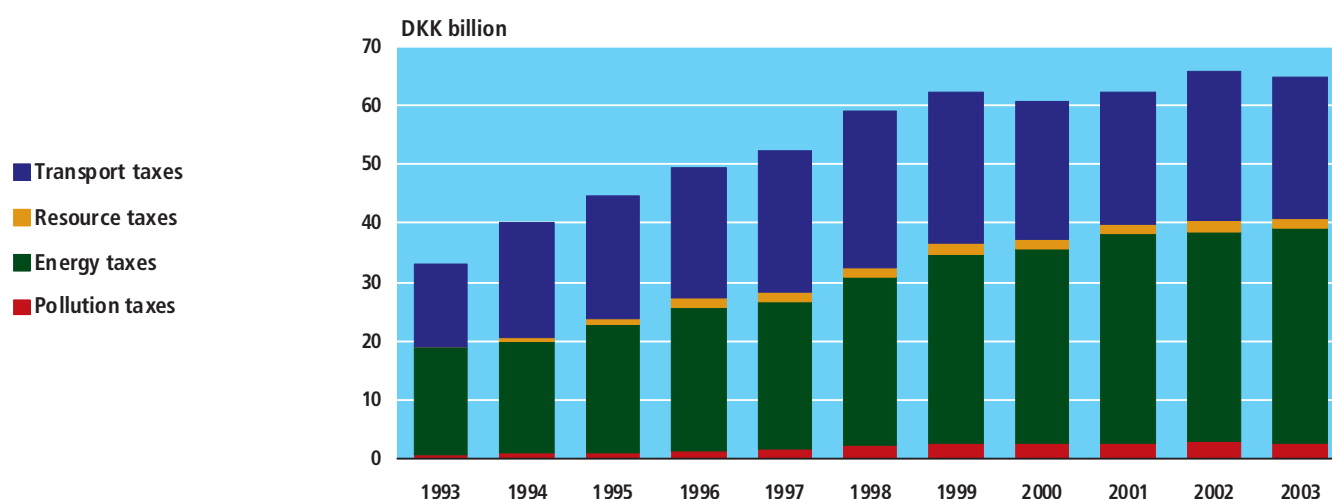
6. Public sector response

Environmental taxes

Denmark's environmental policy involves an increasing use of environmental taxes. Environmental taxes comprise pollution taxes, energy taxes, resource taxes and transport taxes. In 2002, the total revenue generated from these taxes was DKK 65.7 billion, corresponding to 10 per cent of total revenues from taxes and duties. Energy taxes accounted for the greatest increase. Total revenue generated from energy taxes amounted to 35.8 billion in 2002, corresponding to 55 per cent of total revenue from the environmental taxes. In the same year, transport taxes accounted for DKK 25.3 billion or 39 per cent of environmental taxes. Pollution taxes accounted for 4 per cent and resource taxes 3 per cent

Figure 13

Environmental taxes 1993-2003



Energy taxes comprise taxes and duties on carbon dioxide, sulphur dioxide, electricity, natural gas, petrol and specific petroleum products. Transport taxes comprise taxes and duties on tyres, third-party liability insurance and sales of number plates for motor vehicles, weight duties and registration duties and passenger duties. Pollution taxes comprise taxes and duties on CFCs, PVCs, phthalates, chlorinate solvents, growth stimulants, pesticides, specific retail containers, nickel/cadmium batteries, and waste and waste water. Resource taxes comprise taxes and duties on game and fishing licence, quarrying and imports of raw materials, and piped water.

Table 1

Area, population and coastline 2005

	Land and inland water area km ²	Population 1st. January	Density of population per km ²	Number of islands	Inland water area 1959 km ²	Coastline 1959 km
Denmark	43 098.31	5 411 405	125.6	407	700	7 314
Regions						
Zealand	7 450.59	2 281 142	306.2	99	184	1 735
Lolland-Falster	1 795.34	113 002	62.9	45	24	587
Bornholm ¹	588.55	43 445	73.8	9	3	141
Funen	3 485.84	476 580	136.7	100	26	1 130
The Islands, total	13 320.32	2 914 169	218.8	252	237	3 593
Jutland	29 777.99	2 497 236	83.9	154	463	3 721
Counties						
Copenhagen Municipality	88.25	502 362	5 692.5	2	3	92
Frederiksberg Municipality	8.77	91 886	10 477.3	•	0	•
Copenhagen County	528.26	618 237	1 170.3	3	15	121
Frederiksborg County	1 347.44	375 705	278.8	14	80	248
Roskilde County	891.42	239 049	268.2	18	7	154
West Zealand County	2 983.77	304 761	102.1	28	66	608
Storstrøm County	3 398.02	262 144	77.1	77	36	1 099
Bornholm Municipality ¹	588.55	43 445	73.7	9	3	141
Funen County	3 485.84	476 580	136.7	100	27	1 130
South Jutland County	3 939.12	252 980	64.2	14	119	567 ²
Ribe County	3 131.66	224 454	71.7	4	23	207
Vejle County	2 996.64	358 055	119.5	10	26	264
Ringkøbing County	4 853.95	274 574	56.6	23	80	598
Århus County	4 560.73	657 671	144.2	40	77	635
Viborg County	4 122.51	234 434	56.9	15	90	646
North Jutland County	6 173.38	495 068	80.2	46	48	804
Faroe Islands	1 398.85	48 379	34.5	17³	...	1 117⁴
Greenland	410 449.00⁵	56 969	0.1	...	...	...

Note 1. The most southern point in Denmark is Gedserodde on Falster, 11°58'15" east, 54°33'35" north, the most northerly point is near Skagen 10°36'11" east, 57°45'07" north, the most westerly point is Blåvandshuk 08°04'22" east, 55°33'36" north, and the most easterly point is Christiansø (Østerskær), 15°11'55" east, 55°19'17" north. *European Datum, 1950.*

Note 2. The basic measurements were carried out by the Geodætisk Institut between 1953-1959 on the topographical maps current at that time (1:20,000), cf. *Danmarks Areal* (Statistiske Meddelelser 1968:4). Areas were transferred by Statistics Denmark in planimetric measurements to the current 4 cm maps (1:25,000).

Note 3. Areas in column 1 include all areas within the contours of the country. Fjords and inlets which have free passage to the sea (e.g. Ringkøbing fjord), are not included in the figures.

Note 4. The figures in columns 5 and 6 are from the 1959 planimetric measurements and they have not been transferred to more modern maps. In column 6, 4 lakes and 2 closed fjords, each of over 100 hectares (10 km²) are included: these are Arresø, Esrumsø, Mossø, Tissø, Saltbæk Vig and Stadil Fjord. There are 53 named islands in the Danish lakes with a total area of 1.97 km². The coastline is divided into counties according to the local authority allocation of 1 April 1970.

Note 5. Named lakes, water courses, etc. in parishes which were divided into municipalities, each in its own county, on 1 April 1970 are included in that county with the largest part of the parish.

¹ Including Christiansø. ² The border with Germany was measured as 67.7 km. In length. ³ Inhabited islands. ⁴ Measured in 1955. ⁵ Only the part of Greenland free of ice is included. The total area of Greenland is 2,166,086 km², of which 81 pct. is covered by inland ice.

Source: National Survey and Cadastra.

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Table 2

Administrative division of Denmark 2005

	Municipalities	Parishes	Customs and tax regions	Judicial districts	Constituencies ¹	
					Counties and large constituencies	Constituencies
Total	271	2 124	27	82	17	103
The Islands	130	893	14	40	10	58
Copenhagen Municipality	1	71	1	1	3 {	16
Frederiksberg Municipality	1	10	1	1		3
Copenhagen County	18	70	3 ²	10	1	9
Frederiksborg County	19	78	2	5	1	4
Roskilde County	11	68	1 ³	2	1	3
West Zealand County	23	167	2 ³	7	1	6
Storstrøm County	24	182	2 ³	6	1	6
Bornholm Municipality	1 ⁴	22	1	1	1	2
Funen County	32	225	2	7	1	9
Jutland	141	1 231	13	42	7	45
South Jutland County	23	116	2	6	1	7
Ribe County	14	88	1	5 ⁵	1	4
Vejle County	16	136	1 ^{6,7}	5 ⁵	1	6
Ringkøbing County	18	143	2 ⁷	6	1	4
Århus County	26	285	3	6	1	10
Viborg County	17	223	2 ⁸	5 ¹⁰	1	5
North Jutland County	27	240	2 ⁹	9 ¹⁰	1	9

Note 1. Judicial system: There are two High-Court districts and 15 judicial districts. The East High-Court District covers the Islands, which are divided into 9 judicial districts. The West High-Court District covers Jutland and is divided into 6 judicial districts.

Note 2. With regard to ecclesiastical matters, there are 10 parishes (111 rural deans and 1,340 reverends).

Note 3. Danish Working Environment Service: There are 14 Inspection Districts: Copenhagen and Frederiksberg municipalities comprise 1 district, Roskilde and Bornholm county comprise 1 district, while the remaining part of Denmark's 12 counties each comprises 1 district.

Note 4. The Public Employment Office: There are 14 public employment offices: Copenhagen and Frederiksberg municipalities and Copenhagen County, which has 1 office, while the remaining part of Denmark's 13 counties, each has 1 office.

Note 5. There are 8 Customs and Tax Regions 4 on the Islands and 4 in Jutland.

Note 6. Assessment districts and valuation districts now belong under the Central Customs and Tax Administration.

¹ In accordance with Act no. 704 of 27 June 2004 regarding election to the Folketing. ² Copenhagen County is part of Customs and Tax Region Copenhagen, South Zealand and North Zealand-Bornholm. ³ Roskilde County, West Zealand and Storstrøms County belong to Customs and Tax Region South Zealand. ⁴ With the exception of Christiansø, which is not comprised by the division of municipalities; the island is administered by the Ministry of Defence. ⁵ Part of judicial district 51, Grindsted, is located in Vejle County. ⁶ Brædstrup, Gedved, Hedensted, Horsens, Juelsminde and Tørring-Uldum municipalities, Vejle County, belong to Customs and Tax Region East Jutland. ⁷ Nørre Snede Municipality, Vejle County belong to Customs and Tax Region West Jutland. ⁸ Viborg County is part of Customs and Tax Region North Jutland and East Jutland. ⁹ Farsø, Hobro, Nørager and Aars municipalities, North Jutland County, are part of Customs and Tax Region East Jutland, the remaining part belongs to Customs and Tax Region North Jutland. ¹⁰ Part of Judicial District 78, Hobro, and part of Police District 52, Hobro, are located in Viborg County.

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Table 3

Area and population. Regions and inhabited islands

Municipality code	Area in ha 2005	Population		Municipality code	Area in ha 2005	Population	
		1 January 2004	1 January 2005			1 January 2004	1 January 2005
Whole country	4 309 831	5 397 640	5 411 405	Funen and its islands	348 584	475 082	476 580
Zealand and its islands	745 059	2 273 215	2 281 142	- Funen	298 456	443 533	445 061
- Zealand	703 132	2 101 919	2 108 877	431 Avernakø	586	119	113
331 Agersø	684	255	238	443 Birkholm	92	8	7
- Amager	9 629	157 237	158 224	431 Bjørnø	150	35	43
365 Bogø	1 307	1 056	1 071	421 Bågå	623	39	36
331 Egholm	99	2	2	479 Drejø	426	76	74
373 Enø	340	265	280	445 Fænø	394	2	1
229 Eskilsø	139	3	3	479 Hjortø	90	14	13
365 Farø	93	3	4	- Langeland	28 384	14 081	13 995
373 Gavnø	575	25	29	431 Lyø	605	150	138
331 Glænø	559	49	56	487 Siø	131	25	22
221 Hesselø	71	2	0	479 Skarø	197	31	37
361 Langø	127	5	5	431 Store Svelmø	27	0	206
365 Lindholm	7	4	4	475 Strynø	488	193	4
397 Masnedø	168	154	156	479 Thurø	753	3 649	3 701
365 Møn	21 775	10 618	10 547	447 Tornø	21	3	3
301 Nekselø	223	25	24	479 Tåsinge	6 979	6 127	6 192
365 Nyord	499	50	50	423 Æbelø	232	2	2
331 Omø	452	194	190	- Ærø	8 807	6 995	6 932
315 Orø	1 502	950	948	81 named islands	1 143	•	•
185 Saltholm	1 599	3	4	Jutland	2 977 799	2 491 852	2 497 236
301 Sejerø	1 237	372	406	- Jutland peninsular	2 387 430	2 098 815	2 105 542
101 Slotsholmen	21	21	21	- Vendsyssel-Thy	468 573	305 828	304 701
361 Tærø	175	3	3	773 Agerø	385	32	38
76 named islands	646	•	•	727 Alrø	751	157	162
Lolland, Falster and their islands	179 534	113 717	113 002	- Als	31 222	51 597	51 718
- Lolland	124 286	69 360	68 751	707 Anholt	2 237	165	161
- Falster	51 376	43 498	43 405	545 Barsø	266	25	25
363 Askø	282	55	55	851 Egholm	600	59	50
379 Fejø	1 600	630	611	615 Endelave	1 308	172	171
379 Femø	1 138	149	154	563 Fanø	5 578	3 169	3 151
363 Lilleø	86	15	14	783 Fur	2 229	914	904
379 Skalø	106	7	9	813 Hirsholm	17	4	6
379 Vejlø	37	1	1	619 Hjarnø	321	111	108
379 Vejro	157	2	2	675 Jegindø	791	518	507
36 named islands	465	•	•	529 Kalvø	18	11	8
Bornholm and its islands	58 855	43 774	43 445	827 Livø	331	7	8
400 Bornholm	58 815	43 673	43 347	825 Læsø	10 122	2 177	2 145
411 Christiansø ¹	25	101	98	571 Mandø	763	59	59
411 Frederikø ¹	4	•	•	773 Mors	36 331	22 604	22 441
411 6 named islands	11	•	•	531 Rømø	12 886	710	697
				741 Samsø	11 206	4 197	4 125
				503 Store Okseø	11	0	2
				727 Tunø	352	112	112
				671 Venø	646	212	211
				609 Vorsø	58	1	1
				515 Årø	566	196	183
				128 named islands	2 801	•	•

Note. Als includes the following municipalities: 501, 523, 535 plus 24,658 people in Sønderborg Municipality. - Amager includes the following habitants municipalities: 155 and 185 (excl. Saltholm) plus 105,490 people in Copenhagen Municipality. - Falster includes the following municipalities: 369 (excl. Toreby parish), 375, 391 and 395. - Langeland includes the following municipalities: 475 (excl. the island of Strynø), 481 and 487 (excl. the island of Siø). - Lolland includes the following municipalities: 355, 359, 363 (excl. the islands of Askø and Lilleø), Toreby parish in Nykøbing F. Municipality, 367, 371, 379 (excl. the islands of Fejø, Femø, Skalø, Vejlø and Vejro, 381, 383 and 387.- Vendsyssel-Thy includes the following municipalities: 675 (excl. the island of Jegindø), 765, 785, 787, 803, 805, 807, 811, 813 (excl. Hirsholm), 817, 819, 821, 829, 835, 839, 841, 847, 849 plus 37,717 people in Aalborg Municipality, Aggersborg parish 495 people in Løgstør Municipality. - Ærø includes municipality 443 (excl. the island of Birkholm) and municipality 493. In total 327 named islands are without inhabitants.

¹ Not included in the division of municipalities, administered by the Ministry of Defence.

For further information visit www.statbank.dk/02

Table 4

Land cover¹

	Km ²	Per cent
Total area	43 560.76	100.00
Artificial surfaces	4 246.46	9.75
Urban fabric, industrial and commercial units ²	3 154.63	7.24
Motorway	43.96	0.10
Expressway	9.10	0.02
Road broader than 6 metre	269.02	0.62
Road 3 – 6 metre	551.58	1.27
Railway	58.22	0.13
Bridge	0.02	0.00
Embankment	2.64	0.01
Runway	3.31	0.01
Mineral extraction sites	19.94	0.05
Technically sites	17.46	0.04
Cemetery	6.96	0.02
Sport facilities	52.18	0.12
Leisure facilities	57.44	0.13
Agricultural areas	28 897.85	66.34
Arable land	28 615.01	65.69
Market garden	33.87	0.08
Pastures	155.18	0.36
Pastures in urban areas	93.72	0.22
Land principally occupied by agriculture, with significant areas of natural vegetation	0.07	0.00
Forests and semi-natural areas	6 788.32	15.58
Forest	1 829.48	4.20
Broad-leaved forest	1 309.40	3.01
Coniferous forest	2 147.34	4.93
Mixed forest	7.98	0.02
Natural grassland	391.92	0.90
Moors and heathland	981.76	2.25
Beaches, dunes and sand plains	51.21	0.12
Sparsely vegetated areas	69.23	0.16
Wetlands	2 274.89	5.22
Meadows	808.89	1.86
Inland wetslands	205.66	0.47
Peatbogs	875.60	2.01
Salt marshes	384.74	0.88
Water bodies	670.59	1.54
Lake	616.49	1.42
Stream width 8- 12 metre	49.42	0.11
Reeds	0.34	0.00
Fish farm	4.34	0.01
Unclassified	682.65	1.57

Note. The Primary data are *arealanvendelseskortet; Areal Information System*, (The Ministry of Environment). Further information can be obtained on www.dmu.dk. The figures are a revision (not an update) of the collected data. The National Environmental Research Institute has done the revision in 2001. The classification is based on the tree digit *CORINE land cover nomenclature*, as a 4th. number is added for national purpose.

¹ The figures are based on different primary data covering the period from the end of the 1980's to the middle of the 1990's. ² Include city center, human locality area with low buildings, human locality area with high buildings, Built-up area in rural areas and industrial area. Roads are not included.

Source: National Environmental Research Institute.

Table 5 **Denmark's largest lakes**

Lake's name	Location	1980-89	1999-2002	Lake's name	Location	1980-89	1999-2002
————— km ² —————				————— km ² —————			
Arresø	Zealand	39.5	39.5	Søndersø	Lolland	8.5	8.4
Esrum Lake	Zealand	17.4	17.4	Tystrup Lake	Zealand	...	6.7
Stadil Fjord ¹	West Jutland	18.5	17.3	Tømmerby Fjord	North Jutland	...	6.0
Mossø	East Jutland	16.6	16.6	Vejlen/Ulvedyb	North Jutland	...	5.9
Saltbæk Vig ¹	Zealand	15.6	16.1	Julso	East Jutland	...	5.8
Tissø	Zealand	12.7	12.7	Tange Lake	West Jutland	5.5	5.5
Furesø	Zealand	9.3	9.3	Lund Fjord	North Jutland	5.4	5.1
Skanderborg Lake	East Jutland	8.0	8.6				

Note. 1980–89: Areas are calculated on the basis of the latest edition of the Geodætisk Institut's 4 cm maps up to 1988–89. The measurement basis spans from revised older maps, where the degree of revision is unknown, to modern photogrametric maps. Named lakes are lakes which are named on maps.

¹ Area of brackish water.

Source: National Survey and Cadastre.

Table 6

Meteorological conditions. Temperature and degree-days

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	All year
Maximum temperature¹													
1874-2004 Temp.	12.0	15.8	22.2	28.6	32.8	35.5	35.3	36.4	32.3	24.1	18.5	14.5	36.4
Measured during the years	<i>1999</i>	<i>1990</i>	<i>1990</i>	<i>1993</i>	<i>1892</i>	<i>1947</i>	<i>1941</i>	<i>1975</i>	<i>1906</i>	<i>1978</i>	<i>1968</i>	<i>1953</i>	<i>1975</i>
2004	8.3	11.5	17.8	19.3	24.2	24.4	27.6	31.4	26.9	18.4	14.5	10.5	31.4
Average daily temperature²													
Normal (1961-1990)	2.0	2.2	4.9	9.6	15.0	18.7	19.8	20.0	16.4	12.1	7.0	3.7	10.9
2004	1.7	4.7	6.5	11.7	15.1	17.1	18.7	22.1	17.6	12.2	8.1	6.2	11.8
Mean temperature													
Normal (1961-1990)	0.0	0.0	2.1	5.7	10.8	14.3	15.6	15.7	12.7	9.1	4.7	1.6	7.7
2004	-0.2	2.2	3.7	7.9	11.3	13.6	15.2	18.0	13.8	9.7	5.5	4.1	8.7
Average nightly temperature¹													
Normal (1961-1990)	-2.9	-2.8	-0.8	2.1	6.5	9.9	11.5	11.3	9.1	6.1	2.3	-0.7	4.3
2004	-2.9	-0.5	0.8	4.4	7.9	10.4	11.8	14.2	10.3	7.0	2.3	1.8	5.6
Minimum temperature²													
1874-2004 Temp.	-31.2	-29.0	-27.0	-19.0	-8.0	-3.5	-0.9	-2.0	-5.6	-11.9	-21.3	-25.6	-31.2
Measured during the years	<i>1982</i>	<i>1942</i>	<i>1888</i>	<i>1922</i>	<i>1900</i>	<i>1936</i>	<i>1903</i>	<i>1885</i>	<i>1886</i>	<i>1880</i>	<i>1973</i>	<i>1981</i>	<i>1982</i>
2004	-18.3	-9.2	-7.0	-3.2	-0.8	2.0	4.8	2.7	1.9	-2.4	-10.1	-8.0	-18.3
Degree-days													
Normal (1971-1990)	516	473	452	339	186	...	...	...	136	251	361	461	3 175
2004	534	431	413	272	177	(103)	(63)	(23)	96	226	344	399	2 892

Note. Daily measurements at a number of stations throughout the country - as a rule 40 stations - have been used as the basis for the monthly national averages in the table. Annual values may take account of decimals which are not included in the monthly averages. Normals are averages for a number of years, as a rule 30, and they state the expected figures for a day in January, February, etc.

¹ A maximum/minimum thermometer registers the *highest/lowest temperature* in a day from all the about 150 stations. Absolute maximum/minimum in the years 1874-2004 are found by extracting the highest/lowest temperature from the about 150 stationer (approx. 100 before 1960). Measured during the most recent year the temperature occurred. ² The average day temperature/night temperature is calculated from the highest/lowest daily temperatures at 30 stations. *Mean temperature* is calculated from 3 or 8 daily observations. *Degree days* are used as a measurement for heating needs in the heating season (1 September – 31 May). Degree days in the summer period are in brackets. This is because degree days only very seldom are used during the summer period and for the same reason no normals are calculated for this period. Degree days are shade-temperature days and they are stated as averages for the whole country. The degree-days figure is the sum of the degree days for individual months. The size of the degree-days figure is converted to a percentage of the normal to give consumption in the individual heating season.

Source: Danish Meteorological Institute.

Table 7 Meteorological conditions. Precipitation, sunshine hours, etc. 2004

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year total
Precipitation	mm												
Normal (1961-1990)	57	38	46	41	48	55	66	67	73	76	79	68	712
All Denmark	98	40	50	42	31	73	76	107	75	107	57	71	827
Cph Municipality, Frb.Municipality, Cph. County, Fr.borg County, and Roskilde County	72	28	49	29	25	88	107	71	28	81	53	73	704
West Zealand County	67	29	39	33	26	83	81	85	29	77	42	67	658
Storstrøm County	81	38	33	33	33	68	77	97	40	64	31	56	651
Bornholm Municipality	83	31	36	31	12	43	64	103	64	110	46	47	670
Funen County	96	41	43	35	36	78	61	104	61	96	37	58	746
South Jutland County	122	58	48	43	24	96	75	128	112	94	61	80	941
Ribe County	131	53	54	53	23	68	68	141	115	111	68	82	967
Vejle County	95	43	56	42	36	77	60	116	76	110	55	80	846
Ringkøbing County	118	47	62	56	20	73	59	137	106	142	84	93	997
Aarhus County	84	31	51	40	48	78	88	88	53	108	53	59	781
Viborg County	102	35	64	55	24	66	64	113	87	133	60	67	870
North Jutland County	88	24	46	36	43	43	83	94	67	132	61	54	771
	per cent												
Relative humidity, all Denmark¹													
Normal (1961-1990)	91	90	87	80	75	77	79	79	83	87	89	90	84
2004	89	86	83	79	78	80	81	79	80	86	87	91	83
Cloud cover, all Denmark²													
Normal (1961-1990)	76	72	68	61	57	58	59	55	60	67	70	74	65
2003	86	67	67	63	63	69	67	51	55	67	68	76	67
	hours												
Bright sunshine, all Denmark³													
Normal (1961-1990)	43	69	110	162	209	209	196	186	128	87	54	43	1 495
2004	37	104	139	187	220	198	190	232	193	108	70	47	1 724
	hPa												
Mean air pressure (sea level)													
Aalborg	1006	1013	1019	1015	1012	1011	1012	1011	1012	1010	1014	1010	1012
Copenhagen Airport	1007	1014	1019	1015	1012	1013	1013	1012	1014	1011	1015	1013	1013
	m/sec												
Frequently winddirection⁴													
Normal (1961-1990)	V19	Ø18	V22	V20	V20	V29	V35	V28	V28	V22	V22	V23	V24
2004	SØ25	SV24	SV19	Ø24	V31	V39	V37	Ø21	V30	SØ24	V25	SV36	V24
Mean wind force⁵													
Normal (1961-1990)	7	6	6	6	5	5	5	5	6	6	7	7	6
2004	5	5	6	5	5	5	4	5	6	6	5	6	5

Note. *Precipitation* is stated as the height the surface of water would rise if it could not run away or evaporate. The figures stated are national averages of approximately 100 stations throughout the country. Totals for months and years are calculated taking account of decimals. Account is taken of area for the individual counties. See also note to the table on temperature and degree days. 'All Denmark' does not include Bornholm.

Air pressure is the weight of a column of air with a cross-sectional area of 1 cm² which rests on a horizontal plane. It is measured in hPa = hectopascals = millibar.

¹ *Humidity* states, in percent, the relationship between the actual water vapour in the air and the amount which would be necessary to saturate the air at the given temperature. ² *Cloud cover* is the percentage of the sky which is covered by clouds. In 2005 new standards for cloud cover based on 7 measurement stations are calculated. ³ *Sunshine hours* (bright sunshine, i.e. 200 watt pr. m²). DMI now observed the hours of bright sunshine using measurements of global radiation instead of measurements from a traditional Campbell-Stokes sunshine recorder. The new method is without questions more precise than the old one, but implies at the same time that "new" and old hours of sunshine not directly can be compared. Typical values are lower during the summertime and higher during winter compares to the "old" values. ⁴ *Wind incidence* from 10 coastal stations states the percentage distribution of the daily observations in the 8 wind directions and no wind < means less than 0.5 %.

Source: Danish Meteorological Institute.

Table 8

Meteorological conditions. Daily information 2004

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year total
Number of days within a month													
all Denmark													
Summer days (max. >25°)													
Normal (1961-1990)	0.0	0.0	0.0	0.0	0.2	1.9	2.6	2.3	0.1	0.0	0.0	0.0	7.2
2004	0.0	0.0	0.0	0.0	0.0	0.0	0.7	7.5	0.4	0.0	0.0	0.0	8.6
Ice days (max. <0°)													
Normal (1961-1990)	8.6	7.5	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.0	23.0
2004	9.9	<	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	10.5
Frost days (min. <0°)													
Normal (1961-1990)	19.0	19.0	15.0	6.6	0.7	<	0.0	0.0	0.2	1.8	7.3	15.0	84.0
2004	22.1	17.8	11.9	0.7	<	0.0	0.0	0.0	0.0	0.7	7.3	8.6	69.1
Days with fog													
Normal (1961-1990)	10.0	9.1	8.7	7.7	7.0	7.2	6.8	9.0	8.7	10.0	7.7	8.9	101.0
2004	11.0	10.2	7.3	8.3	4.9	3.2	10.0	10.5	8.0	8.2	8.1	13.4	102.9
Precipitation days (R ³ 0.1 mm)													
Normal (1961-1990)	17.0	13.0	14.0	12.0	12.0	12.0	13.0	13.0	15.0	16.0	18.0	17.0	171.0
2003	20.1	14.0	11.8	10.8	10.4	17.3	16.0	16.0	14.5	19.8	17.8	19.8	188.2
Heavy precipitation days (R ³ 10 mm)													
Normal (1961-1990)	1.1	0.5	0.7	0.7	1.1	1.5	1.8	1.8	2.0	2.2	2.0	1.6	17.0
2004	3.0	0.4	1.4	0.8	0.6	2.0	2.3	3.5	2.1	3.3	0.8	1.5	21.7
Days with snow													
Normal (1961-1990)	7.7	6.4	5.0	2.0	0.1	0.0	0.0	0.0	0.0	0.1	2.3	6.2	30.0
2004	10.7	5.6	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.7	22.4
Windy days in pct.													
Normal (1961-1990)	15.0	11.0	13.0	8.0	6.0	5.0	5.0	5.0	9.0	12.0	15.0	15.0	10.0
2004	4.0	4.0	6.0	5.0	3.0	5.0	2.0	2.0	8.0	9.0	7.0	9.0	5.0
Days with thunder													
Normal (1961-1990)	0.3	0.1	0.1	0.5	1.8	2.7	3.2	3.0	1.8	0.8	0.5	0.2	15.0
2004	0.0	0.3	0.0	0.3	1.8	1.2	3.8	5.5	1.3	1.1	0.1	0.0	15.4

Note 1. *Summer days* are days where the highest temperature is over 25° Celsius. *Ice days* are days where the highest temperature is under 0° Celsius. *Frost days* are days where the lowest temperature is under 0° Celsius. *Days with fog* are days where fog is observed around the station. *Precipitation days* are days with precipitation of 0.1 mm or more. *Heavy precipitation days* are days with precipitation of 10 mm or more. *Days with snow* are days with snowfall of 0.1 mm or more measured after melting. *Windy days* have wind of more than 10.8 m/sec. Registered at coastal stations. *Days with thunder* are a national average of thunder days from individual stations. When the number of days is less than 10, a tenth is included.

< means less than 0.1 but greater than 0.0.

Note 2: The national monthly average is calculated on the basis of the daily measurements recorded by a number of variously located stations – usually approximately 40 stations. Decimals, which are not included in the monthly average of the table, may have been taken into account when the annual value is calculated. The standard figures are the average figure covering a number of years, usually 30 years, and they indicate the expected figures for, respectively January, February, etc. In 2005 new standard figures for Days with snow, thunder and fog are calculated.

Source: Danish Meteorological Institute.

Table 9

Air pollution in cities

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<hr/>										
µg/m ³ sulphur dioxide										
Copenhagen	8.7	9.0	7.0	4.6	4.3	4.0	3.3	... ¹	...	...
Ålborg	4.6	4.0	5.0	2.7	2.7	1.8	...	...¹	...	...
Odense	4.3	3.8	4.9	2.6	2.1	1.7	1.3	... ¹	...	...
<hr/>										
µg/m ³ nitrogen dioxide										
Copenhagen	46.7	53.0	44.7	42.6	42.9	46.8	42.0	40.0	46.6	46.6
Ålborg	36.1	37.4	37.6	33.6	34.2	40.1	35.1	34.7	33.0	35.4
Odense	35.8	34.4	34.0	35.5	31.6	32.9	31.2	31.2	37.0	35.5
Århus	...	...	...	...	...	...	...	...	44.2	46.4
<hr/>										
ng/m ³ lead										
Copenhagen	37.1	26.0	24.8	16.6	16.4	16.6	29.6	23.4	17.5	15.1
Ålborg	44.7	31.4	18.6	13.9	13.0	12.5	...	12.5	10.5	9.9
Odense	31.9	22.3	22.0	14.9	14.5	13.6	13.0	11.3	12.0	19.5
Århus	...	...	...	...	...	...	...	...	8.5	11.5
<hr/>										
µg/m ³ particulates										
Copenhagen	64.7	61.1	65.3	46.8	45.5	47.2	48.7	34.1 ²	36.0	32.9
Ålborg	61.1	55.7	68.9	53.7	50.7	51.3	...	28.8 ²	31.8	31.2
Odense	55.6	53.2	62.7	61.4	45.6	46.6	47.6	30.8 ²	33.2	36.7
Århus	...	...	...	...	...	...	...	...	29.6	29.4

Note. µg/ m³ corresponds to a millionth of a gram per cubic meter, while ng/m³ corresponds to a billionth of a gram per cubic meter.

¹ Due to the low concentration of sulphur dioxide in the air, measurements have been discontinued. ² From 2001 new measurement method.

Source: National Environmental Research Institute.

 For further information visit www.statbank.dk/term8

Table 10 **Ozone layer over Denmark**

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	All year
	DU ¹												
1980	354	357	396	417	403	376	367	327	300	308	302	323	353
1985	375	383	392	395	371	366	339	311	296	265	300	321	343
1990	310	344	361	380	356	351	340	317	294	274	297	308	328
1995	321	357	372	358	350	324	311	294	297	269	277	307	320
2000	305	339	340	352	348	335	336	306	280	279	282	326	319
2001	326	359	389	397	357	359	324	306	304	275	272	299	331
2002	300	358	364	375	338	342	321	304	283	301	295	273	321
2003	329	345	341	378	363	341	336	315	299	294	290	280	326
2004	343	376	381	368	374	359	337	319	294	282	286	324	337

¹ The ozone layer in Dobson units (DU). This measurement states how many hundredths of a millimetre thick the ozone layer would be if it was collected at the surface of the earth.

Source: Danish Meteorological Institute.

 For further information visit www.statbank.dk/ozone1 and [ozone2](http://www.statbank.dk/ozone2)

Table 11

Emissions from the transport sector 2002

	CO ₂	NO _x	SO ₂	CO
	thousand tons			
Total¹	12 300	79	2.4	305
Road transport	11 389	67	0.4	284
Railway transport	210	3	0.0	1
Air transport	146	1	0.0	1
Sea transport	554	9	2.0	20
	per cent			
Total¹	100	100	100	100
Road transport	93	84	15	93
Railway transport	2	4	0	0
Air transport	1	1	1	0
Sea transport	5	11	85	7

¹ Emissions from military not included.

Source: National Environmental Research Institute.


 For further information visit www.statbank.dk/term6

Table 12**Emission of greenhouse gases¹**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	— mia. GWP —									
Total	75	79	77	90	80	75	72	67	69	68
Transport	12	12	12	12	13	13	13	13	13	13
Manufacturing and production	8	8	9	9	9	8	9	8	8	8
Energy sector	32	36	33	45	36	32	29	26	27	27
Waste disposal	1	1	1	1	1	1	1	1	1	1
Agriculture	12	12	12	12	11	11	11	11	10	10
Other	10	10	10	11	10	9	10	9	9	9

¹ Carbon dioxide, laughing gas and methane.

Source: National Environmental Research Institute.


 For further information visit www.statbank.dk/luft4

Table 13**Emission of acidification¹**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	thousand tons PAE									
Total	18	18	17	19	15	14	13	12	11	11
Transport	3	3	3	3	3	2	2	2	2	2
Manufacturing and production	1	1	1	1	1	1	1	1	1	1
Energy sector	6	6	5	7	4	3	2	2	1	1
Waste disposal	-	-	-	-	-	-	-	-	-	-
Agriculture	7	7	7	6	6	6	6	6	6	6
Other	2	2	2	2	2	2	1	1	1	1

¹ Sulphur dioxide, nitrogen oxides and ammonia.

Source: The National Environmental Research Institute of Denmark.


 For further information visit www.statbank.dk/luft5

Table 14

Decoupling indicators for the transport sector

	1995	2000	2002
	Index 1990 = 100		
CO ₂	102.7	92.2	91.4
Energy consumption	98.3	93.0	88.9
NM VOC	82.5	49.1	41.7
N ₂ O	166.5	205.4	214.9
CO	86.4	55.4	49.5
NO _x	88.7	59.7	53.6

Note. The indicators expresses the development in emissions from the transport sector in relation to the development in the economy expressed in the Gross domestic product (GDP).

Table 15

Final energy consumption by sector

	1990	2000	2003
		PJ	
Transport	170	199	200
Households	186	190	180
Industry	236	249	246

Note. Figures are climate-corrected which means that variations in the climate are incorporated.


 For further information www.statbank.dk/term1

Table 16

Bathing water quality

	Monitoring stations	Acceptable water quality	Unacceptable water quality	Beach areas where bathing is forbidden
1985	1 374	1 017	288	69
1990	1 370	1 251	70	49
1991	1 338	1 230	70	38
1992	1 307	1 225	54	28
1993	1 282	1 206	55	21
1994	1 288	1 234	33	21
1995	1 301	1 227	54	20
1996	1 299	1 223	57	19
1997	1 310	1 275	18	17
1998	1 307	1 244	45	18
1999	1 307	1 260	30	17
2000	1 295	1 250	28	17
2001	1 279	1 247	17	15
2002	1 275	1 222	38	15
2003	1 269	1 223	30	16
2004	1 256	1 219	23	16 ¹

¹ Two closed beach areas are maintained without any monitoring stations.

Source: Environmental Protection Agency.

Table 17

Waterworks by content of nitrates in drinking water 2003

	Waterworks by content of nitrates per litre			
	0.0 - 4.9 mg	5.0 - 24.9 mg	25.0 - 49.9 mg	50.0- mg
	per cent			
All Denmark	78	14	6	2
Copenhagen County ¹	76	20	4	-
Frederiksborg County	81	16	1	2
Roskilde County	93	5	1	1
West Zealand County	89	7	4	0
Storstrøm County	83	15	1	1
Bornholm Municipality	90	10	-	-
Funen County	85	13	2	-
South Jutland County	83	15	2	-
Ribe County	85	15	-	-
Vejle County	88	9	2	1
Ringkøbing County	86	8	4	2
Aarhus County	74	15	8	3
Viborg County	71	15	11	3
North Jutland County	55	24	19	2

Note. The limit value is 50 mg/l.

¹ Copenhagen County includes Copenhagen and Frederiksberg Municipalities.

 For further information www.statbank.dk/vand2

Table 18

Consumption of drinking water by counties 2003

	House- holds	Industry and institutions	Irrigation	Losses, etc.	All Denmark
	mio. m ³				
All Denmark	245.5	193.3	162.8	28.2	629.9
Copenhagen County ¹	57.1	28.3	0.0	4.5	89.9
Frederiksborg County	17.5	5.3	0.7	1.6	25.1
Roskilde County	9.7	9.9	0.0	1.6	21.2
West Zealand County	9.6	17.9	0.3	1.7	29.5
Storstrøm County	11.5	7.4	1.0	1.5	21.4
Bornholm Municipality	2.7	1.0	0.0	0.1	3.9
Funen County	20.9	16.1	3.3	2.8	43.1
South Jutland County	14.7	8.7	21.2	1.7	46.3
Ribe County	10.3	14.2	32.9	1.4	58.8
Vejle County	14.5	16.8	38.7	1.8	71.7
Ringkøbing County	15.1	15.9	34.4	1.7	67.1
Aarhus County	28.4	16.8	4.2	3.5	52.9
Viborg County	12.1	10.6	5.3	1.8	29.7
North Jutland County	21.5	24.5	20.7	2.6	69.3

¹ Copenhagen County includes Copenhagen and Frederiksberg Municipalities.


 For further information www.statbank.dk/vand1

Table 19

Consumption of drinking water by purpose

	2001	2002	2003
	m ³ in mio.		
All Denmark	686.3	645.8	629.9
Households	255.7	247.7	245.5
Industry and institutions	212.3	215.4	193.3
Irrigation	192.1	157.6	162.8
Losses, etc.	26.3	25.0	28.2

 For further information www.statbank.dk/vand1

Table 20

Amount of waste analysed by type of source and treatment 2003

	Recycling	Incineration	Landfilling	Special treatment	Storage	Total
	thousand tons					
Total	8 439	3 287	981	20	108	12 835
Households	937	1 816	180	9	68	3 009
Institutions, wholesale and retail trade	740	765	137	4	24	1 670
Manufacturing	1 157	290	379	7	8	1 841
Construction	3 531	77	170	0	8	3 785
Waste water treatment plants	662	340	55	0	1	1 058
Power plants	1 413	0	60	0	0	1 473

Note. The data originates from the information system on waste and recycling (ISAG) which is kept by the Danish Environmental Protection Agency.

Source: Environmental Protection Agency, sugar factories, the recycling industry, and power plants.

 For further information visit www.mst.dk

Table 21

Amount of waste analysed by type of waste and treatment 2003

	Recycling	Incine- ration	Landfilling	Special treatment	Storage	Total
	thousand tons					
Total	8 439	3 287	981	20	108	12 835
Daily refuse	227	1 516	28	0	0	1 771
Bulky waste	2 182	339	279	0	0	2 800
Garden waste	109	314	143	3	66	635
Commercial and industrial waste	677	1	15	0	0	694
Hazardous and hospital waste	4 998	1 027	426	1	41	6 493
Processing residue	49	85	87	16	0	238
Packing waste	195	1	0	0	0	196
Not known	2	3	2	0	0	8

Note The data originates from the information system on waste and recycling (ISAG) which is kept by the Danish Environmental Protection Agency.

Source: Environmental Protection Agency, sugar factories, the recycling industry, and power plants.

 For further information visit www.mst.dk

Table 22

Sales of pesticides

	1998	1999	2000	2001	2002	2003
	tons					
Sales of pesticide products¹						
Total sale	14 179	12 445	12 141	12 120	12 090	11 736
Repellents	56	84	35	23	30	32
Fungicides	1 911	1 999	1 757	1 625	1 684	1 744
Rodenticides	375	441	458	625	422	420
Herbicides	7 320	5 740	5 641	6 368	6 340	6 096
Insecticides	1 185	900	746	672	803	837
Soil disinfectants	0	4	2	10	6	5
Combined fungicides and insecticides	26	16	15	12	23	22
Algicides	0	1	4	5	3	2
Slimicides for use in paper pulp	39	60	61	54	39	28
Products against pests on farm animals	141	111	134	189	250	106
Products for the protection of woodwork	2 756	2 657	2 869	1 992	2 234	2 126
Plant growth regulators	369	432	420	546	256	317
Of which active ingredients²						
Active ingredients, total	4 326	3 605	3 551	3 687	3 556	3 553
Repellents	4	6	7	4	4	6
Fungicides	891	884	734	654	683	665
Rodenticides	4	3	6	2	4	3
Herbicides	2 781	2 059	2 136	2 364	2 369	2 390
Insecticides	102	86	77	87	89	92
Soil disinfectants	0	4	2	9	5	5
Combined fungicides and insecticides	3	2	4	6	11	12
Algicides	0	0	1	1	1	1
Slimicides for use in paper pulp	33	42	42	33	32	28
Products against pests on farm animals	2	1	1	2	2	2
Products for the protection of woodwork	297	261	295	189	197	171
Plant growth regulators	209	257	245	337	158	179

¹ A pesticide product comprises one or more effective substances, emulators, adhesives and inactive fillers. ² That part of the product, which has a toxic effect.

Source: Danish Environmental Protection Agency.


 For further information www.statbank.dk/pest2

Table 23

Extraction of raw materials

	1990	1995	2000	2001	2002	2003
	m ³ in thousands					
Extraction of raw materials, total	33 976	34 211	40 945	38 258	36 970	35 225
Extraction from land area:	28 106	28 558	33 809	32 859	31 188	28 982
Stone, gravel, sand	22 534	21 721	27 587	27 056	25 555	23 634
Granite	810	662	199	166	193	190
Chalk, limestone	2 924	4 049	3 405	3 480	3 240	3 025
Clay	462	739	788	720	663	632
Plastic clay and bentonite	303	311	313	234	221	225
Quartz sand	186	191	479	488	464	484
Moler	195	186	227	231	254	265
Peat and sphagnum	399	259	247	287	336	314
Other raw materials	292	440	563	197	262	213
Extraction from sea area						
Sand, gravel, sand for land filling etc.	5 870	5 652	7 136	5 399	5 782	6 243

Source: Extraction from sea area is collected in the National Forest and Nature Agency.


 For further information visit www.statbank.dk/01

Table 24

Expenditure and revenue by environmental domains. General government

	1999	2001	2003*
	DKK mio.		
Current and capital expenditure, total	23 470	24 713	24 511
Air and climate	2 539	1 722	1 002
Waste water	5 419	5 518	5 981
Waste	7 030	7 889	8 619
Soil and ground water	740	805	819
Biodiversity and landscape	2 319	2 707	2 547
Research and development	1 511	1 578	1 503
Environmental assistance	1 714	2 121	1 641
Other ¹	2 197	2 373	2 399
Current and capital revenue, total²	13 260	14 606	15 559
Air and climate	9	19	26
Waste water	5 176	5 600	6 105
Waste	6 706	7 500	8 039
Soil and ground water	278	122	117
Biodiversity and landscape	206	448	275
Research and development	564	582	612
Other ¹	321	335	384

Note. Includes market services.

¹ Including administration. ² Excluding environmental taxes.

 For further information www.statbank.dk/mreg2

Table 25

Environmental expenditure and revenues. General government

	1999	2001	2003*
	— mio. kr. —		
Current and capital expenditure, total	23 470	24 713	24 511
Current expenditure, total	18 502	19 926	19 774
Compensation of employees	4 113	4 447	4 699
Intermediate consumption	10 112	11 129	11 555
Current transfers, total	4 277	4 350	3 521
Capital expenditure, total	4 968	4 787	4 736
Fixed gross investments	3 654	3 635	4 176
Other capital expenditure	1 314	1 152	560
Current and capital revenue, total¹	13 260	14 606	15 559
Capital revenue, total	12 870	14 110	14 934
Sales of goods and services	12 004	13 144	13 959
Current transfers, total	866	966	975
Compulsory contributions	5	6	6
Other current transfers	860	960	969
Capital revenue, total	390	496	625

¹ Excluding environmental taxes.

 For further information www.statbank.dk/mreg2

Table 26

Expenditure and revenue by environmental domains 2003*

Subsectors

	Central government	Counties	Municipalities	General government sector, total ¹
	DKK mio.			
Current and capital expenditure, total	6 183	2 115	16 212	24 511
Air and climate	1 002	0	0	1 002
Waste water	9	0	5 973	5 981
Waste	244	0	8 375	8 619
Soil and ground water	160	578	81	819
Biodiversity and landscape	1 176	1 006	365	2 547
Research and development	1 503	0	0	1 503
Environmental assistance	1 641	0	0	1 641
Other ³	449	530	1 419	2 399
Current and capital revenue, total²	1 033	224	14 302	15 559
Air and climate	26	0	0	26
Waste water	0	0	6 104	6 105
Waste	133	0	7 906	8 039
Soil and ground water	78	35	5	117
Biodiversity and landscape	161	65	49	275
Research and development	612	0	0	612
Other ³	22	125	238	384

¹ Unconsolidated. ² Excluding environmental taxes. ³ Including administration.

 For further information www.statbank.dk/mreg2

Table 27

Environmental expenditure and revenues 2003. Subsectors

	Central government	Counties	Municipalities	General government, total ¹
	DKK mio.			
Current and capital expenditure, total	6 183	2 115	16 212	24 511
Current expenditure, total	5 308	2 019	12 448	19 774
Compensation of employees	1 258	854	2 587	4 699
Intermediate consumption	1 099	954	9 501	11 555
Current transfers, total	2 951	211	360	3 521
Capital expenditure, total	875	96	3 764	4 736
Fixed gross investments	329	95	3 753	4 176
Other capital expenditure	547	2	12	560
Current and capital revenue, total²	1 033	224	14 302	15 559
Capital revenue, total	1 026	208	13 700	14 934
Sales of goods and services	388	96	13 475	13 959
Current transfers, total	639	112	224	975
Compulsory contributions	0	0	6	6
Other current transfers	639	112	218	969
Capital revenue, total	6	16	602	625

¹ Unconsolidated. ² Excluding environmental taxes.

 For further information www.statbank.dk/mreg2

Table 28**Convictions for offences against environmental legislation**

	1995	1996	1997	1998	1999	2000	2001	2002	2003
	number of convictions								
Total	411	406	693	583	590	647	727	749	783
Environmental Protection Act	230	170	253	208	209	177	228	202	240
Nature Conservation Act	45	60	58	54	91	95	78	64	72
Washington Convention	28	16	9	14	16	39	60	112	81
Marine Environment Act	4	2	1	-	2	1	8	4	12
Forestry Act	-	-	1	2	1	-	-	-	-
Act on Urban and Rural Areas	30	17	43	43	76	93	151	125	172
Act on Holiday Dwellings and Camping	4	13	108	22	5	6	3	1	6
Act on Chemical Compounds and Products	-	2	12	7	15	6	8	24	13
Other acts relating to the environment	70	126	208	233	175	230	191	217	187

 For further information visit www.statbank.dk/01

Table 29

Denmark's fauna and flora

1997 - 2005	Total number of known species	Total number of 'listed species'		Species extinct in Denmark ¹	Species requiring special protection		
		number	per cent		Directly endangered ²	Vulnerable species ³	Rare species ⁴
Total	10 598	3 142	30	343	611	997	1 191
Flora							
Fungi / Lichens	3 950	1 452	37	112	268	453	619
Fungi	3 000	878	29	31	157	248	442
Lichens	950	574	60	81	111	205	177
Vascular plants	1 050	220	21	23	36	66	95
Fauna							
Insects	5 289	1 359	26	190	285	450	434
Ephemeroptera	42	20	48	5	8	4	3
Plecoptera	25	10	40	2	2	3	3
Odonata	50	21	42	4	4	7	6
Pentatomoidea	56	15	27	0	2	7	6
Trichoptera	168	54	32	10	3	12	29
Beetles	3 674	964	26	144	233	328	259
Butterflies	73	36	49	9	8	18	1
Moths	900	141	16	13	12	45	71
Zygaenidae	8	5	63	1	1	3	0
Syrphidae	269	86	32	2	10	21	53
Simuliidae	24	7	29	0	2	2	3
Vertebrates	309	111	36	18	22	28	43
Freshwater fish	38	15	39	2	5	1	7
Amphibians	14	5	36	0	1	3	1
Reptiles	7	2	29	2	0	0	0
Birds	200	74	37	14	15	14	31
Mammals	50	15	30	0	1	10	4

Note. Definitions of categories are identical to those which are used in the 'red lists'. These are national lists of the status of endangered animal and plant species. National Environmental Research Institute is working with a revision of the red lists in 2005.

¹ Species which are regarded as extinct in Denmark after 1850. ² Species which are regarded as in danger of extinction in Denmark in the near future if the negative factors which are currently affecting them continue. ³ Species which are expected to be directly endangered in Denmark if the negative factors which are currently affecting them continue. ⁴ Species which are so few in number that they are particularly sensitive to random man-made or natural fluctuations and negligence.

Source: National Forest and Nature Agency.

For further information visit <http://redlist.dmu.dk>

Table 30

Breeding pairs of the 20 most common birds in Denmark 2004

No.	Species	Number of breeding pairs	Trend
1	Blackbird	2 000 000 – 2 500 000	Stable
2	Chaffinch	1 500 000 – 2 000 000	Stable
3	Skylark	1 100 000 – 1 300 000	Falling
4	Great tit	700 000 – 1 000 000	Stable
5	House sparrow	500 000 – 1 000 000	Falling
6	European greenfinch	500 000 – 700 000	Rising
7	Starling	400 000 – 600 000	Falling
8	Willow warbler	400 000 – 600 000	Falling
9	Yellowhammer	400 000 – 600 000	Falling
10	Tree sparrow	400 000 – 600 000	Fluctuating
11	Wren	300 000 – 500 000	Fluctuating
12	Whitethroat	300 000 – 450 000	Fluctuating
13	Blackcap	300 000 – 450 000	Rising
14	Wood pigeon	250 000 – 300 000	Rising
15	Chiff chaff	200 000 – 300 000	Rising
16	Robin	200 000 – 300 000	Fluctuating
17	Song thrush	200 000 – 300 000	Stable
18	Magpie	200 000 – 300 000	Rising
19	Bluetit	200 000 – 250 000	Fluctuating
20	Swallow	200 000 – 250 000	Fluctuating

Source: The Danish Ornithological Society. *Ynglefuglebestande i Danmark 2003*.

 For further information www.dof.dk

Table 31

Breeding pairs of the 20 rarest birds in Denmark 2004

No.	Species	Number of breeding pairs	Trend
1	Tengmalm's owl	0-1	Fluctuating
2	Osprey	0-1	Fluctuating
3	Fulmar ¹	0-2	-
4	Little gull	1	Fluctuating
5	Bee eater	1	Fluctuating
6	Great reedwarbler	1-5	Falling
7	White stork	2	Falling
8	Golden eagle	2	Rising
9	Peregrine falcon	2	Rising
10	Short-eared owl	2	Falling
11	Golden plover	2-3	Falling
12	Crested lark	2-4	Falling
13	Whitethroated dipper	2-5	Fluctuating
14	Gullbilled tern ²	3-4	Falling
15	Hobby	4-6	Fluctuating
16	Blackheaded gull	5	Rising
17	Red-crested pochard	6	Rising
18	Tawny pipit	10-15	Falling
19	Whitetailed eagle	12	Rising
20	Spoonbill	22	Rising

Note. A bird is not considered an established Danish breeding bird until it has bred for at least 5 consecutive years. Protection of wild birds is regulated in accordance with the Danish administrative game legislation and the Danish Protection of Nature Act.

¹ The last breeding pair was registered in 2001 ² New breeding bird having bred for less than 5 years in Denmark.

Source: The Danish Ornithological Society: 'Threatened Breeding pairs', 2000. *Threatened Breeding pairs 2000, Dansk Ornitologisk Forenings Tidsskrift*. 97(2003): pages 175-192 and unpublished data from 2003.


 For further information visit www.dof.dk

Table 32

Energy balance sheet for Denmark 2003*

	Crude oil and semi- manufac- tured oil	Coal, coke, etc.	Oil products	Natural gas	Other gas	Renewable energy resources	Electricity	District heating
	thousand tons			mio Nm ³	thousand tons	TJ	GWh	TJ
Production	18 156	-	8 610	7 726	458	92 364	43 757	130 657
Imports	3 579	9 325	4 822	-	4	4 769	7 023	-
Stock	36	- 226	1 431	- 298	26	-	-	-
Waste and cable losses	87	93	88	3	5	516	2 603	26 163
Exports	13 047	8	4 587	3 208	90	-	15 568	-
Total domestic supply	8 565	9 450	7 326	4 813	342	96 617	32 609	104 494
Households	-	5	2 498	712	48	12 760	10 203	64 759
Agriculture, fishing, quarrying	-	39	867	737	5	3 853	2 053	1 889
Agriculture, horticulture, and forestry	-	36	623	93	4	3 787	1 902	1 885
Fishing	-	-	203	-	0	-	61	-
Mining and quarrying	-	2	41	643	1	66	90	4
Manufacturing	8 565	304	880	943	266	4 174	9 291	7 654
Mfr. of food, beverages and tobacco	-	75	197	318	6	136	2 211	852
Mfr. of textile and leather	-	-	9	27	0	33	201	181
Mfr. of wood products, printing and publishing	-	1	32	102	2	1 635	1 120	2 510
Mfr. of chemicals and plastic products	8 565	21	234	170	239	21	2 171	1 787
Mfr. of other non-metallic mineral products	-	207	286	138	7	823	825	96
Mfr. of basic metals and fabr. metal products	-	0	107	171	10	94	2 225	1 961
Mfr. of furniture and manufacturing n.e.c.	-	-	16	19	1	1 431	539	267
Electricity, gas and water supply	-	9 103	576	2 113	0	75 831	548	16
Construction	-	-	342	5	5	-	299	-
Wholesale and retail trade, hotels, restaurants	-	-	313	102	3	-	4 054	10 180
Sale and repair of motor vehicles, sale of auto. fuel	-	-	69	11	0	-	401	1 085
Wholesale, except of motor vehicles	-	-	170	41	1	-	1 370	4 118
Retail trade and repair work, exc. of m. vehicles	-	-	59	27	0	-	1 732	2 670
Hotels and restaurants	-	-	15	23	1	-	551	2 307
Transport, post and telecommunications	-	-	1 554	12	11	-	1 519	1 174
Transport	-	-	1 525	6	11	-	1 189	555
Post and telecommunications	-	-	30	6	0	-	330	619
Finance and business activities	-	-	96	51	1	-	1 239	5 035
Finance and insurance	-	-	6	9	-	-	226	918
Letting and sale of real estate	-	-	27	7	0	-	141	710
Business activities	-	-	63	34	1	-	872	3 406
Public and personal services	-	-	200	138	4	-	3 404	13 788
Public administration	-	-	77	17	2	-	395	1 680
Education	-	-	26	31	1	-	770	3 125
Human health activities	-	-	13	19	0	-	467	1 893
Social institutions etc.	-	-	26	32	-	-	774	3 141
Associations, culture and refuse disposal	-	-	58	40	1	-	998	3 949

For further information visit www.statbank.dk/ene1

Table 33

Energy consumption in Denmark

	1995	2000	2003
Energy consumption, gross	thousand tons		
Hard coal etc.	10 987	6 571	9 415
Coke and furnace coke	51	41	34
Brown coal etc.	9	2	1
Waste	2 314	2 905	3 492
Fuel wood, etc.	1 255	1 338	1 324
Straw	843	843	1 440
Kerosene	14	4	18
Jet fuel	657	535	486
Motor gasoline ¹	1 887	1 965	1 917
Other petrol and oil products ²	750	1 251	79
Gas/Diesel oil	3 897	3 493	3 577
Fuel oil	998	596	817
Petroleum-coke	176	224	262
Liquid gas (LPG)	87	76	69
Refinery gas	370	294	238
	mio. Nm ³		
Natural gas ³	3 009	4 205	4 231
	thousand GJ		
Biogas	1 277	1 433	1 670
Wind energy and water power	4 347	15 375	20 095
Electricity supply	mio. KWh		
Electricity sold, total	31 472	32 835	32 615
Dwellings	9 550	9 592	9 662
Agriculture, etc.	2 544	2 568	2 437
Manufacturing	9 449	9 832	9 363
Other industries, public administration, etc.	9 929	10 843	11 153
Crude oil and natural gas	thousand tons		
Crude oil, Danish production	9 263	17 780	18 143
	mio. Nm ³		
Natural gas, Danish production	5 165	7 883	7 726

¹ 1995 corrected for cross-border trade. ² Including waste oil and orimulsion. ³ Excl. consumption on North-Sea platforms.

Source: Association of Danish Energy Companies.


 For further information visit www.statbank.dk/ene1

Table 34

Manufacturers' energy consumption 2003

		Solid fuel	Liquid fuel	Gas	Electricity	District heating
		thousand GJ				
	Manufacturing, total^{1,2}	11 936	20 934	51 271	29 397	6 619
14009	Extraction of gravel and clay etc.	150	903	2 448	253	1
15009	Mfr. of food, beverages and tobacco²	2 073	6 799	13 926	7 584	1 460
151000	Production etc. of meat and meat products	0	938	2 118	1 941	98
155000	Mfr. of dairy products	-	638	3 326	1 417	6
158909	Mfr. of other food products	2 070	5 024	5 673	3 525	1 056
159000	Mfr. of beverages	-	182	2 679	615	291
160000	Mfr. of tobacco products	3	17	129	86	10
17009	Mfr. of textiles and leather	3	60	883	544	55
170000	Mfr. of textiles	-	52	807	484	35
180000	Mfr. of wearing apparel	3	5	34	33	20
190000	Mfr. of leather and footwear	-	3	43	27	0
20000	Mfr. of wood and wood products	1 287	323	195	832	573
21009	Mfr. of paper prod.; printing and publ.	39	219	3 360	1 914	1 340
210000	Mfr. of pulp, paper and paper products	36	194	3 036	1 175	1 158
221200	Publishing of newspapers	-	1	13	98	60
221309	Publishing activities, excluding newspapers	-	3	30	61	19
222009	Printing activities	3	22	281	581	102
23000	Mfr. of refined petroleum products etc.	-	918	12 431	891	260
24000	Mfr. of chemicals	556	952	5 159	4 120	1 228
241009	Mfr. of chemical raw materials	-	400	3 247	1 819	444
243009	Mfr. of paints and soap	556	156	966	946	83
244000	Mfr. of pharmaceuticals	-	396	946	1 354	700
25000	Mfr. of rubber and plastic products	14	186	1 146	2 305	112
26000	Mfr. of other non-metallic mineral prod.	6 644	9 026	5 436	2 628	61
261009	Mfr. of glass and ceramic goods	0	15	1 409	518	13
263009	Mfr. of tiles, bricks cement and concrete	6 644	9 011	4 028	2 111	48
27009	Mfr. and processing of basic metal	56	604	2 993	2 891	331
270000	Mfr. of basic metal	0	136	1 663	1 249	95
281009	Mfr. of building materials of metal	32	359	580	819	155
286009	Mfr. of various metal products	24	109	751	824	81
29000	Mfr. of machinery and equipment	8	565	1 449	1 950	545
291000	Mfr. of marine engines and compressors	-	104	697	946	274
292000	Mfr. of ovens and cold-storage plants	2	208	255	431	130
293000	Mfr. of agricultural machinery	-	99	230	129	13
294009	Mfr. of machinery for industries	4	136	184	328	85
297000	Mfr. of domestic appliances	3	19	83	115	44
30009	Mfr. of electronic components	40	150	811	1 370	425
300009	Mfr. of computers and electric motors	6	87	465	659	237
320000	Mfr. of radio and communication equipment	31	15	207	326	40
330000	Mfr. of medical and optical instruments	3	49	139	385	148
35009	Mfr. of transport equipment	10	95	594	591	89
351000	Building of ships and boats	3	37	277	233	37
352009	Mfr. of transport equipment, excl. ships	7	58	317	358	53
36000	Mfr. of furniture; manufacturing n.e.c.	1 056	135	439	1 524	139
361000	Mfr. of furniture	1 036	119	324	1 026	76
365009	Mfr. of toys and jewellery	20	15	115	498	63

Note. The table includes workplaces in firms with 20 or more employed in the industry.

¹ Incl. extraction of gravel, clay, stone and salt, etc. ² Excl. bakeries.

For further information visit www.statbank.dk/ene1

Table 35

Production of renewable energy

	1990	2000	2003
	TJ		
Total production	52 631	89 205	112 309
Solar energy	100	335	382
Wind power	2 197	15 268	20 019
Water power	101	109	76
Straw	12 481	12 220	16 719
Wood chips	1 724	2 744	6 228
Firewood	8 757	11 655	11 533
Wood pellets	1 575	2 984	4 758
Wood wastes	6 191	6 895	7 027
Biogas	752	2 912	3 578
Waste combustion	15 499	30 392	36 230
Biodiesel	-	-	1 692
Fish oil	744	49	259
Geothermal heat ¹	2 510	3 644	3 808

¹ Heat pumps and geothermal power.

Source: Danish Energy Authority.