Geography, environment and energy

- Climate and area
- Infrastructure
- Environment
- Energy

Climate and area

The long Danish coastline

Denmark is a small country, compared to its closest neighbours. Sweden and Germany are ten times and eight times larger respectively than Denmark, which has an area of more than 43,000 km^2. On the other hand, Denmark's coastline is extraordinarily long for a country of this size. Denmark stretches along a coast of more than 7,300 km, which is longer than the Chinese Wall. It corresponds to almost one and a half metre of coast per inhabitant.

One characteristic of Denmark's geography is the many islands, a total of 391. The largest islands are, by order of mention, Sjælland, Vendsyssel-Thy, Fyn, Lolland and Bornholm. Jutland (including Vendsyssel-Thy) account for 69 per cent of Denmark's total area.

In addition to Denmark, the Kingdom of Denmark includes the self-governing areas of Greenland and the Faroe Islands. The ice-free part of Greenland is almost ten times larger than Denmark.

Denmark's nature is characterized by agriculture and forests

For thousands of years, Denmark has been an agricultural country, and this has largely characterized Danish landscapes. Consequently, two thirds of the landscape consists of man-made agricultural areas. However, forests are also evident in the landscape in the form of, among other types, deciduous forest and coniferous forest. Rold Forest and Grib Forest are the largest forests.

Figure 1 Distribution of Denmark's area by type of area

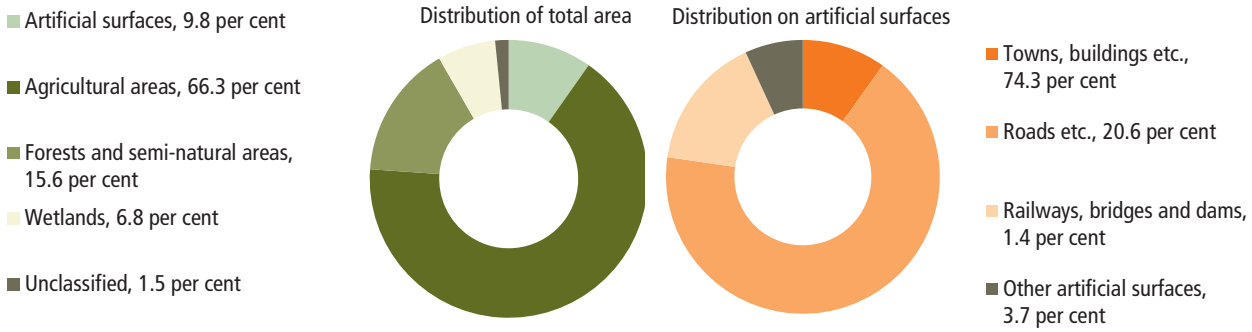


Table 408

Man-made infrastructure and buildings characterize the landscape

Cities, roads, railroads, bridges and other types of man-made surfaces cover a total of 10 per cent of Denmark's area, corresponding to three times the area of the Faroe Islands – or 56 per cent of Sjælland. Urban centres, such as residential neighbourhoods and industrial districts, dominate and account for three-fourths of the man-made surfaces.

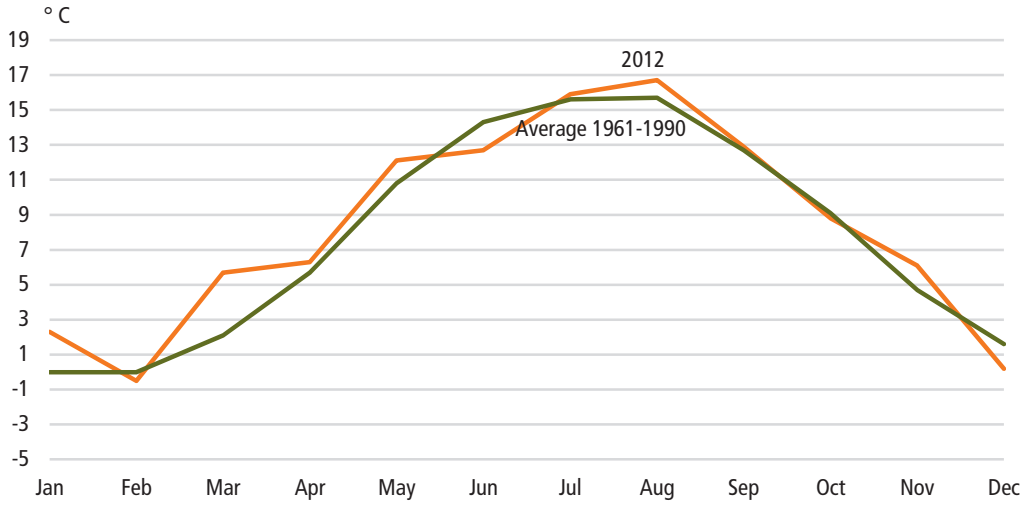
It rains or snows every second day

The Danish weather is known for being variable. It is a fact that it rains or snows every second day in Denmark, since a year has an average of 171 days of precipitation.

Snow seven days a month during the wintertime

Denmark has mild winters without large amounts of snow, but with much rain. On average, it snows seven days every month in December, January and February. This decreases to five days of snow in March, and April has an average of three days of snow.

Figure 2 Temperatures in Denmark



Source: www.dmi.dk

Temperature variations of 16 °C during a year

In a year, the average temperature generally varies from 0 °C in January to 16 °C in August. Great variations occur in relation to the average. The coldest day in more than 100 years was a January day in 1982 with temperatures of -31 °C, and the warmest day was an August day in 1975 with temperatures of 36 °C.

"… and it will be overcast again today"

A natural feature of everyday life in Denmark is overcast days and many clouds in the sky. The clouds cover an average of two thirds of the sky in a year, but the summer is the least cloudy season with an average cloudiness of 60 per cent.

Not many days of sunshine in a year

Denmark is a country where the total hours of sunshine a year gives occasion to enjoy the sun while it is out. There is an average of four hours of sunshine a day, naturally primarily during the spring and summertime. From May to August, there are more than six hours of sunshine a day.

Infrastructure

Extension of motorways and dual-carriageways

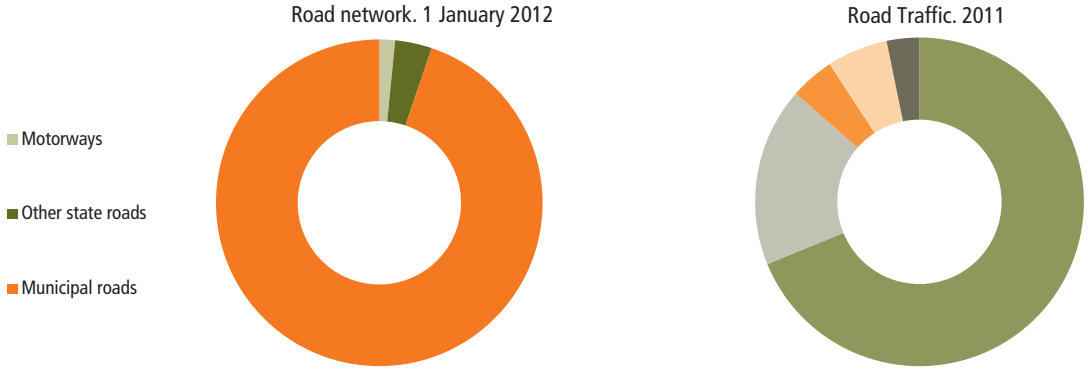
There were 74,174 km of public roads in Denmark on 1 January 2012. After the restructuring of the administrative regions as from 2007 the new municipalities have taken over the administration of the earlier locally oriented county roads, while the state has taken over the administration of the other primary roads of the former counties. The state road network now comprises 5 per cent of the public road network. The other 95 per cent are administered by the new municipalities.

The majority of the public road network (65 per cent) is in Jutland, while the rest is distributed between the Copenhagen region (9 per cent) and the remaining part of the islands (26 per cent).

The public road network has increased by nearly 2,500 km over the past ten years, mainly because of more municipal roads. Simultaneously the principal road network has been enlarged.

Since 2001, the motorway network has been extended by 16 per cent to 1,130 km in 2011, and the length of the dual-carriageways has increased by 25 per cent to 381 km in 2011.

Figure 3 Distribution of road network and of road traffic



www.statbank.dk/vej11 and vej20

Almost a quarter of the rail network is electrified

The length of the total rail network was 2,667 km on 1 January 2011, the same as the previous year. Viewed in relation to the total area of Denmark, there is 62 km of railway per 1,000 km^2. The main part of the rail network is operated by the state-owned Rail Net Denmark.

The regional railways are responsible for operating 514 km of rail network and Copenhagen Metro for 21 km. Since 1990, the rail network has decreased by nearly 200 km, mainly due to closure, by Rail Net Denmark, of sections carrying goods. Compared to Sweden and Norway, the railway density for the Danish state-owned rail network is two and four times greater, respectively, but compared to most other European countries, the density of the Danish rail network is slightly smaller.

At the beginning of 2011, almost a quarter of the rail network was electrified. This is three times more than in 1990, but unchanged compared to 2009.

Goods transport by ship is concentrated at 22 sea ports

In 2010, there were 113 Danish ports handling freight. The 22 largest ports each handled more than 1 million tonnes of goods annually, and accounted for 85 per cent of the total goods transport by sea.

In terms of throughput of goods, the ports of Fredericia and Aarhus are the greatest Danish ports handling, respectively, 15 per cent and 11 per cent of total throughput of goods in sea.

Ferry and passenger ship traffic is concentrated at 36 ports

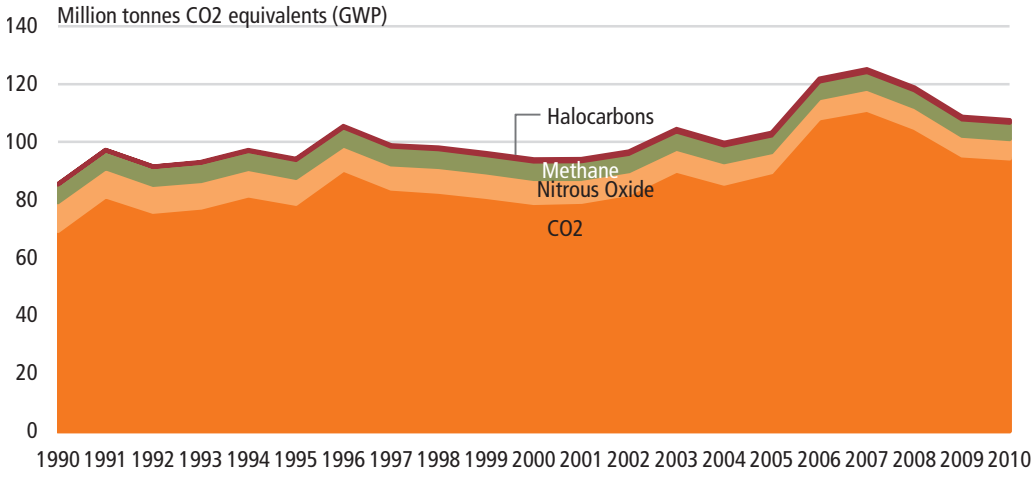
74 ports are engaged in transport of passengers, of which 36 of them have more than 200,000 arriving and departing passengers every year and account for 92 per cent of passengers in Danish ports. The greatest Danish ferry port is Helsingør accounting for 20 per cent of all sea passengers, followed by Rødby Færgehavn with 15 per cent of all passengers in 2010.

Environment

Greenhouse gases

88 per cent of the global warming potential from Danish greenhouse gases came from CO_2 in 2010. Methane accounted for 6 per cent, while nitrous oxide contributed 6 per cent. The emissions of halocarbons constituted less than 1 per cent of the total Danish global warming potential. By converting the emissions into CO_2-equivalents account have been taken for the fact that the effects of the substances on the atmosphere, and, thus, their global warming potentials, are different.

Figure 4 Greenhouse gas emissions from Danish economic activities

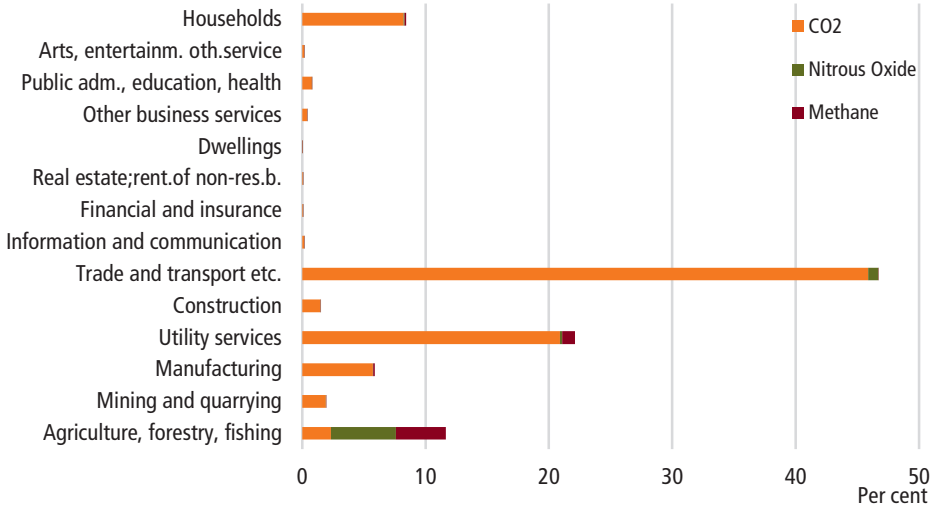


Note: The halocarbons (at the top of the figure) constitute less than 1 million tonnes CO_2-equivalents and are hardly visible.

Greenhouse gas emissions from industries and households

When CO_2, methane and nitrous oxide emissions are taken as a whole and assessed in relation to their global warming potential, between 1990 and 2010, the industries have contributed approximately 90 per cent of all Danish man-made emissions, with households making up the remaining 10 per cent. *Agriculture, fishing and* quarrying contributed 12 per cent of the global warming potential. It is largely due to emissions of methane and nitrous oxide from agriculture, while emissions of CO_2 played a minor role.

Figure 5 Greenhouse gas emissions from industries and households. 2010



Note: Emissions are calculated as CO2-equivalents (GWP).

In 2010, *electricity, gas and water* supply contributed 22 per cent of the global warming potential from greenhouse gases. This includes all Danish production of electricity and district heating. All emissions in connection with production of electricity and district heating come from this industry, while the use of electricity and district heating in the industries and households cause no direct emissions.

Trade and transport caused 47 per cent of the global warming potential from CO_2, methane and nitrous oxide. Included are all emissions from businesses that carry out transport as a service to other businesses and households. On the other hand, it does not include transport activities carried out by businesses and households on their own behalf, using their own cars and lorries, etc.

Greenhouse gas emissions from transport

If we look at total emissions of greenhouse gas from transport activities in industries and households, they accounted for 52 per cent of the total warming potential.

Emissions from Danish operated ships abroad contributed 37 per cent of total emissions of greenhouse gas and 71 per cent of emissions from all transport activities.

Emissions from the households' use of cars contributed 37 per cent of total greenhouse gas emissions from Danish transport activities, when the share of the emissions related to Danish operated ships and planes' bunkering of fuel abroad is excluded.

Environmental taxes

Denmark's environmental policy involves an increasing use of environmental taxes or more precise environmentally related taxes. Environmental taxes comprise of pollution, energy, resource, and transport related taxes.

In 2009, the total revenue generated from these taxes was DKK 79.4 billion, corresponding to around 10 per cent of total revenues from taxes and duties.

Total revenue generated from energy related taxes amounted to DKK 36.4 billion in 2009, corresponding to 45.8 per cent of total revenue from environmental related taxes.

In 2009, transport related taxes accounted for 31.4 per cent of environmental related taxes while resource related taxes accounted for 19.0 per cent and pollution related taxes accounted for 3.7 per cent.

The decline from 2008 to 2009 in resource related taxes can mainly be explained by a fall in corporation tax on hydrocarbon manufacturing of DKK 5 billion and a fall in hydrocarbon tax of DKK 5.8 billion. The decline in transport related taxed can be attributed to a fall in the motor vehicle registration duty of DKK 7.4 billion.

Figure 6 Environmental taxes

Compared to Statistical Yearbook 2009 the relationship between "pollution taxes" and "resource taxes" has changed. The change is caused by the hydrocarbon tax and corporation tax on hydrocarbon manufacturing as these taxes are now classified as resource taxes instead of pollution taxes. The change has been implemented back in time.

www.statbank.dk/mreg2s

Energy

Denmark self-sufficient as regards energy

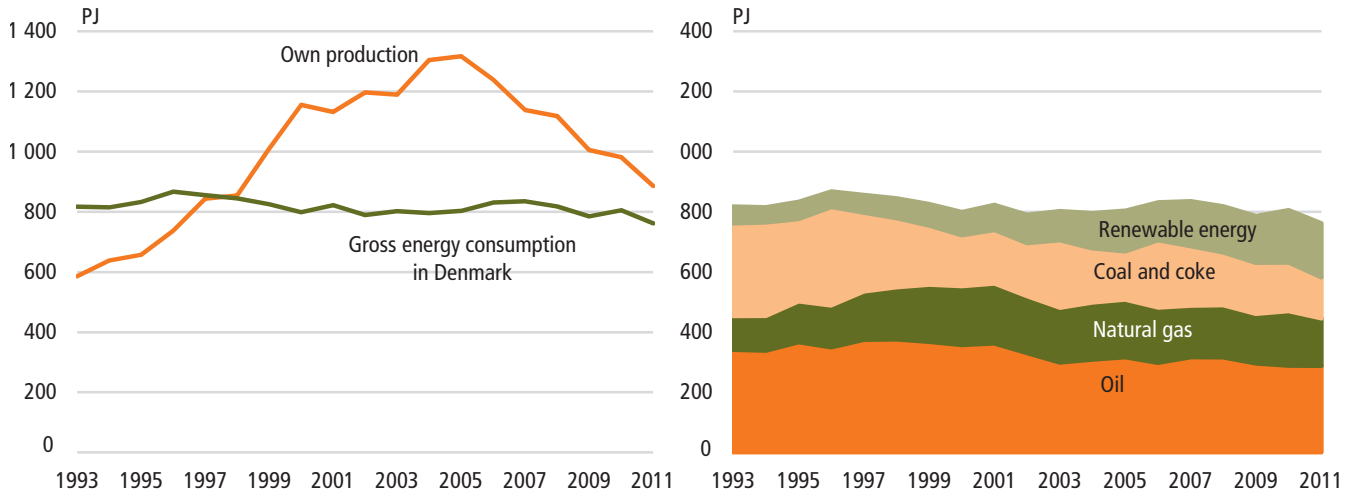
Since 1997, Denmark has been energy self-sufficient thanks to the extraction of crude oil and natural gas from the North Sea and the production of renewable energy. The total production has increased until 2005.

In 2006 there was a significant decrease in the production of energy, primarily due to a decrease in the production of oil and natural gases. The decrease has continued in the years after, but still, in 2011, the production of energy remains higher than the total consumption of energy in Denmark.

Changed composition of the energy consumption

Gross energy consumption consists of oil, natural gas, coal and renewable energy, etc. When calculating gross energy consumption, adjustments are made to take into account imports and exports of electricity. Total gross energy consumption increased by 5 per cent from 2009 to 2011.

Figure 7 Gross energy consumption



Since 1990, the composition of fuel use has changed significantly as there has been an increase in the consumption of natural gas and renewable energy and a decrease particularly in the coal consumption.

More renewable energy sources

The consumption of renewable energy has increased over a number of years and now accounts for 24 per cent of total gross energy consumption. Renewable energy plays a particularly important part with regard to environmental issues like emissions of greenhouse gases and global warming, as an increase in the use of such energy causes a reduction in greenhouse gas emissions by replacing the use of fossil fuels, e.g. coal and oil.

Renewable energy sources include the greenhouse gas emission free types of energy, e.g. wind power and solar power as well as carbon-dioxide neutral fuels, e.g. hay and wood, which absorb carbon dioxide from the atmosphere during growth, only to release it again when they are incinerated.

Table 405 Area, population and coastline

	Land and inland water area km²	Population 1 January 2013	Density of population per km²	Number of islands	Inland water area 1959 km²	Coastline 1959 km
All Denmark	**42 915.7**	**5 602 628**	**130.5**	**391**	**700**	**7 314**
Provinces						
Byen København	169.6	716 958	4 227.3	13	18	213
Københavns omegn	342.3	525 393	1 534.9	1	. . .	. . .
Nordsjælland	1 449.0	448 910	309.8	22	80	248
Bornholm[1]	592.3	40 807	68.9	6	3	141
Østsjælland	807.7	237 351	293.9	15	7	154
Vest- og Sydsjælland	6 414.9	579 008	90.3	103	102	1 707
Fyn	3 478.7	485 672	139.6	96	26	1 130
Sydjylland	8 777.3	715 747	81.5	23	. . .	. . .[2]
Østjylland	5 841.4	845 971	144.8	49	. . .	. . .
Vestjylland	7 164.3	426 539	59.5	25	. . .	. . .
Nordjylland	7 878.6	580 272	73.7	38	. . .	. . .
Regions						
Hovedstaden	2 553.1	1 732 068	678.4	42	101	602
Sjælland	7 222.6	816 359	113.0	118	109	1 861
Syddanmark	12 255.6	1 201 419	98.0	119	. . .	. . .
Midtjylland	13 005.7	1 272 510	97.8	74	. . .	. . .
Nordjylland	7 878.6	580 272	73.7	38	. . .	. . .
Faroe Islands	**1 393.0**	**48 351**[3]	**34.7**	**17**	**. . .**	**1 117**[4]
Greenland	**410 449.0**[5]	**56 370**	**0.1**	**. . .**	**. . .**	**44 087**

Note: Due to different compilation methods figures deviate from figures in table 4. The most southern point in Denmark is Gedserodde on Falster, the most northerly point is near Skagen, the most westerly point is Blåvandshuk, and the most easterly point is Christiansø (Østerskær).

Source: Danish Geodata Agency

www.statbank.dk/folk1 and are207

[1] Incl. Christiansø. [2] The border with Germany was measured as 67.7 km. In length. [3] 1 January 2012.
[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 per cent is covered by inland ice.

Table 406 Administrative division of Denmark. 2013

	Municipalities	Parishes	Customs and tax regions	Constituencies[1]	
				Counties and large constituencies	Constituencies
Total	**98**	**2 194**	**37**	**10**	**92**
The Islands	**56**	**904**	**18**	**6**	**48**
Jutland	**42**	**1 290**	**19**	**4**	**44**
Region Hovedstaden	**29**	**250**	**8**	**4**	**28**
Byen København	4	81	2	1	12
Københavns omegn	13	56	1	1	8
Nordsjælland	11	91	4	1	6
Bornholm	1	22	1	1	2
Region Sjælland	**17**	**421**	**6**	**1**	**12**
Østsjælland	5	60	2	}	3
Vest- og Sydsjælland	12	361	4	1	9
Region Syddanmark	**22**	**523**	**9**	**2**	**21**
Fyn	10	233	4	1	8
Sydjylland	12	290	5	1	13
Region Midtjylland	**19**	**640**	**9**	**2**	**22**
Østjylland	11	357	5	1	11
Vestjylland	8	283	4	1	11
Region Nordjylland	**11**	**360**	**5**	**1**	**9**

[1] In accordance with Act no. 1292 of 8 December 2006 on elections to the Danish Parliament.

www.statbank.dk/02

Table 407 Area and population on islands

Municipality code		Population 1 January 2013	Area in km²
	All Denmark	**5 602 628**	**43 059.62**
	Zealand and its islands	**2 401 862**	**7 473.16**
330	Agersø	181	8.08
Flere	Amager	180 657	96.28
390	Bogø	1 108	14.40
370	Dybsø	1	1.38
370	Enø	332	3.53
250	Eskilsø	6	1.40
390	Farø	5	. . .
370	Gavnø	31	5.65
330	Glænø	51	. . .
190	Klaus Nars holm	3	0.00
390	Langø	2	1.32
390	Masnedø	129	1.71
390	Møn	9 580	218.31
326	Nekselø	18	2.23
390	Nyord	41	5.57
330	Omø	154	4.45
316	Orø	846	15.03
185	Saltholm	1	16.72
326	Sejerø	348	12.50
Flere	Sjælland	2 208 348	7 049.27
101	Slotsholmen	18	0.21
101	Trekroner	1	0.02
390	Tærø	1	1.71
	82 named and uninhabitated islands	•	13.38
	Lolland-Falster and their islands	**105 758**	**1 796.96**
360	Askø	37	2.80
376	Falster	42 544	513.99
360	Fejø[2]	464	17.04
360	Femø	123	11.40
360	Lilleø	7	0.84
Flere	Lolland	62 578	1 244.97
360	Vejrø	5	1.60
	43 named and uninhabitated islands	•	4.33
	Bornholm and its islands	**40 807**	**589.68**
400	Bornholm	40 715	589.32
411	Christiansø[3]	92	0.21
	4 named and uninhabitated islands	•	0.14
	Funen and its islands	**485 672**	**3 489.80**
430	Avernakø	114	5.74
492	Birkholm	11	0.91
430	Bjørnø	32	1.48
420	Bågø	27	6.19
479	Drejø	64	4.28
479	Frederiksø	2	0.06
Flere	Fyn	456 128	2 988.62
410	Fænø	2	3.90
479	Hjortø	8	0.91
482	Langeland[1]	12 644	283.54
430	Lyø	101	6.21
482	Siø	15	1.43
479	Skarø	33	1.96
482	Strynø	202	4.92
479	Thurø	3 595	7.58
440	Tornø	4	0.24
479	Tåsinge	6 174	69.99
492	Ærø	6 516	87.51
	78 navngivne ubeboede øer	•	14.30
	Jutland and its islands	**2 568 529**	**29 710.03**
773	Agerø	26	3.49
727	Alrø	147	7.70
540	Als	50 682	311.39
707	Anholt	169	21.75
580	Barsø	22	2.66
851	Egholm	48	6.06
615	Endelave	176	13.23
563	Fanø	3 237	59.60
779	Fur	826	21.95
813	Hirsholm	3	0.17
766	Hjarnø	104	3.23
671	Jegindø	464	7.77
Flere	Jyske halvø	2 186 789	23 861.05
580	Kalvø	13	0.19
820	Livø	9	3.32
825	Læsø	1 839	112.86
561	Mandø	41	8.54
773	Mors	21 163	360.46
550	Rømø	618	86.56
741	Samsø	3 806	112.26
580	Store Okseø	4	0.08
727	Tunø	109	3.56
Flere	Vendsyssel-Thy	297 886	4 674.24
671	Venø	190	6.35
615	Vorsø	1	0.59
510	Årø	157	5.88
	111 named and uninhabitated islands	•	15.11

Note.: The area is based on map10 of the Danish Geodata Agency and Cadastre. In relation to the area in table 1, non-registered areas are also included here, e.g. lakes and roads.

www.statbank.dk/bef4 and are207

[1] Incl. Lindø. [2] Incl. Skalø. [3] Not included in the division of municipalities, administered by the Ministry of Defence.

Table 408 Land cover

	Km²	Per cent
Total area	**43 560.76**	**100.00**
Artificial surfaces	**4 246.46**	**9.75**
Urban fabric, industrial and commercial units[1]	3 154.63	7.24
Motorway	43.96	0.10
Expressway	9.10	0.02
Road broader than 6 metres	269.02	0.62
Road 3 – 6 metres	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
Technical sites	17.46	0.04
Cemeteries	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 heath land	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 wetlands	205.66	0.47
Peat bogs	875.60	2.01
Salt marshes	384.74	0.88
Water bodies	**670.59**	**1.54**
Lakes	616.49	1.42
Stream width 8-12 metres	49.42	0.11
Reeds	0.34	0.00
Fish farms	4.34	0.01
Unclassified	**682.65**	**1.57**

Note: The figures are based on different primary data covering the period from the end of the 1980s to the middle of the 1990s. Due to different compilation methods figures deviate from figures in table 1. The Primary data are the *land use map; Area Information System* (The Ministry of Environment). Further information can be obtained from: www.dmu.dk. The figures are a revision (not an update) of the collected data. The National Environmental Research Institute conducted the revision in 2001. The classification is based on the three-digit *CORINE land cover nomenclature*, as a fourth number is added for national purposes.

[1] Include city centres, human locality areas with low buildings, human locality areas with high buildings, built-up areas in rural areas and industrial areas. Roads are excluded.

Source: National Environmental Research Institute
www.dmu.dk

Table 409 Denmark's 15 largest lakes

Lake's name	Province	2012	Lake's name	Proviince	2012
		km^2			km^2
Arresø	Nordsjælland	39.7	Søndersø	Vest- og Sydsjælland	8.0
Esrum sø	Nordsjælland	17.4	Tystrup sø	Vest- og Sydsjælland	6.7
Mossø	Østjylland	16.5	Tømmerby Fjord	Nordjylland	5.7
Stadil Fjord[1]	Vestjylland	16.2	Julsø	Østjylland	5.6
Saltbæk Vig[1]	Vest- og Sydsjælland	15.9	Ulvedybet	Nordjylland	5.5
Tissø	Vest- og Sydsjælland	12.5	Tange sø	Østjylland	5.4
Furesø	Nordsjælland	9.4	Lund Fjord	Nordjylland	5.1
Skanderborg sø	Østjylland	8.5			

[1] Area of brackish water.

Source: Danish Geodata Agency

www.gst.dk

Table 410 Meteorological conditions

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
	°C												
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
2012	2.3	-0.5	5.7	6.3	12.1	12.7	15.9	16.7	12.9	8.8	6.1	0.2	8.3
Average daily temperature													
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
2012	4.2	2.2	9.1	9.7	16.3	16.4	19.9	21.1	16.1	11.3	7.9	2.2	11.4
Average nightly temperature													
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
2012	0.0	-4.0	2.8	2.9	8.0	9.2	11.9	12.5	9.9	6.3	4.0	-2.3	5.1
Maximum temperature													
1874-2012 Temp.	12.4	15.8	22.2	28.6	32.8	35.5	35.3	36.4	32.3	26.9	18.5	14.5	36.4
Measured during the years	**2005**	**1990**	**1990**	**1993**	**1892**	**1947**	**1941**	**1975**	**1906**	**2011**	**1968**	**1953**	**1975**
2012	10.6	15.1	19.1	20.7	28.3	25.0	29.6	32.9	27.5	20.9	12.2	10.0	32.9
Minimum temperature													
1874-2012 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	**1982**	**1942**	**1888**	**1922**	**1900**	**1936**	**1903**	**1885**	**1886**	**1880**	**1973**	**1981**	**1982**
2012	-10.4	-23.1	-4.2	-8.6	-3.4	1.1	5.1	5.6	0.5	-5.7	-6.4	16.5	-23.1
	degree-days												
Degree-days													
Normal (1961-1990)	522	491	461	337	198	84	43	47	128	243	361	469	3 382
2012	456	509	351	321	159	128	49	28	123	255	328	520	3 234
	mm.												
Precipitation													
Normal (1961-1990)	57	38	46	41	48	55	66	67	73	76	79	68	712
2012	79	31	21	55	36	98	91	69	98	93	65	78	819
	hours												
Bright sunshine, all DK													
Normal (1961-1990)	43	69	110	162	209	209	196	186	128	87	54	43	1 495
2012	73	106	164	159	252	182	224	215	115	90	44	45	1 674
	days												
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
2012	0.0	0.0	0.0	0.0	1.2	0.0	2.5	2.5	0.1	0.0	0.0	0.0	6.3
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
2012	14.2	18.8	3.2	6.1	0.3	0.0	0.0	0.0	0.0	2.5	2.1	20.1	66.0
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
2011	3.7	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	22.6
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
2012	17.8	13.0	7.5	16.7	9.9	17.7	21.0	18.1	23.0	26.3	23.4	23.0	228.3
Days with snow													
Normal (1961-1990)	12.0	9.3	4.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.3	5.1	33.0
2012	5.7	13.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	16.6	36.3

Note 1: *Degree days* are used as a measurement for heating needs in the heating season (1 September - 31 May).Degree days are shade-temperature days.

Note 2: < means less than 0.1, but greater than 0.0.

Source: Danmarks Meteorologiske Institut

www.dmi.dk

Table 411 Infrastructure for transport

1 January	2011	2012
	km	
Road network, total	**74 171**	**73 929**
Of which motorways	1 130	1 143
State roads	3 786	3 790
Municipality roads	70 344	70 098
Railway network, total	**2 667**	**2 650**
Of which Copenhagen Metro	21	21
Of which private railways	514	514
	number	
Stations and halts	545	541
Sea ports	113	113
Airports	23	23

www.statbank.dk/vej11, bane41 and skib101

Table 412 Infrastructure for transport, expenditure

	2010	2011
	DKK mio.	
Road network	**14 854**	**14 401**
Construction expenditure	6 975	7 838
Operation and maintenance	7 879	6 563
State railway network	**2 234**	**2 607**
New investments	490	1 211
Reinvestments	1 650	1 322
Other investments	94	74
Private railways	**8**	**6**
Sea ports	**368**	**. . .**
Constructions	350	. . .
Buildings	18	. . .
Airports	**356**	**. . .**
Great Belt Link	**66**	**99**
Øresund Link	**7**	**67**
Copenhagen Metro	**637**	**3 651**

www.statbank.dk/vej2, bane42, flyv2 and skib2

Table 413 Greenhouse gas emissions from the Danish economy

	1990	1995	2000	2005	2008	2009	2010
	1 000 tonnes CO2 equivalents						
Agriculture, forestry, fishing	15 285	14 292	13 102	12 448	12 407	11 873	11 985
Mining and quarrying	1 162	1 493	2 523	2 453	2 166	1 925	2 003
Manufacturing	8 203	9 295	9 251	7 780	7 096	5 838	6 051
Utility services	26 734	32 159	25 062	21 962	22 994	22 898	22 752
Construction	818	932	1 091	1 367	1 643	1 488	1 553
Trade and transport etc.	16 184	18 606	26 073	40 429	56 633	50 171	48 064
Information and communication	130	134	167	167	164	156	162
Financial and insurance	78	58	61	74	79	72	72
Real estate;rent.of non-res.b.	37	43	58	59	68	66	71
Dwellings	58	41	26	24	25	23	24
Other business services	257	258	289	387	413	389	402
Public adm., education, health	869	868	698	931	797	843	821
Arts, entertainm. oth.service	170	139	151	167	173	166	174
Industries, total	**69 985**	**78 319**	**78 551**	**88 248**	**104 657**	**95 908**	**94 135**
Households	9 761	10 775	10 257	10 092	9 085	8 838	8 677
Others	5 565	4 716	4 442	3 949	4 152	3 054	3 853
Total	**85 310**	**93 810**	**93 250**	**102 290**	**117 894**	**107 799**	**106 665**
Reduction due to biomass growth	- 836	- 916	1 915	1 069	-1 017	-3 603	-5 689
Greenhouse gas emissions from the Danish economy	**84 474**	**92 894**	**95 165**	**103 358**	**116 877**	**104 197**	**100 976**
Of which							
Danish operated ships' bunkering abroad	9 360	11 166	19 330	32 955	48 145	42 398	40 013
Danish operated planes' bunkering abroad	275	431	520	1 628	1 871	1 738	1 442
Total industries, excl. bunkering abroad	60 350	66 722	58 701	53 665	54 641	51 772	52 680
Emissions from biomass	4 587	5 725	6 899	10 728	12 324	12 628	14 860

Table 414 Extraction of raw materials

	1990	1995	2000	2011
	m^3 in thousands			
Extraction of raw materials, total	**33 976**	**34 210**	**40 945**	**36 176**
Extraction from land area:	**28 106**	**28 558**	**33 809**	**28 654**
Sand, gravel and stone	22 534	21 721	27 587	23 017
Quartz sand	186	191	479	297
Granite	811	662	199	202
Clay	462	739	788	377
Expanded clay	303	311	313	244
Moler	195	186	227	201
Chalk, limestone	2 924	4 049	3 405	2 362
Peat	399	259	247	200
Other raw materials	292	440	563	1 754
Extraction from sea area				
Sand, gravel, sand for land filling etc.	5 870	5 652	7 136	7 522

Source: National Forest and Nature Agency

www.statbank.dk/rst01 and rst3

Table 415 Greenhouse gas emissions from Danish transport activities

	1990	1995	2000	2008	2009	2010
	1 000 tonnes CO_2 equivalents					
Total	**22 168**	**25 730**	**34 005**	**65 269**	**58 347**	**55 998**
Road traffic, households	4 623	5 598	6 036	5 938	5 620	5 338
Road traffic, industries	4 804	5 165	5 343	7 079	6 675	6 903
Trains	294	305	230	241	235	247
Danish operated ships' bunkering in Denmark	811	1 106	935	918	740	723
Danish operated ships' bunkering abroad	9 360	11 166	19 330	48 145	42 398	40 013
Danish operated planes' bunkering in Denmark	2 001	1 959	1 610	1 076	941	1 332
Danish operated planes' bunkering abroad	275	431	520	1 871	1 738	1 442
	per cent					
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Road traffic, households	20.9	21.8	17.8	9.1	9.6	9.5
Road traffic, industries	21.7	20.1	15.7	10.8	11.4	12.3
Trains	1.3	1.2	0.7	0.4	0.4	0.4
Danish operated ships' bunkering in Denmark	3.7	4.3	2.7	1.4	1.3	1.3
Danish operated ships' bunkering abroad	42.2	43.4	56.8	73.8	72.7	71.5
Danish operated planes' bunkering in Denmark	9.0	7.6	4.7	1.6	1.6	2.4
Danish operated planes' bunkering abroad	1.2	1.7	1.5	2.9	3.0	2.6

Table 416 Link between total Danish CO2-emissions and the Kyoto-protocol

	1990	2010
	mio. tonnes	
Total CO2 emissions from the Danish economy (Environmental Accounts)	**74.0**	**108.6**
- Binding of CO2 in biomass	**5.5**	**20.5**
Biomass used as fuels	4.7	14.9
Further biomass growth	0.8	5.7
- Danish CO2 emissions abroad	9.4	40.7
Ships	9.2	39.2
Planes	0.3	1.4
- Other differences related to transports and cross border trade	1.9	0.8
= **Total emissions accounted for in the Kyoto Protocol**	**57.2**	**46.6**

Table 417 Sales of pesticides

	2009	2010	2011
	tonnes		
Sales of pesticide products[1]			
Total sale	**9 673**	**12 919**	**13 868**
Herbicides	4 872	8 368	9 154
Fungicides	1 452	1 753	2 008
Algicides	22	17	16
Insecticides	1 475	804	1 181
Slimicides for use in paper pulp	-	-	-
Products against pests on farm animals	17	60	68
Plant growth regulators	419	321	271
Combined fungicides and insecticides	12	9	15
Soil disinfectants	10	17	-
Rodenticides	275	585	337
Repellents	14	15	16
Products for the protection of woodwork	1 105	969	803
Of which active ingredients[2]			
Active ingredients, total	**3 267**	**4 321**	**4 741**
Herbicides	2 218	3 362	3 742
Fungicides	572	562	626
Algicides	4	3	16
Insecticides	74	50	49
Slimicides for use in paper pulp	-	-	-
Products against pests on farm animals	2	1	1
Plant growth regulators	270	203	171
Combined fungicides and insecticides	5	3	5
Soil disinfectants	9	16	-
Rodenticides	1	3	1
Repellents	4	4	4
Products for the protection of woodwork	108	115	125

[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

www.statbank.dk/pest2

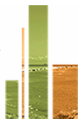


Table 418 Energy account for Denmark. 2011

	Crude oil and semi-manufactured oil	Coal, coke, etc.	Oil products	Natural gas	Other gas	Renewable energy resources	Electricity	District heating
	thousand tonnes			mio. Nm^3	thousand tonnes	TJ	GWh	TJ
Production	11 311	-	6 511	6 779	460	147 471	33 493	131 522
Imports	3 138	6 628	19 395	198	8	35 459	11 963	-
Total supply	**14 449**	**6 628**	**25 906**	**6 977**	**468**	**182 930**	**45 456**	**131 522**
Exports	7 117	385	5 057	2 071	95	2 726	10 375	-
Changes in inventories	52	618	1 698	912	-7	-	-	-
Distribution losses etc.	73	62	68	3	4	1 020	2 388	26 335
Total industries and households	**7 207**	**5 563**	**19 083**	**3 992**	**375**	**179 185**	**32 693**	**105 187**
Households	-	1	1 869	655	38	33 611	10 156	67 065
Total industries	**7 207**	**5 561**	**17 214**	**3 336**	**337**	**145 574**	**22 537**	**38 122**
Agriculture, forestry and fishing	**-**	**49**	**634**	**36**	**3**	**2 290**	**1 898**	**1 585**
Mining and quarrying	**-**	**5**	**24**	**653**	**0**	**845**	**69**	**20**
Manufacturing	**7 207**	**174**	**555**	**820**	**318**	**6 225**	**7 659**	**5 199**
Utility services	**-**	**5 333**	**187**	**1 538**	**1**	**135 284**	**1 213**	**1 824**
Electricity, gas, steam and air conditioning supply	-	5 333	151	1 521	0	134 925	608	-
Water supply, sewerage and waste management	-	-	36	17	1	358	605	1 824
Construction	**-**	**-**	**441**	**10**	**2**	**-**	**202**	**-**
Trade and transport etc.	**-**	**-**	**14 997**	**104**	**3**	**-**	**5 647**	**11 019**
Wholesale and retail trade	-	-	322	72	2	-	3 643	7 629
Transportation	-	-	14 658	8	0	-	1 319	855
Accommodation and food service activities	-	-	17	24	1	-	685	2 535
Information and communication	**-**	**-**	**35**	**14**	**0**	**-**	**1 009**	**1 527**
Financial and insurance	**-**	**-**	**13**	**9**	**-**	**-**	**311**	**970**
Real estate activities and renting of non-residential buildings	**-**	**-**	**17**	**3**	**0**	**-**	**127**	**334**
Dwellings	**-**	**-**	**4**	**3**	**0**	**-**	**8**	**350**
Other business services	**-**	**-**	**97**	**33**	**1**	**-**	**570**	**3 486**
Knowledge-based services	-	-	37	18	1	-	409	1 855
Travel agent, cleaning, ao. operational services	-	-	60	15	0	-	161	1 632
Public administration, education and health	**-**	**-**	**180**	**91**	**5**	**930**	**3 082**	**9 686**
Public adm., defense and compulsory social security	-	-	109	13	2	121	414	1 355
Education	-	-	28	35	2	298	1 192	3 723
Human health and social work	-	-	42	44	1	512	1 476	4 609
Arts, entertainment and other services	**-**	**-**	**30**	**20**	**2**	**-**	**742**	**2 122**
Arts, entertainment and recreation activities	-	-	11	15	1	-	550	1 626
Other service activities	-	-	19	5	1	-	192	496
Act. of households as empl. of domestic personnel	-	-	-	-	-	-	-	-
Of which: Bunkering abroad by Danish-operated ships	-	-	12 796	-	-	-	-	-
Of which: Bunkering abroad by Danish-operated planes	-	-	348	-	-	-	-	-

[1] The Danish operated ships and planes' bunkering abroad is part of the industry Transport.

www.statbank.dk/ene1n

Table 419 Gross energy consumption

	1970	1980	1990	2000	2011
	TJ				
Total industries and households	**838 381**	**894 135**	**904 604**	**1 048 703**	**1 293 471**
Households	329 344	325 343	292 284	286 517	283 363
Total industries	**509 037**	**568 791**	**612 320**	**762 186**	**1 010 107**
Agriculture, forestry and fishing	**42 524**	**57 588**	**58 724**	**58 053**	**48 084**
Mining and quarrying	**5 424**	**3 908**	**13 322**	**30 395**	**28 625**
Manufacturing	**182 392**	**182 764**	**178 879**	**188 511**	**143 281**
Utility services	**5 685**	**6 875**	**8 693**	**10 681**	**13 953**
Electricity, gas, steam and air conditioning supply	948	1 914	2 724	2 953	5 035
Water supply, sewerage and waste management	4 737	4 961	5 969	7 728	8 918
Construction	**13 303**	**13 027**	**15 605**	**16 688**	**21 074**
Trade and transport etc.	**219 991**	**231 181**	**263 674**	**383 373**	**669 184**
Wholesale and retail trade	47 864	56 794	52 839	47 895	51 349
Transportation	166 133	166 534	202 239	326 931	608 569
Accommodation and food service activities	5 994	7 853	8 597	8 547	9 266
Information and communication	**5 227**	**7 059**	**7 857**	**8 686**	**11 061**
Financial and insurance	**2 200**	**3 881**	**4 533**	**3 841**	**4 194**
Real estate activities and renting of non-residential buildings	**622**	**877**	**1 447**	**1 789**	**2 152**
Dwellings	**865**	**1 622**	**2 198**	**992**	**717**
Other business services	**5 300**	**8 035**	**10 029**	**10 902**	**13 190**
Knowledge-based services	2 547	4 412	6 339	6 050	7 216
Travel agent, cleaning, and other operationel services	2 753	3 623	3 689	4 852	5 974
Public administration, education and health	**20 766**	**44 620**	**39 811**	**39 251**	**44 849**
Public administration, defence and compulsory social security	5 177	15 651	10 265	9 474	9 828
Education	6 601	12 496	12 177	11 853	15 477
Human health and social work	8 989	16 473	17 369	17 925	19 544
Arts, entertainment and other services	**4 738**	**7 352**	**7 547**	**9 023**	**9 744**
Arts, entertainment and recreation activities	2 628	4 545	5 078	6 326	6 793
Other service activities	2 111	2 807	2 469	2 697	2 951
Activities of households as employers of domestic personnel	0	0	0	0	0
Of which: Bunkering abroad by Danish-operated ships	91 506	96 821	117 645	242 966	516 958
Of which: Bunkering abroad by Danish-operated planes	1 448	2 360	3 777	7 144	15 134

[1] The Danish operated ships and planes' bunkering abroad is part of the industry Transport.

www.statbank.dk/ene3n

Table 420 Manufacturers' energy consumption. 2009

	Solid fuel	Liquid fuel	Gas	Electricity	District heating
	thousand GJ				
Total[1]	**11 253**	**15 130**	**44 780**	**24 222**	**4 922**
Extraction of gravel and stone	890	421	678	187	3
Mining support service activities	0	8	9	19	17
Production of meat and meat products	89	225	1 819	1 470	107
Processing and preserving of fish	488	432	1 162	440	62
Dairy products	0	593	3 860	772	1
Grain mill and bakery products	3	61	1 217	758	80
Other food products	1 220	3 323	2 958	2 377	512
Beverages	0	67	1 411	521	61
Tobacco products	0	27	120	89	17
Textiles	0	14	370	388	42
Wearing apparel	2	3	6	17	14
Leather and footwear	22	1	13	14	0
Wood and wood products	1 639	233	249	604	232
Paper and paper products	1 637	179	1 742	877	34
Printing etc.	0	16	206	499	132
Oil refinery etc.	0	766	13 879	1 139	586
Basic chemicals	0	205	1 638	1 637	428
Paints and soap etc.	607	139	2 266	863	76
Pharmaceuticals	0	193	928	1 173	677
Rubber and plastic products	17	78	588	1 653	104
Glass and ceramic products	0	10	951	437	28
Concrete and bricks	3 824	6 433	3 152	1 543	44
Basic metals	9	60	1 292	706	77
Fabricated metal products	131	1 015	1 429	1 551	324
Computers and communication equipment etc.	12	17	254	199	30
Other electronic products	2	4	34	182	76
Electric motors, etc.	1	8	81	118	40
Wires and cables	0	5	73	157	27
Household appliances, lamps, etc.	0	3	76	91	46
Engines, windmills and pumps	9	103	836	1 301	449
Other machinery	110	329	589	697	206
Motor vehicles and related parts	9	33	233	364	37
Ships and other transport equipment	3	34	363	273	58
Furniture	525	50	183	533	62
Medical instruments, etc.	0	7	25	90	91
Toys and other manufacturing	3	11	56	355	42
Repair and installation of machinery and equipment	0	26	36	129	99

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.

Table 421 Production of renewable energy

	1990	2000	2011
	TJ		
Total production	**47 688**	**77 519**	**134 774**
Solar energy	100	335	784
Wind power	2 197	15 268	35 187
Hydro power	101	109	61
Straw	12 481	12 220	19 756
Wood chips	1 724	2 744	11 291
Firewood	8 757	12 432	20 469
Wood pellets	1 575	2 984	2 411
Wood wastes	6 191	6 895	7 523
Biogas	752	2 912	4 106
Waste combustion[1]	10 508	17 870	21 202
Biodiesel	-	-	2 965
Fish oil	744	49	784
Geothermal heat[2]	2 558	3 701	8 234

[1] In 2008 the compilation method was changed with regard to the calculation of energy for waste.
[2] Heat pumps and geothermal power.

Source: Danish Energy Agency
www.ens.dk