

## Key Indicators 2003

Denmark's National Strategy for Sustainable Development  
A shared future – Balanced development

The Danish Government, November 2003

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# Indicators for sustainable development

This is the first update of Denmark's indicators for sustainable development. The original version was published up to the World Summit on Sustainable Development in Johannesburg in 2002.

The indicators have been selected in order to reflect objectives and activities in Denmark's National Strategy for Sustainable Development, "A shared future – balanced development". They have moreover been selected on the basis of suggestions and opinions prevalent in public debate on sustainable development. The indicators are an important element in ongoing reports on development and results in relation to targets and activities. The indicators are part of the basis for assessment in connection with ongoing adjustments of targets and activities in Denmark's National Strategy for Sustainable Development. The indicators show developments within the Strategy's overall targets and principles for achieving sustainable development, and targets and activities in specific, selected action areas.

The indicators elucidate and illustrate developments in relation to important targets or activities in the National Strategy for Sustainable Development. The indicators are updated annually.

The indicators fall into two parts:

- An overall set of key indicators which describes developments and results in relation to the Strategy's 8 overall objectives and principles. This set comprises 14 indicators.
- A detailed, specific set of indicators which address individual action areas, describing developments and results in relation to some of the Strategy's targets and activities. This set comprises 90 indicators.

This publication presents the set of key indicators relating to the 8 overall targets and principles in the Danish National Strategy for Sustainable Development.

Please use the following link if you are interested in viewing the 90 background indicators for sustainable development and in reading more about the indicators:

<http://www.mst.dk/indikator/SD/>

## What are indicators used for?

Efforts have been made to present the indicators so they are technically comprehensive yet easy to understand. Hopefully, the indicators can be of use to politicians, business organisations, trade unions, researchers, green organisations, and citizens alike.

To an increasing extent, indicators are being used and developed as a tool for decision-makers and the general population. The development of environmental indicators, sector indicators and indicators for sustainable development is going on at international, regional, as well as local levels. Some of the most important actors at international level are: the OECD, the UN Commission on Sustainable Development (CSD), and the European Commission (Eurostat and the European Environment Agency). Other important actors in the development of indicators for sustainable development include the World Bank, World Resources Institute, Worldwatch Institute, Baltic 21 Institute for Sustainable Industry, the Nordic Council of Ministers, and a number of NGOs.

The Danish set of indicators is inspired by international indicator sets, which means it is possible to compare developments in Denmark with developments in other countries within relevant areas. Work will be carried out regularly to incorporate indicators developed at international level where relevant, and Denmark will strive to ensure that international indicators for sustainable development are meaningful, from a Danish point of view. However, the Danish Government places great importance on Denmark having its own set of indicators linked to the Danish Strategy for Sustainable development.

In Denmark, several counties and municipalities are in the process of establishing indicators for sustainable development as part of local Agenda 21 efforts. The national indicator set can serve as useful inspiration for these regional and local efforts. Thus, the opportunity for comparison of developments at local and national levels is improved.

The indicators contain information in a less detailed and often a more aggregated form than data and statistics. Well-known examples of indicators often used to describe developments in society are gross national product or the unemployment rate, which can describe a country's economy and labour market. Within the environment field, a well-known indicator is, for example, application frequency for pesticides, which can describe the impact of pesticides on the environment. Indicators for sustainable development are broader in perspective than traditional economic or environment indicators, because they also shed light on e.g. consumption, resources, genuine saving, and the decoupling of environmental degradation from economic growth.

The Danish indicators are based on a solid scientific foundation. Assumptions and the method used are well documented, and the underlying data basis is available. Data has been adjusted in accordance with accepted practice. For instance, a number of indicators must be adjusted using weather indices. The set of indicators will be developed in step with improvements in the data basis or as new targets and activities become important in achieving sustainable development.

# Trends

The Danish vision of sustainable development is based on eight objectives and principles:

- The welfare society must be developed and economic growth must be decoupled from environmental impacts
- There must be a safe and healthy environment for everyone, and we must maintain a high level of protection
- We must secure a high degree of biodiversity and protect the ecosystems
- Resources must be used more efficiently
- We must take action at an international level
- Environmental considerations must be taken into account in all sectors
- The market must support sustainable development
- Sustainable development is a shared responsibility, and we must measure progress

## **1. The welfare society must be developed and economic growth must be decoupled from environmental impacts**

Denmark has enjoyed good and stable economic development. From 1990 to 2002, GDP per capita grew by approximately 24.5 per cent. This corresponds to an average rate of increase of approximately two per cent per year.

For many years, increases in GDP and increasing negative impacts on the environment have been closely linked. This link has been decoupled for emissions of greenhouse gases and acidifying substances. Overall emissions of greenhouse gases have fallen slightly during the period 1990 to 2001. Emissions of acidifying substances have fallen considerably, however, most significantly in regard to emissions of sulphur. At the same time, GDP has increased steadily since 1993, indicating that economic growth and environmental impacts have been decoupled.

Assessment of the value of economic, social, and environmental resources is the basis for the indicator "Genuine Savings". "Genuine Savings" constitute an economic indicator for the development of the total wealth of a society. When combined with the other indicators, "Genuine Savings" can provide a picture of whether the development during any given year is sustainable. "Genuine Savings" in Denmark have increased slightly throughout the last six to seven years. It should, however, be noted that the "Genuine Savings" indicator is still being developed, and that it must be supplemented by analyses of what constitutes critical impacts on health, nature, and the environment. In particular, it should be noted that no value can

be assigned to a number of environmental impacts, and therefore these impacts are not included in the indicator.

Seen in an international context, Denmark is characterised by having a very high rate of employment. Since the mid-1990s, employment in Denmark has risen significantly, with an additional 200,000 people (approx.) entering the labour market. This means that continued, significant growth in employment would be an ambitious goal. The challenge becomes even greater in view of the fact that demographic developments will, all other things being equal, reduce the labour force in the years to come. Despite this, increased employment rates and fewer unemployed people make up a substantial part of the Government's growth strategy.

## **2. There must be a safe and healthy environment for everyone, and we must maintain a high level of protection**

Danes are growing older again. In the last seven years, the average life expectancy has increased as much as it did during the preceding 21 years. Men have added 2 years to their average life expectancy from 1995 to 2002, whereas the corresponding increase for women is 1.4 years. The increase has been so significant that in 2000, the average life expectancy of Danish men corresponded to the target figure for 2004. In 2000, women's life expectancy was as high as the 2002 target figure. Only three other EU Member States have experienced greater increases in the average life expectancy after 1995.

In 2001, Denmark's total emissions of greenhouse gases were at 1990 levels after having peaked in 1996. Emissions have fallen within a number of sectors. For example, emissions from agriculture have fallen by approximately 16 per cent, which is mainly due to the implementation of the Action Plans for the Aquatic Environment. Emissions from households have fallen by approximately 15 per cent, which is mainly due to more efficient energy consumption, and emissions from the waste sector fell by almost 11 per cent during the period. By contrast, emissions from the transport sector grew by almost 18 per cent. Emissions from the commercial sector have gone up by almost seven per cent, which is due to e.g. greater energy consumption. In order to reduce Denmark's emissions of greenhouse gases, the goal is to incorporate all reduction opportunities for greenhouse gases in the most cost-effective manner. There is a need for special efforts to reduce emissions of greenhouse gases from the transport sector and the commercial sector.

Classification of chemicals is an important part of the work carried out to ensure a high level of protection, so that the environment is

safe and healthy for everyone. A common EU classification of substances creates a basis for common risk management. The number of classified substances and related substances has doubled since 1993. At the end of 2002, the classified substances accounted for a total of approximately 7,000 substances out of the 100,000 substances, which are or have been available on the European market.

### **3. We must secure a high degree of biodiversity and protect the ecosystems**

A high degree of biodiversity must be secured, and ecosystems must be protected. One goal is to increase the extent of Danish woodland areas so that forests will cover 20-25 per cent of Denmark. From 1950 to 2000, the total woodland area has grown steadily. The area of original forest has fallen, while the area of deciduous forest is now once again on the rise after having fallen for some time. The objective is to increase the area of deciduous forest and to retain the area of original forest. The total area accounted for by meadows, dry grassland, moors, and marshlands (open natural habitats) has diminished during the period 1950 to 2000. In 2000, the total area accounted for by these natural habitats was only approximately half of the corresponding 1950 figure. The efforts to increase the area of the open natural habitats: meadow, dry grassland, and moor have not had any discernable impact in the latest inventories.

### **4. Resources must be used more efficiently**

For some indicators, Danish consumption of resources has fallen. After a period of strong growth in energy consumption from 1995-96, both energy consumption and consumption of drinking water have fallen up until 2002. There has been a relative decoupling of energy consumption and consumption of drinking water from economic growth during the period 1996 to 2002. Waste volumes fell during the period 1996 to 1999. This means that the waste intensity (waste generation seen in relation to GDP) also fell during the same period. However, the waste intensity increased again from 1999 to 2000 as a result of greater waste volumes. After 2000, there has once more been a small decrease.

### **5. We must take action at an international level**

Denmark lives up to the goal of contributing to combating poverty in the world. The Danish objectives for promoting global, sustainable development are closely linked to the international development tar-

gets set by the UN, and they support these targets. In the years from 1992 to 2002, Denmark contributed approximately 1 per cent of its GNI every year, which is far more than the UN target of 0.7 per cent of GNI. In 2002, environmental assistance accounted for approximately 0.07 per cent of GNI, and this figure has increased in 1998 to 2002.

### **6. Environmental considerations must be taken into account in all sectors**

Concern for nature and the environment within the different sectors of society is elucidated in the indicator report by showing the environmental profile for selected sectors. In 2003, profiles for the energy and transport sectors will be shown.

As regards the *energy sector*, CO<sub>2</sub> emissions have been reduced throughout the 1990s and up to the present. This is partly due to greater use of natural gas and renewable energy. More efficient use of combined heat and power generation has also reduced CO<sub>2</sub> emissions. The energy sector almost exclusively emits the greenhouse gas CO<sub>2</sub> and accounts for more than 45 per cent of Denmark's total emissions of greenhouse gases. In total, energy consumption accounts for almost 80 per cent of Denmark's emissions of greenhouse gases. Total energy consumption has increased by 8 per cent since 1988, while emissions have increased by almost 3 per cent. The energy produced is used in a more efficient manner. Energy consumption and emissions have not increased at the same rate as economic growth during the period. As regards acidifying substances, SO<sub>2</sub> emissions from the energy sector have fallen by 86 per cent during the period 1990 to 2001. NO<sub>x</sub> emissions have been reduced by approximately 26 per cent.

Within the *transport sector*, total transport activities increased during the period 1990 to 2001. Passenger transport and freight transport both increased by 14 per cent during the period 1990-2001. The total growth is primarily due to increases in motorised road transport. Transport-sector emissions of greenhouse gases (CO<sub>2</sub>) increased by 14 per cent during the period 1990 to 2001. Transport emissions of CO<sub>2</sub> have closely followed the rate of economic growth. In Danish towns, traffic is the greatest source of air pollution. Emissions of SO<sub>2</sub> have fallen by 72 per cent as a result of the rules on lower sulphur content in diesel. The pollutants from traffic are mainly nitrogen oxides (NO<sub>x</sub>), hydrocarbons (NMVOC), sulphur dioxide (SO<sub>2</sub>), and carbon monoxide (CO). Despite mounting traffic, emissions of NO<sub>x</sub>, NMVOC, and CO are falling. This is due to the 1990 requirement stipulating that new petrol-powered cars must have

catalytic converters. During the period from 1988 to 1998, the number of cars with catalytic converters rose from zero to more than 50 per cent of all petrol-powered cars.

For many emissions, the link between economic growth and the environmental impact of transport has been successfully decoupled. It is likely that emissions of NO<sub>x</sub> and NMVOC will continue to fall until all petrol-powered cars are fitted with a catalytic converter. New and more restrictive requirements for different types of cars will enter into force in 2005.

### **7. The market must support sustainable development**

Sustainable development and economic growth are not mutually exclusive. Enterprises, which focus on the environment, tend to have a competitive edge.

The increase in the number of eco-labelled products available shows that there is a market for green products. This also shows that the market can be used to support sustainable development. The increase in the number of eco-labelled products has been particularly pronounced in recent years, and in 2003, more than 2,633 eco-labelled products are widely available. The most commonly seen eco-label is the Swan label (the Nordic eco-label), but the Flower (the EU eco-label) is making good progress. In 1999, only two products bore the Flower, and in 2000 the corresponding number was seven. Since then, the number of Flower-labelled products has grown to somewhere between 60 and 80. The number is expected to reach around 100 by the end of 2003.

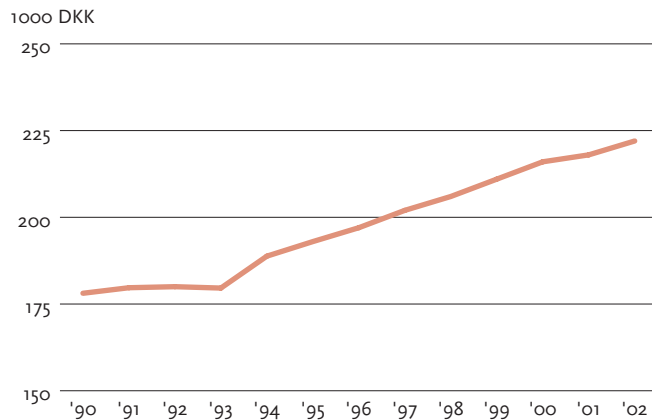
### **8. Sustainable development is a shared responsibility, and we must measure progress**

Environmental management is one way of integrating environmental concerns into production. In this manner, enterprises assume responsibility for ensuring a more environmentally friendly production chain. Since 1994, the number of enterprises with certified environmental management in the form of EMAS and ISO 14001 has increased year by year. Denmark is among the European countries which have the greatest number of EMAS registered enterprises compared to the size of the population (surpassed only by Austria). Developments in the number of EMAS and ISO registered enterprises show that it is possible to use environmental concern as a competitive parameter.

## **Key Indicators 2003**

## GDP per capita

Source: Statistics Denmark



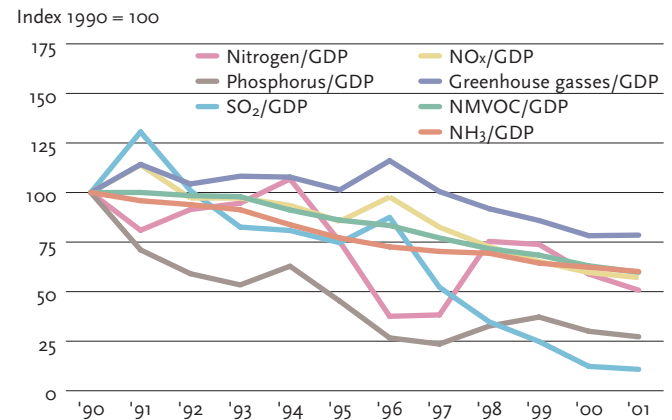
This indicator elucidates Denmark's economic development. The figure shows the gross domestic product at constant prices per capita during the period 1990 to 2002. The use of constant prices means that account has been taken of changed prices, which in turn means that these figures reflect the actual development of production in Denmark.

The development of GDP per capita reflects market trends. From 1990 to 1993, production per capita was approximately DKK 180,000. From 1990 to 2002, GDP per capita rose by slightly more than 24.5 per cent. This corresponds to an average rate of increase of approximately 2 per cent per year. In 2002, GDP per capita was DKK 222,132.

As GDP is expected to continue to grow, it is central that economic development be decoupled from increasing pressure on resources. Within a number of areas, the link between economic growth and increased pollution has been successfully decoupled. Even so, great challenges remain within other areas that are important to health, nature, and the environment. The increase in GDP per capita indicates growing wealth. Increasing wealth improves the opportunities for ensuring sustainable development in future – e.g. in the form of greater savings and more investments in cleaner technology.

## Decoupling illustrated by environmental impacts for 4 factors (greenhouse gases, runoffs of nutrients into the sea, emissions of acidifying compounds and emissions to air) in relation to GDP

Source: The National Environmental Research Institute, Denmark; Statistics Denmark



This indicator elucidates developments in relation to the objective of decoupling economic growth from impacts on the environment. The figure shows the development in emissions of greenhouse gases, runoffs of nutrients into the sea (N and P), and emissions of acidifying compounds (SO<sub>2</sub> and NH<sub>3</sub>) as well as emissions to air (NO<sub>x</sub> and NMVOC) in relation to GDP.

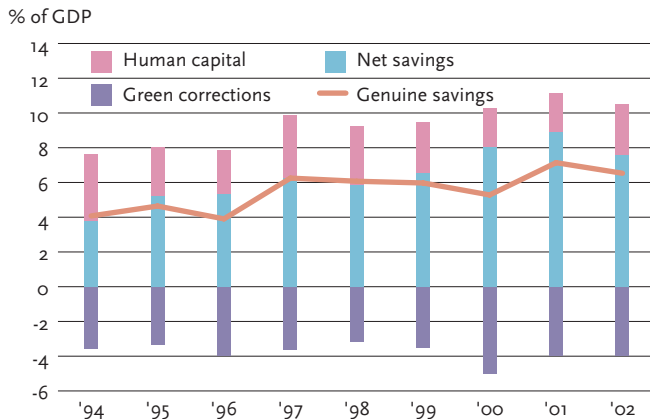
Generally speaking, emissions of nitrogen and phosphorus have fallen since 1990. There is, however, a correlation with water runoffs, which means that considerably increased water runoffs from 1997 to 1999 have also caused greater nitrogen runoffs during that period. Emissions of greenhouse gases have fallen slightly during the period 1990 to 2001. Emissions of acidifying substances have fallen considerably, however, most significantly in regards to emissions of sulphur. At the same time, GDP has grown steadily since 1993, which indicates that economic growth and impact on the environment have been decoupled. Besides emissions of NMVOC caused by humans, there are several other NMVOC sources. Thus, the total impact on the environment is larger than the impact illustrated in the figure. Since the effort for decoupling is focused on emissions caused by humans, these emissions are illustrated in the figure.

Generally speaking, developments within selected parameters are headed in the right direction in relation to the objective of decoupling growth and environmental impacts.



## Genuine Savings

Source: The Ministry of Finance



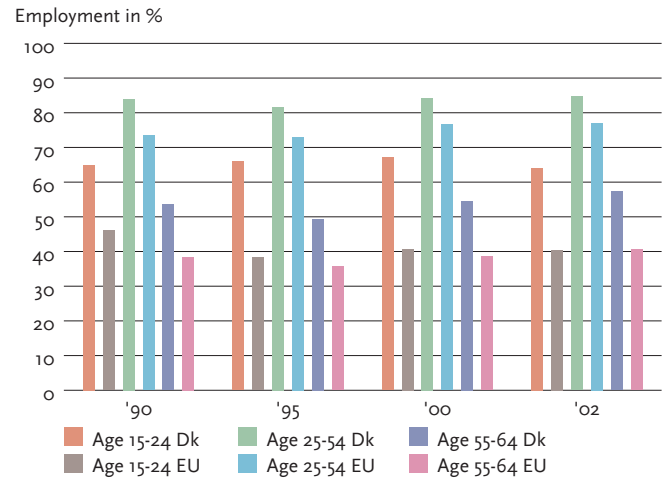
“Genuine Savings” is an economic indicator for developments in the total wealth of society. This means that the concept is used to determine the value of economic, social and environmental resources. When combined with the other indicators, genuine savings can provide a picture of whether development during any given year is sustainable. The “Genuine Savings” indicator covers the financial net savings (i.e. savings less depreciations) plus savings in terms of human capital (e.g. in the form of training at workplaces), less the use of natural resources (oil and gas reserves) and the negative effects of emissions of greenhouse gases and a number of pollutants. All of these elements are assigned a monetary value. However, the “green corrections” only incorporate the effects on nature and environment to which a monetary value can be assigned. This means that a number of effects are not included in the scope of this indicator.

The “Genuine Savings” have shown a slight upwards tendency throughout the last six to seven years. No calculations for this indicator can be made before 1994 onwards. The main reason that the green corrections increased in 2000 is the higher price assigned to extraction of oil and gas in the North Sea, brought on by the increase in the price of crude oil. This factor is, however, more or less cancelled out by increasing financial net savings.

The objective is to consistently maintain positive genuine savings, so that the financial net savings and the savings in terms of human capital provide a contribution which surpasses the value of the green corrections. It should be noted that the “Genuine Savings” indicator is still being developed, and that it must be supplemented by analyses of what constitutes critical impacts on health, nature, and the environment. In particular, it should be noted that no value can be applied to a number of environmental impacts, and so these impacts are not included in the indicator.

## Employment analysed by age groups

Source: The OECD, Employment Outlook



This indicator elucidates economic and social aspects of sustainable development. Denmark is characterised by having a very high rate of employment when compared to other countries. This means that further, significant growth in employment would be an ambitious goal. The challenge becomes even greater in view of the fact that demographic developments will, all other things being equal, reduce the size of the labour force in the years to come.

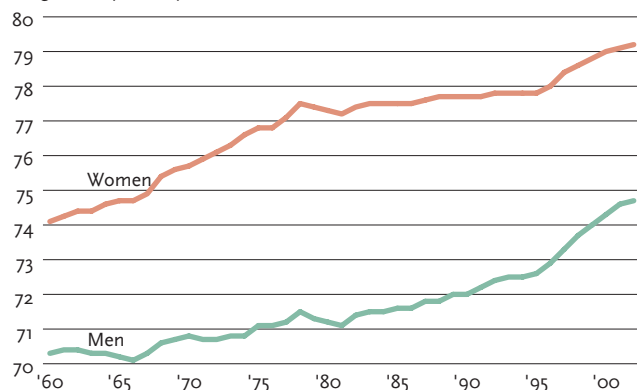
Increasing the employment rate is important in order to ensure economic growth and a sustainable fiscal policy. That is, to ensure a budget surplus that will cover long-term increases in expenditure linked to an aging population, without having to tighten the fiscal policy. Increased employment constitutes an important contribution towards realising the objectives of the Government's overall growth strategy, which is to create the best possible basis for growth in production and employment through growth-focused structural policies.

If the Government's economic policy strategy is to be realised, increased labour-market participation and lower unemployment rates must create the basis for increased employment corresponding to additional employment for 60,000 individuals during the period 2003 to 2010. At its meetings in Lisbon and Stockholm, the European Council established ambitious targets for employment rates within the EU up until 2010. The targets are an employment rate close to 70 per cent of the population within the working age, an employment rate of more than 60 per cent for women, and an employment rate of 50 per cent among the 55 to 64 year-old age bracket. Denmark already meets these objectives, but has, as was mentioned above, established national objectives for further increases in the employment rate.

## Average life expectancy (men and women compared)

Source: Statistics Denmark

Average life expectancy



This indicator elucidates aspects of the state of health in Denmark.

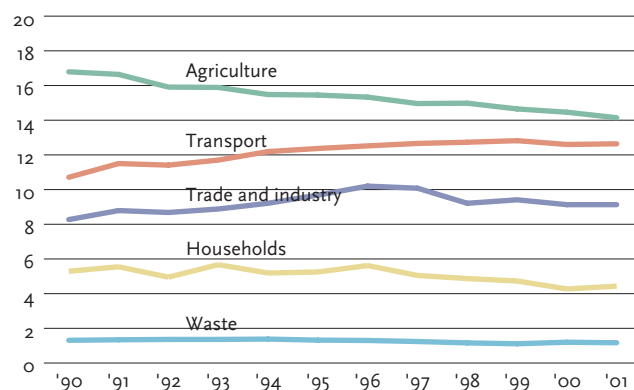
The average life expectancy of Danish men has gone up from 70.3 years in 1960 to 74.7 years in 2002. The average life expectancy of women has risen from 74.1 years in 1960 to 79.2 years in 2002. Men added 2 years to their average life expectancy from 1995 to 2002, whereas the corresponding increase for women was 1.4 years. During the last seven years, the average life expectancy has increased as much as it did during the preceding 21 years.

The increase has been so significant that in 2000, the average life expectancy of Danish men corresponded to the target figure for 2004. In 2000, the women's life expectancy was as high as the 2002 target figure. Only three other EU Member States have experienced greater increases in life expectancy after 1995.

## Gross emissions in million tonnes CO<sub>2</sub> equivalents analysed between industry, transport, households, agriculture, and waste

Source: The National Environmental Research Institute, Denmark

Mill. tonnes



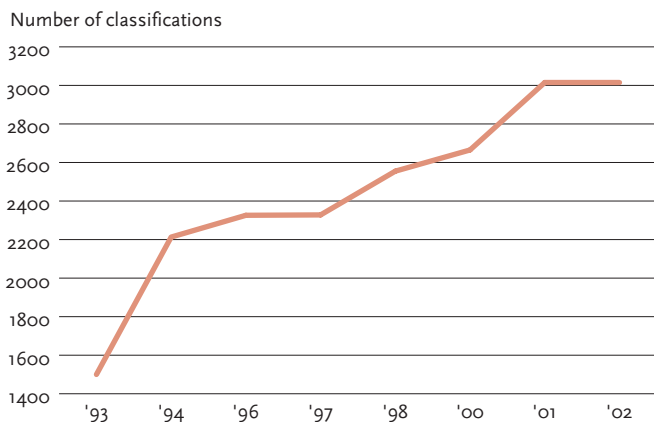
This indicator shows emissions of greenhouse gases from Danish sectors. The distribution by sector corresponds to the one used in "Climate 2012", the Ministry of Energy and Environment, March 2001. Denmark's base year under the Kyoto Protocol comprises the 1990 emissions of CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> as well as the 1995 emissions of HFCs, PFCs, and SF<sub>6</sub>. This indicator does not extend to Greenland and the Faeroe Islands.

In 2001 the total emissions corresponded to 1990 levels after having peaked in 1996. Emissions from the transport sector grew by 18 per cent. Emissions from agriculture fell by approximately 16 per cent, which is mainly due to the implementation of the Action Plans for the Aquatic Environment. These plans served to reduce nitrogen emissions, thereby also reducing nitrous oxide (laughing gas) emissions. Emissions from the commercial sector have increased by around 7 per cent, which is partly due to greater energy consumption, and partly due to the increasing use of HFCs as a cooling agent as an alternative to cooling agents which degrade the ozone layer. Emissions from households are down by approximately 15 per cent, which is mainly due to more efficient energy consumption and to the fact that consumers are changing from individual heating systems which use oil to systems which use natural gas, or to district heating. Emissions from the waste sector, which in this context extends only to methane emissions from landfills, are down by around 11 per cent. This is mainly due to the 1997 ban on depositing degradable waste and to the increasing collection of methane from landfills for energy purposes.

The objective is to incorporate all reduction opportunities for greenhouse gases in the most cost-effective manner possible. As the figure shows, there is a particular need to reduce emissions within the transport sector and the commercial sector.

## Number of chemicals which have been classified

Source: The Danish Environmental Protection Agency



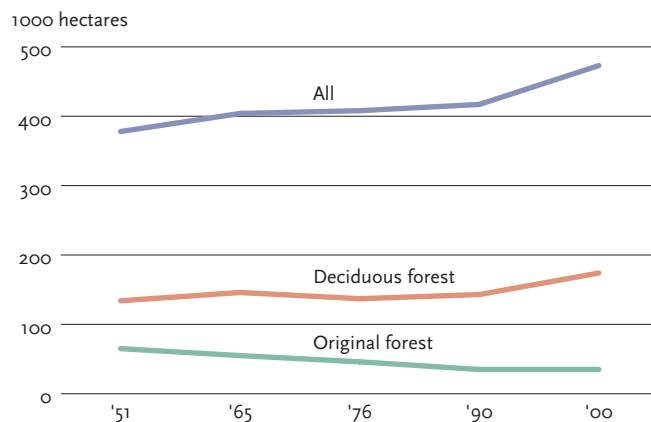
This indicator elucidates the efforts to maintain a high level of protection, so that the environment is healthy and safe for everybody. The figure illustrates developments in common EU classifications of substances and substance groups. The figure does not include substances which have been self-classified by manufacturers. At the end of 2002, approximately 7,000 substances had been classified out of the total of 100,000 substances available on the European market, either now or in the past.

The figure shows that the number of classified substances and related substances has doubled since 1993. The number of completed classifications is subject to sudden increases, as larger numbers of classifications are completed at the same time. This work is still in progress.

Classification is an integral part of the overall work undertaken to assess and regulate chemical substances. Common EU classification creates a basis for common risk management, including bans on the sale of substances and products which are carcinogenic, mutagenic, or hazardous to embryos.

## Area of natural habitats (deciduous forest, original forest)

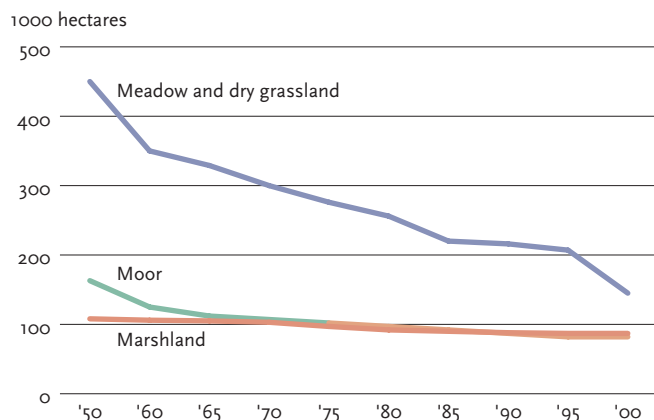
Source: Nature and Environment – Selected Indicators 2001



See figure 8b.

## Area of natural habitats (meadow, dry grassland, moor, and marshland)

Source: *Nature and Environment – Selected Indicators 2001*



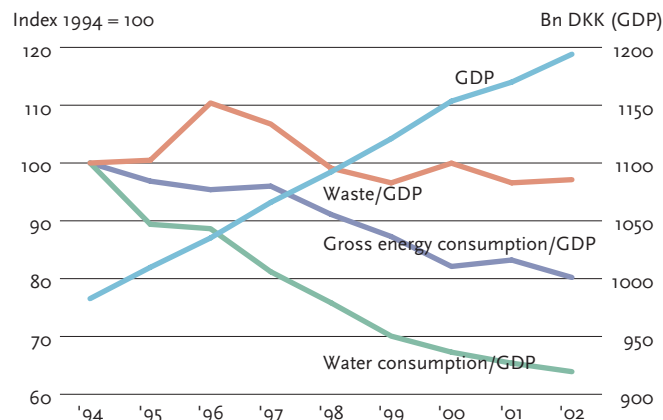
This indicator elucidates developments in relation to the objective of securing a high degree of biodiversity and protecting ecosystems. The figure 8a shows developments from 1950 to 2000 as regards the area of original forest, deciduous forest, and total forest. The figure 8b shows the development during the period 1950 to 2000 for these natural habitats.

From 1950 to 2000, the total forest area increased steadily, whereas the area of deciduous forest changed relatively little. We also see that the area of original forest has fallen. The difference between the total area and the deciduous area mainly comprises imported conifers (particularly common spruce). The figure 8b shows that all three of the open natural habitats have dwindled in extent during the period 1950 to 2000. Indeed, the total area of the three natural habitats covered only half as much land in 2000 as it did in 1950.

One objective is to increase the extent of Danish woodland areas so that forests cover 20–25 per cent of Denmark. The forest area is being increased, and at the same time, the intention is to increase the area of deciduous forest as well as to retain the area of original forest. Thus, we see that the latest inventories show that the area of deciduous forest is once again on the rise. The intention is to increase the area accounted for by the open natural habitats: meadow, dry grassland, and moor. This has not, however, yet had a discernible impact.

## Resource flows for 3 factors (energy consumption, drinking water consumption, and total waste volume in relation to GDP)

Source: *The National Environmental Research Institute, Denmark; the Danish Energy Authority; Geological Survey of Denmark and Greenland*



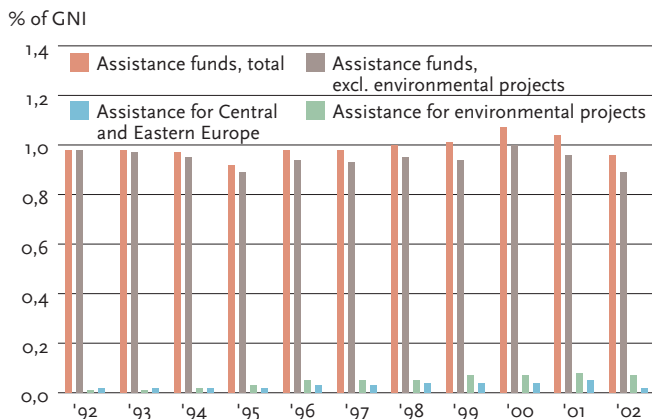
This indicator elucidates developments in relation to the objective of using resources more efficiently. The figure shows the correlation between developments within selected consumption patterns, total waste volume, and economic growth.

The waste volumes diminished during the period 1996 to 1999. This means that the waste intensity (waste production in relation to GDP) also fell during this period. Even so, the waste intensity rose again from 1999–2000 due to greater waste volumes, however, after 2000, the waste intensity fell once more. Following a period of strong growth from 1995–96, both energy consumption and consumption of drinking water have fallen significantly up until today. At the same time, GDP grew steadily.

There has been a relative decoupling of energy consumption and drinking water consumption from economic growth during the period 1996 to 2002. The relative decoupling between waste volumes and economic growth is primarily the result of a reduction in waste volumes from power plants and the building and construction sector. If these two sectors are not included in calculations, we see that waste volumes grew from 1997–98 onwards.

## Assistance funds as a percentage of GNI, in total and analysed between development and environmental assistance, and assistance to neighbouring countries

Source: The Ministry for Foreign Affairs and the Environmental Protection Agency



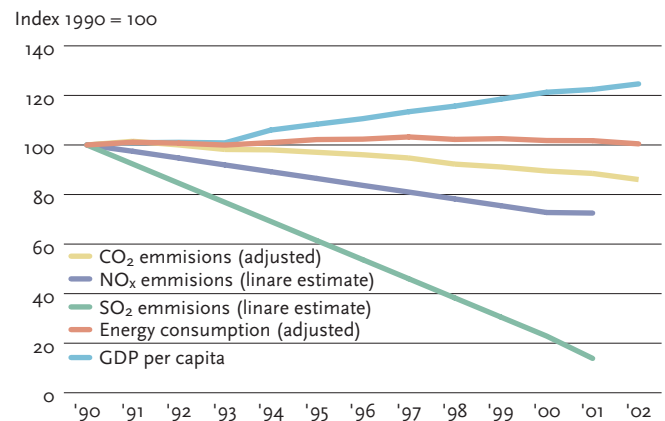
This indicator elucidates Denmark's international efforts. Denmark's international efforts within the assistance area have been calculated in accordance with the calculation rules used by the OECD development committee, the DAC. In addition to this, the figure shows the relative funds spent on environmental assistance (as a percentage of GNI) and other development assistance (total assistance excluding environmental assistance) as a percentage of GNI. Environmental assistance can be funded through official development assistance and the MIFRESTA framework.

During the period 1992 to 2002, Denmark contributed approximately 1 per cent of its GNI every year, which is far more than the UN target of 0.7 per cent of GNI. In 2002, environmental assistance accounted for approximately 0.07 per cent of GNI, and this figure has increased during the years 1998-2002.

With its extensive international efforts, Denmark lives up to the objective to contribute to combating poverty in the world. The Danish objectives for promoting global, sustainable development are closely linked to the international development targets set by the UN, and they support these targets.

## Environmental profile of the energy sector, illustrated by energy consumption and emissions of NO<sub>x</sub>, CO<sub>2</sub> and SO<sub>2</sub> in relation to GDP

Source: The National Environmental Research Institute, Denmark



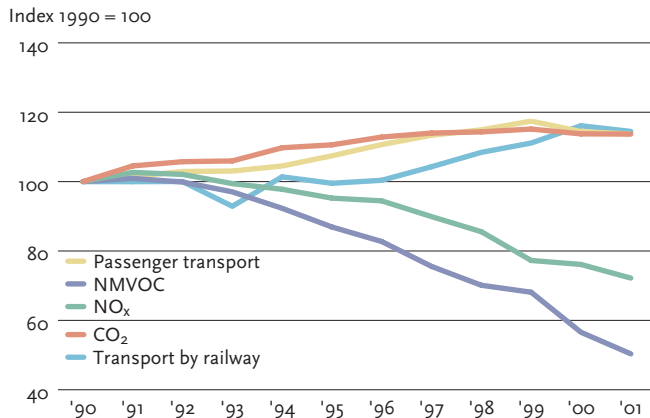
This indicator elucidates developments in relation to the objective of taking into account environmental considerations in all sectors. This indicator presents a picture of the emissions of greenhouse gases and acidifying substances from the energy sector. The energy sector almost exclusively emits the greenhouse gas CO<sub>2</sub>, and this accounts for more than 45 per cent of Denmark's total emissions of greenhouse gases. In total, energy consumption accounts for almost 80 per cent of Denmark's emissions of greenhouse gases. This sector is also behind the most significant discharges of acidifying substances, e.g. SO<sub>2</sub>.

Since 1990, the corrected gross energy consumption has grown only marginally. Economic growth has not caused a corresponding increase in energy consumption. This is due to a significant drop in energy intensity (defined as the gross energy consumption per million GDP). The corrected CO<sub>2</sub> emissions arising from energy use in 2002 have been established at 52.4 million tonnes, whereas the corresponding figure in 2001 was 53.9 million tonnes. This corresponds to a reduction of 2.7 per cent. In relation to 1990, the reduction was 13.9 per cent. During the period 1990-2001, CO<sub>2</sub> emissions from the energy sector fell by 86 per cent, and in 2001, emissions of NO<sub>x</sub> from the energy sector were 26 per cent lower than in 1990. Among other things, the reduction in CO<sub>2</sub> emissions during the 1990s was brought about by greater use of natural gas and renewable energy. More efficient use of combined heat and power has also reduced CO<sub>2</sub> emissions.

Danish emissions of all greenhouse gases (including CO<sub>2</sub>) must be reduced so that the average level of emissions in the years 2008-2012 is 21 per cent lower than the annual emissions in 1990. Total energy consumption has increased by 8 per cent since 1988, while emissions have increased by almost 3 per cent. The energy produced is used in a more efficient manner. SO<sub>2</sub> emissions have been decoupled from economic growth, particularly due to flue gas decontamination and less sulphurous fuels. The target for reducing SO<sub>2</sub> emissions was reached in 1998.

## Environmental profile of the transport sector, as illustrated by energy consumption, emissions of NO<sub>x</sub>, CO<sub>2</sub> and NMVOC in relation to freight and passenger transport performance

Source: The National Environmental Research Institute, Denmark; Statistics Denmark



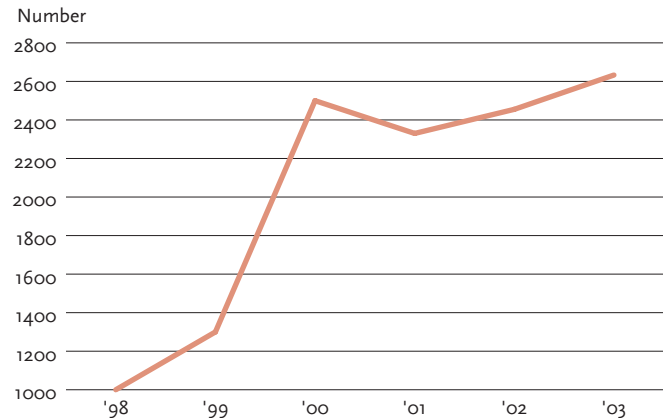
This indicator elucidates developments in relation to the objective of taking into account environmental considerations in all sectors. The pollutants from traffic are mainly nitrogen oxides (NO<sub>x</sub>), hydrocarbons (NMVOC), sulphur dioxide (SO<sub>2</sub>), and particles and carbon monoxide (CO). In Danish towns, traffic is the main source of air pollution. CO<sub>2</sub> emissions are primarily linked to the climate issue.

During the period 1990 to 2001, total passenger transport work (number of passenger km per year) rose by 14 per cent. Passenger transport by passenger cars accounts for more than 70 per cent. Freight transport work (tonnes km) grew by 16 per cent during the period 1990 to 2001. The total growth was primarily caused by increases in motorised road transport. The transport sector accounts for approximately 16 per cent of Denmark's total emissions of greenhouse gases (CO<sub>2</sub>). During the period from 1990-2001, emissions have gone up 14 per cent. Despite mounting traffic, emissions of NO<sub>x</sub> and NMVOC are decreasing. This is due to the 1990 requirement stipulating that new petrol-powered cars must have catalytic converters. During the period 1988 to 1998, the number of cars with catalytic converters grew from zero to more than half of the total stock of cars.

For many emissions, the link between economic growth and the environmental impact of transport has been successfully decoupled. It is likely that emissions of NO<sub>x</sub> and NMVOC will continue to fall until all petrol-powered cars have a catalytic converter. New and stricter requirements on various types of vehicles will enter into force in 2005. Transport emissions of CO<sub>2</sub> have, however, followed the growth of freight and passenger transport performance.

## Number of eco-labelled products, analysed as the number of trade names

Source: Eco-labelling Denmark



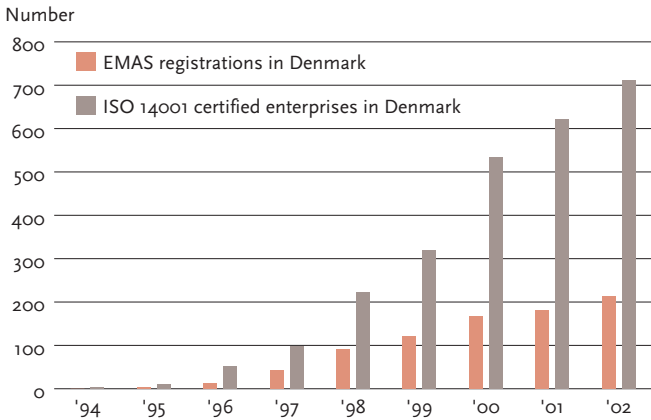
This indicator elucidates developments in the number of eco-labelled products. The figures comprise the number of Swan-labelled and Flower-labelled products. A manufacturer can sell more than one product under the same license, because, for instance, the same products are sold via different retailers. For some products under the same license, the question is also whether the products, technically, are very similar, however with different uses and therefore different trade names, such as e.g. paints for either walls or ceilings, and small or large batteries.

From 1998 to 2003, the number of eco-labelled products widely available to the consumer has risen steadily. The most commonly seen eco-label is the Swan label, but the Flower is making good progress. In 1999, only two products bore the Flower, and in 2000 the corresponding number was seven. Since then, the number of Flower-labelled products has increased to somewhere between 60 and 80 products. This increase is expected to reach a total of 100 products by the end of 2003. In other words, an increase of 25 per cent from the 2002 level. The increase in the number of Flower-labelled products started accelerating in earnest in connection with the eco-label campaign launched in 2001. The fall in the number of products from 2000 to 2001 is due to a fall in Swan-label licenses for printing paper as a result of big manufacturers no longer finding such licenses worthwhile. However, there has still been an increase in numbers for several other groups of products, and in 2003 2,575 products bear the Swan label.

The increase in the number of eco-labelled products available shows that there is a market green products, and that the market can be used to support sustainable development.

## Number of EMAS and ISO registered enterprises

Source: The Danish Environmental Protection Agency



This indicator is to elucidate developments in the ability of enterprises to use their environmental efforts as a competitive parameter. The EMAS (Eco-Management and Audit Scheme) is the common European scheme for environmental management and environmental auditing. ISO 14001 (replaced BS 7750 in 1996) is the international standard for environmental management. The numbers in the figures are accumulated numbers which show the number of EMAS registered and ISO 14001 certified enterprises in Denmark. Many EMAS registered enterprises are also ISO 14001 certified.

Since 1994, the number of enterprises using environmental management has gone up every year.

The objective is to ensure that enterprises can increasingly use their environmental efforts to give them a competitive edge. Developments in the number of EMAS registered and ISO 14001 certified enterprises are contributing to this end. Denmark is among the European countries which have the greatest number of EMAS registered enterprises compared to the size of the population (topped only by Austria). Developments in the number of EMAS and ISO 14001 registered enterprises show that it is possible to use environmental concerns as a competitive parameter.