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Nordic Council of Ministers

Nordic Sustainable Development Indicators 2009





Nordic Sustainable Development Indicators 2009

ANP 2009:733

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ISBN 978-92-893-1882-2

Cover: PAR NO 1 A/S

Layout: PAR NO 1 A/S

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Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and three autonomous areas: the Faroe Islands, Greenland, and Åland.

Nordic cooperation has firm traditions in politics, the economy, and culture. It plays an important role in

European and international collaboration, and aims at creating a strong Nordic community in a strong Europe.

Nordic cooperation seeks to safeguard Nordic and regional interests and principles in the global community. Common Nordic values help the region solidify its position as one of the world's most innovative and competitive.

Nordic Sustainable Development Indicators 2009

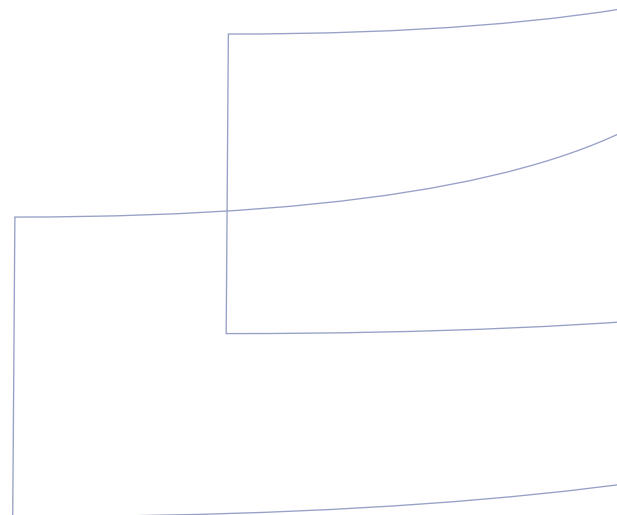
This set of sustainable development indicators for the Nordic countries was developed in order to monitor the goals set out in the strategy *Sustainable Development – New Bearings for the Nordic Countries. Revised edition with goals and priorities 2009–2012*.

Sustainable development includes three interdependent dimensions: the economical, the social and the ecological. The strategy has four chapters and sets out goals and prioritised areas for Climate and renewable energy; Sustainable production and consumption; The Nordic welfare state as a tool for sustainable development; Education and research, participation of the population and local sustainability strategies. The purpose of the indicators is to give pointers as to how the Nordic countries are performing in these areas.

The indicators show that in many respects the situation in the Nordic countries has been favourable in recent years in terms of sustainable development. The Nordic economies have been growing but at the same time energy efficiency has improved and emissions of some pollutants have declined. This implies that there are some signs that environmental impacts have been decoupled from economic growth. Unemployment has been low, education levels are rising, organic agriculture and the use of eco-labels are widespread, and the share of renewable energy is increasing. Nonetheless the consequences of climate change have become more apparent, the environment continues to be negatively affected by pollution and unsustainable use of resources, and the number of people on sick leave or receiving disability benefit is growing. This makes overall development less sustainable.

Within the framework of the preparation of the Nordic Council of Ministers strategy for sustainable development, Nordic indicators were presented both in 2003 and in 2006 (www.norden.org).

Nordic Council of Ministers, April 2009



List of indicators

Given below is a list of indicators and how they refer to the various sections of the strategy.

There are no indicators referring to chapter 1, which is an introductory chapter.

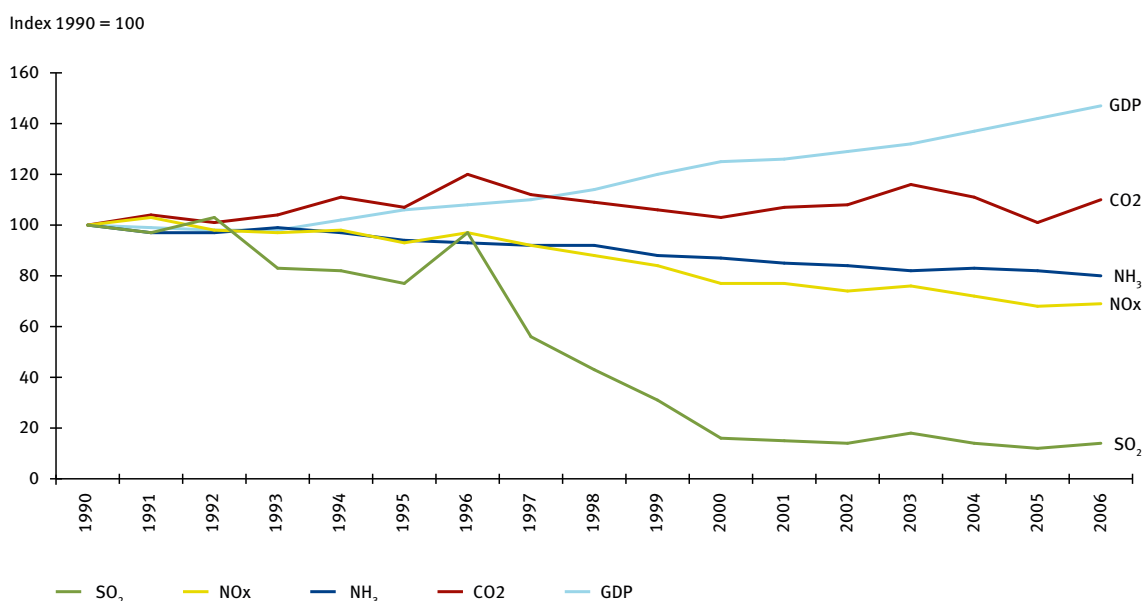
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Climate and renewable energy

(chapter 2 in the strategy)

Overall goal: Through the sustainable use of natural resources, the Nordic countries will respond to the challenges of climate change while conserving the region's biological diversity and increasing the welfare of the population. In order to reduce their contribution to the global temperature increase, the Nordic countries will significantly reduce their emissions of climate gases, nationally and within the framework of the UN and EU, and use energy more efficiently.

2.1 Decoupling environmental impact from economic growth (the Nordic countries as a whole)



Source: Nordic Statistical Yearbook 2008.

The graph shows emissions of greenhouse gases and acidifying substances relative to gross domestic product (GDP).

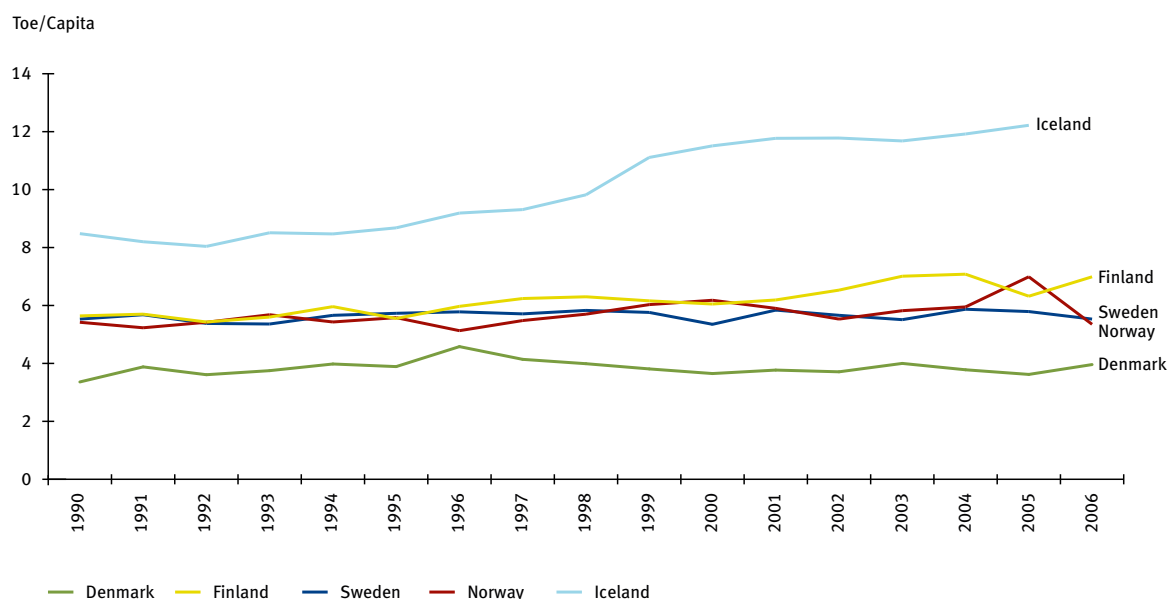
Economic growth was very high in the Nordic countries in the period 1994 to 2007. At the same time the countries were able to cut emissions of the acidifying substances NO_x and ammonia (NH₃), but not to the same degree as the cut in sulphur dioxides (SO₂). These were cut substantially in most of the Nordic countries from the early 1980s to the end of the 1990s. The biggest challenge is to reduce carbon dioxide (CO₂) emissions, also at the global level. Coal-fired power plants and the transport sector account for the majority of CO₂ emissions (see separate figure on greenhouse gases).

Emissions of acidifying compounds stem primarily from the combustion of fossil fuels and emissions from livestock farms. Acidification can lead to forest dieback and harm to animals and vegetation in water areas. The presence of lime may reduce or neutralise the impact of acidification. There is a great presence of lime in soil and in water in Denmark, which neutralises the effect of acidification. The critical load is not exceeded anywhere in Iceland and acidification is therefore not a problem.

Sweden and Norway are lime-deficient and are more vulnerable to the acidification of soil, lakes and watercourses. Relative to land area, Denmark has by far the highest emissions of acidifying substances.

The Nordic countries have committed themselves, through the Gothenburg protocol to reduce emissions of acidifying substances. When the protocol is fully implemented in 2010, Europe's sulphur emissions are due to be cut by at least 63%, NO_x emissions by 41%, VOC emissions by 40% and ammonia emissions by 17% compared to 1990.

2.2 Gross energy consumption (in toe per capita)



Source: Nordic Statistical Yearbook 2008.

Gross energy consumption shows how much energy is required to meet domestic energy consumption (including transport).

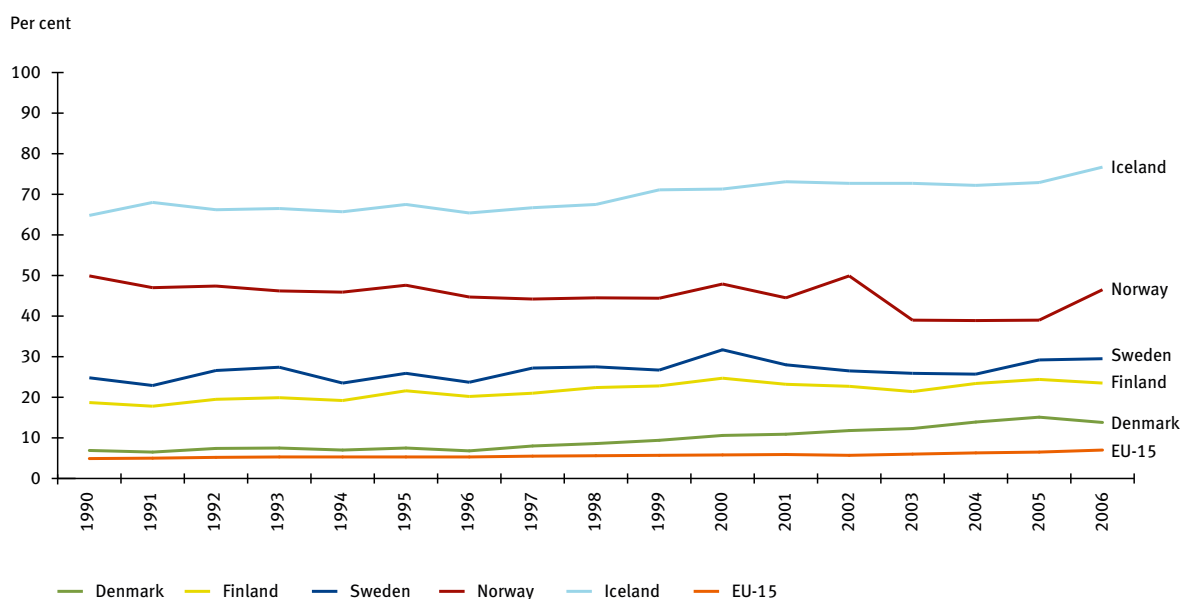
Gross domestic energy consumption per capita in the Nordic region displays relatively large differences from country to country. Some of the factors causing this include differences in climate and industrial structure. The steep increase in Iceland is due to the country's major investments in the expansion of power-intensive industries using renewable energy.

Despite economic growth, the Nordic countries did not use significantly more gross energy per capita in 2006 than in 1990, with the exception of Iceland and, partly, Finland.

The Nordic countries have a shared goal of making substantial progress in energy efficiency and energy saving. National campaigns and initiatives have been launched to reduce energy consumption by changing consumer behaviour, using energy-saving lighting, buying eco-labelled white goods, building low-energy houses and insulating existing buildings.

The Nordic countries have strengthened research co-operation in the climate, energy and environment area, and have promoted innovation in an effort to halt climate change. There are ongoing efforts to implement a common Nordic electricity market. The EU countries have agreed on a 20% increase in energy efficiency by 2020.

2.3 Renewables' share of gross energy consumption



Source: Nordic Statistical Yearbook 2008.

This indicator is the ratio between the energy produced from renewable energy sources and gross domestic energy consumption for a given calendar year.

Renewable energy is energy generated from natural resources. Renewable energy sources include hydropower, bio energy (wood, waste, etc.), geothermal, wind and solar power. Renewable energy does not include energy sources dependent on limited resources such as fossil energy and nuclear energy.

By international comparison, the Nordic countries receive a relatively large proportion of their primary energy from renewable resources. The share varies. It is close to 80% in Iceland, 45% in Norway, 40% in Sweden, a little less in Finland and about 15% in Denmark. The EU-15 Member States aim to increase renewables' share of primary energy consumption to 20% by 2020. There has not been a significant rise in the share of renewable energy in the Nordic region since 1990, except in Iceland and to some extent in Denmark.

The Nordic countries have different comparative advantages when it comes to renewable energy sources.

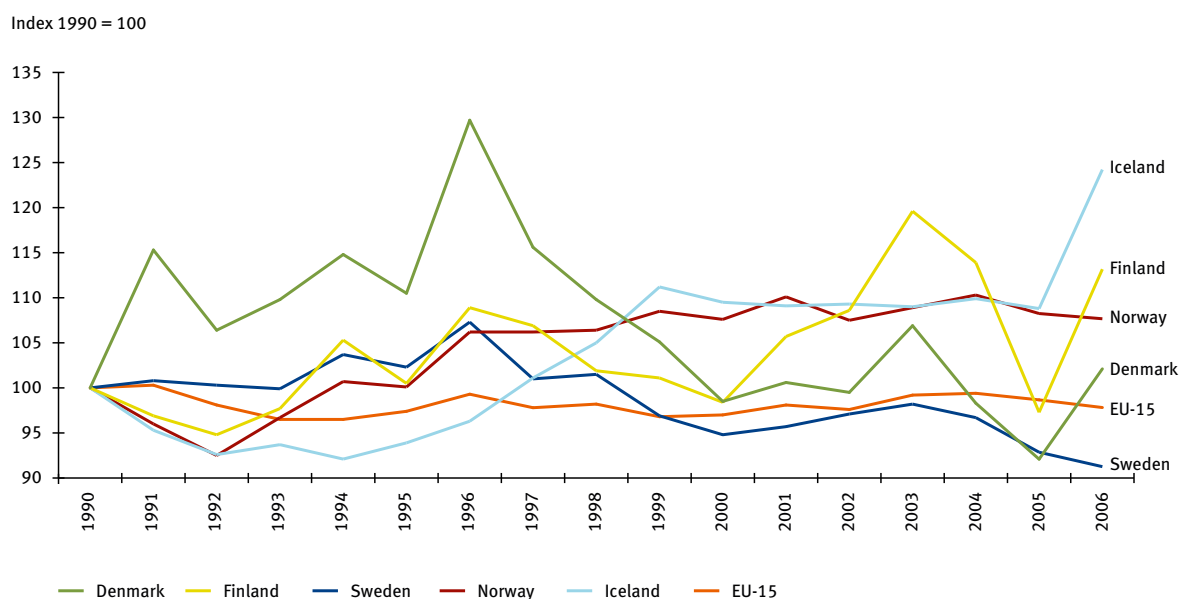
Denmark is an international leader in developing and producing windmills. Norway has plenty of hydropower, but the development potential for hydro is limited. Norway is also a leader in the production and development of solar

cells. Resources are also being spent on capturing and storing carbon from gas-fired power plants.

Both Sweden and Finland are pioneers in using bio energy and, together with Denmark, are investing substantial resources in developing second-generation transport biofuels from forestry and agriculture residues. The Nordic countries are testing the use of algae for energy production.

Iceland has a wealth of expertise in utilising geothermal energy. Nuclear power is a major source of energy in Finland and particularly in Sweden. Nuclear plants are not based on a renewable energy source because of limited access to uranium, but the generation of energy does not produce climate gases. Nuclear power poses challenges including security and waste disposal. Finland is in the process of increasing its energy supply from nuclear power.

2.4 Emissions of greenhouse gases (CO₂ equivalents)



Source: Nordic Statistical Yearbook 2008.

The indicator shows emissions of greenhouse gases in the Nordic countries in the period 1990 to 2006.

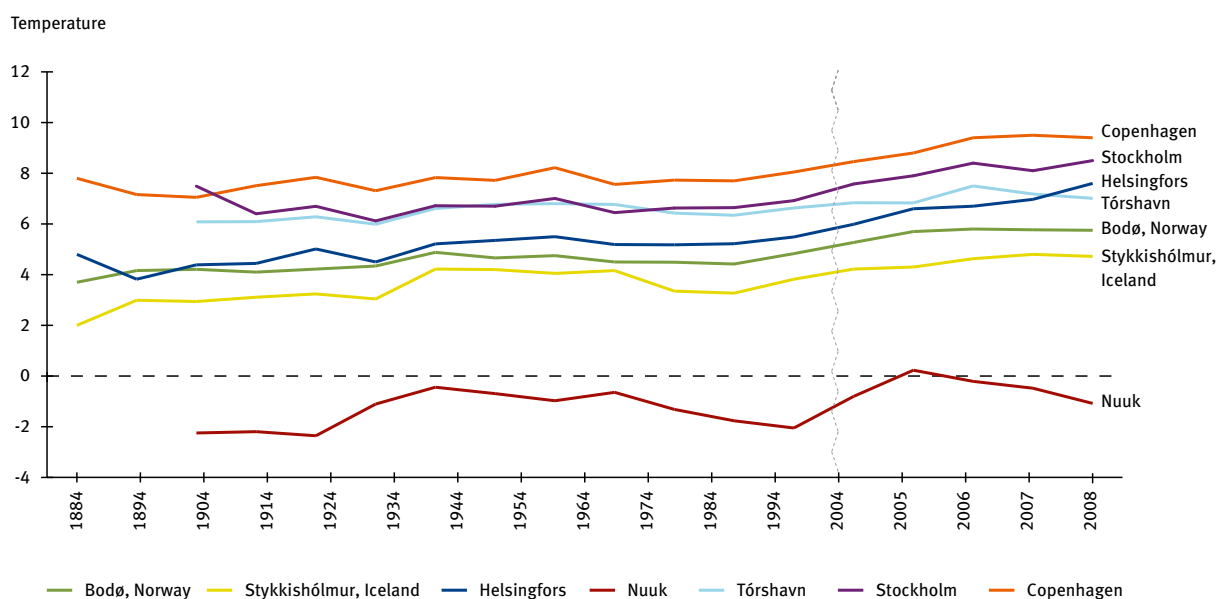
Global warming caused by emissions of greenhouse gases is the biggest challenge facing humanity this century. Carbon dioxide (CO₂) is the greenhouse gas with the greatest overall impact on the earth's energy balance. Carbon dioxide is generated as a by-product of the combustion of fossil fuels or the burning of vegetable matter. The Intergovernmental Panel on Climate Change (IPCC) estimates that CO₂ concentrations in the atmosphere due to human activity could increase twice or fourfold this century compared to pre-industrial levels if measures are not taken to reverse the trend. The consequences of such an increase in concentrations of emissions in the atmosphere will be dramatic.

Between 2000 and the present, the Earth's population has already discharged one third of all the CO₂ the atmosphere can absorb up to 2050 to keep eventual global warming to about two degrees above pre-industrial levels. Under the Kyoto Protocol, industrial countries have undertaken to ensure that, in the period from 2008 to 2012, overall emissions of greenhouse gases will be cut by at least 5% below 1990 levels. The EU nations have agreed to cut emissions to at least 20% below 1990 levels by 2020. In Iceland,

Finland, Norway and Denmark emissions of greenhouse gases in 2006 were above 1990 levels, while in Sweden emissions were below 1990 levels. There was a significant rise in emissions from 2005 to 2006 in Finland, Denmark and Iceland.

The consequences of climate change will become apparent in the longer term. Therefore it is a big challenge to create an understanding of the need for effective steps now to avoid future destruction and negative consequences for humanity's surroundings.

2.5 Temperature trends



Sources: DMI (Danmarks Meteorologiske Institut), Meteorologisk Institutt, Norge, Veðurstofa Íslands (Íslands Meteorologiske Institutt), Ilmatieteen laitos (Meteorologisk Institutt, Finland) SMHI, Sveriges Meteorologiska och Hydrologiska Institut.

The indicator shows the trend in average temperatures for selected weather stations in each of the Nordic countries in the period 1874 to 2008.

The curve shows the ten-year moving average from 1874 to 2004 and after that the temperature for each year up to and including 2008.

The figure shows increasing temperature over the last ten years. The average increase in the last ten years is 1.04° C higher than the average temperature for the whole period. The largest increase has been seen in Helsinki, Finland and the lowest in Tórshavn in the Faroe Islands. The temperature trend is a possible indicator of climate change and global warming. The warming of Arctic is one of the main climate challenges for the next ten years.

The Nordic countries aim to limit the rise in global temperature to 2° C over pre-industrial levels in order to avoid the most harmful effects of global warming. The UN's scientific committee, the Intergovernmental Panel on Climate Change (IPCC), acknowledges that global warming is caused by human activity.

The Nordic countries will work for an ambitious global climate agreement that includes all of the world's countries and lives up to the IPCC's recommendations. They are aware that the industrialised countries have to take the lead and recognise their share of the responsibility for reducing global emissions of greenhouse gases. At the same time, the Nordic countries have taken steps to meet the consequences of global warming and cooperate on initiatives to adjust to different climatic conditions.

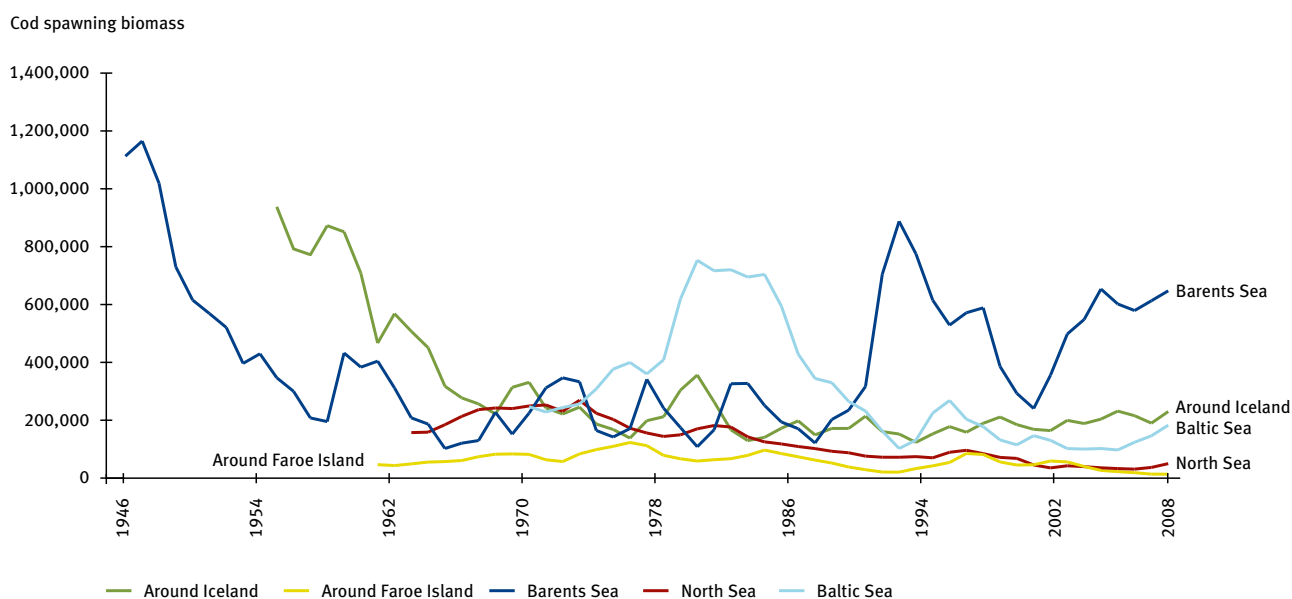
Sustainable production and consumption

(chapter 3 in the strategy)

Overall goal: The Nordic countries will promote the transition to a more sustainable form of development, combining economic growth in the region's economies with reduced damage to the environment. Emissions of hazardous substances should cease as soon as possible – or be gradually reduced if they cannot be phased out immediately – with the aim of minimising concentrations of these substances in the environment.

Vigorous efforts are required in order to change consumption patterns and reduce the environmental impact of consumption and production. A more effective use of energy and natural resources, including reuse and recycling, should be stimulated. The Nordic Region will increase efforts to develop environmental technology and eco-innovation, and steps need to be taken to make the region a driving force within the EU and globally by demonstrating successful Nordic initiatives.

3.1 Cod-spawning biomass in Nordic waters



Source: ICES.

The indicator shows the development in cod-spawning biomass in Nordic waters in the period 1946 to 2008.

There has been an increase in cod-spawning biomass in all Nordic waters in the period 2003 to 2008, except for the stock around the Faroe Islands. The increase is positive, but needs to be seen in a long-term perspective with historically far larger stocks.

Cod is the clearest example of a stock under severe pressure in the North Sea. The spawning stock biomass was at approx. 250,000 tonnes in the early 1970s, but now it is approximately 50,000 tonnes. Spawning biomass has shown an increase since 2006, but remains below a sound level.

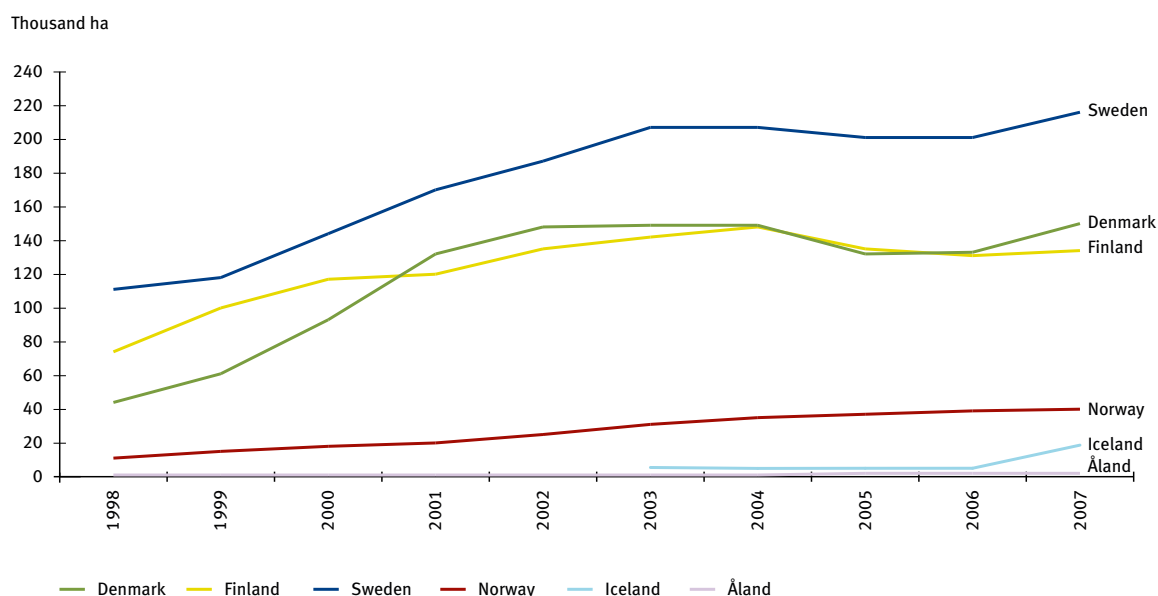
In the Baltic Sea, the historically low cod-spawning stock biomass increased by 86,000 tonnes in the period 2005 to 2008, and is now 183,000 tonnes. However, although an important improvement, this level is not high compared to estimates of 700,000 tonnes in 1979. ICES classifies the stock as being harvested sustainably, but it is still below target.

The stock of Northeast Arctic cod has full reproductive capacity and is being harvested sustainably. Cod recruitment in 2008 is expected to be above the long-term mean, while it is expected to be below the long-term mean both in 2009 and 2010.

In 2008, cod-spawning stock biomass around Iceland amounted to 230,000 tonnes, which is above the historic low (123,000 tonnes in 1993), but below the desired long-term average of 304,000 tonnes.

The outlook is worst for the stock around the Faroe Islands. The most recent ICES assessment based on estimates of the spawning stock biomass indicates that the reproduction capacity of the cod stock is in trouble, even without fisheries. In 2005, the spawning stock biomass was at the same level as before the collapse in 1990, and was further reduced in 2008. ICES therefore recommends a cessation of fisheries and that a recovery plan be put in place aimed at rapidly rebuilding the stock.

3.2 Organic farming



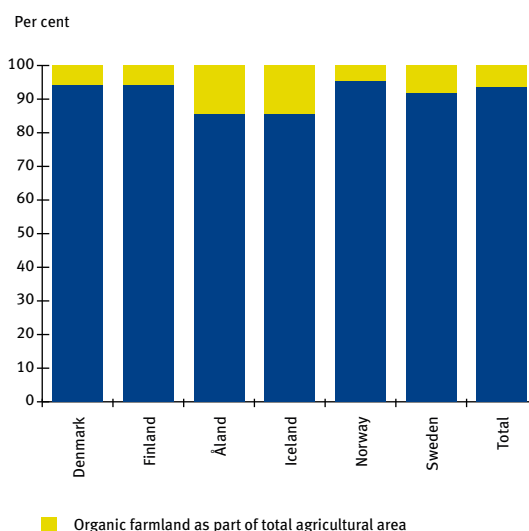
Sources: Eurostat, Åland and Vottunarstofan Tún in Iceland.

This indicator shows the trend in the area of organic farmland in the Nordic countries in the period 1998 to 2007.

Total organic farmland in the Nordic region has increased from 240,000 hectares in 1998 to 560,000 hectares in 2007. Iceland has experienced strong growth from 5,500 hectares in 2003 to 18,600 hectares in 2007. In Finland organic farmland increased by 9% from 2005 to 2007. The 134,000 hectares of organic farmland in Finland represents 6% of total arable land.

All the Nordic countries have seen a significant increase in the area of organic farmland over the last 15 years. In Sweden, where the increase has been highest, the total area of organic farmland is 8% of the total agricultural area, while in Denmark it is around 6%. In comparison, in the old EU Member States (EU-15), organic farmland constitutes 4% of the total agricultural area.

The area of arable land differs a lot between the Nordic countries. It is interesting to see how large a proportion of total arable land is organic farmland. The figure below shows this.

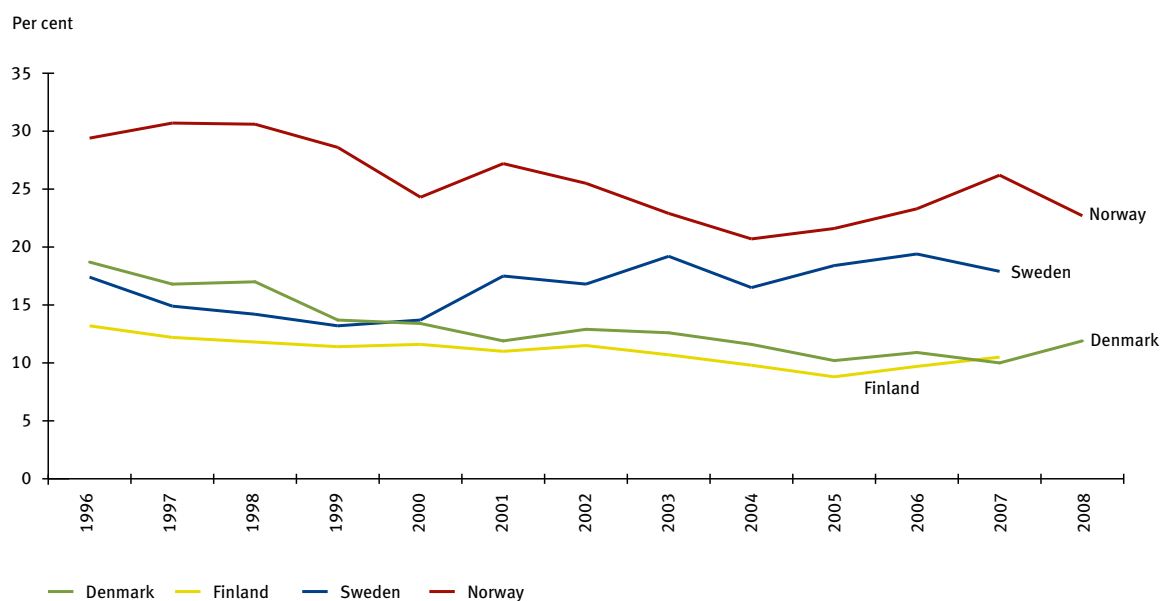


Country	Total arable land	Organic land	Percentage
Denmark	25 329 km ²	1500 km ²	6%
Finland	22 873 km ²	1340 km ²	6%
Åland	139 km ²	20 km ²	14%
Iceland	1 290 km ²	186 km ²	14%
Norway	8 584 km ²	400 km ²	5%
Sweden	26 480 km ²	2160 km ²	8%

The figure and table show that the relative share of organic farmland of the total is highest in Iceland and Åland, but at the same time they have the smallest arable areas of all the countries. Sweden is out in front when comparing 'the heavily arable' countries of Denmark, Finland and Sweden. The Norwegian government has set an aim that 15% of arable land should be organic by 2015, while Sweden wants at least 20% of arable land to be organic by 2010. Approximately 6% of Denmark's arable land was organic in 2008, and a substantial increase is expected in the years to come.

Organic farming causes less pressure on the environment than traditional farming.

3.3 Forest trees damaged by defoliation



Sources: Institute for World Forestry ('The Conditions of Forests in Europe, 2008 executive report').

Forest & Landscape, CU, Denmark.

The graph shows defoliation as a percentage of trees monitored in classes 2-4 (moderate to serious defoliation or death) in the period 1996 to 2007/08.

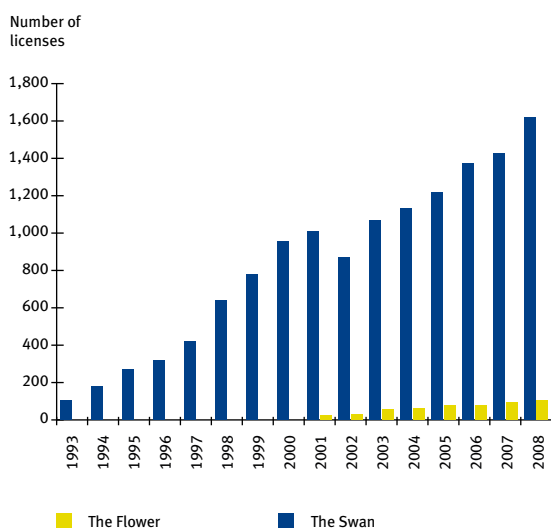
Defoliation is one of the best indicators of the state of health of forests. The weather, pollution and forestry's choice of tree species in relation to forest growth conditions influence the health of trees. In Sweden, defoliation of trees in classes 2-4 was at about the same level in 2007 as in 1996, whereas in the other countries it was a little lower.

The figure covers all tree species in each country, which means that different species are monitored. The area and trees monitored vary from country to country. The conditions in Norway, Sweden and Finland are comparable, but Denmark has significantly less forest and different tree species. To make a correct comparison between countries, one should measure defoliation for a particular tree species. For example, the European average for the defoliation of spruce in 2007 was 19.5%; the figure for Norway was 17.4%, Finland 18.3% and Denmark 7% (the figure for Sweden is not available).

The acidification of conifer forests has been a gradual process; similarly it takes a long time to restore the pH balance on the forest floor. In Denmark, defoliation was high in the mid-1990s owing to very dry summers and the after-effects of vermin and warm winters and storms. After this period conditions in growing seasons have generally been good, with particularly high levels of precipitation in most years, and fewer problems with vermin. However, there has been a slight setback in recent years, mostly due to insect attacks and the drought in 2006.

3.4 Number of licences to manufacture eco-labelled products

The figure shows strong growth in the number of licenses in the period of existence of the Swan label and a significant growth from 2007 to 2008. In Denmark, the number of Swan-labelled products rose by 47% from 2006 to 2008. The comparable figure for the EU Flower eco-label was 66%, but this was from a much lower level.



Sources: National ecolabelling agencies.

The indicator shows the number of licences for Nordic Swan eco-labels issued, and the number of licences issued to Nordic manufacturers for European Flower eco-labels.

Products carrying the Swan label meet extremely high environmental standards. The Swan also sets criteria with regard to quality and performance. The product must offer features which are at least as good as other similar products on the market.

Today, Nordic consumers can choose between a large number of eco-labelled products and services, from more than 70 product groups. Among these are body care products, textiles, furniture, groceries, electronics, stoves, tires, print shops and 'do-it-yourself' products. Hotels and camping sites in particular have shown greater interest in eco-labels in recent years. Whilst only five Danish holiday resorts were licensed for the Swan or the Flower in 2007, in the beginning of 2009 this number had increased to 46 hotels and camping sites. In Norway, 26 hotels are Swan-labelled and in Sweden as many as 151 hotels. In April 2009, Norway got its first Swan-labelled restaurant.

A Gallup poll in 2004 showed that the Swedes are the most knowledgeable in the Nordic countries about the Swan. 90% of people were aware of it and knew what it stood for, while in Norway, Finland and Denmark the comparable figure was 80%. Even though Iceland has had Swan-labelling since 1991, only about 50% of people were familiar with the label.

3.5 Use of chemicals in production in the Nordic countries

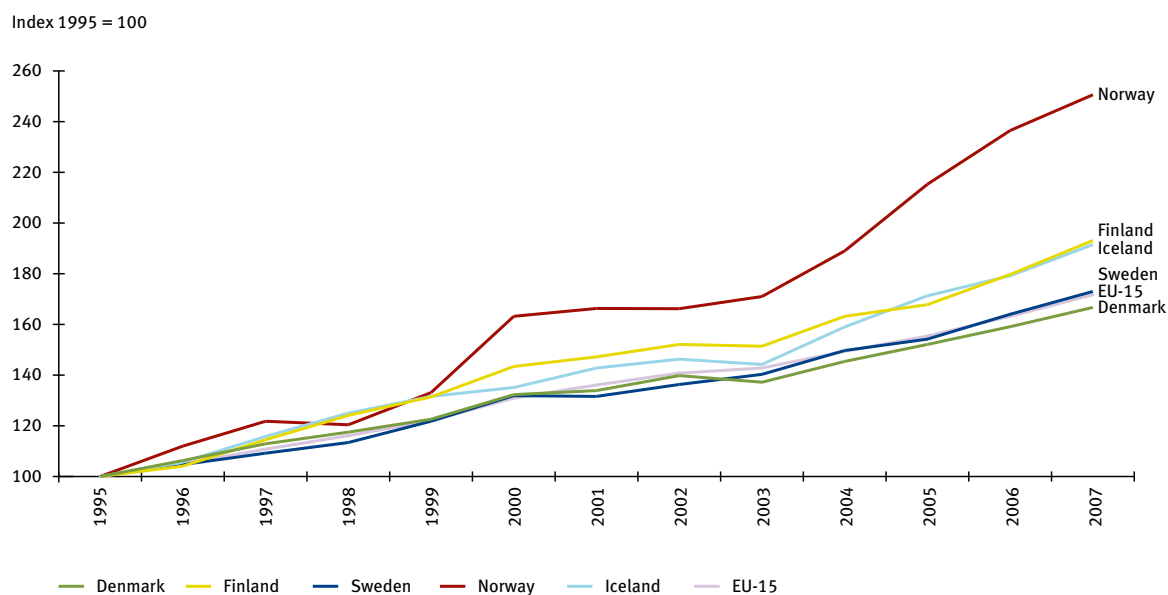
This indicator is in preparation and will be published as soon as it is ready.

The Nordic welfare state as a tool for sustainable development

(chapter 4 in the strategy)

Overall goal: The Nordic countries are committed to strengthening sustainable development in the Nordic Region – to include the well-being of the population, the promotion of health, social cohesion, an accessible society for all sections of the population, good employment opportunities and the development of enterprises. At the same time, the aim is to develop the Nordic welfare model so that it can cope with demographic change and benefit from the opportunities associated with globalisation.

4.1 Economic growth (PPS¹)



Source: Nordic Statistical Yearbook 2008.

Gross domestic product (GDP) is a measure of the value creation in a country. Stated per capita, it can be considered an expression of a country's general level of material wealth.

Over a twelve-year period, economic growth in Denmark has been more or less in line with that of Western Europe, defined as the 15 countries in the EU before enlargement. The other four Nordic countries have all seen a noticeably higher increase in gross domestic product (GDP). In 2007, Finland's economy grew by as much as 4.4%. Iceland and Norway also had a large increase in GDP in 2007, by 3.8 and 3.7% respectively.

Icelandic GDP growth is in a class of its own and was more than twice as high as average EU-15 growth from 1995 to 2007. This intensive expansion came to an abrupt end in 2008 when Iceland was especially hard hit by the global economic crisis. All the Nordic countries have a higher level of prosperity than the EU-15, if prosperity is calculated as GDP per capita. Norwegian GDP per capita is as much as 67% above the EU-15-average and Norway is currently one of the countries with the highest standards of living, as measured on this scale.

¹) PPS = Purchasing Power Standards

4.2 Life expectancy at birth

Women	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Denmark	77.8	77.8	77.8	78.0	78.4	78.6	78.8	79.0	79.2	79.2	79.5	79.9	80.2	80.4	80.5
Faroe Islands	80.2	80.1	80.5	80.5	80.9	81.5	81.5	81.4	81.9	81.4	81.1	81.3	81.4	81.3	82.0
Greenland	68.5	68.8	68.3	68.4	67.8	68.0	68.0	68.0	67.8	69.0	69.5	70.4	70.9	71.0	–
Finland	79.5	80.2	80.2	80.5	80.5	80.8	81.0	81.0	81.5	81.5	81.8	82.3	82.3	82.8	82.9
Åland	82.6	81.8	81.1	82.7	82.3	84.8	81.2	81.5	84.7	84.4	84.1	84.0	83.6	83.5	–
Iceland	80.7	81.0	80.6	80.6	81.3	81.5	81.4	81.4	82.2	82.6	82.4	82.7	83.1	83.0	82.9
Norway	80.3	80.6	80.8	81.1	81.0	81.3	81.1	81.4	81.5	81.5	81.9	82.3	82.5	82.7	82.7
Sweden	80.8	81.4	81.5	81.5	81.8	82.1	81.9	82.0	82.1	82.1	82.4	82.7	82.8	82.9	83.0

Men	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Denmark	72.5	72.5	72.6	72.9	73.3	73.7	74.0	74.3	74.5	74.6	74.9	75.2	75.6	75.9	76.0
Faroe Islands	72.9	73.5	73.5	73.9	74.2	74.2	74.3	75.1	75.5	75.9	76.5	77.0	76.9	76.5	76.5
Greenland	61.7	61.9	62.3	62.8	63.0	62.5	62.7	62.8	62.8	63.3	64.1	64.6	65.5	65.7	–
Finland	72.1	72.8	72.8	73.0	73.4	73.5	73.7	74.1	74.6	74.9	75.1	75.3	75.5	75.8	75.8
Åland	74.5	75.1	75.1	72.9	75.4	77.4	75.3	78.5	77.2	79.2	77.3	76.1	77.6	78.0	–
Iceland	76.9	77.1	76.5	76.2	76.4	77.0	77.5	77.6	78.1	78.4	79.0	79.2	79.2	79.4	79.4
Norway	74.2	74.9	74.8	75.4	75.5	75.5	75.6	76.0	76.2	76.5	77.0	77.5	77.7	78.1	78.2
Sweden	75.5	76.1	76.2	76.5	76.7	76.9	77.1	77.4	77.6	77.7	77.9	78.4	78.4	78.7	78.9

Source: Nordic Statistical Yearbook 2008.

The indicator shows life expectancy at birth for men and women in the Nordic region.

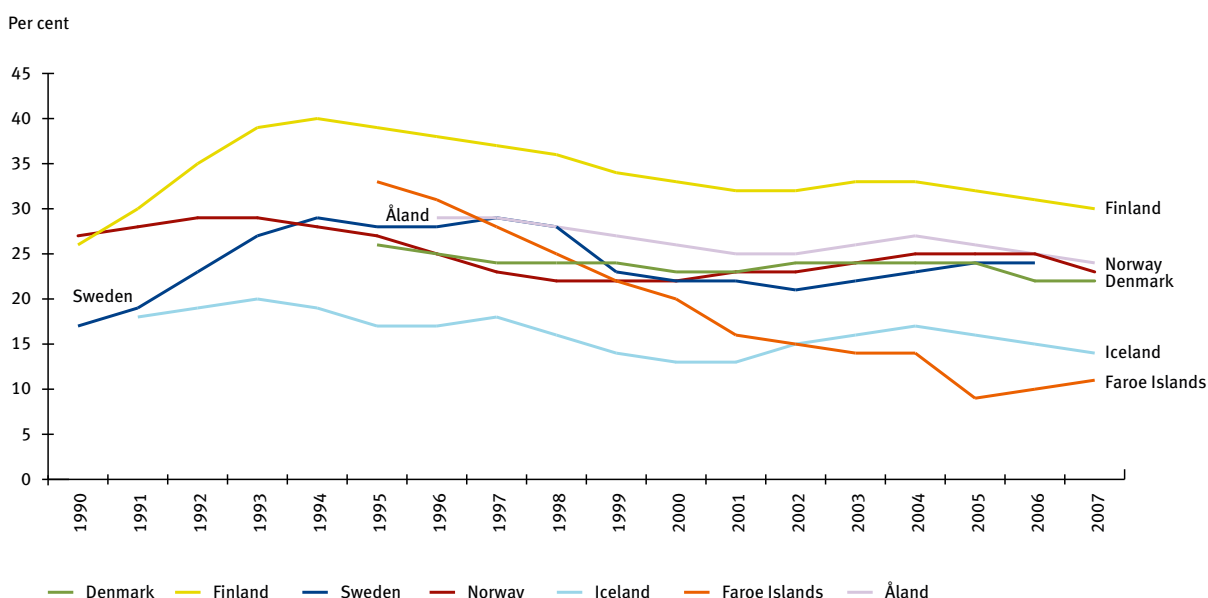
Changes in life expectancy can indirectly show a population's health and living conditions, illustrate the quality of the health service and medical developments, and indicate changes in the population's life styles and quality of life. These are all important aspects of a society's sustainable development.

In all the Nordic countries, women's life expectancy is significantly longer than men's. In Denmark, life expectancy is shorter than in the other Nordic countries, with the exception of Greenland and Finnish men. Despite great progress in recent years, Greenland stands out with significantly shorter life expectancy, about ten years below the average of the other countries.

The indicator shows that life expectancy has risen steadily since 1990. With preventive programmes to encourage healthier lifestyles among the populations and ongoing improvement and expansion of treatment options for diseases, this trend is expected to continue in the future.

4.3 Unemployment

From the mid-1990s and until about 2000, unemployment decreased significantly in all the Nordic countries, following the economic crisis in the beginning of the 1990s, when the unemployment rate was high.



Source: Nordic Statistical Yearbook 2008.

The indicator shows the number of 16-66 year olds not active in the labour market.

The figure includes people outside the labour force (i.e. students, early-retired, non-working, etc.) as well as jobseekers.

Today the unemployment rate for Finland and Sweden is the same as for the EU-15. Unemployment in the other Nordic countries is lower than the EU average. In Åland, unemployment has been 2% for many years. The number of unemployed persons in the Nordic countries has fallen by 30% in the past 10 years.

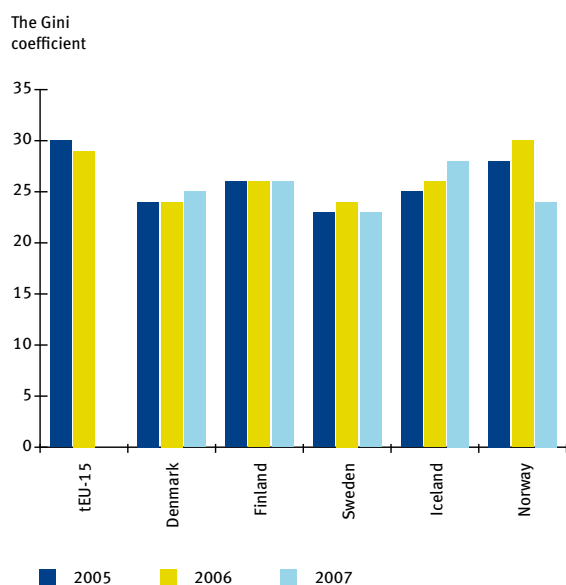
Throughout the entire period, Finland had the largest number of 16-66-year-olds not active in the labour market, whereas Iceland had the fewest, only surpassed by the Faroe Islands from 2001 up until today.

Full employment is the goal of the Nordic governments. Many years of strong economic expansion have created jobs for many people, including immigrants. Strong economic expansion has now been replaced by global recession. Even though governments have taken steps to stimulate the economy with a number of stimulus packages, unemployment rates are rising in the Nordic countries, as they are in most other economies in the world.

In Norway absence from work due to illness is a large problem, as are the large numbers of people receiving disability benefit. Absence from the workplace for more than one week due to illness is markedly higher in Norway and Sweden than in the other Nordic countries. Women's absence due to illness is higher than that of men in all the countries. Health expenditure rose by more than 60% in Norway and Sweden in the period 2002 to 2006. In Denmark, the increase was only 30%.

Because of low birth rates and longer average life expectancy, the dependency ratio is increasing, as those leaving the labour market outnumber those entering the labour market. The Nordic countries exchange experiences of measures to keep people in the labour market, reduce absenteeism due to illness and increase the integration of immigrants.

4.4 Gini-coefficient (distribution of income)



Source: Eurostat.

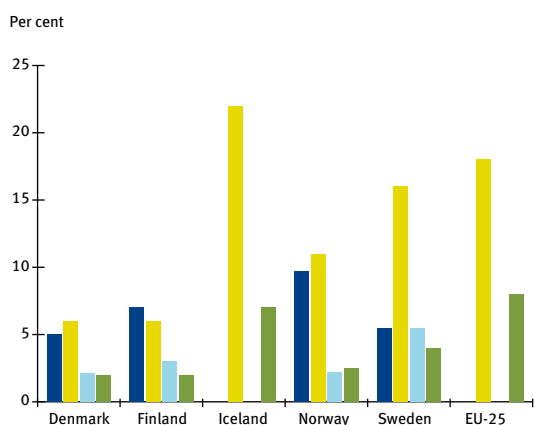
The indicator shows the degree of inequality of income distribution.

The Gini coefficient is a measure of inequality of wealth distribution. A low Gini coefficient indicates more equal income or wealth distribution, while a high Gini coefficient indicates more unequal distribution. 0 corresponds to perfect equality (everyone having exactly the same income).

The table shows that Sweden is the country with the most equal income distribution on this scale and Iceland and Norway the most unequal. The inequality in income distribution in Iceland increased from 2005 to 2007, while inequality in Norway seems to have peaked in 2006 and fell quite steeply in 2007. In Denmark and Finland the numbers are fairly constant over the period.

With Gini coefficients between 23 and 30, the differences in income level in the Nordic countries are smaller than in most of the OECD countries. Only Norway was above the EU-15 average, in 2006, with a Gini coefficient of 30. The financing of the Nordic welfare model entails a relatively heavy tax burden and a major redistribution of income compared to most other countries in the world.

4.4b Families with children living in relative poverty



Source: Nososko.

The indicator shows the percentage of families with children (couples and single parents) with a household income that is less than half of the mean disposable income (less than 50% of the median of the equivalent disposable income) in 2002 and 2005.

Iceland tops the statistics in 2005 with 22% of single parents with a household income that is half of the mean disposable income in the country. The average for the EU-25 is 18%. As measured on this scale, relative poverty in families with children is less pronounced in Denmark and Finland than in the other Nordic countries.

The trend from 2002 shows that the percentage of single parents living in relative poverty has grown markedly in Sweden; from 5.5% in 2002 to 16% in 2005. In Finland, there were 1% fewer families living in relative poverty in 2005 compared to 2002. In Norway and Denmark there was a slight increase in the number of relatively poor single parents, while the number for couples with children living in relative poverty was at about the same level in 2002 and 2005.

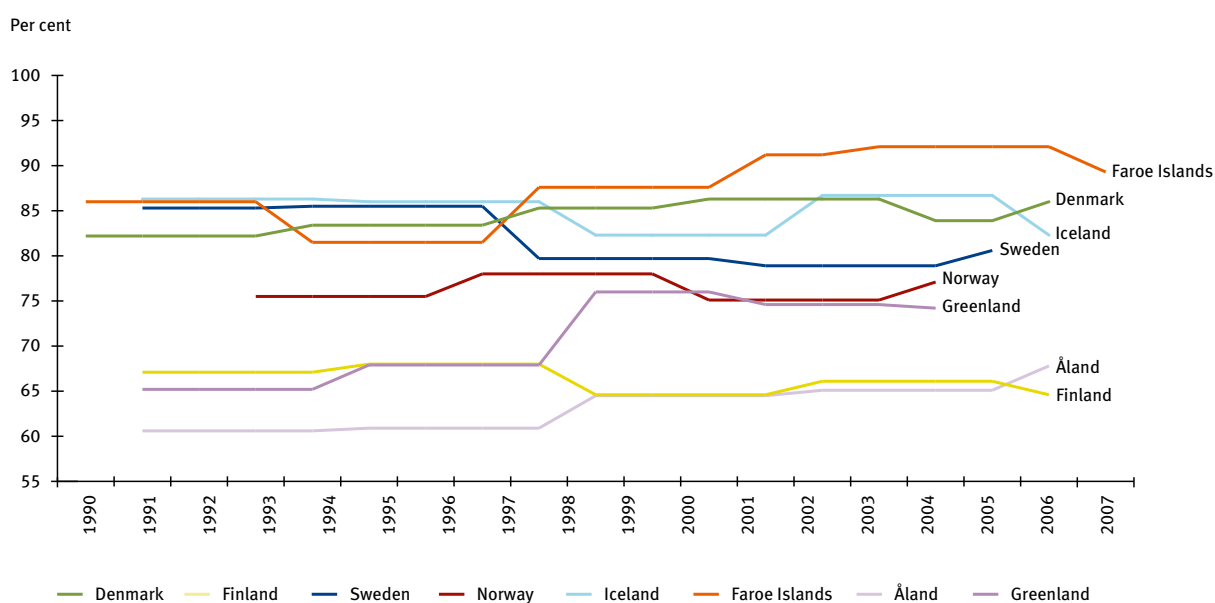
Education and research, public participation and local sustainability

(chapter 5 in the strategy)

Overall goal: The Nordic countries aim to make knowledge about sustainable development part of the curricula and guidelines for elementary schools, youth education, adult education and higher education. Nordic initiatives in education, research and innovation should contribute to knowledge and technology that support sustainable devel-

opment. It is important to actively involve the public in the Nordic countries in efforts to promote sustainable development. All Nordic municipalities should stand behind the Aalborg Commitments to sustainable urban development, or develop and adopt their own strategies for sustainable development.

5.1 Voter turnout



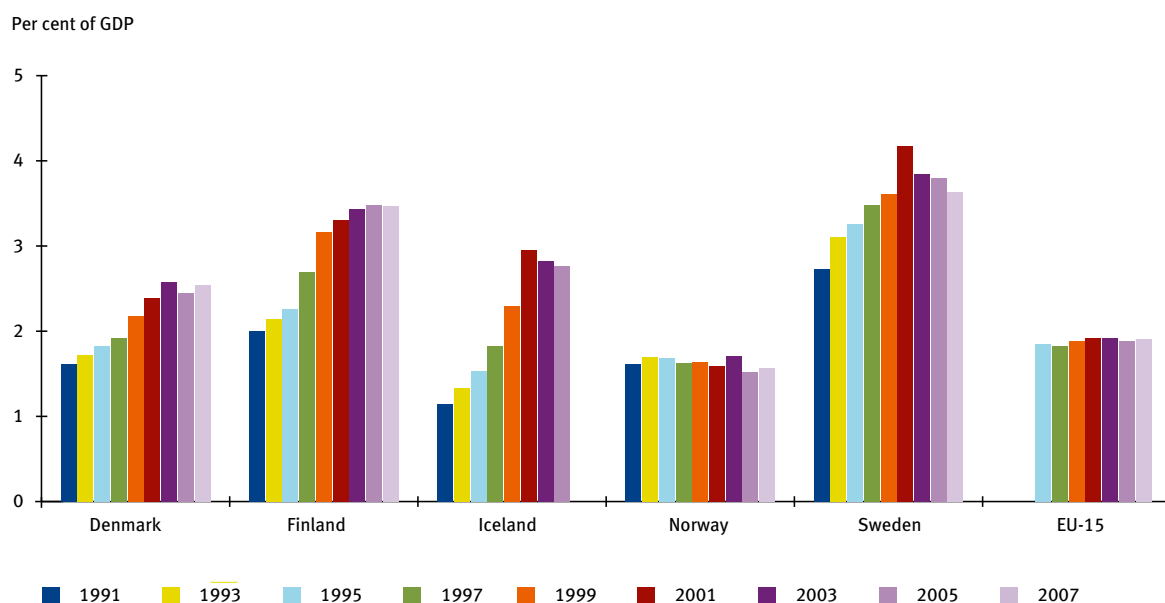
Source: Nordic Statistical Yearbook 2008.

The figure shows the turnout of voters in national elections in the Nordic countries and self-governing areas. The turnout is calculated as the number of valid votes cast in relation to the number of persons entitled to vote.

The indicator shows that people in the Faroe Islands are the most eager to vote, with turnouts of about 90%. Voters in Finland tend to stay at home more, which is reflected in the turnout rates – around 65%.

Commitment from citizens is a precondition for sustainable development. The Nordic countries also have an overall ambition to build a high degree of awareness of the challenges and processes that lead to sustainable development. The turnout of voters is an expression of the population's commitment in relation to political decisions of general importance for society.

5.2 Research and Development



Source: Nordic Statistical Yearbook 2008.

The indicator shows the trend in investments in research and development as a percentage of GDP in the Nordic countries and the EU-15.

Research and development (R&D) are prioritised areas for all the Nordic countries. In relative terms, the Nordic countries spend more resources on R&D than other Western European countries. The EU-15 countries spend 1.9% of their gross domestic product (GDP) on research and development, while over the period Sweden spend 3.7%, Finland 3.4%, Iceland 2.8% and Denmark 2.4%.

Sweden and Finland have surpassed the EU's aim of spending 3% of GDP on research and development by 2010. Sweden is one of the world's most advanced countries in research. Only Norway is below the EU-15 average with 1.5% of GDP spent. However, Norway's GDP is extraordinarily high due to the country's oil and gas revenue, and if Norwegian R&D expenditure is calculated in terms of euros per person, it is higher than the figure per person in the EU-15.

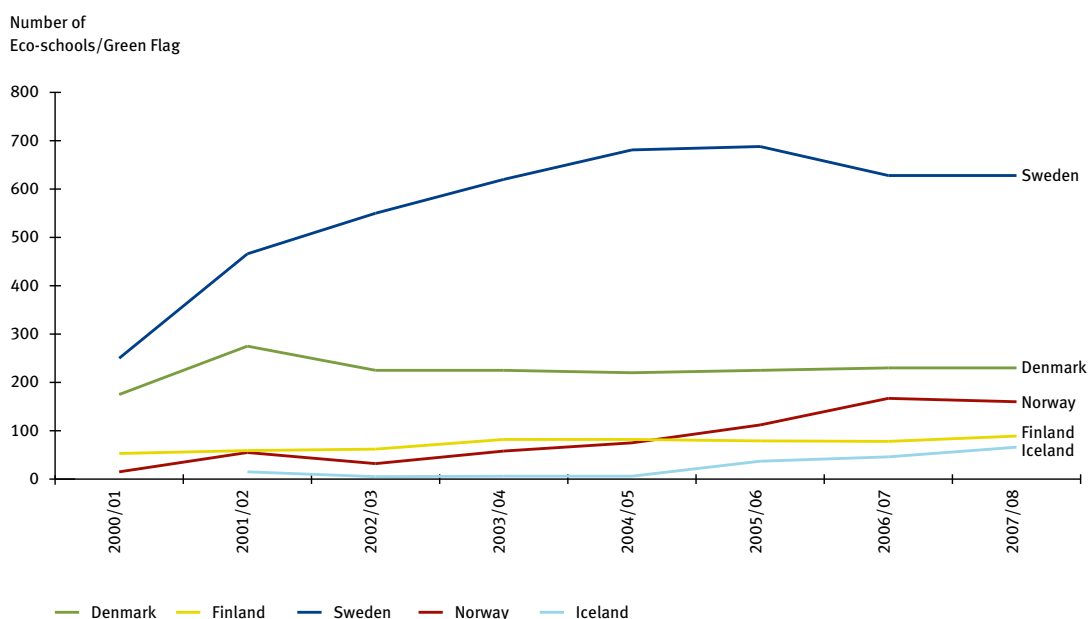
While R&D expenditure in the EU-15 has constituted an unchanged proportion of GDP since the mid-1990s, the Nordic countries' R&D expenditure has increased, also if calculated as a percentage of GDP.

The majority of R&D expenditure comes from private business, ranging from 46% of all R&D expenditure in Norway to 75% in Sweden.

The report 'Nordic Innovation Monitor 2009'²⁾, which covers a total of 165 indicators within IT, human capital, knowledge creation and entrepreneurship, shows that the Nordic countries perform very well in information and communication technology, especially when it comes to integrating technology in the daily life of citizens and businesses. Despite the fact that the Nordic countries prioritise education, research and development, the report finds that companies are not good at using knowledge of workers' creative and innovative skills. This is the reason why the Nordic countries lag behind other OECD countries in innovation.

²⁾ www.norden.org/pub

5.3 Schools with the Eco Schools Green Flag



Sources: www.ecoschools.org, Nordic statistical agencies.

The figure shows the number of schools with the Green Flag in the Nordic countries in the period 2000 to 2007.

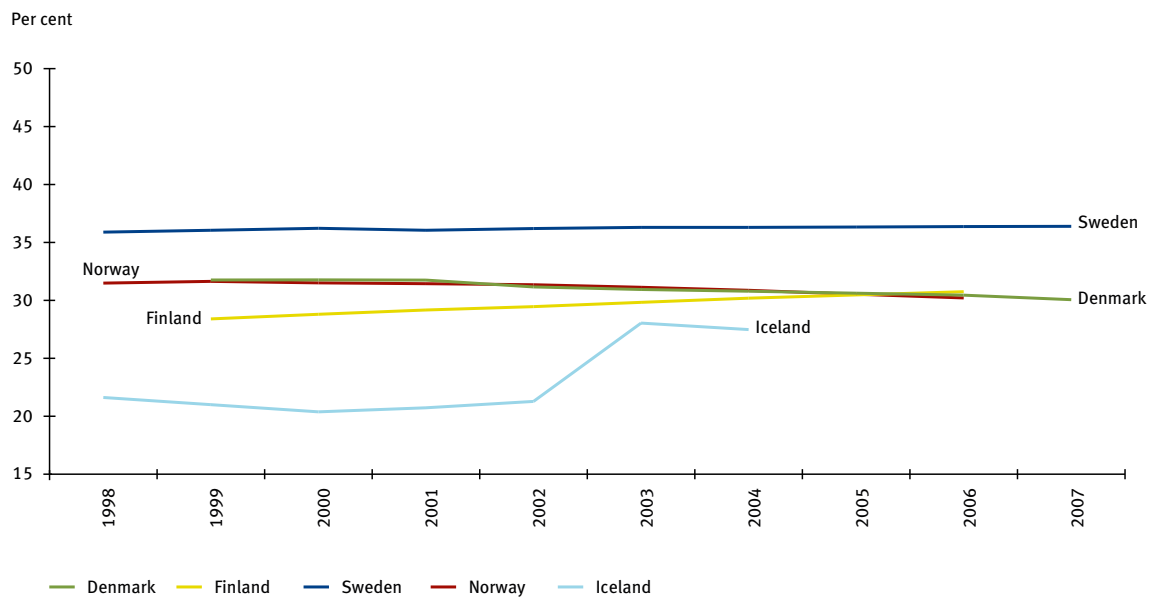
Green Flag/Eco Schools is a teaching programme for environmental education for sustainable development aimed at schools and day-care centres in the Nordic region. The Eco Schools flag is a sign that the school has completed an extensive and high-quality educational programme in sustainable development and that the school has assigned a high priority to environmental considerations in its daily activities. Each of the Nordic countries has a national Eco Schools network, but they are all part of the international Eco Schools environmental teaching programme which spans 40 countries.

In Sweden, more than 1600 schools and day-care centres participate in the programme. Denmark expects at least 500 registered schools to be in the programme in the years to come. In Denmark, no day-care centres are part of the programme, but they have a similar programme for day-care centres called Green Shoots. This eco project is administered by The Danish Outdoor Council.

This figure shows only schools under the Green Flag programme, not day-care centres. Sweden here takes the lead with most schools in the programme, but compared to the total number of schools in a country, Iceland has proportionally most schools in the programme. Finland has fewest.

School year 2007/2008	Total number of primary schools	Schools with Green Flag	Percentage
Norway	3102	160	5%
Denmark	2363 (fig. for 2006)	230	10%
Sweden	9320	628	7%
Finland	3263	89	3%
Iceland	169	66	40%

5.4 Proportion of the population with secondary education



Source: Nordic Statistical Yearbook 2008.

The indicator shows the proportion of the population with secondary education.

The figure for Denmark for 2001 is unconfirmed.

A high level of knowledge, equal educational opportunities for the entire population and opportunities for realising this potential are cornerstones of Nordic competitiveness.

In the Nordic countries, people are in general highly educated. After 9–10 years of compulsory schooling most young people go on to some form of further education. The figure shows that Sweden has the largest number of people

with secondary education. We see a slight decline in the proportion of the population with secondary education in Norway and Denmark over the last six years, while the number has increased in Finland. Iceland saw an increase of 7% from 2002 to 2003.



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This set of sustainable development indicators for the Nordic countries was developed in order to monitor the goals set out in the strategy *Sustainable Development – New Bearings for the Nordic Countries*.
Revised edition with goals and priorities 2009-2012.

Sustainable development includes three interdependent dimensions: the economical, the social and the ecological. The strategy has four chapters and sets out goals and prioritised areas for Climate and renewable energy; Sustainable production and consumption; The Nordic welfare state as a tool for sustainable development; Education and research, participation of the population and local sustainability strategies.

The purpose of the indicators is to give pointers as to how the Nordic countries are performing in these areas.