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Environmental Statistics – Key Facts

December 2012

Department for Environment Food & Rural Affairs

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PB 13671

Contents

Introduction

Welcome to the second edition of our key environmental statistics 2012. This is a replacement for the Environment In Your Pocket printed publications which we have had to discontinue in 2009. The new publication has a number of advantages over the old printed publication. It will be regularly updated to provide the most recent figures on a whole range of environmental issues. Retaining the hyperlinks in the text allow you to more easily navigate to more information. It is more in keeping with the modern teaching resources and conforms to the wider government agenda of making data more accessible and transparent.

The key facts are based on the pages available on the Defra website. However, if you have any suggestion of how to improve this publication please contact us at:

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Or fill in our online questionnaire at: feedback form

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Air Quality

Levels of particulates and ozone

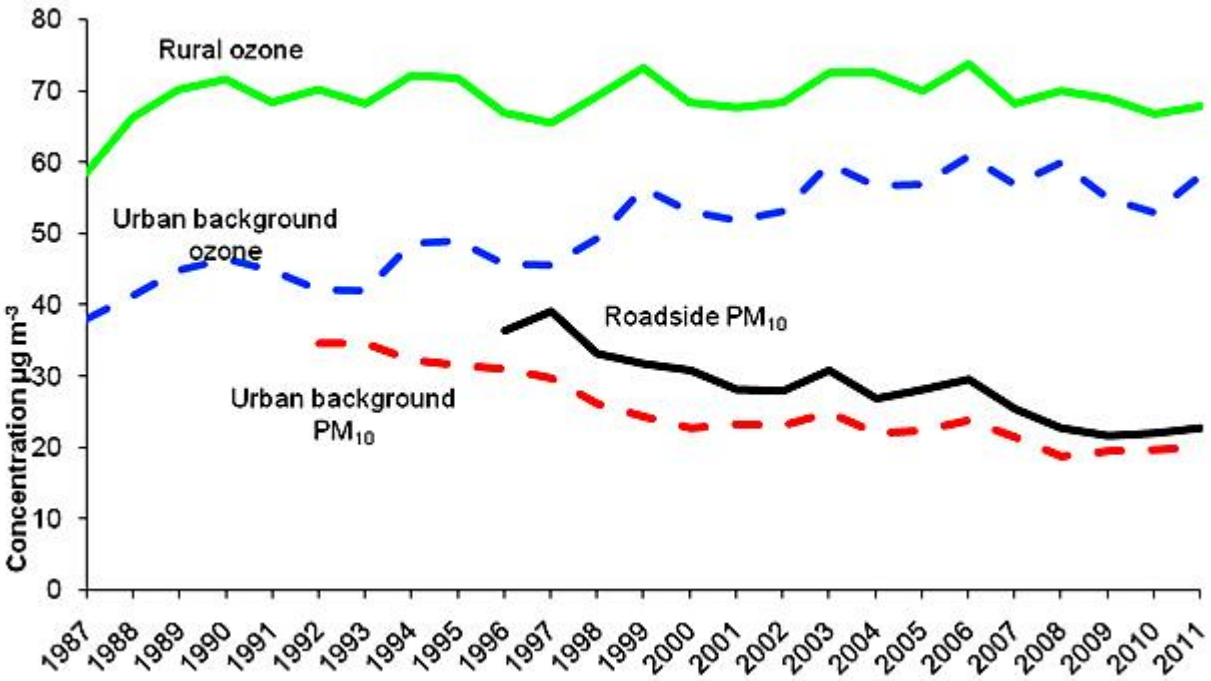
Our air quality is monitored by a national network of monitoring sites, which continuously captures ambient air quality levels for selected pollutants throughout the UK. This monitoring helps to assess the risks to people's health and to the environment.

Statistics can be derived for the average concentrations of pollutants

Air quality statistics in the UK, 1987 to 2011 – Final: Statistical release

These statistics include concentrations of particulates (PM_{10}) and Ozone (O_3), which are the two pollutants thought to have the greatest health impacts.

Average annual level of particulates and ozone: UK, 1987 – 2011 (final)



Notes:

The ozone index shows the annual mean of the daily maximum 8 hour running mean. The PM_{10} index shows the annual average.

Urban background particulate pollution has shown long-term improvement but changed little recently: concentrations declined from a peak of 35 micrograms per cubic metre (µg m^{-3}) in 1992 to 20 µg m^{-3} in 2011. They changed little in the past four years and were 20 µg m^{-3} in 2010.

Roadside particulate pollution has shown long-term improvement but changed little recently: concentrations declined from a peak of 39 µg m^{-3} in 1997 to 22 µg m^{-3} in 2011. They changed little in the past four years and were 22 µgm^{-3} in 2010.

Urban background ozone pollution has shown a long-term increase: concentrations increased from a low of 38 µg m^{-3} in 1987 to 58 µg m^{-3} in 2011 and increased from 53 µg m^{-3} in 2010 after declining from a peak of 61 µg m^{-3} in 2006.

Rural background ozone pollution has shown no clear long-term trend and changed little recently: concentrations increased from a low of 58 µg m^{-3} in 1987 to 68 µg m^{-3} in 2011, but changed little in the past five years, fluctuating between 67 and 70 µg m^{-3} after declining from a peak of 74 µg m^{-3} in 2006.

Data download

Days when pollution is moderate or higher

Our air quality is monitored by a national network of monitoring sites, which continuously captures ambient air quality levels for selected pollutants throughout the UK. This monitoring helps to assess the risks to people's health and to the environment.

Statistics can be derived for the average number of days when pollution is moderate or higher.

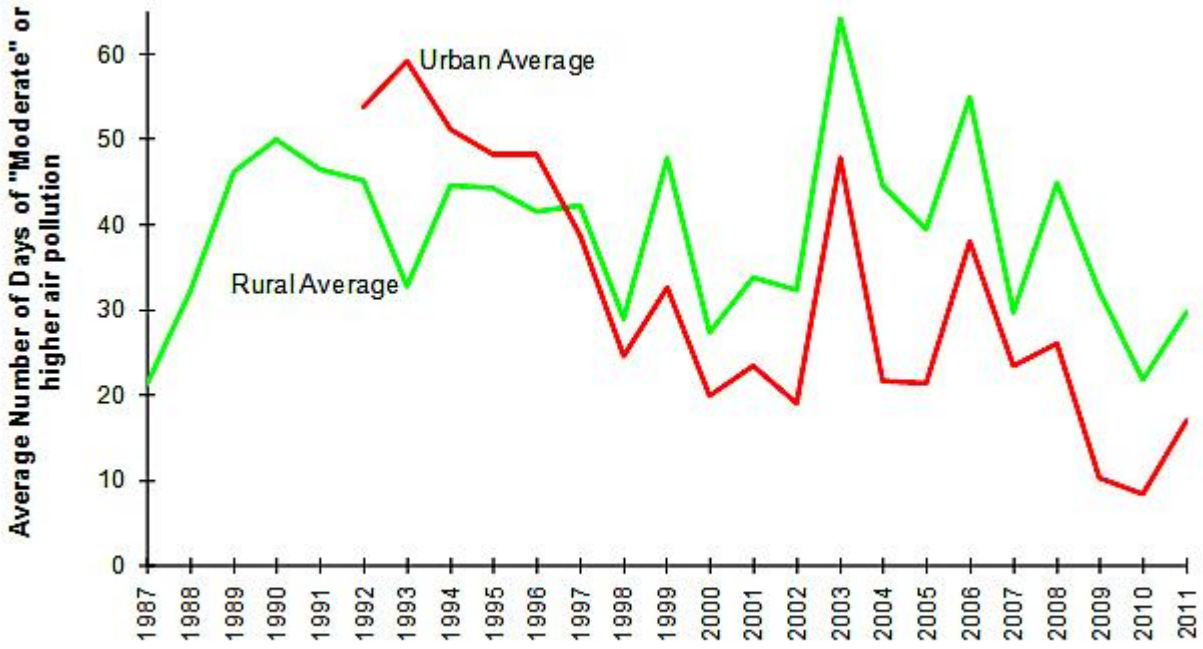
Air quality statistics in the UK, 1987 to 2011 – Final: Statistical release

The statistics are based on concentrations of pollutants and the resulting 'pollution days' for the following:

carbon monoxide (CO)
nitrogen dioxide (NO_2)
ozone (O_3)
particulates (PM_{10})
sulphur dioxide (SO_2)

At the moderate level, the effects of pollution may start to be noticeable to people with respiratory and other health problems, with greater risks to health at higher levels.

Days when pollution is moderate or higher UK, 1987-2011



Days of moderate or higher air pollution in urban areas have shown a long-term improvement but increased in 2011: average days declined from a peak of 59 days in 1993 to 16 days in 2011, but increased from the lowest recorded level of 8 days in 2010.

Days of moderate or higher air pollution for rural areas have shown no clear trend but increased in 2011: average days declined from a peak of 64 days in 2003 to 30 days in 2011, but increased from a low of 22 days in 2010.

Note on Methodology

Urban sites must have monitored PM10 and achieved 75% data capture for this pollutant. If not, the site is not counted in the indicator even if there are “moderate or higher” days for a different pollutant.

Rural sites must have monitored O3 and achieved 75% data capture for this pollutant. If not, again, the site is not counted even if there are “moderate or higher” days for a different pollutant.

Data download

Individual site data

Emissions of air pollutants in the UK, 1970-2011

Defra National Statistics cover UK emissions of sulphur dioxide (SO_2), nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOCs), ammonia (NH_3) and particulate matter (PM_{10} and $PM_{2.5}$).

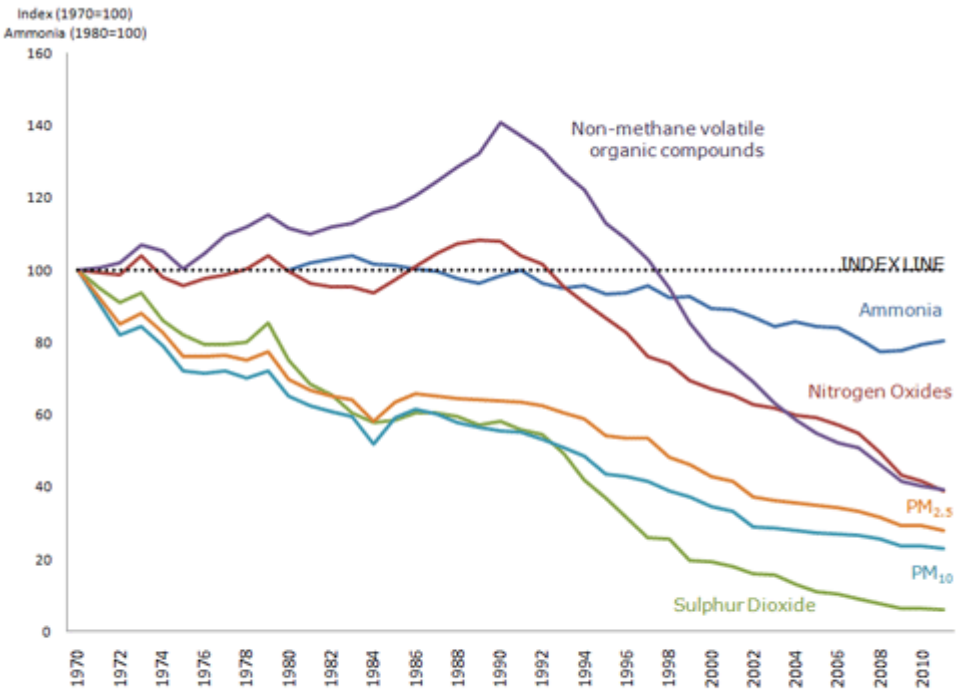
Statistical Release: Emissions of air pollutants in the UK, 1970-2011

There has been a long term decrease in the emissions of all of the pollutants covered (ammonia, nitrogen oxides, non-methane volatile organic compounds, particulate matter (PM_{10} $PM_{2.5}$) and sulphur dioxide). For sulphur dioxide and particulate matter, the rate of decline was most pronounced in the 1990s, and has slowed in recent years.

Ammonia emissions have increased in each of the last three years by a total of four per cent, although this follows a relatively large fall between 2006 and 2008. The remaining air pollutants have seen decreases in 2011 compared to 2010, of between 2.5 and 6.6 per cent.

The UK has continued to meet international obligations for emissions of the four pollutants for which it has legally binding commitments for 2010 onwards. The results are also presented alongside new commitments for emission reduction to 2020.

Trends in UK sulphur dioxide, nitrogen oxides, non-methane volatile organic compounds, ammonia and particulate matter (PM_{10}, $PM_{2.5}$) 1970 – 2011



Background

Chronic exposure to PM contributes to the risk of developing cardiovascular diseases and lung cancer. Particulate matter can have an either cooling or a warming effect on climate, and also has a key role in the ecosystem impacts of air pollution.

As well as being emitted directly, particulates can be formed in the atmosphere from reactions between other pollutants, of which SO_2, $NO_{x,}$ NMVOCs and NH_3 are the most important. Health effects of PM are caused after their inhalation and penetration into the lungs. The smaller the particles, the deeper they penetrate into the lungs. PM's mortality effects are therefore strongly associated with the smaller $PM_{2.5}$ fraction, even though the coarser 2.5-10μm fraction known as PM_{10} also has clear health and mortality impacts. The recently revised UNECE Gothenburg Protocol which aims to abate acidification, eutrophication and ground-level ozone (Gothenburg Protocol) now includes an emission reduction target for $PM_{2.5}$ to be met by 2020.

Emissions of NO_X, SO_2 or NMVOCs can react together to form low level ozone which at higher levels can cause breathing problems, trigger asthma, reduce lung function and cause lung diseases. Several European studies have reported that current ozone concentrations in Europe have health effects, especially in the summer, and that daily mortality rises with increases in ozone exposure.

Air pollution also damages ecosystems through:

- **acidification** (SO_2, NO_x and NH_3) – where chemical reactions involving air pollutants create acidic compounds which can cause harm to vegetation and buildings (including as acid rain);
- **eutrophication** (NO_x and NH_3) – where nitrogen can be deposited in soils or in rivers and lakes through rain, affecting the nutrient levels and diversity of species in sensitive environments, for example encouraging algae growth in lakes and water courses.
- **ground-level ozone** (NO_x and NMVOCs) – where chemical reactions involving air pollutants create the toxic gas ozone (O_3) which can damage wild plants, crops, forests and some materials and is a green house gas contributing to the warming of the atmosphere.

Air pollutant emissions reductions do not always produce a corresponding drop in atmospheric concentrations in the UK. For example, emissions of the pollutants that lead to ozone formation have reduced substantially, but this is not reflected in the long-term trend in ozone concentrations. This is partly explained by a proportion of the ozone experienced in the UK originating from air pollutant emissions from mainland Europe and beyond."

There are two main international agreements that aim to reduce transboundary air pollution:

- the **National Emission Ceilings Directive (NECD)** – sets ceilings for each EU Member State for emissions of sulphur dioxide, nitrogen oxides, non-methane volatile organic compounds (NMVOCs), and ammonia to be met by 2010 and thereafter.
- the **Gothenburg Protocol under the UNECE Convention on Long Range Transboundary Air Pollution (CLRTAP)** - sets similar or identical UK emissions ceilings for the same pollutants for 2010 and thereafter. This Protocol was revised in May 2012 and now sets emission reduction commitments for the same four pollutants and for $PM_{2.5}$ for 2020.

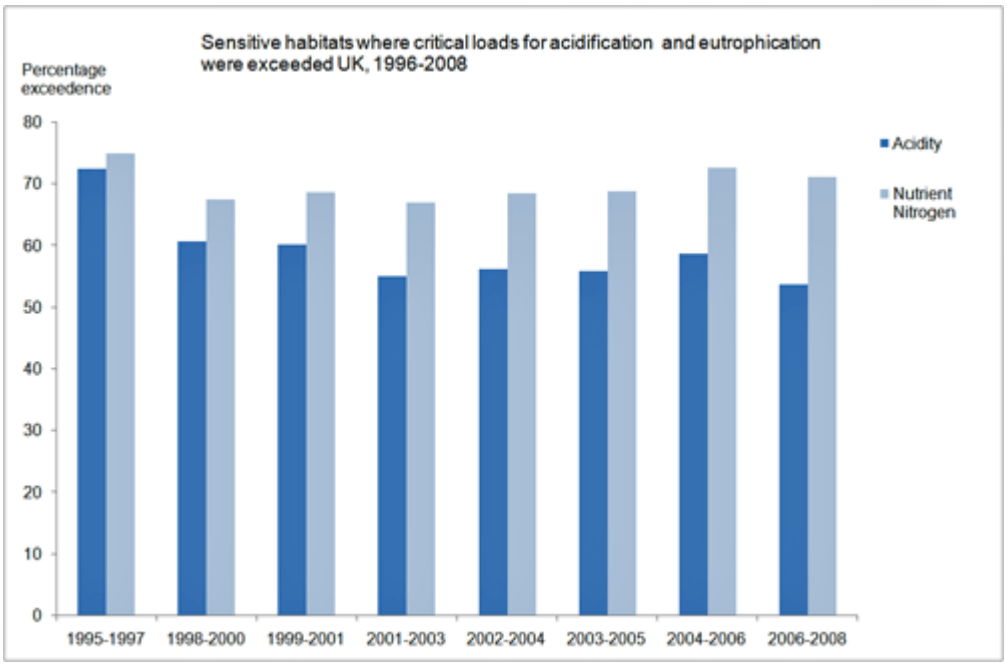
Data download

Next scheduled update December 2013

Sensitive habitats where critical loads for acidification and eutrophication were exceeded

In the period 2006-08, the UK experienced a decrease in the percentage area of sensitive habitats that exceeded critical loads for acidification and eutrophication compared to 2004-06, although there is no clear trend in the last decade.

Why is this important – Critical loads are thresholds above which certain pollutants cause significant harm to the environment through acidification and eutrophication (excessive freshwater algae growth due to nitrogen leading to lowered oxygen content). The pollutants come mainly from burning fossil fuels and waste from farm animals.



- Advice on changes in methodology(May 2011)
- Critical loads are still exceeded in more than 50 per cent of habitats for both pollutants.
- With the exception of Northern Ireland, for both measures each UK country saw a decrease in habitats exposed to above the critical loads in this reporting period. This is the third consecutive period of improvement for England.

Data download, including country breakdown

Next scheduled update September 2012

Air Quality - Further Information

Government policy on air quality

Air pollutant emissions methodology
Air quality in Scotland, Wales, Northern Ireland and Europe
Additional information on air quality.
Air Quality monitoring networks and methodology

Further information on acidification and eutrophication in the UK
International action to reduce acidification and eutrophication

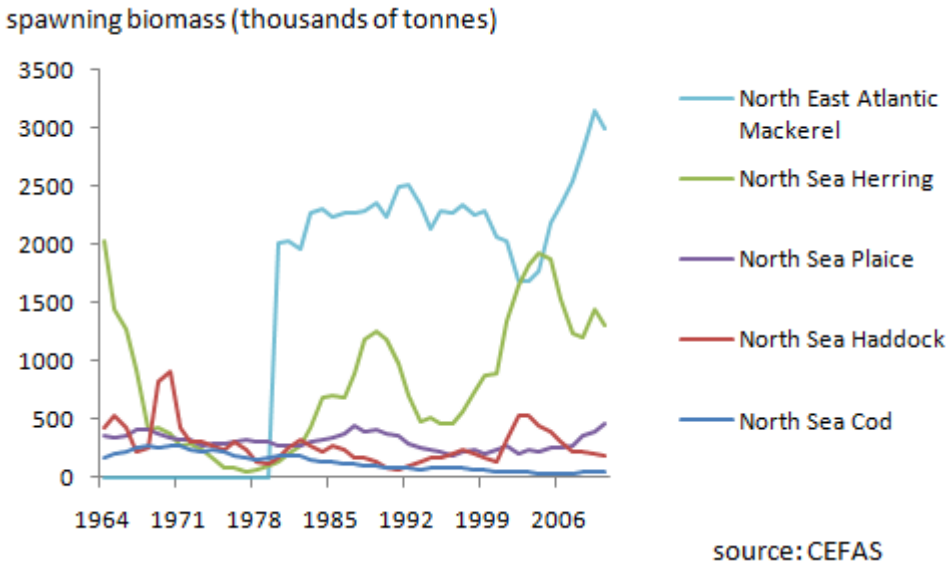
Coastal and marine waters

North Sea fish stocks and stocks of North East Atlantic mackerel

Cod and Plaice showed a small increase in adult biomass in 2010, although haddock has continued to experience a small year on year decrease in biomass from a peak in 2002.

Why is this important – Sustainable fisheries are essential for a healthy and diverse marine ecosystem. They are also important for a vibrant and long term fishing industry.

North Sea fish stocks 1964 -2010



- Fish stocks can fluctuate substantially over relatively short periods and trends may vary from species to species. The North Sea herring population was seriously affected in the 1970s, the fishery was closed between 1978 and 1982 allowing stocks to recover. Between 2004 and 2007 stocks dropped by 45 per cent but the recovery seems to have faltered with a decline in 2010.
- Stocks of North Sea cod has fallen 68 per cent since 1964. North Sea haddock has fallen by 56 per cent relative to the 1964 population.
- The population of North Sea plaice has fluctuated since 1964, but 2010 stocks are now above 1964 levels.
- The population of North East Atlantic mackerel has fluctuated since 1980 but suffered a 18 per cent drop in 2002. Populations have since recovered.

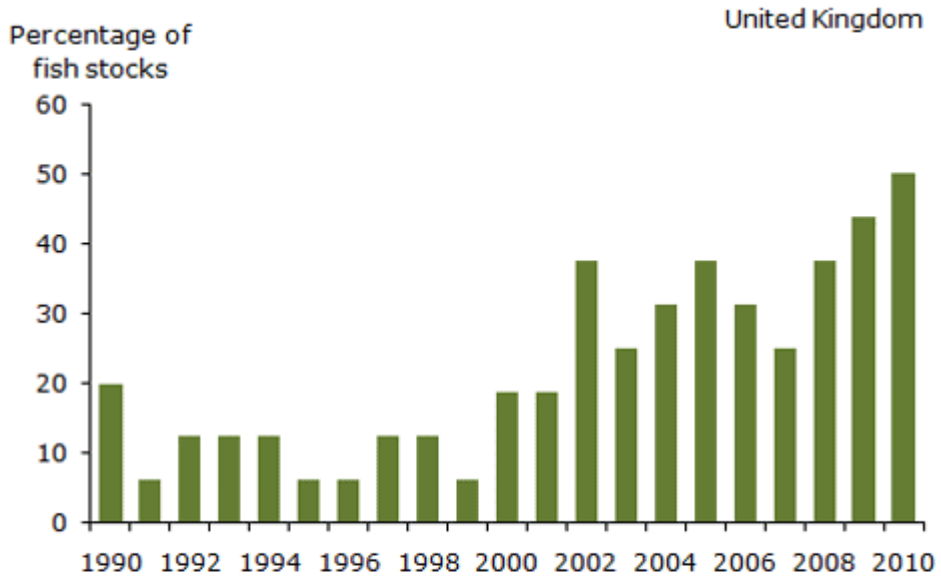
Data download

Sustainability of fish stocks around the UK

The percentage of the 16 fish stocks considered to be harvested sustainably and at full reproductive capacity varied between 0 per cent and 20 per cent in the 1990s, but has subsequently increased to between 25% and 50% during 2002 to 2010. Despite these increases, between 50 and 75 per cent of the indicator stocks have had reduced reproductive capacity and/or have been harvested unsustainably each year since 2002.

Why is this Important – Fish are an integral component of marine biodiversity. They are an important element of the food chain for seabirds, seals and cetaceans and are a source of food and employment for people. Sustainable fisheries will help to ensure our marine ecosystems remain diverse and resilient and provide a long-term and viable fishing industry.

Percentage of fish stocks harvested sustainably and at full reproductive capacity, UK: 1990 – 2010



Notes: Based on 16 stocks for which accurate time series are available derived from stock assessment reports.

Source: International Council for the Exploration of the Sea, Centre for Environment, Fisheries and Aquaculture Science.

- The main factors affecting the sustainability of fish stocks seem to be fishing activity and natural factors. To prevent over-exploitation of fish stocks it is important to balance fishing activity against the natural ability of fish stocks to regenerate.

- In 2009 the number of stocks included in the index reduced from 18 to 16, because for two stocks it was no longer possible to evaluate status. Exclusion of these two stocks, and changes to historical trends of the other stocks from updated assessments using data up to 2009, has shifted the value of the indicator downwards for all years since

1998, with the largest decreases observed in 2008 (down 19 per cent) and 2007 (down 14 per cent). This is mainly because the excluded stocks were previously included in the indicator and assessed as being fished sustainably in recent years.

Data download

Next scheduled update tbc (spring 2013)

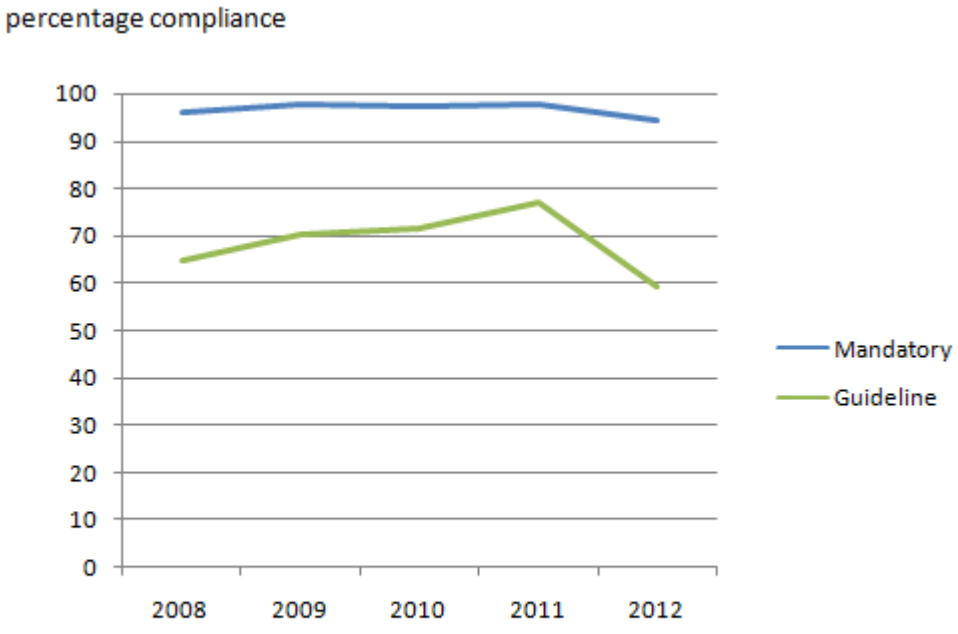
Coastal Bathing waters – Five year summary of compliance with mandatory, and UK guidelines

In 2012, out of the 610 bathing sites measured 575 (94.3 per cent) met the mandatory (basic) standards of the European Bathing Water Directive in the UK. In 2012, 59.5 per cent of UK coastal bathing waters met the more stringent guideline standards of the Bathing Water Directive.

The UK is currently in a transition period as we move from the original to the revised Directive. Bathing water quality is now monitored using the new parameters of E.coli and intestinal enterococci and the data is used to assess compliance with the standards set by Directive 76/160//EEC. At the same time, it will be used in the four year data set that will provide the first set of classifications under Directive 2006/7/EC in 2015. There is now a single guideline standard which is comparable to the previous UK Guideline standard.

Why is this important -The microbiological quality of bathing waters can be affected by pollution from agricultural and urban sources, discharges of sewage effluent, storm water overflows and river borne pathogens all of which could have a significant impact on human health. The EC Bathing Water Directive sets mandatory and more stringent guideline standards with tighter limit values. During the transition period the E.coli is used to assess mandatory standard, with a limit value of 2000 per 100ml. At least 95 per cent of samples must meet the limit value. Guideline standard is assessed on monitoring for intestinal enterococci, with a limit value of 100 per 100ml in at least 80 per cent of samples.

Coastal Bathing Water – Mandatory and UK Guideline Compliance: UK 2008-2012



Source: Department of Environment Northern Ireland (DOENI), Environment Agency (EA), Scottish Environment Protection Agency (SEPA)

- Bathing water quality has improved steadily since 1988, largely as a result of improvements to the sewerage system by water companies. Variations from year to year tend to be related to weather conditions, as combined sewer overflows operate more frequently during wet weather, diffuse pollution from urban and agricultural sources is increased, and in poor summers there is less sunlight to kill off bacteria in water. The lower results in 2012 reflect the extreme weather conditions during the summer, which was the wettest for 100 years and saw the wettest April-June period ever recorded by the Met Office. Peak compliance of almost 100 per cent occurred in the hot, dry summer of 2006. In 2012 94.3 per cent of coastal bathing waters met the mandatory standard.
- Compliance with guideline standards was also affected by the severe weather and has fallen in 2012 to 59.5 percent, with England showing a significant reduction in the number of sites complying with the more stringent guideline standards. The north east saw a percentage fall from 90.7 per cent in 2011 to 46.3 per cent in 2012.
- Monitoring under the physicochemical parameters of Directive 76/160/EEC has been discontinued.

Data Download

Next scheduled update November 2013

Coastal and marine waters - Further Information

Government policy on Fisheries

Government policy on coastal and marine waters

Additional data: fish stocks in the North Sea.

International Council for the Exploration of the Sea (ICES)

Marine Management Organisation

Bathing water in Scotland, Northern Ireland and Europe

Additional data and information on Bathing Water Quality

Blue Flag awards

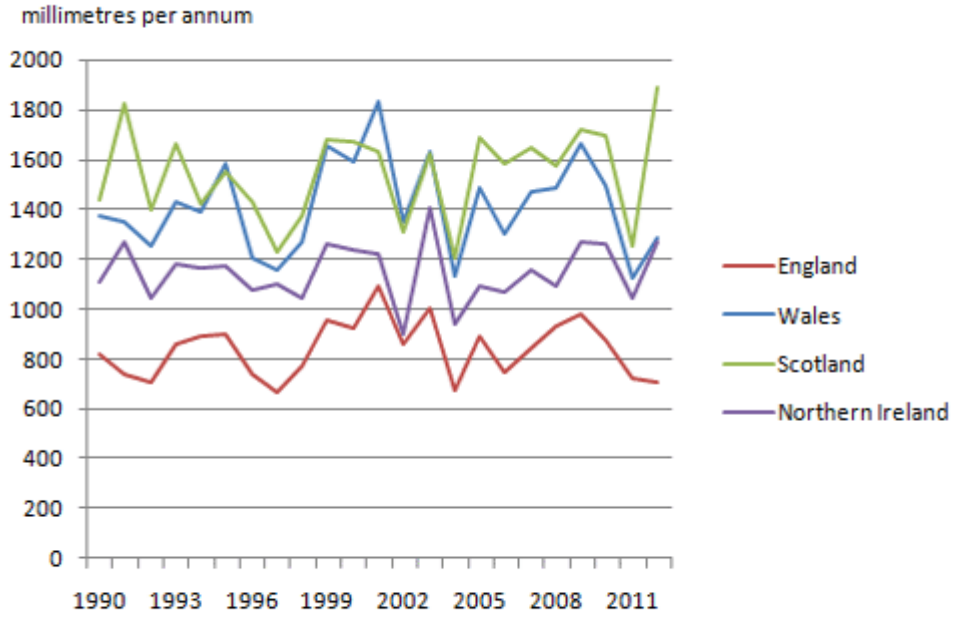
Inland water

Average annual rainfall

Provisional 2011 results indicate a significant rise in rainfall over 2010 figures, which is also 8 % above the long term average (1971 baseline). Scotland showed a marked variation in average annual rainfall rates. Monthly updates on rainfall are available from CEH (November 2012) .

Why is this important – Water use, water quality and the health of the aquatic environment are all affected by climatic conditions. Water resources, in particular, are greatly influenced by the interplay of rainfall patterns and strongly seasonal evaporative losses.

Average annual rainfall average: 1990-2011



source: Compiled by the Centre for Ecology and Hydrology, Wallingford (CEH) using data supplied by the National Climate Information Centre, Met Office.

- Although the UK's resilience to within-year drought episodes was well demonstrated in 2003, our continuing vulnerability to extreme weather conditions has been re-emphasised over the last decade which has seen an extension in the recorded variability of river flows and groundwater levels in many areas.

Data Download

Average temperature and total rainfall in England and Wales : 1845 to 2011

Next scheduled update July 2013

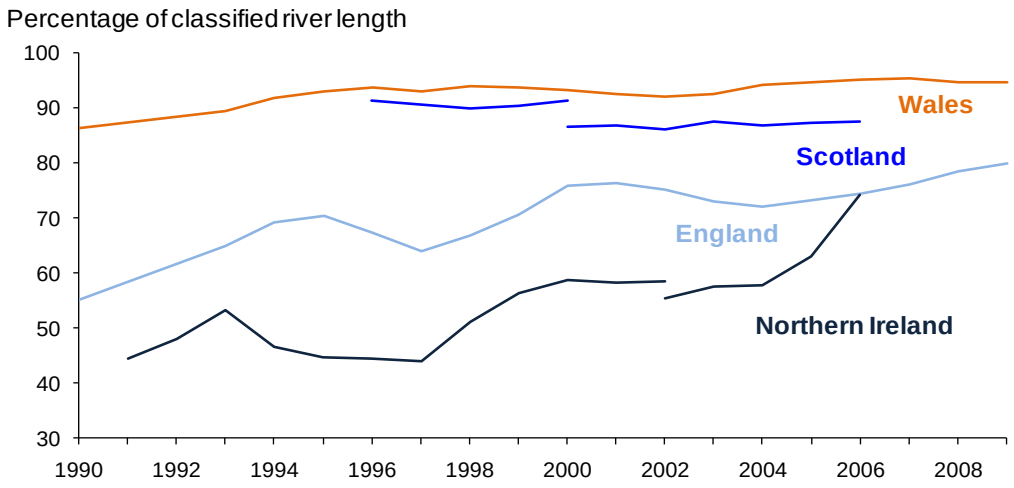
Chemical river water quality

The EU Water Framework Directive has resulted in the need to change the way in which surface water quality is monitored and reported. It is not currently possible to produce an indicator of water quality that is consistent across the countries of the UK or provides a long-term indicator of change. Defra, the Environment Agency for England and Wales, the Scottish Environment Protection Agency and the Department of the Environment for Northern Ireland are considering reporting options and methodologies. This indicator will be updated once a new methodology has been established.

80 per cent of English rivers were of good chemical quality in 2009, an increase from 79 per cent in 2008, and the fifth consecutive year of improvement. In Wales, 95 per cent of river length was of good chemical quality in 2009, and has maintained this level since 2005.

Why is this important – Chemical river water quality is worsened by pollution from point sources (such as discharges from factories or sewage works) and diffuse pollution (for example from agriculture or from roads or urban areas). The pollutants covered here provide an effective assessment of the extent to which rivers are affected.

Rivers of good chemical quality: UK, 1990-2009



Source: EA, SEPA, NIEA

Overall, lower than average rainfall and low river flows can have an adverse effect on river quality because there is reduced dilution of pollutants. However, periods of intense rainfall can cause leaching of pollutants into rivers from the soil.

For England, Wales and Northern Ireland, results are based on the General Quality Assessment (GQA) classification, and on the Digitised River Network (DRN) for Scotland.

In 2011, a new indicator will be published based on the monitoring network for the EU's Water Framework Directive (WFD)

Data download

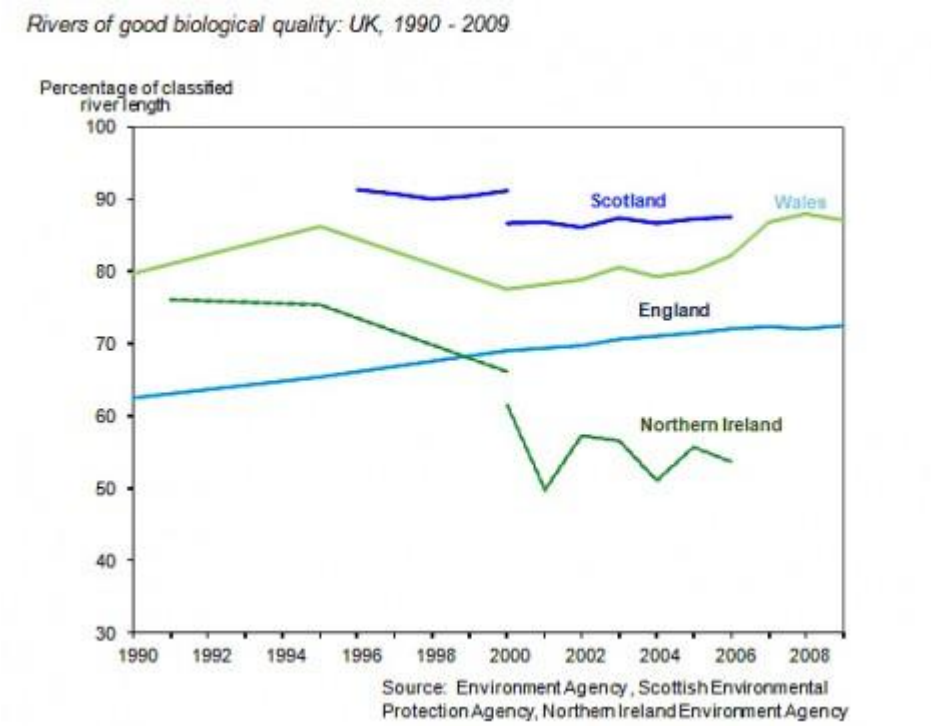
Biological river water quality

The EU Water Framework Directive has resulted in the need to change the way in which surface water quality is monitored and reported. It is not currently possible to produce an indicator of water quality that is consistent across the countries of the UK or provides a long-term indicator of change. Defra, the Environment Agency for England and Wales, the Scottish Environment Protection Agency and the Department of the Environment for Northern Ireland are considering reporting options and methodologies. This indicator will be updated once a new methodology has been established.

73 per cent of the English rivers surveyed were of good biological quality in 2009. This is a slight increase on 72 per cent in 2008, although there has been little change in recent years. In Wales, 87 per cent of surveyed rivers were of good biological quality in 2009, and there has been little change since 2007.

Why is this important – Biological testing provides a more comprehensive assessment of river health than chemical testing alone.

Rivers of good biological quality: UK, 1990-2009



The indicator is calculated using species composition of macroinvertebrates, tiny animals which are negatively affected by poor water quality.

English rivers have shown considerable improvement since 1990. Wales saw a sustained period of improvement between 2004 and 2007, levelling off in recent years.

In 2011, a new indicator will be published based on the monitoring network for the EU's Water Framework Directive (WFD).

Data download

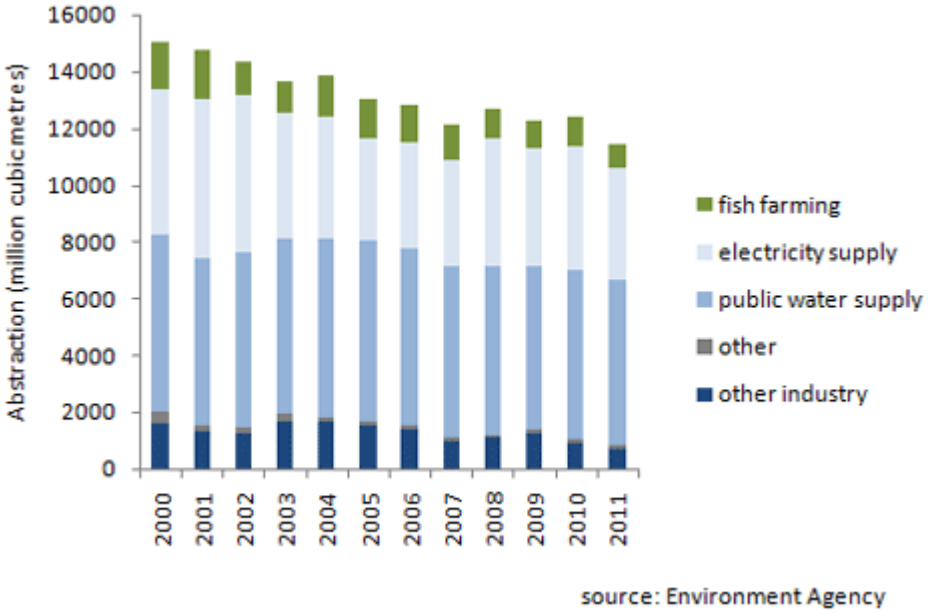
Water Abstraction Estimates

The consumption of water abstracted from non-tidal surface and groundwater in England and Wales has fallen from an estimated 15,063 million cubic metres in 2000 to an estimated 11,399 million cubic metres in 2011.

Statistics release

Why is this important – Water is a vital resource that needs to be managed carefully to ensure that people have access to affordable and safe drinking water and sanitation, and that industry needs are met, without depleting water resources or damaging ecosystems.

Abstractions from non-tidal surface water and groundwater by use: England and Wales, 2000-2011



source: Environment Agency

Of the 11,399 million cubic metres abstracted from non-tidal surface water and groundwater in 2011, 51 per cent was for the public water supply and 34 per cent for the electricity supply industry.

Data download

Next scheduled update: December 2013

Note on additional water abstraction datasets: Estimates of average abstraction in million cubic metres is presented for non-tidal waters (groundwater and non-tidal surface waters) and tidal waters, and by the following purpose categories:

- Public water supply
- Spray irrigation (agricultural and non agricultural)
- Agriculture (excl. spray irrigation)
- Electricity supply industry

- Other industry
- Fish farming, cress growing, amenity ponds
- Private water supply
- Other

The Environment Agency data is for England & Wales and by Environment Agency region. The boundaries used are based on river catchments.

- Abstractions and licensed abstractions from all sources by purpose, England and Wales
- Abstractions from all surface and groundwaters by purpose and Environment Agency region
- Abstractions from tidal waters by purpose and Environment Agency region
- Abstractions from non-tidal surface waters by purpose and Environment Agency region
- Abstractions from groundwaters by purpose and Environment Agency region
- Abstractions from all sources except tidal by purpose and Environment
- Abstractions from all surface and groundwaters by purpose and source

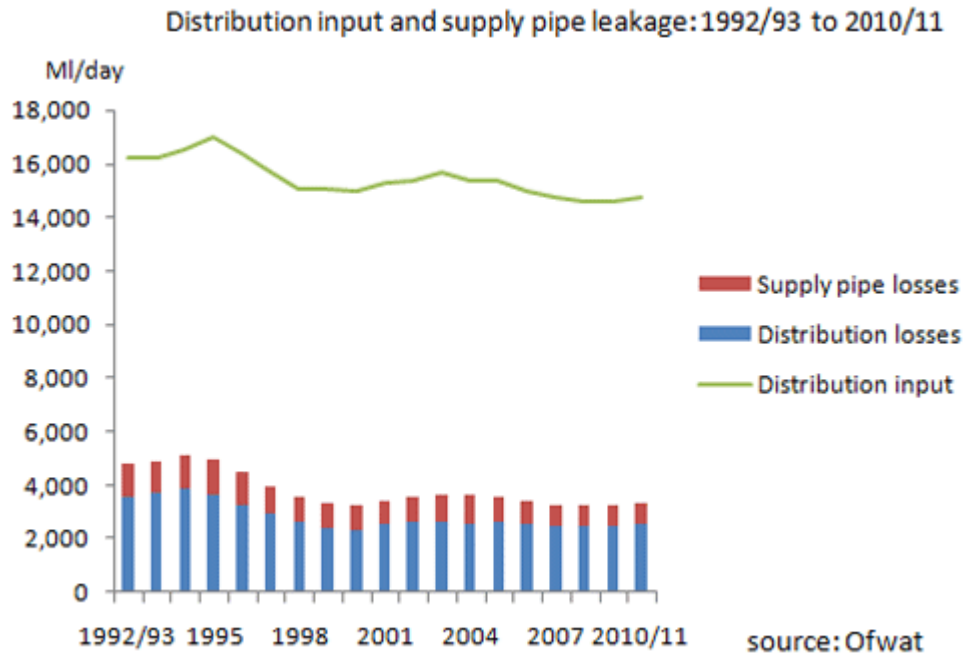
Data on the number of licences held are also available:

- Abstraction licences in force and new licences determined
- Number of licences in force by purpose

Water leakage

For England and Wales in 2010-11 2,559 megalitres per day of water were lost through leakage. This represents a rise of 2.6 per cent over the previous year but a 34 per cent fall since the peak in 1994-5.

Why is this important – Targets are set each year for water companies in England and Wales to reduce leakage.



- *Distribution losses* include all losses of drinkable water between the treatment works and the highway boundary. *Supply pipe losses* are leakage from the customer's pipes between the highway boundary and stop tap.

Data download

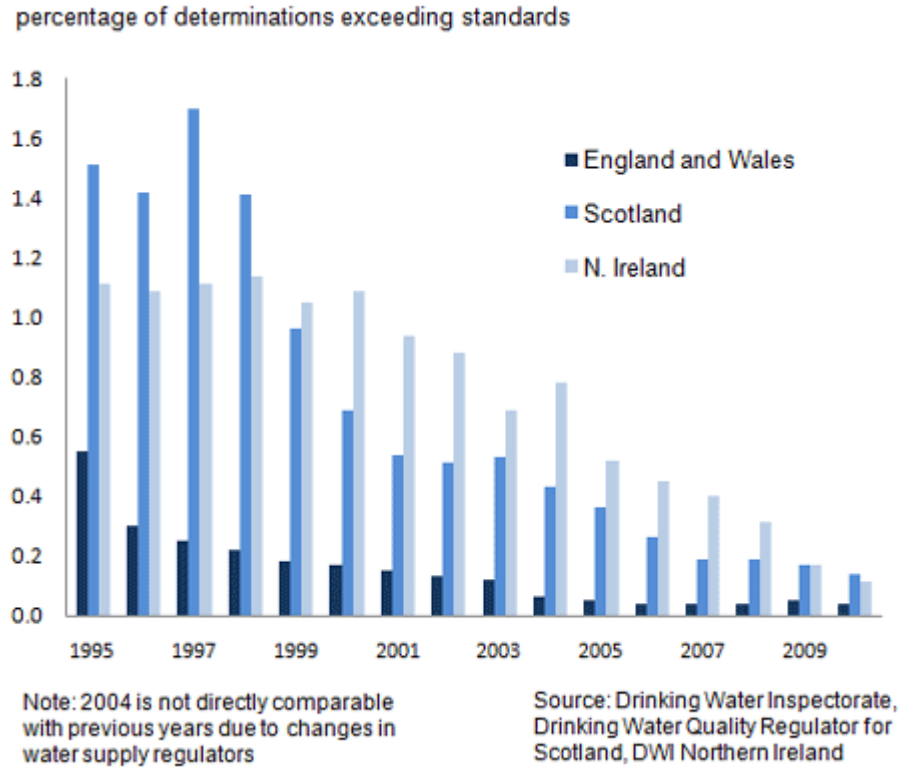
Next scheduled update May 2013

Drinking water quality

There has been a marked improvement in drinking water quality in the UK since the mid 1990s. Now, less than 0.3 percent of tests fail to meet standards in all countries. In 2010, there was further improvement in drinking water quality in England & Wales and Scotland, remaining at 0.04 and 0.14 percent failures respectively. Northern Ireland saw an improvement, from 0.17 to 0.11 percent.

Why is this important – Almost all of the population of England and Wales is served by the public water supply. A safe and reliable water supply is essential in maintaining the health of the population, and is of increasing importance with the challenges faced from the impacts of climate change on water resources.

Drinking water quality: UK, 1995-2010



Assessments sample both the water leaving water treatment works, service reservoirs, and at consumers taps.

The patterns across supply zones in Scotland and Northern Ireland may not be comparable to those in England and Wales because of the large proportion of very small zones in Scotland and Northern Ireland. Nearly 59 per cent of all Scottish zones serve less than 5000 people and a combined total of about 4 per cent of the total population of Scotland.

The EU's Drinking Water Directive aims to protect health by setting standards for drinking water across Europe.

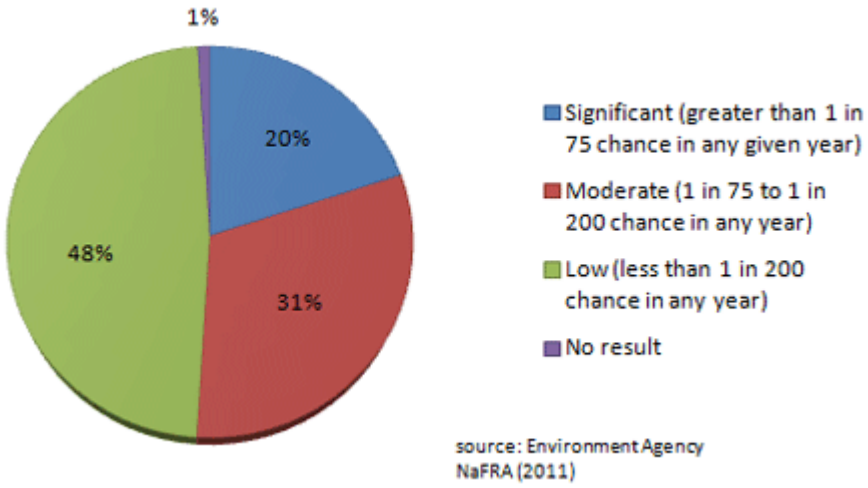
Data download

Number of properties at risk of flooding

In England and Wales an estimated 2.7 million properties lie in areas at risk of flooding. Of these around 546,000 are in areas where the risk is considered to be significant, that is a 1 in 75 (1.3%) or greater chance of being flooded in any given year.

Why is this important – Flooding can have a devastating effect on the health of the communities affected. It also has a significant impact for the local and national economy.

Number of properties at risk of flooding from rivers and seas



Risks are the likelihood of flooding occurring given existing flood defences and do not reflect the extent to which flooding may be serious enough to cause damage.

This indicator is under development. Its reporting and assessment will be refined on the establishment of wider flood management measures currently in preparation.

Data download

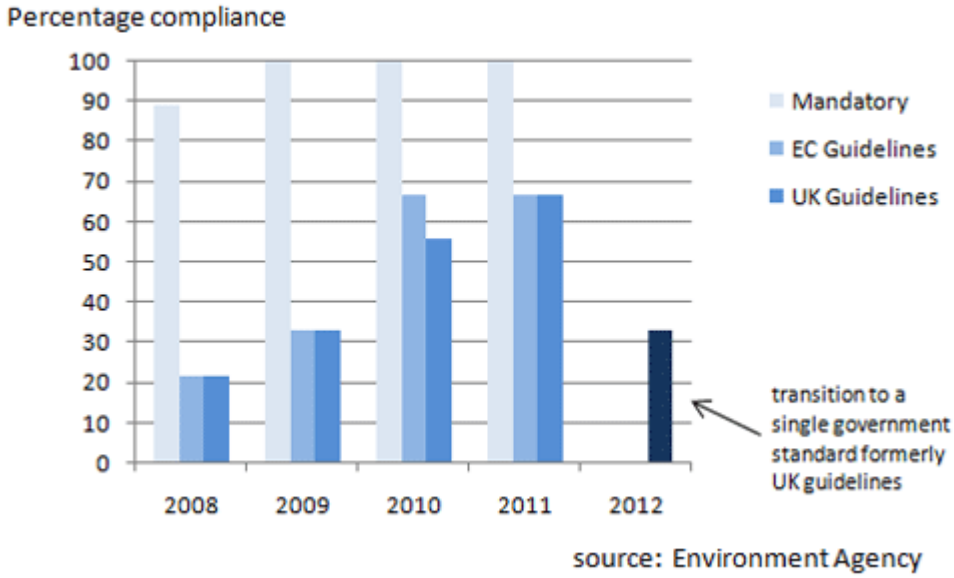
Inland bathing water surveys, mandatory and guideline standards

In 2012, all 12 inland bathing waters in the UK met the mandatory (minimum) standards of the European Bathing Water Directive and met the more stringent guideline standards of the Bathing Water Directive.

The UK is currently in a transition period as we move from the original to the revised Directive. Bathing water quality is now monitored using the new parameters of E.coli and intestinal enterococci and the data is used to assess standards set by Directive 76/160/EEC. At the same time, it will be used in the four year data set that will provide the first set of classifications under Directive 2006/7/EC in 2015. There is now a single guideline standard which is comparable to the previous UK Guideline standard.

Why is this important -The microbiological quality of bathing waters can be affected by diffuse pollution from agricultural and urban sources, discharges of sewage effluent, storm water overflows and river borne pathogens (i.e. pollutants that could affect human health). The EC Bathing Water Directive sets mandatory and more stringent guideline standards with tighter limit values. During the transition period E.coli is used to assess mandatory standard, with a limit value of 2000 per 100ml. At least 95 per cent of samples must meet the limit value. Guideline standard is assessed on monitoring for intestinal enterococci, with a limit value of 100 per 100ml in at least 80 per cent of samples.

Bathing water surveys, compliance with mandatory, EU and UK Guideline standard: 2008-2012



- Nine inland sites in England were designated as bathing waters in 1998 and two were designated in Scotland in 1999. There were no more additions to the list until a third Scottish inland water was designated in 2008.
- Variations in water quality from year to year may be related to weather conditions, as inland waters can be affected by run-off from surrounding urban or agricultural land. Inland bathing waters may be affected by phytoplankton blooms, which are not harmful, or in some cases by cyanobacteria (blue-green algae), which is toxic. Advice will be given on signs at the lakes during the bathing season.

Data download

Site Results

Next scheduled update November 2013

Inland water - Further information

Government policy on water quality and abstraction

EU Water Framework Directive

Water quality in Scotland and Northern Ireland
Additional data on: river water quality

Further information on monitoring water leakage
Water leakage in Scotland and Northern Ireland

Drinking Water Inspectorate for England and Wales

Drinking water quality in Scotland and Northern Ireland
Drinking water quality in Europe
Additional data on: drinking water quality

Environment Agency Floodline information and Managing flood risk
Flooding in Wales and Scotland

UK climate summaries
European comparisons
Flooding in England

Nitrate and phosphate in European rivers

Green Economy, Green Business

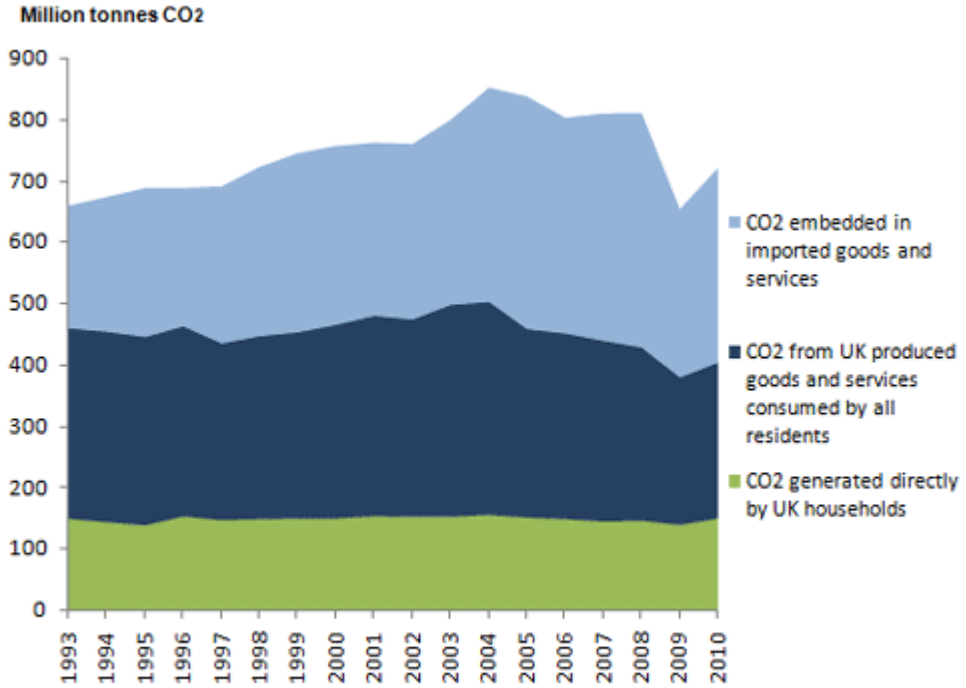
UK's Carbon Footprint – Carbon dioxide emissions relating to UK consumption

Latest data on the UK's carbon dioxide (CO2) footprint shows an increase of 10 per cent between 2009 and 2010. This follows the 19 per cent fall in 2009 and leaves the carbon dioxide footprint 9 per cent higher than it was in 1993.

Official Statistics Release (pdf)

Why is this important – We are all consumers – of food and drink, personal travel, household products and travel tourism. As such, we are accountable to some degree for the pressures which our consumption puts on the environment.

CO_2 emissions associated with UK consumption 1993 to 2010



source: University of Leeds and Centre for Sustainability Accounting

- When investigating the impact that UK consumption has on carbon dioxide emissions, the worldwide production of goods consumed in the UK needs to be taken into account as well as goods produced in the UK. Since 1993 the structure of the UK economy has shifted towards the services sector. The consequence of this is that more of the goods UK households consume are now produced abroad.
- CO_2 emissions associated with imported goods and services consumed in the UK have risen by 59 per cent since 1993 and now account for over 40 per cent of all consumption emissions (316 mt CO_2, 44 per cent), compared to around 30 per cent of the carbon dioxide footprint in 1993 (199 million tonnes (mt) CO_2).

Data download

Official Statistics Release (pdf)

Data download for chart (csv)

Excel detailed yearly data (xls)

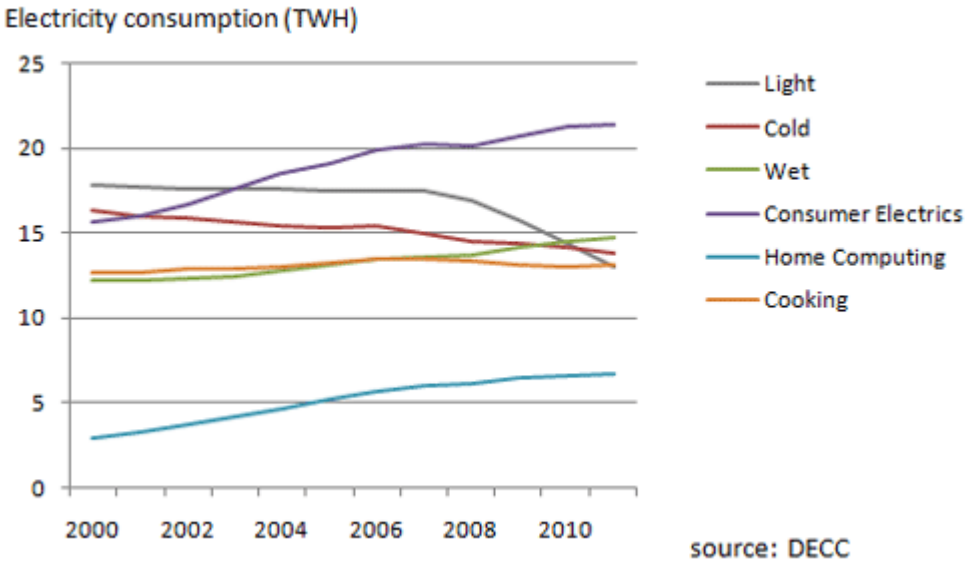
Next update: December 2013

Electricity consumption by households

In 2011, 111 Terrawatt hours (TWh) of electricity were consumed in UK households, resulting in 59 million tonnes of CO_2 emissions. Electricity consumption in UK households has decreased by around 11% since 2004 and is similar to the level of use in 2000.

Why is this important – Over half of electricity consumption in UK households relates to use of consumer electronics**,** such as computers, washing machines, and televisions.

Electricity consumption by households, UK 2000-2011



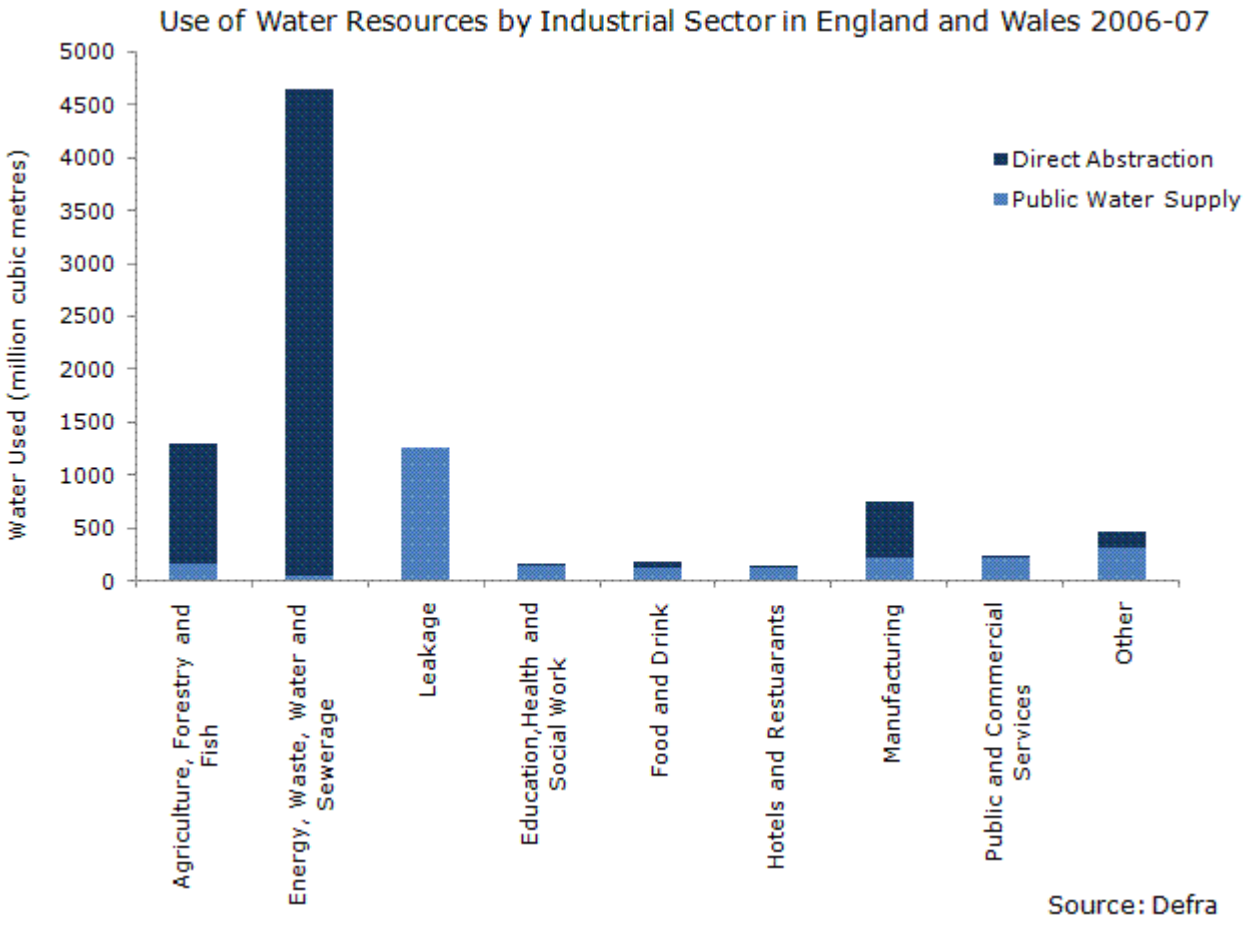
- Electricity consumption for lighting and cold appliances (fridges and freezers) have shown notable decreases between 2000 and 2011, 26 per cent and 14 per cent respectively. This highlights the improved energy efficiency in both product groups.
- Electricity consumption for Consumer Electronics has more than doubled since 2000. The Defra household study in 2011 found that on average 9-16 per cent of household electricity use resulted from products being left on standby.
- The results from the Defra public attitudes survey conducted in 2009 estimate that 60 per cent of light bulbs in the home are now energy efficient light bulbs.

Data download

Water use by industry

Approximately half the 12.7 billion cubic metres of water abstracted in 2006-07 in England and Wales was for public water supply, with the remainder largely accounted for in cooling uses by the electricity generation sector and in the agricultural sector.

Why is this Important – predictions of warmer summers and wetter winters will put pressure on our water supply. More efficient and sustainable ways of using water in order to have a secure water supply are needed.



Approximately 6.5 billion cubic metres of water were directly abstracted for use by businesses in England and Wales in 2006-07. Energy, waste, water and sewerage accounted for 71 per cent of the total (4612 million cubic metres), most of it abstracted directly from surface sources. The fish farming industry abstracted 16 per cent of the total and the manufacturing sector accounted for 9 per cent.

Water losses through leakage account for the largest use of public water supply, using 51 per cent (1248 million cubic metres). Manufacturing accounted for 13 per cent (324 million cubic metres) and service industries accounted for 9 per cent (217 million cubic metres).

The chart shown below does not include water abstracted for household use. Households in England and Wales account for approximately half of the water abstracted for public water supply, including leakage.

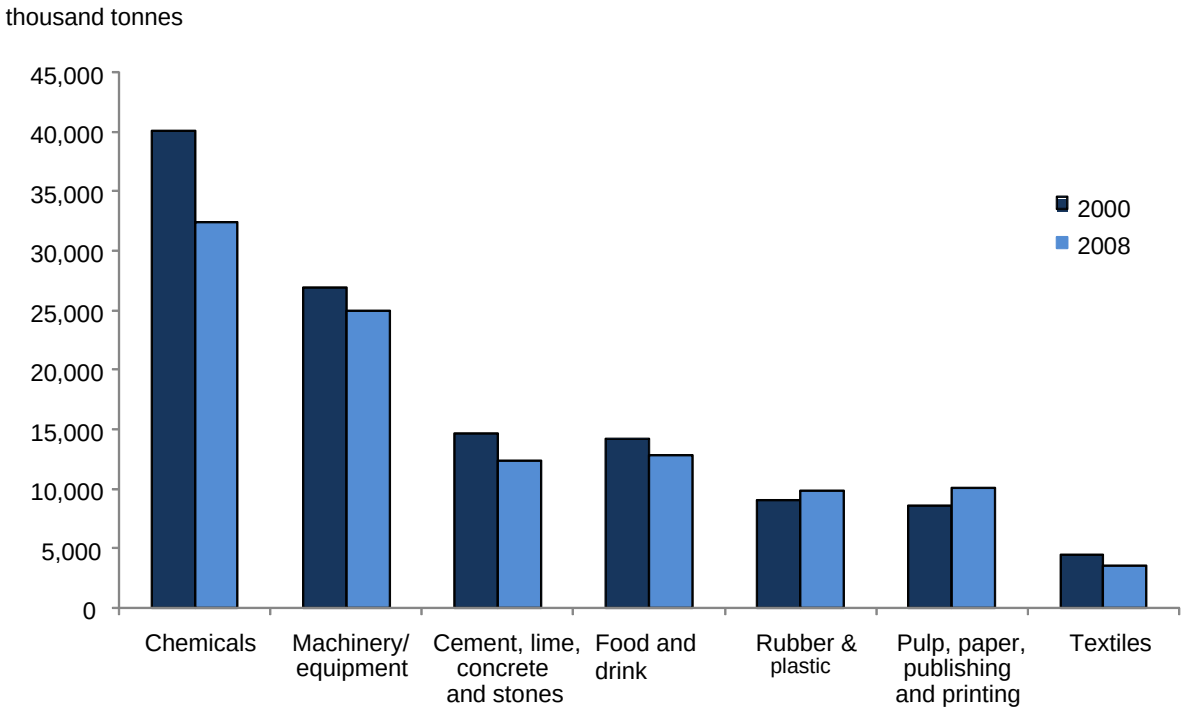
Data download

CO_2 emissions by different sub-groups in manufacturing sector

In 2008, the total CO2 emissions in the manufacturing sector were equivalent to 140 million tonnes of carbon. This was a 10 per cent decrease in CO2 emissions in UK manufacturing sectors from 2000.

Why is this Important – in 2008, UK manufacturing sectors accounted for approximately 23 per cent of UK producer carbon dioxide emissions.

CO_2 emissions by different sub-groups in manufacturing sector: UK, 2000 - 2008



Note: Includes emissions from electricity use, using a constant emission factor

Source: Office for National Statistics

The chemicals sector performed better than the others with a 19 per cent reduction in CO_2 emissions respectively between 2000 and 2008. Gross Value Added (GVA) for this sector has increased by 28 per cent in the same period.

Pulp, paper, publishing, and printing, rubber and plastics were the two sub-groups included in this analysis where emissions increased between 2000 and 2008. The overall increases for these sub-groups were 17 per cent and 9 per cent respectively. In contrast, GVA in these sub-sectors actually decreased between 2000 and 2008: GVA for pulp paper, printing and publishing decreased by 9 per cent and for rubber and plastic by 10 per cent.

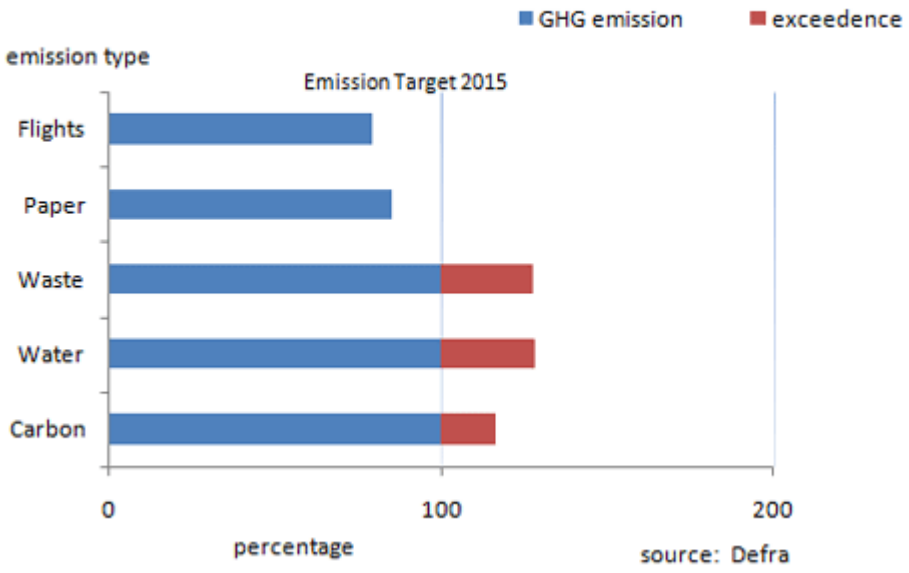
Data download

Government Greening Commitments

By 2011-12, Government departments had already achieved their 2014-15 targets for reductions in Domestic Flights, Water use and Paper use.

Why is this important – The UK Government is committed to leading by example with its commitments to creating a more sustainable Government by lowering levels of Carbon, Water, Waste, Paper and Flights.

Sustainable Operations on the Government Estate, UK (2009-2012)



- The GCC targets require government to reduce their levels of Carbon, water and waste use whilst cutting down on paper and domestic flights by 2014/15. Paper use and domestic flights have passed their respective targets of 10% and 20% reductions by 2014/15.
- The target for water use is a yearly reduction which is currently being achieved. The target for Carbon (25%) is over half way to being met although the target for waste (25%) is a bit further off. These reductions are estimated to have saved around £44million in 2011/12.

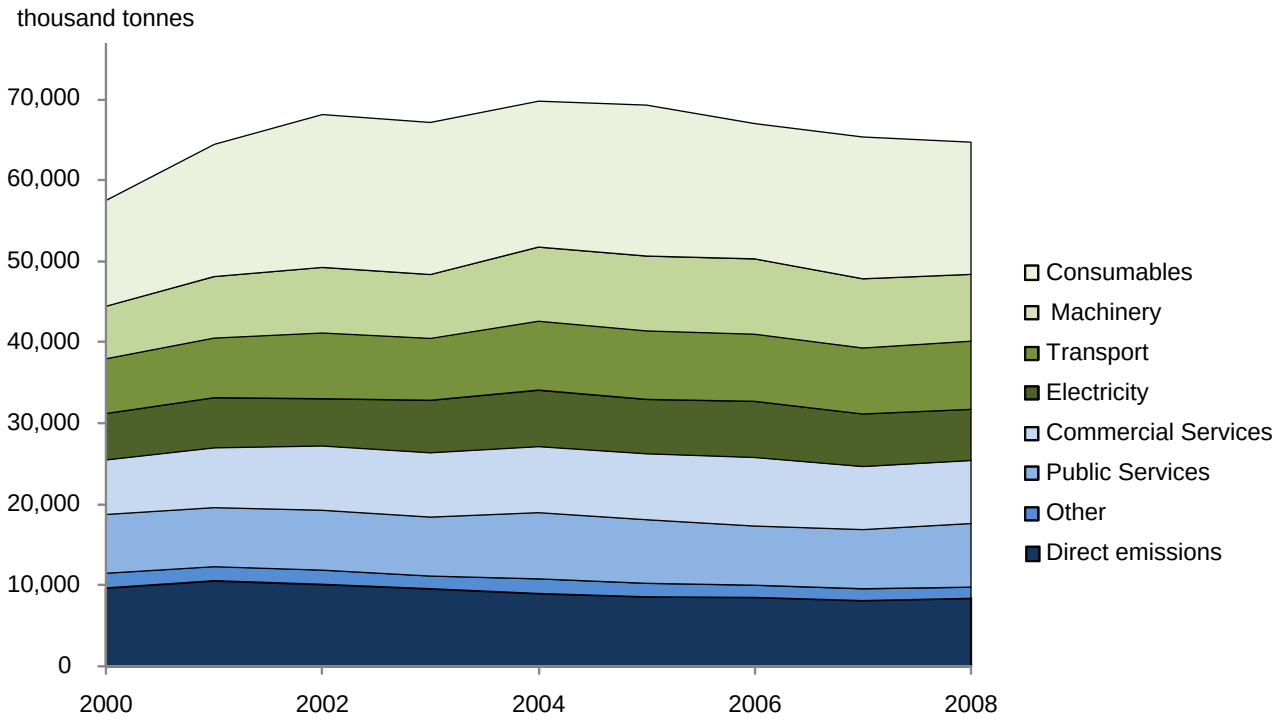
Data download

Central Government carbon footprint

In 2008, the carbon footprint of Central Government was approximately 65 million tonnes of CO2 equivalent (CO2e), an increase of 12 per cent since 2000. Carbon emissions peaked in 2004 at almost 70 million tonnes CO2e.

Why is this Important – The UK government's carbon footprint accounts for approximately 7 per cent of the total UK carbon footprint.

UK Central government carbon footprint, 2000 to 2008



Source: Centre for Sustainable Accounting

Direct emissions are emissions from sources owned or controlled by the Government (e.g. emissions from buildings and transport).

Consumables account for the highest proportion of the government carbon footprint, 25 per cent. The emissions from consumables in the government carbon footprint increased by 25 per cent between 2000 and 2008.

The proportion of emissions that come from products produced abroad has been increasing. In 2000, 28 per cent of the government carbon footprint emissions were from products produced abroad. In 2008 the proportion increased to 35 per cent.

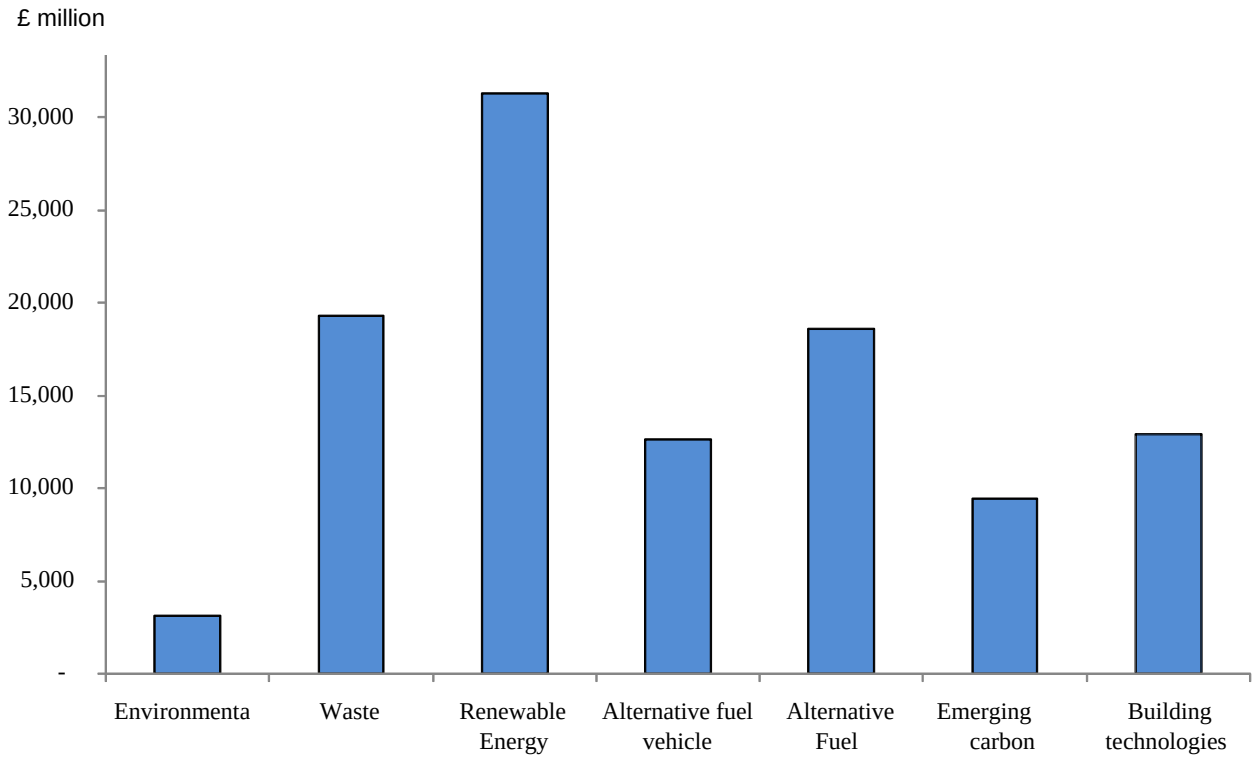
Data download

Market value of low carbon and environmental goods and services

The global market value of low carbon goods and services (LCEGS) in 2007-08 was £3,046 billion. The UK had the sixth largest low carbon and environmental economy, with 3.5 per cent of the global share worth £107 billion.

Why is this Important – we need to ensure that the UK economy provides the goods and services needed to meet our low carbon and other environmental objectives.

UK market value of LCEGS, 2007/08



Source: Innovas

The LCGES industries in the UK are expected to grow by approximately 45 per cent between 2007-08 and 2014-2015. Renewable energy is expected to grow the fastest.

The largest product and service in the UK LCEGS was renewable energy, worth £31.3 billion, representing 29 per cent of UK production. Other products that have a high market value are waste services (£19.3 billion) and alternative fuels (£18.6 billion).

In 2007-08 approximately 10 per cent of products and services were exported to other countries. Renewable energy represented 40 per cent of all UK exports from LCEGS industries.

Data download

Green economy, green business- Further information

Government policy on Green economy, green business

Sustainable Consumption and Production Indicators

Centre for Sustainable Accounting

Office for National Statistics

EU Environmental Policy

Innovas Report into LCGES

Environment Agency

Scottish Environment Protection Agency

Welsh Government

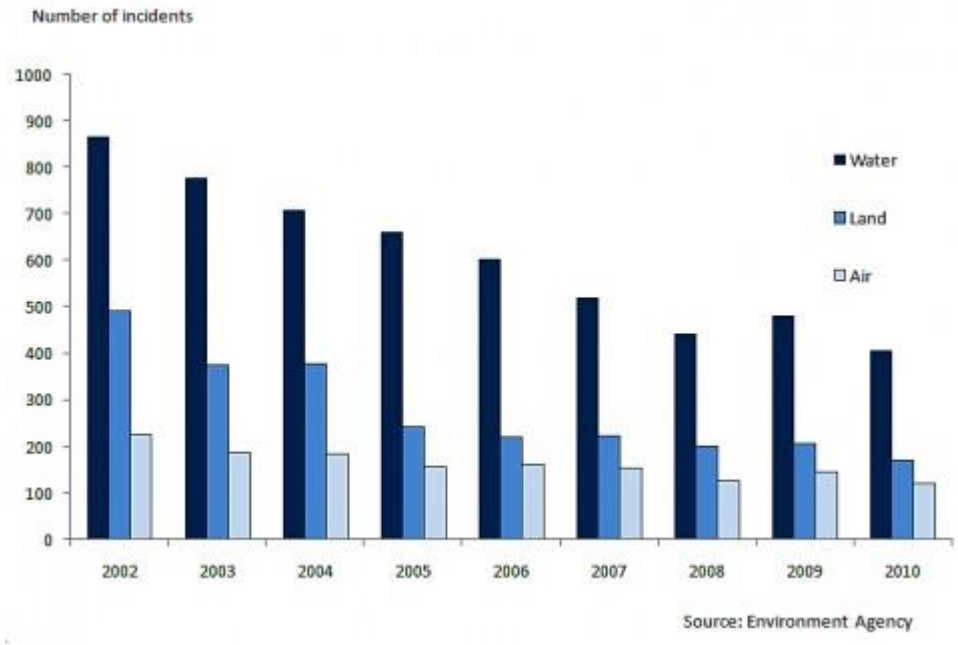
Department for Energy and Climate Change

Supplementary Information

Serious pollution incidents affecting water, air and land

In England and Wales there were 694 serious pollution incidents in 2010 a 16.5 per cent decrease compared with 2009 figures.

Why is this important – Pollution incidents can have significant adverse impact on local communities and wildlife. It may take several years for wildlife populations to recover following a serious pollution incident



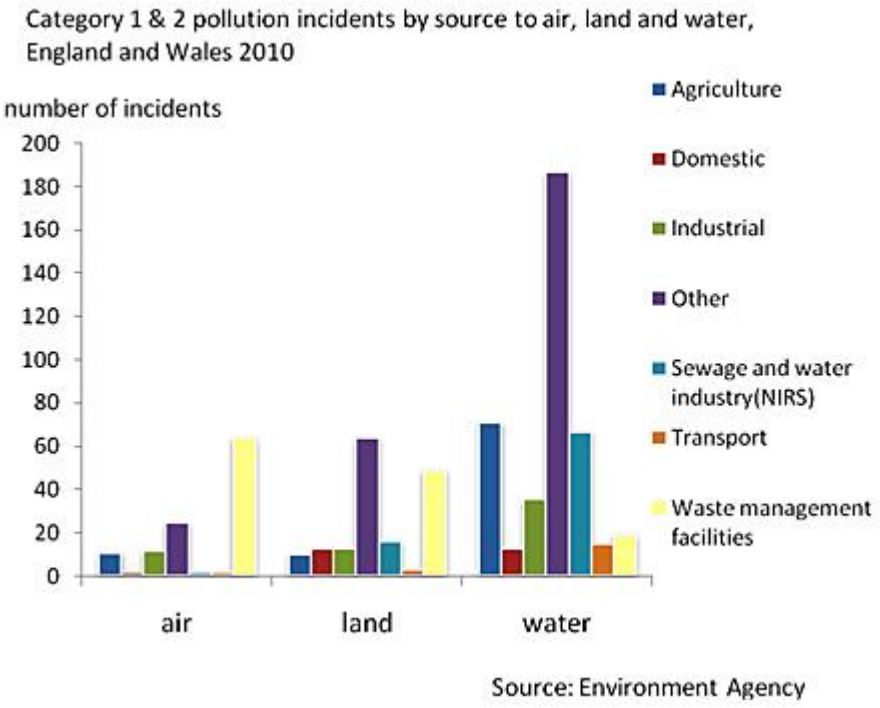
- Pollution incidents have been decreasing steadily since 2002. The number of serious air pollution incidents declined by 47 per cent; land pollution incidents declined by 65 per cent; and water pollution incidents declined by 52 per cent.
- Category 1 and 2 incidents are thought less likely to have been influenced by changes over time in the reporting system and reporting rates, and thus may provide a more meaningful indication of actual trends in pollution incidents. Category 3 represents low severity incidents. Category 4 incidents are those that had no impact on the water environment (although they may have had an impact on land or air environments).

Data download

Category 1 and 2 pollution incidents by source to air, land and water

In 2010 waste management facilities in England and Wales were responsible for 55 per cent of all the serious (category 1 and 2) air pollution incidents and for 29 per cent of serious land pollution incidents

Why is this important – Pollution incidents can have a significant impact on the local environment. Category 1 & 2 incidents represent high and medium severity under the Harmonised Monitoring System.



Source: Environment Agency

Overall, the waste sector was responsible of 19 per cent of all serious pollution incidents. The most common waste materials responsible for such incidents were; asbestos, vehicle parts and household rubbish.

Agriculture caused 13 per cent of all serious pollution incidents, with the sewage and water industry causing a further 12 per cent. Industrial also caused under 9 per cent of all serious pollution incidents.

The impact of each incident is assessed separately for each of the three media (land, air and water).

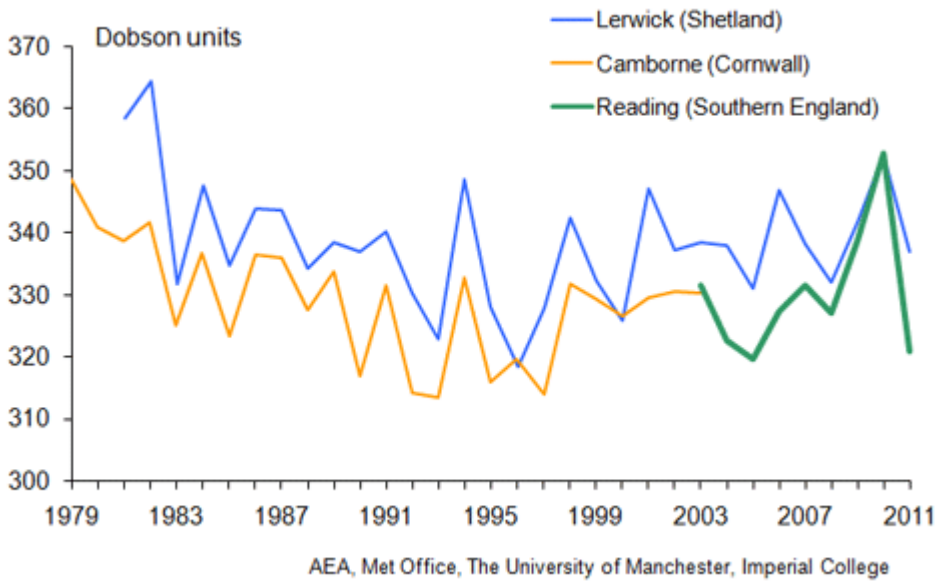
Data download

Column ozone measurement in the UK: 1979-2011

Column ozone measurements in the UK have fluctuated, but generally decreased during the 1980s and 90s, at an underlying rate of about 3 per cent a decade. More recently it appears that the trends may be levelling out, but it is too soon to be sure.

Why is this Important - There is unequivocal evidence that man-made emissions of substances containing chlorine and bromine deplete the stratospheric ozone layer. In 1987, international agreement to limit the production and consumption of the most important of these substances was reached through the Montreal Protocol. Total levels of chlorofluorocarbons (CFCs) in the lower atmosphere peaked in the 1990s. However, these substances have long life in the atmosphere, and it is anticipated that recovery of the ozone layer will not occur until the middle of the 21st century.

Column ozone levels at Lerwick and at Camborne / Reading: 1979-2011



There were a total 13 days in 2011 when Low Ozone Events (days when ozone was lower than two standard deviations below the long term monthly mean) were recorded during 2011. Of these 5 were at Lerwick and 9 at Reading, with 9 April 2011 being the only date to record low ozone events at both sites.

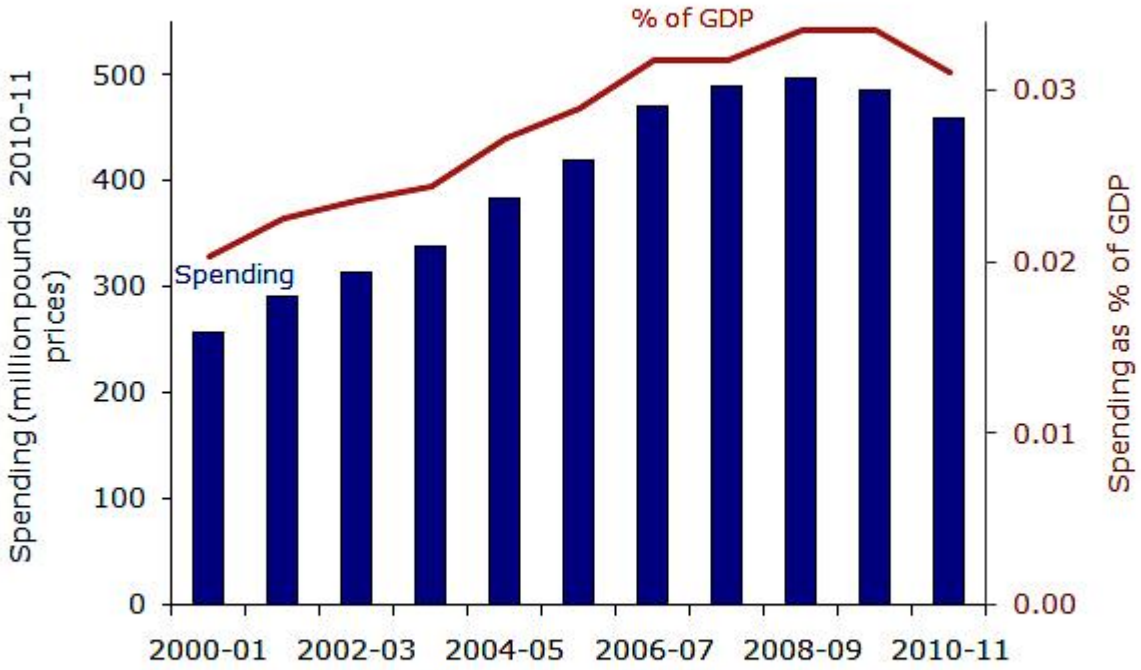
Data download

Expenditure on UK biodiversity

In 2010-11, £458.9 million of UK public sector funding was spent on UK biodiversity, a decrease of 5 per cent compared with 2009-10. Between 2000-01 and 2010-11, public sector spending on UK biodiversity increased by 79 per cent in real terms. Over the same period UK GDP increased by 17 per cent. Public sector funding on UK biodiversity relative to gross domestic product (GDP) fell in 2010-11.

Why is this important – Spending is one way of assessing the priority that is given to biodiversity within Government.

UK spending on biodiversity and as percentage of GDP 2000-01 to 2010-11



Source: Defra, HM Treasury

Note: Deflated using UK Gross Domestic Product (GDP) Deflator

For the purpose of this measure only biodiversity related grant money and programme expenditure has been included. The above figures do not include any associated operational costs.

This indicator is derived from work to establish indicators for the amount of expenditure on biodiversity in the UK and globally. The indicators are based on a combination of expert opinion and published and unpublished estimates from public sector bodies.

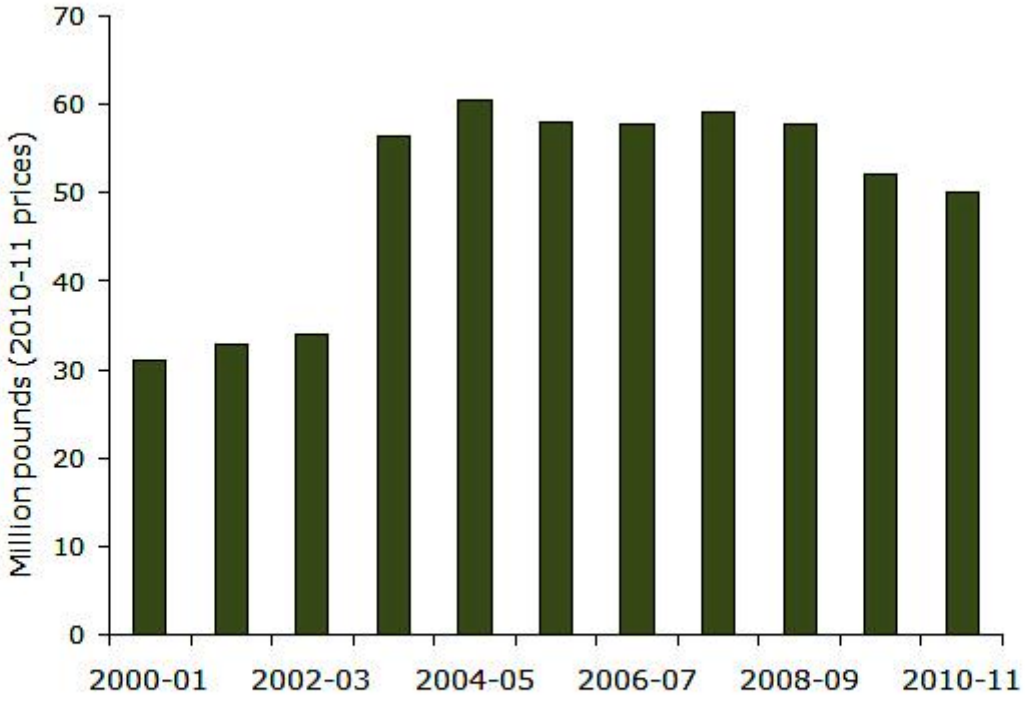
Data download

Expenditure on global biodiversity

In 2010-11, UK public sector funding for international biodiversity totalled £50.2 million. International spending by the UK public sector has increased by 62 per cent since 2000-01 in real terms. However, there has been a reduction since 2007-8.

Why is this important – Spending is one way of assessing the priority that is given to biodiversity within Government.

UK spending on global biodiversity 2000-01 to 2010-11



Source: Defra, HM Treasury

Note: Deflated using UK Gross Domestic Product Deflator.

For the purpose of this measure only biodiversity related grant money and programme expenditure has been included. The above figures do not include any associated operational costs.

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Data download

Supplementary - Further information

Environment Agency - Pollution incidents
Pollution incidents in Scotland and Northern Ireland

How to participate in the EPE Programme
Forms and guidance

Sustainable Development Indicators

Waste and Recycling

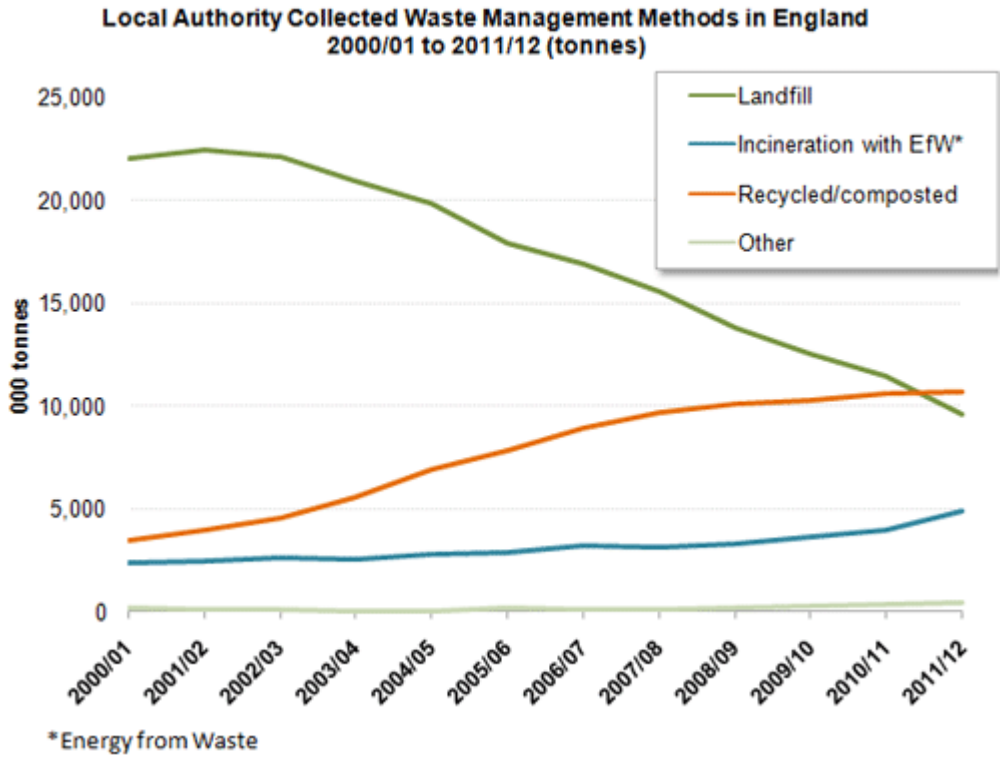
Local Authority Waste Management Statistics for England – Final Annual Results 2011/12

Final estimates of local authority collected waste generation and management for England and the regions, including a new experimental analysis of greenhouse gases and Local Authority collected waste.

2011/12 National Statistics Release

Headline results

- **In 2011/12, 43 per cent of household waste was recycled.** Although this is the highest recycling rate recorded for England, the rate of increase has been levelling off, with 2011/12 being the lowest year on year increase for ten years.
- **Household waste generation was 22.9 million tonnes,** continuing the year on year fall seen since 2007/8. This amounts to 431kg of waste per person.
- **Local Authorities recycled, composted or reused 10.7 million tonnes of the waste they collected.** This amounted to more than was landfilled for the first time since records began, although an increase in incineration may have partly accounted for the change in landfill.



These statistics are based on data submitted by all local authorities in England to WasteDataFlow on the waste they collect and manage, and replace the provisional estimates published for the first three quarters of 2011-12.

See the National Statistics Release for more detailed information.

Data quality assurance process: Statistical summary for 2011-12

Greenhouse gas analysis (Carbon metric)

Quarterly datasets for national and regional data, as well as data at Local Authority level

England and the regions data downloads - 2000-01 to 2010-12

Local authority data downloads – 2011-12, 2010-11, 2009-10, 2008-09, 2007-08, 2006-07, 2005-06

Household recycling by material type 1996-7 to 2009-10

Wastedataflow

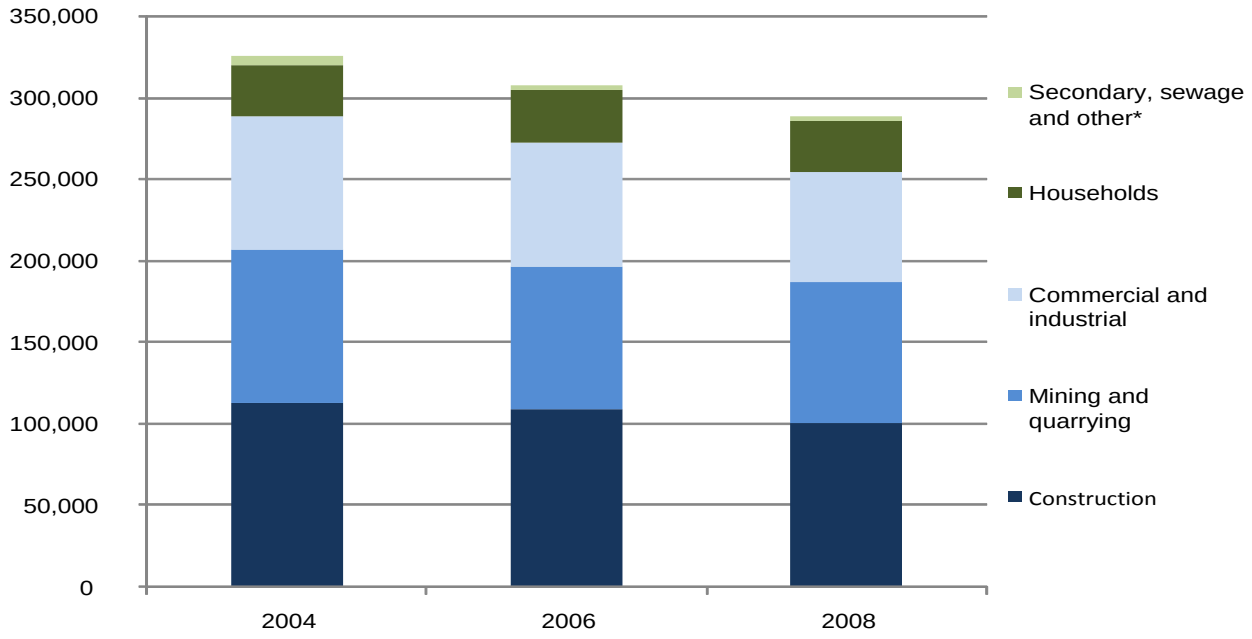
Definition of local authority collected waste

UK waste data

Total UK waste generation has decreased by 11.3 per cent between 2004 and 2008. Out of the sectors generating more than 25mt of waste per year, the Industrial and Commercial sector has seen the biggest percentage change in generation with a decline of 17.3 per cent over the period.

Why is this important – it's important to have a picture of all waste generated in the UK, by broad sector, to put waste in context.

Total waste generation by sector: UK, 2004 to 2008



Source: Defra –Waste Statistics Regulation return to Eurostat, 2004 to 2008

In the UK, in 2008, total waste generation was estimated at 288.6 million tonnes (mt)[1]. This is a decrease of 6.0 per cent from 2006 (307.1mt) and 11.3 per cent from 2004 (325.3mt).

In 2008, the largest contributing sector was construction (101.0mt), followed by mining and quarrying (86.0mt), commercial and industrial (67.3mt), household sources (31.5mt) and the remaining generation combined (2.7mt).

Of the sectors generating more than 25mt a year, the commercial and industrial sector saw the biggest percentage change in generation between 2004 and 2008 with a reduction of 17.3 per cent.

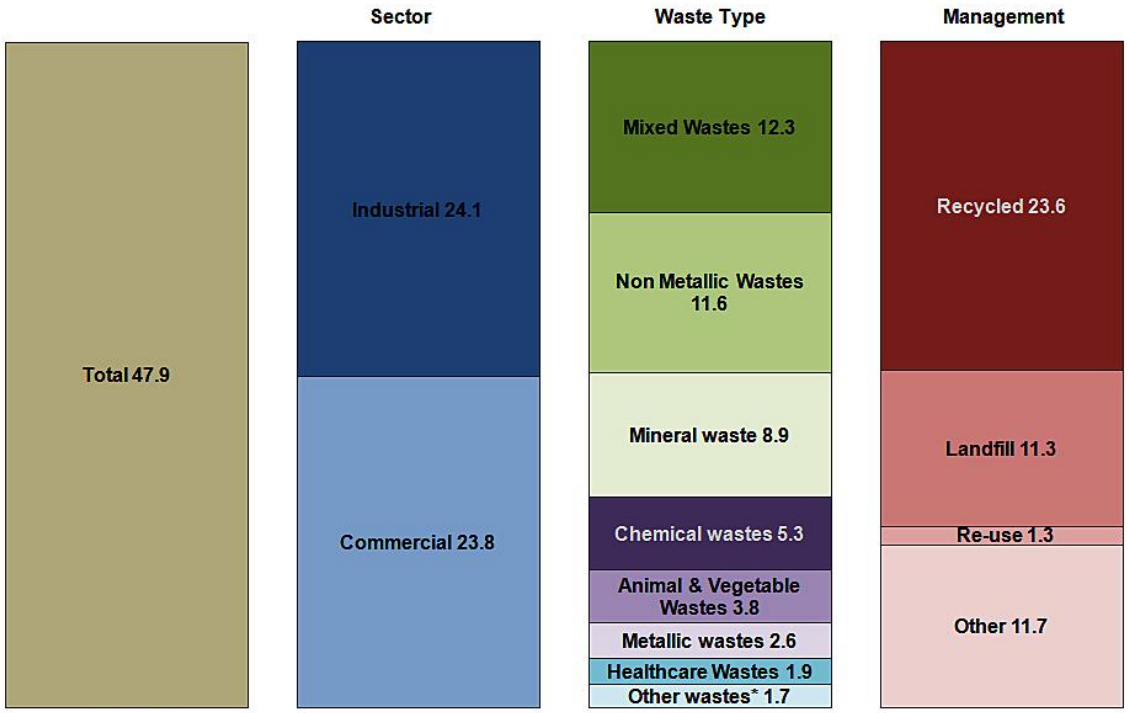
*Other includes healthcare wastes, batteries & accumulators, and wastes containing PCB.

Defra considers this double counting of waste generation and hence exclude such wastes from national reporting.

Commercial and industrial waste generation and management

A total of 47.9 million tonnes of commercial and industrial (C&I) waste were generated in England in 2009, a decrease from 67.9 million tonnes in 2002-3. C&I waste was roughly evenly split between the commercial and industrial sectors.

Why is this important – Businesses generate approximately one quarter of all waste in England, however, waste is a drag on the economy and business productivity. Businesses can save money by making products with fewer natural resources and can reduce the costs of waste treatment and disposal. Improving the productivity with which natural resources are used can generate new opportunities and jobs.



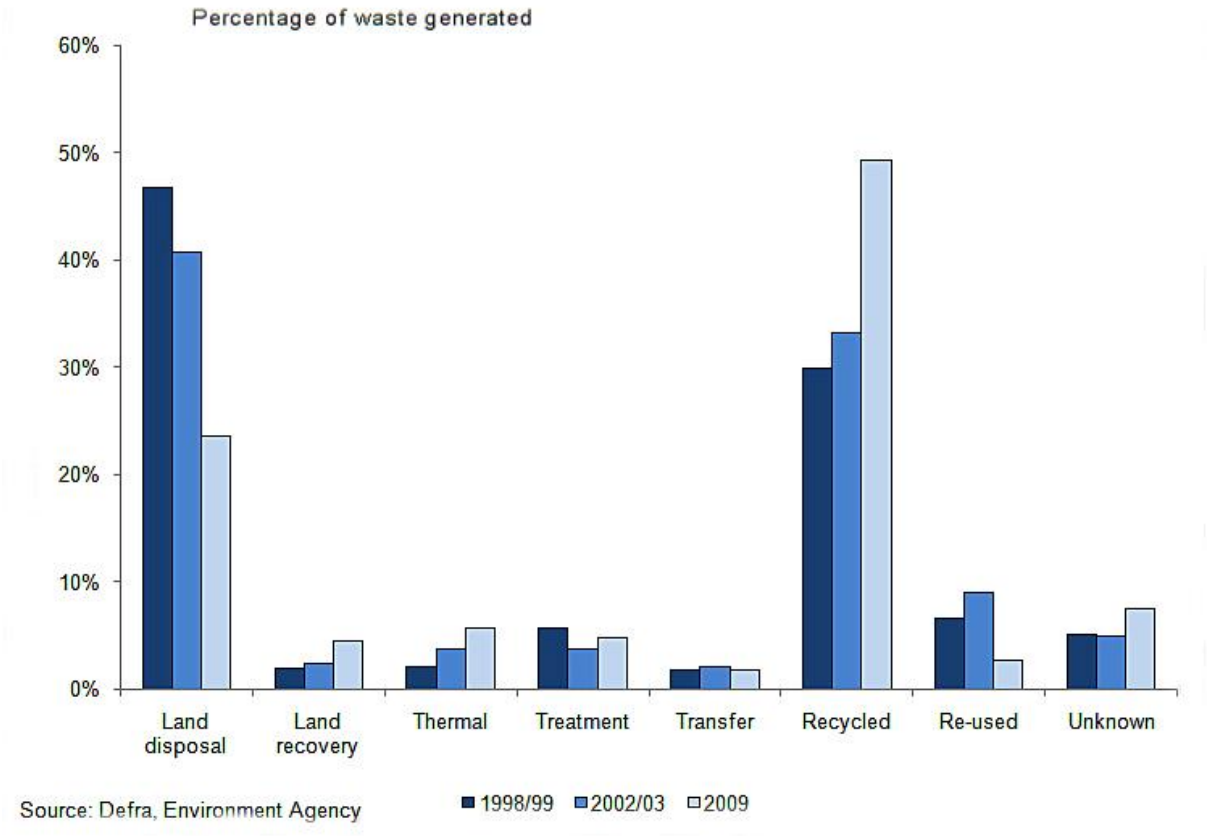
Source: Defra, Environment Agency

*Other includes common sludges, discarded equipment and non-wastes

In 2009, the industrial sector accounted for 24.1 million tonnes (mt) of waste, a decline of 13.5mt since 2002/3. The commercial sector produced 23.8mt of waste in 2009, a decline of 6.5mt since 2002/3.

A total of 25.0 mt, or 52 per cent, of C&I waste was recycled or reused in England in 2009, compared to 42 per cent in 2002/3. A total of 11.3 mt, or 24 per cent, of C&I waste was sent to landfill in 2009, compared to 41 per cent in 2002/3.

Small enterprises, with between 0 and 49 employees, produced 16.6 mt of C&I waste in England, in 2009, or 35 per cent of total C&I waste.



Results revision

The 2009 Commercial and Industrial waste arisings results were published on 16 December 2010. Since publication, it was discovered that some of the waste data for one business in the food, drink and tobacco sector, in the South West, was entered incorrectly, resulting in an overestimate of waste generation by approximately 100,000 tonnes. This also affects the national C&I total waste arisings estimate, the C&I waste management data and some waste types. There has been a correction made to the business sector classification as well which has affected the sector recycling and reuse rates. As a result, the statistical release, data tables and final project report have been revised to remove this error and republished below.

2009 Survey full report and results

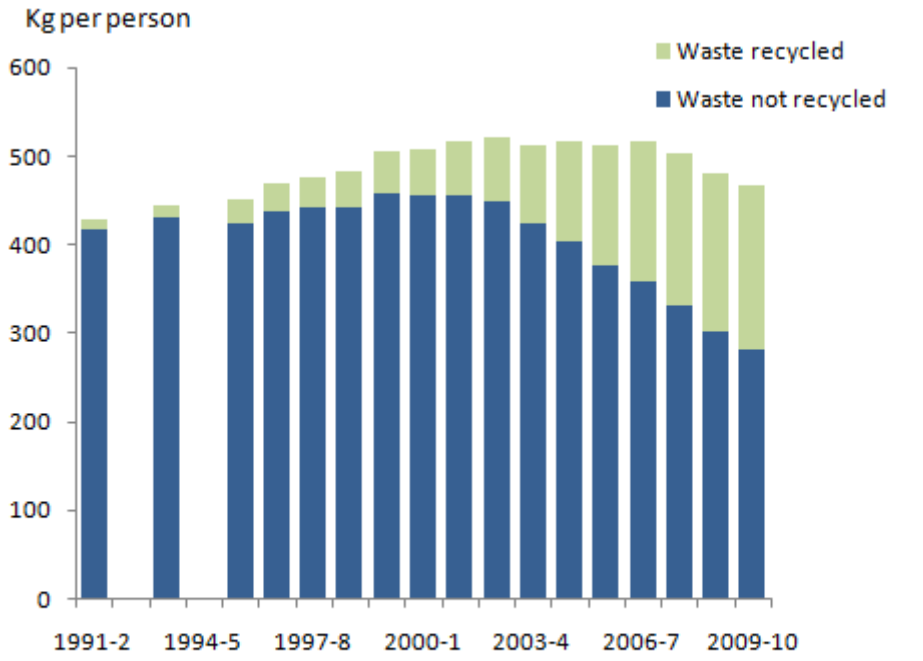
Final results Statistical Release (PDF)
Final results data tables (Excel)
Final project report (PDF)

Household waste and recycling in the UK

In the UK there has been a 38 per cent reduction in non recycled household waste per person between 2000-01 and 2009-10

Why is this important – The EU Waste Framework Directive requires the UK to recycle, compost or reuse 50 per cent of waste from households by 2020.

Household waste recycled per person (kgs): UK, 1991-92 to 2009-10



Source: Defra, Environment Agency, Scottish Evironment Proection Agency, Welsh Assembly

Household waste includes household bin waste and also waste from civic amenity sites, other household collections and recycling sites. Between 2000-1 and 2009-10 household waste per person decreased by 8 per cent, with each person generating 466 kg on average.

The amount of waste recycled or composted has increased, and accounted for 39 per cent of household waste in 2009-10. There has been a year on year decrease in the amount of non-recycled waste per person over the last eight years. It is now at the lowest level since estimates were first made in 1983-4; most of this goes to landfill.

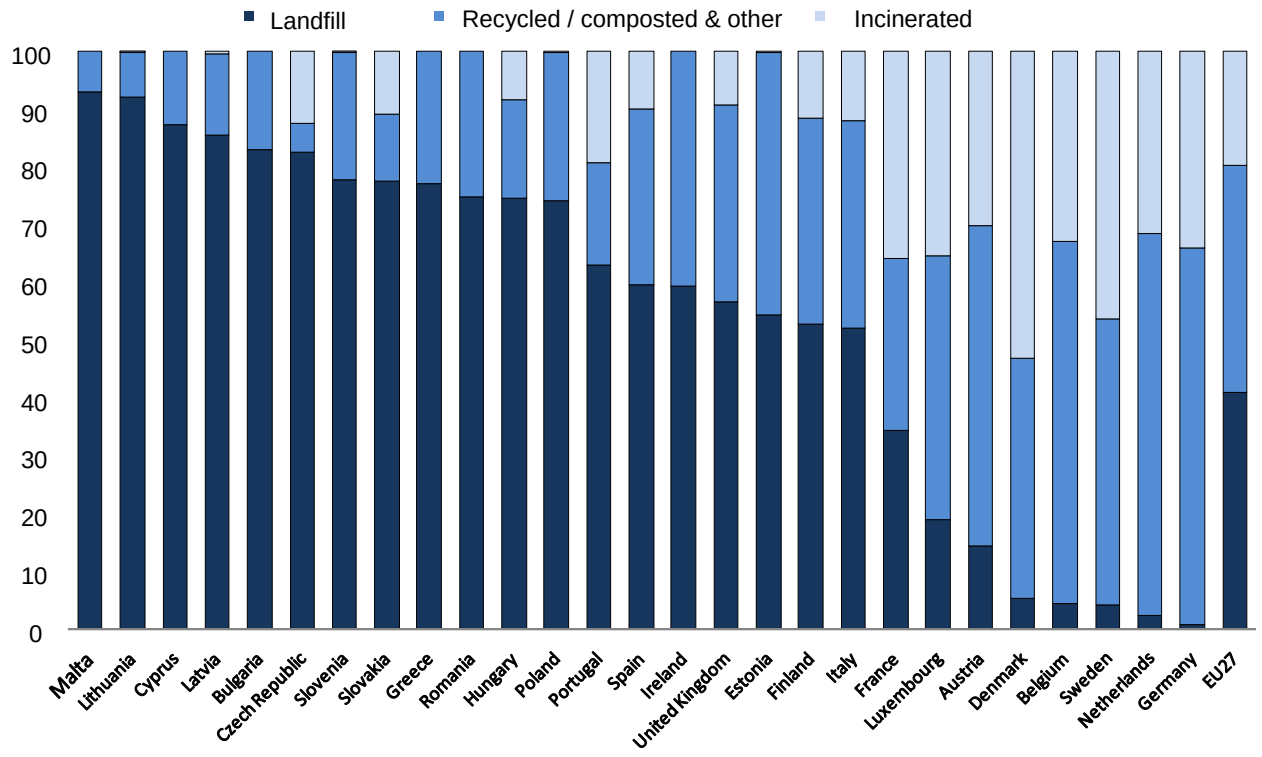
Data download

Municipal waste management in the European Union

The UK landfills around 15 per cent more municipal waste than the EU27 average (40 per cent) . It also has lower recycling and composting rates (34 per cent) than the EU27 average (39 per cent)

Why is this Important – The UK is committed to reducing the amount of waste we send to landfill and improve recycling and composting alternatives. It is beneficial to gauge these rates against EU partners.

Municipal waste management in the European Union: EU27, 2007



Only broad comparisons can be made between countries because of differences in definitions of types of waste management. The recycling category includes some other recovery options (fuel manufacture, for example), which are negligible in most countries, but account for around 10 per cent of municipal waste in Germany, and 6 per cent in Spain.

Denmark is the only country where incineration is the main method of waste disposal (53 per cent). The Netherlands, Germany, Austria and Belgium recycle and compost the majority of their waste.

Data download

Construction and demolition waste, England

Total construction and demolition waste for England was estimated at 77.4 million tonnes in 2010.

Why is this important – Construction and demolition waste forms a significant contribution to landfill. Increasing the recycling and re-use of waste within the industry will help to conserve the dwindling landfill resources.

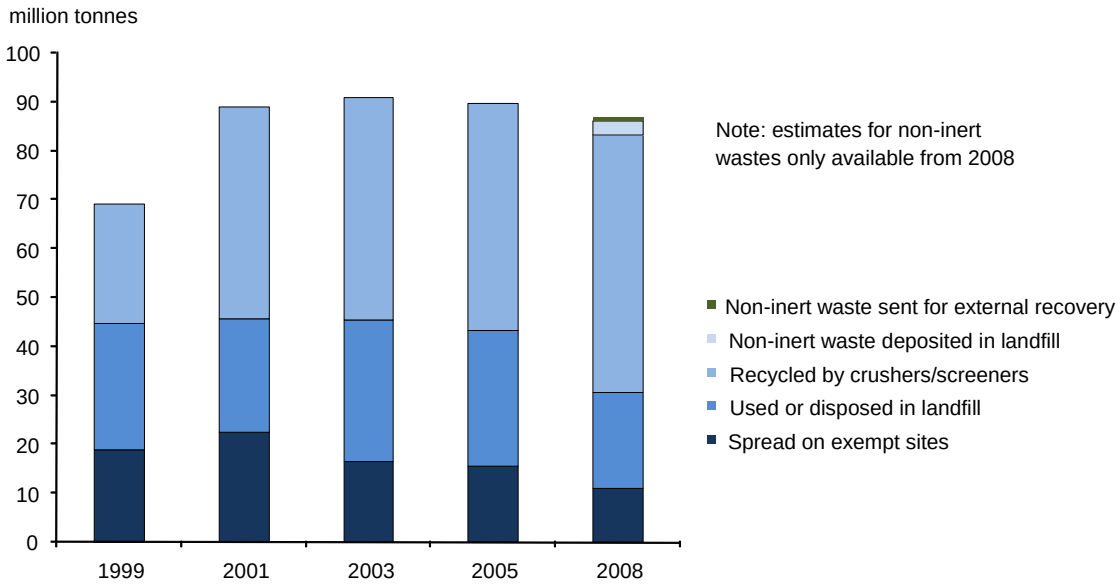
A new methodology for estimating total waste generation has been used to produce estimates for 2008-2010. This has been developed in partnership with other agencies and industry bodies. It uses only existing data sources. The estimates and more detail on the methodology are available below.

Total waste generation 2008-2010

Estimation methodology

Below are older estimates based on historic surveys.

Construction and demolition waste management: England, 1999 to 2008



WRAP: 'Updating data on construction, demolition and excavation waste' report (2008)

Source: CLG: Survey of Arisings and Use of Construction, Demolition and Excavation Waste as Aggregate in England (1999, 2001, 2003 and 2005)

53 million tonnes were recycled and a further 11 million tonnes were spread on exempt sites (usually land reclamation, agricultural improvement or infrastructure projects). The remaining 22 million tonnes were sent to landfill (including backfilling at quarries, and landfill engineering) as waste.

Between 1999 and 2008 the proportion of construction and demolition waste recycled by crushers and screeners has increased from 35 per cent to 61 per cent. The proportion of

construction and demolition waste sent to landfill has decreased from 37 per cent to 22 per cent and the amount of waste going to exempt sites has fallen from 27 per cent to 13 per cent.

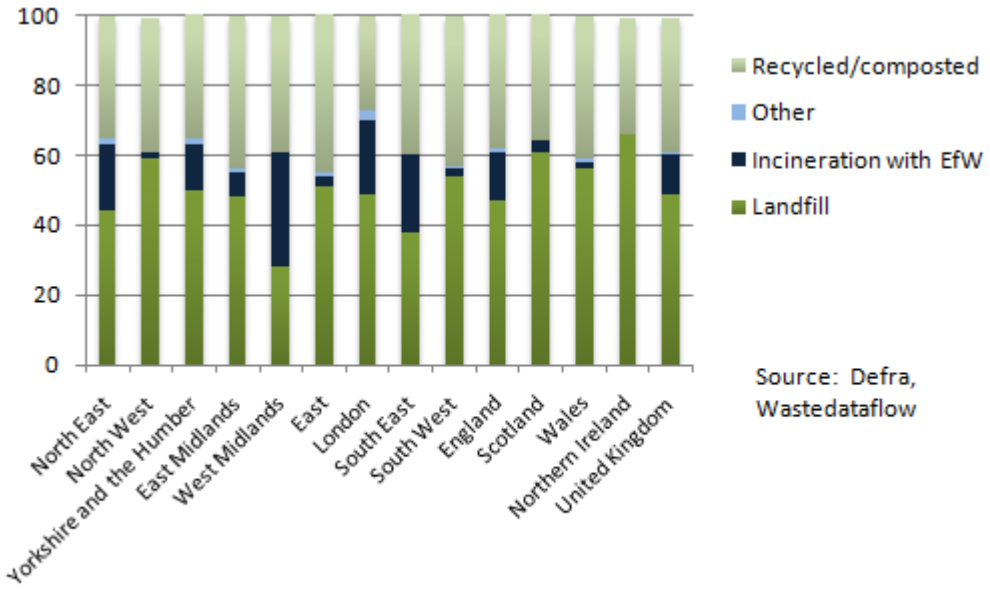
Data download

Local Authority Collected waste management

In 2009-10 32.4 million tonnes of Local authority collected waste see definition was generated in the United Kingdom. Landfill was the dominant waste disposal method in 2009-10 making up 49 per cent of the total. This is a fall of 15 per cent from the 2005-6 figures.

Why is this important - The revised Waste Framework Directive requires household waste recycling rates to be at least 50 per cent by 2020.

Methods of Local Authority waste management: regions and UK, 2009-10



In 2009-10 about 16.2 million tonnes of waste (50 per cent of the total) had some value recovered by recycling, composting, reuse or energy recovery. Of this about 11 per cent involved incineration with energy recovery.

In the UK the East of England has the highest recycling, composting and reuse rate at 46 per cent while London has the lowest recycling, composting and reuse rate at 27 per cent.

The region in the UK with the lowest proportion of Local Authority Collected waste being sent to landfill is the West Midlands (28 per cent) while Northern Ireland has the highest at 66 per cent.

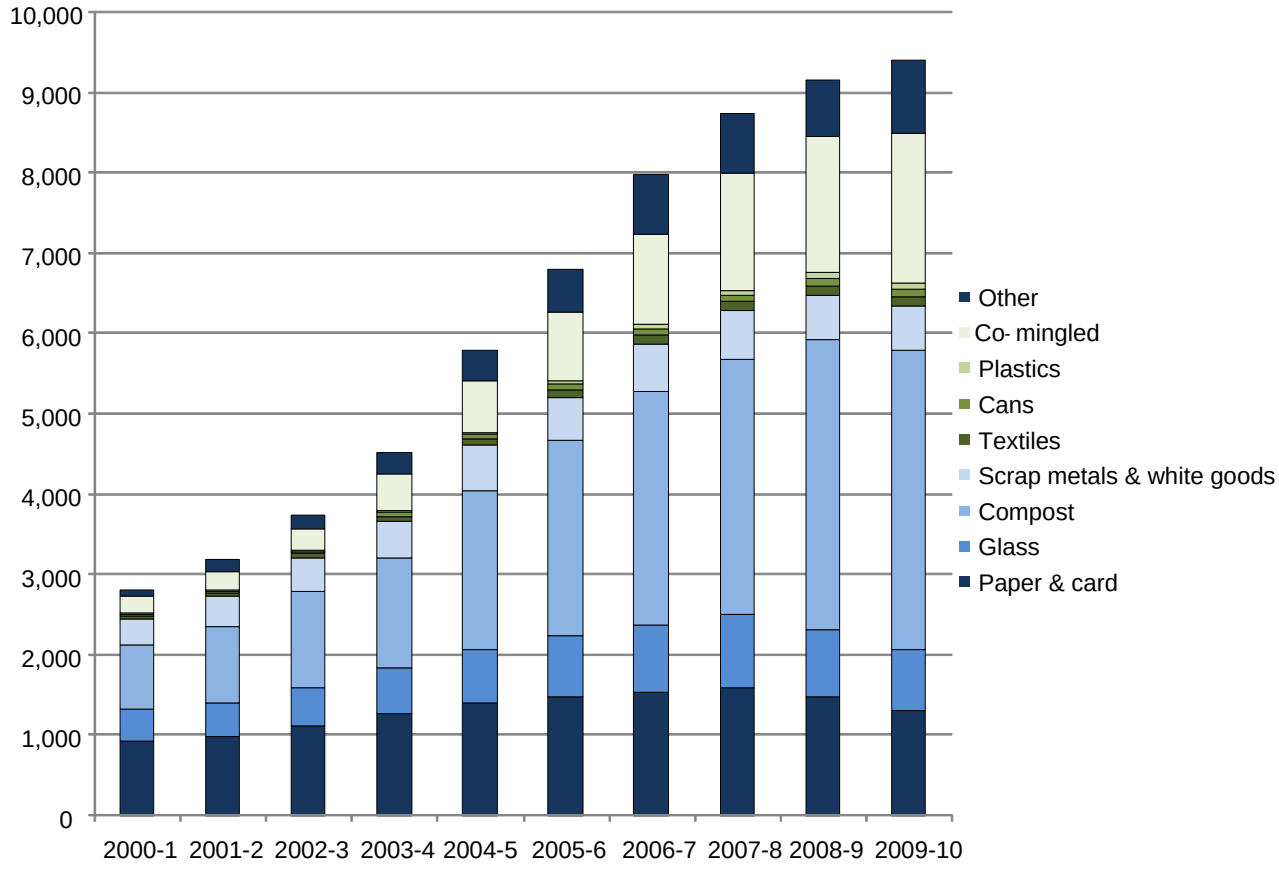
Data download

Household waste recycling, by material - England

There has been a 235 per cent increase in household recycling in England between 2000-01 and 2009-10 and a 365 per cent increase in green recycling alone.

Why is this Important – The EU Waste Framework Directive requires the UK to recycle, compost or reuse 50 per cent of waste from households by 2020.

Household waste recycled by material: England, 2000-01 to 2009-10



In 2009-10 England generated 23 million tonnes of household waste 9.4 million tonnes (39.7 per cent) of this was sent for recycling, composting or reuse. This compares with 2000-01 when 25 million tonnes of household waste was generated and 2.9 million (11.2 per cent) was sent for recycling, composting or reuse.

There has been a change in the composition of recycled waste over time. In 2000-01 paper and card was the largest component, making up 33 per cent of the total, followed by compost (28 per cent) and glass (14 per cent). In 2009-10 compost was the largest component (40 per cent of the total) with the next largest being co-mingled (20 per cent) followed by paper and card (14 per cent).

Co-mingled waste is the collection of a number of recyclable materials in the same box or bin, for example paper, glass and plastics - have become more widespread in recent years.

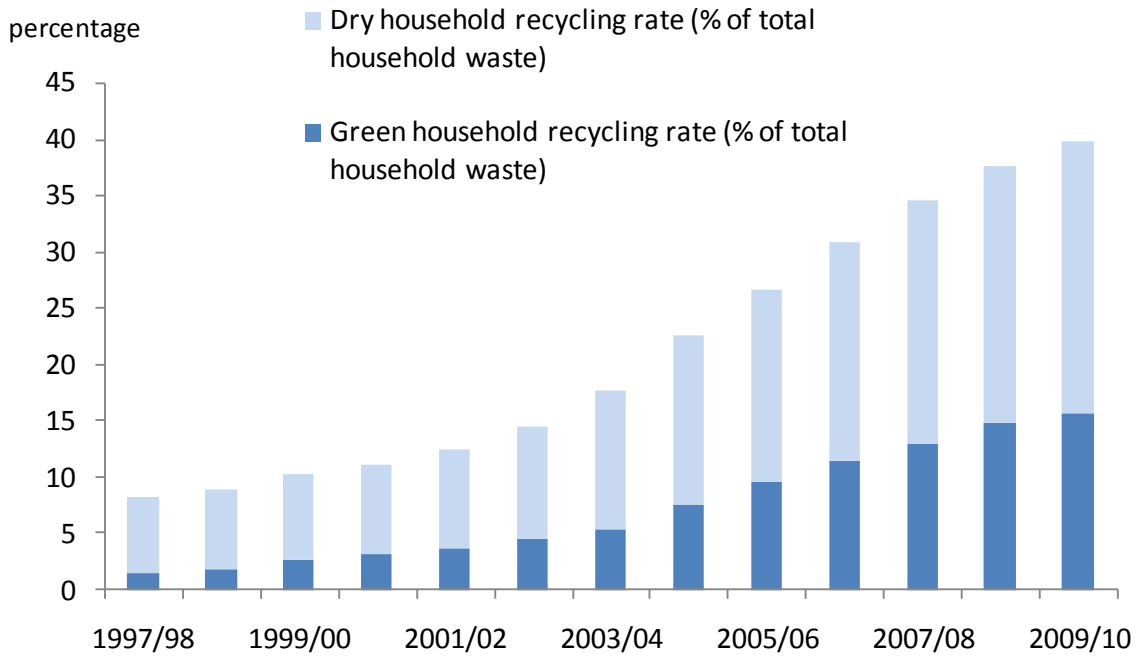
Data download

Household waste: green and dry recycling rates

A total of 23.6 million tonnes of household waste was collected in England in 2009-10, of which 39.7 per cent was recycled, composted or reused. This has increased from 36.7 per cent in 2008-09 and from 8 per cent in 1997-8.

Why is this important – The EU Waste Framework Directive requires the UK to recycle, compost or reuse 50 per cent of waste from households by 2020.

Household waste - green and dry recycling rates: England, 1997-8 to 2009-10



Household green recycling (composting) has increased from 1.6 per cent in 1997-8 to 15.7 per cent in 2009-10, whilst recycling of other household materials (dry recycling) has increased from 6.6 per cent to 24 per cent over the same period.

In 1997-98 only 20 per cent of recycled household waste consisted of green recycling, but by 2009-10 this figure had doubled to 40 per cent

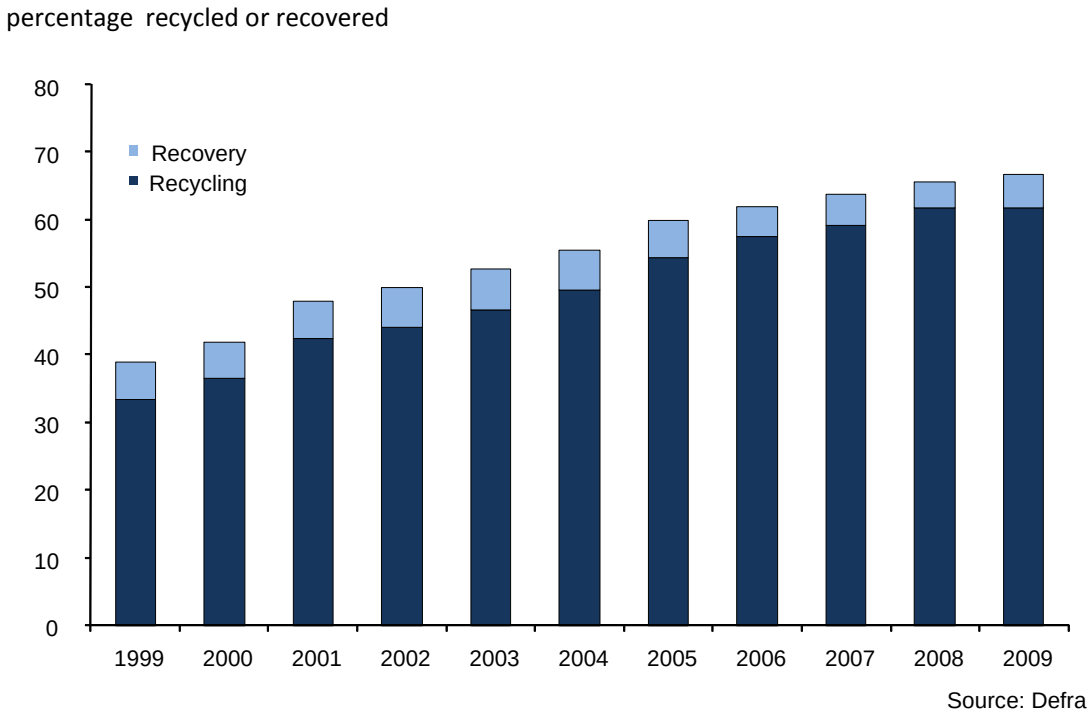
Data download

Recycling and recovery from packaging

The amount of packaging was in the UK estimated to be around 10.8 million tonnes in 2009, 62 per cent of this was recycled and 67 per cent was recovered.

Why is this important – By recycling and recovering packaging material, it ensures that fewer raw materials are used, thus reducing waste sent to landfill and the impact of packaging upon the environment.

Recycling and recovery from packaging: UK, 1999-2009



Source: Defra

Around half of the 10.8 million tonnes of packaging waste comes from the commercial and industrial waste stream and half from household waste.

The recycling rate has increased from 34 per cent in 1999 to 62 per cent in 2009, and the total recovery rate (including recycling) has increased from 38 per cent in 1999 to 67 per cent in 2009.

The 2009 estimates of the recycled packaging waste show materials include paper (47 per cent), glass (25 per cent), plastics (9 per cent), wood (12 per cent), steel (6 per cent) and aluminum (1 per cent).

The UK continues to exceed the overall recovery and recycling targets, and has achieved all of the material specific targets set in the EU Directive on Packaging and Packaging Waste.

Data download

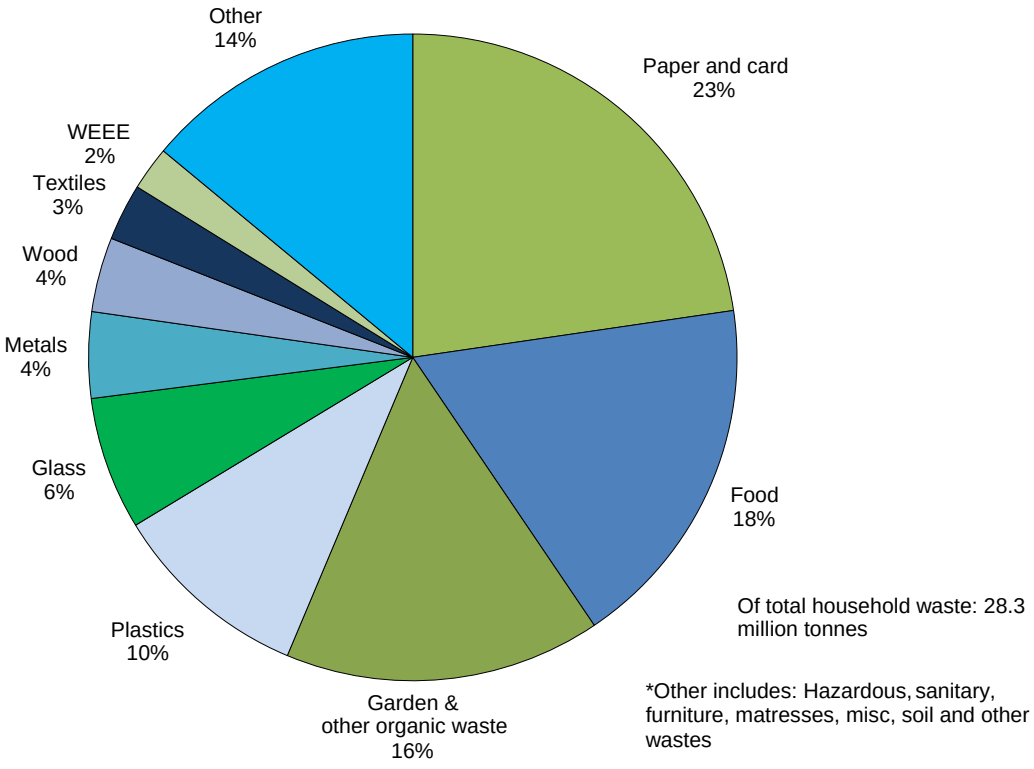
Composition of local authority collected waste

In 2006-07 local authority collected waste comprised 18 per cent food waste.

Why is this Important – The EU Landfill Directive requires biodegradable municipal waste* (BMW) sent to landfill in England to be reduced to 75 per cent of the 1995 figure by 2010, 50 per cent by 2013 and 35 per cent 2020.

Local authority collected waste, England, 2006-07

Municipal waste composition: 2006/07



Note: This data is from the Defra report *Municipal Waste Composition: A Review of Municipal Waste Component Analyses*, not from WasteDataFlow. Therefore the figures should not be compared.

In 2006-07, the largest components of local authority collected waste in England were paper and card at 23 per cent (6.4 million tonnes), food waste at 18 per cent (5 million tonnes) and garden and other organic waste at 16 per cent (4.4 million tonnes).

Food waste and garden and other organic waste together made up 34 per cent of the total local authority collected waste in 2006-07.

According to the report, 67 percent of local authority collected waste is biodegradable.

*The *Consultation on meeting EU Landfill Diversion Targets* includes details on the revised definition of municipal waste in Chapter 3.

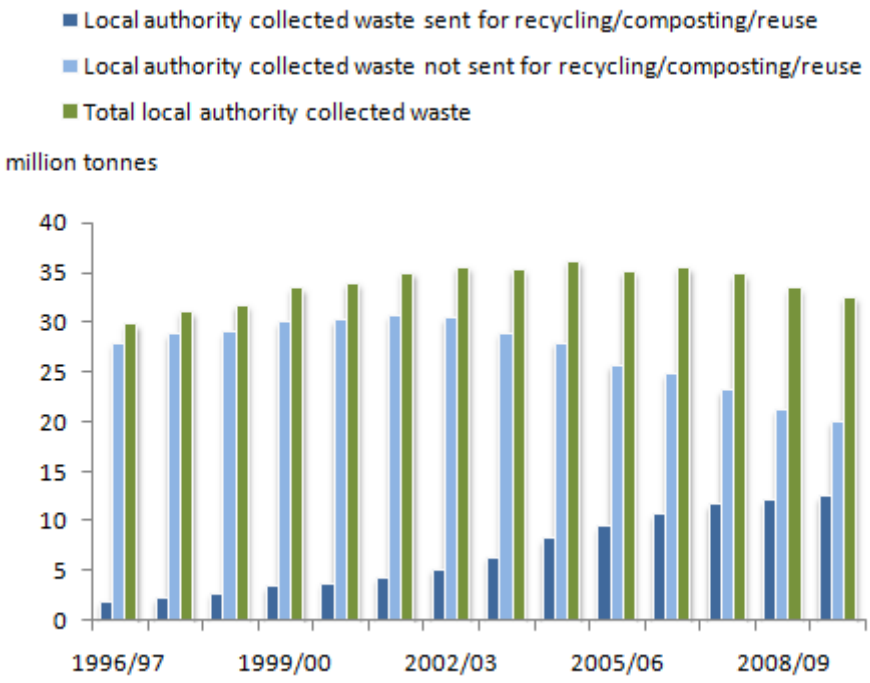
Data download

Local authority collected waste generation

Between 2008-09 and 2009-10 there was a 3 per cent decrease in local authority waste - see definition in the UK

Why is this important – The EU Waste Framework Directive requires the UK to recycle, compost or reuse 50 per cent of waste from households by 2020.

Local authority collected waste generation in the UK, 1996-97 to 2009-10



In 2009-10 in the UK 32.5 million tonnes of local authority collected waste was generated, less than the amount generated in 1999-2000. Between these years the generation rose, peaking in 2004-05 at 36.1 million tonnes. However, over this period the population of the UK has been increasing.

The recycling, composting and reuse rate for local authority collected waste has grown from 6 per cent (1.9 million tonnes) in 1996-97 to 38 per cent (12.4 million tonnes) in 2009-10.

Data download

Waste and Recycling - Further information

Government policy on waste and recycling

WasteDataFlow

Household waste statistics in Wales, Scotland and Northern Ireland

EuroStat - Themes and Data

WRAP report: Construction, demolition and excavation waste arisings, use and disposal for England 2008

Defra – Packaging and waste page

Sustainable Development Indicators – Waste

Sustainable Development Indicators – Household waste and recycling

Definition of local authority collected waste

Biodiversity and wildlife

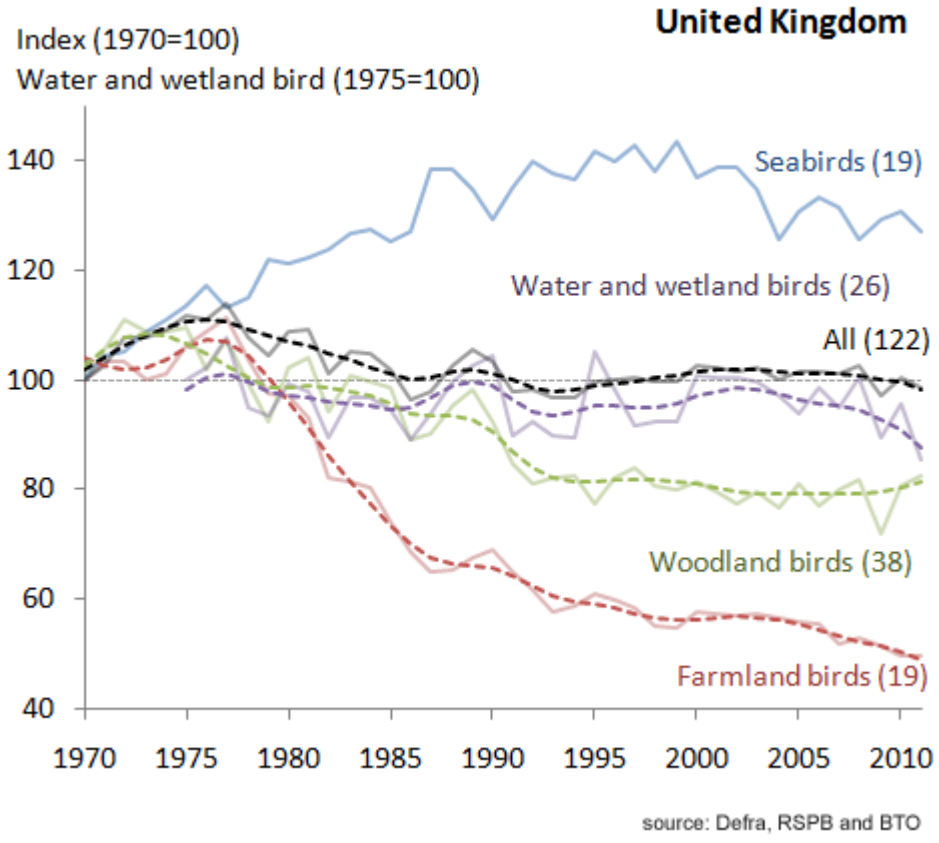
Wild Bird Populations in UK, 1970-2011

Bird populations have long been considered by scientists to provide a good indication of the broad state of wildlife because birds occupy a wide range of habitats, they tend to be near or at the top of food chains and there are considerable long-term data on changes in bird populations from a range of national surveys and monitoring schemes coordinated by expert organisations. Birds also have huge cultural importance and are viewed as a highly valued part of the UK's natural environment by the general public.

Statistical Release : Wild bird populations in the UK 1970-2011 National Statistics Release

These annual statistics present trends up to 2011 in wild bird populations in the UK and the associated Defra National Statistics Release explores the detail behind the following headline results:

Wild bird populations in the UK, 1970 – 2011



- When viewed together, the status of common native breeding bird species in UK appear to have changed little compared with 40 years ago. However, there has been considerable variation between individual bird species and groups of species that share the same broad habitats, and there have been some large losses in once abundant

species, particularly House Sparrow and Starling. The all-species index showed a small but significant decline of 2 per cent from 2005 to 2010.

- Although the largest decreases in **farmland bird** populations occurred between the late seventies and the early nineties, there has been a pronounced recent decline of 13 per cent since 2003. Historically, the decrease has been driven mainly by species that are restricted to, or highly dependent, on farmland habitats (the 'specialists'). However, there has also been a decline in species that are associated with a wider range of habitats (the 'generalists') following a peak in 2003.
- There has been little recent change in UK **woodland bird** populations, with the greatest decline occurring from the late eighties until the mid nineties. In the late nineties populations of generalist species started to increase but the populations of specialist species continued to decline.
- In 2011 **breeding water and wetland bird** populations in the UK were at around the same level as they were in 1975, although there has been a decline of 14 per cent since 2000.
- **Seabird** populat**i**ons in the UK have fallen by 12 per cent since a peak in 1999; however, they remain 27 per cent higher than when data collection began in 1970.
- In the winter of 2010-11 populations of **wintering waterbirds** in the UK were 93 per cent higher than in the winter of 1975-6, although there has been a 7 per cent decline in numbers since their peak in 1996-7.

The bird population indices have been compiled in conjunction with the Royal Society for the Protection of Birds (RSPB), the British Trust for Ornithology (BTO) and the Joint Nature Conservation Committee (JNCC).

For more statistics about the status of birds populations internationally please see the Pan-European Common Bird Monitoring Scheme website.

Data Download

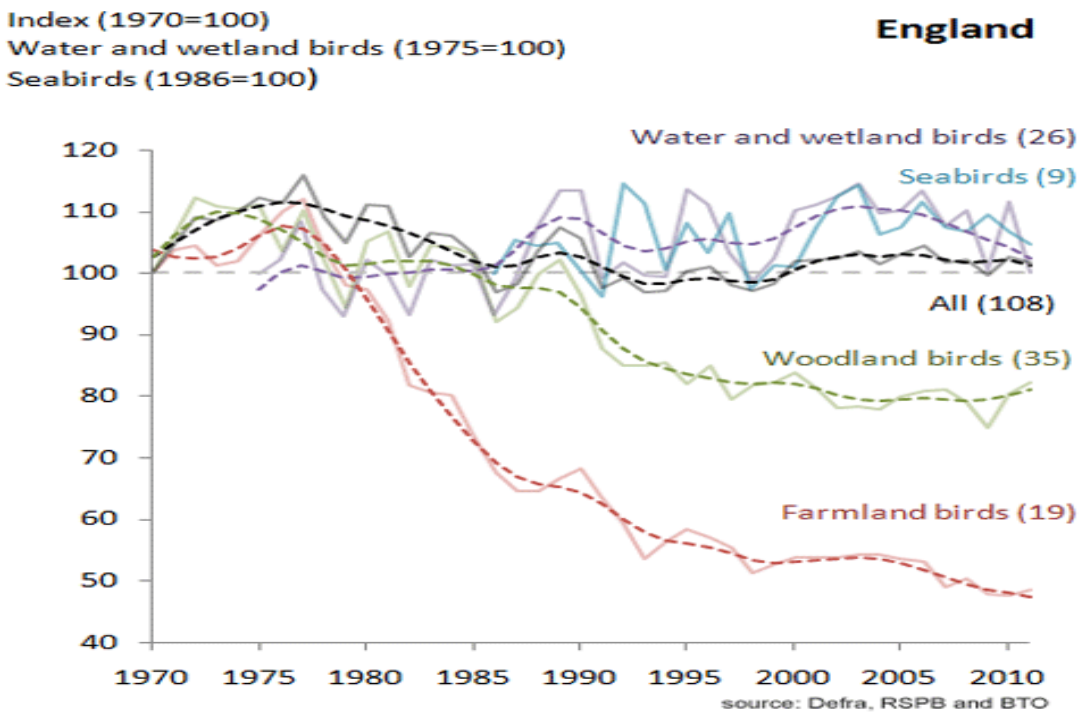
Wild Bird Populations in England, 1970 to 2011

Bird populations have long been considered by scientists to provide a good indication of the broad state of wildlife because birds occupy a wide range of habitats, they tend to be near or at the top of food chains and there are considerable long-term data on changes in bird populations from a range of national surveys and monitoring schemes coordinated by expert organisations. Birds also have huge cultural importance and are viewed as a highly valued part of England's natural environment by the general public.

Wild bird populations in England 1970-2011 National Statistics Release

These annual statistics present trends up to 2011 in wild bird populations in England and the associated Defra National Statistics Release explores the detail behind the following headline results:

Wild bird populations in England , 1970- 2011



- When viewed together, the status of common native breeding bird species in England appear to have changed little compared with 40 years ago. However, there has been considerable variation between individual bird species and groups of species that share the same broad habitats, and there have been some large losses in once abundant species, particularly House Sparrow and Starling. The all-species index showed a small but significant decline of 1 per cent from 2005 to 2010.
- Although the largest decreases in **farmland bird** populations occurred between the late seventies and the early nineties, there has been a pronounced recent decline of 11 per cent since 2003. Historically, the decrease has been driven mainly by species that are restricted to, or highly dependent, on farmland habitats (the 'specialists'). However, there

has also been a decline in species that are associated with a wider range of habitats (the 'generalists') following a peak in 2006.

- There has been little recent change in **woodland bird** populations, with the greatest decline occurring from the late eighties until the mid nineties. In the late nineties populations of generalist species started to increase but the populations of specialist species continued to decline.
- In 2011 **breeding water and wetland** bird populations in England were at about the same level as they were in 1975, although there has been a decline of 13 per cent since 2003.
- There is no clear trend in the populations of breeding **seabird** populations in England, but in 2011 levels were 5 per cent higher than in 1986 when data collection began.
- In the winter of 2010-11 populations of **wintering waterbirds** in England were 105 per cent higher than in the winter of 1975-6; however, there has been an 11 per cent decline in numbers since their peak in 1996-7.

The bird population indices have been compiled in conjunction with the Royal Society for the Protection of Birds (RSPB), the British Trust for Ornithology (BTO) and the Joint Nature Conservation Committee (JNCC).

For more statistics about the status of birds populations internationally please see the Pan-European Common Bird Monitoring Scheme website.

Data Download

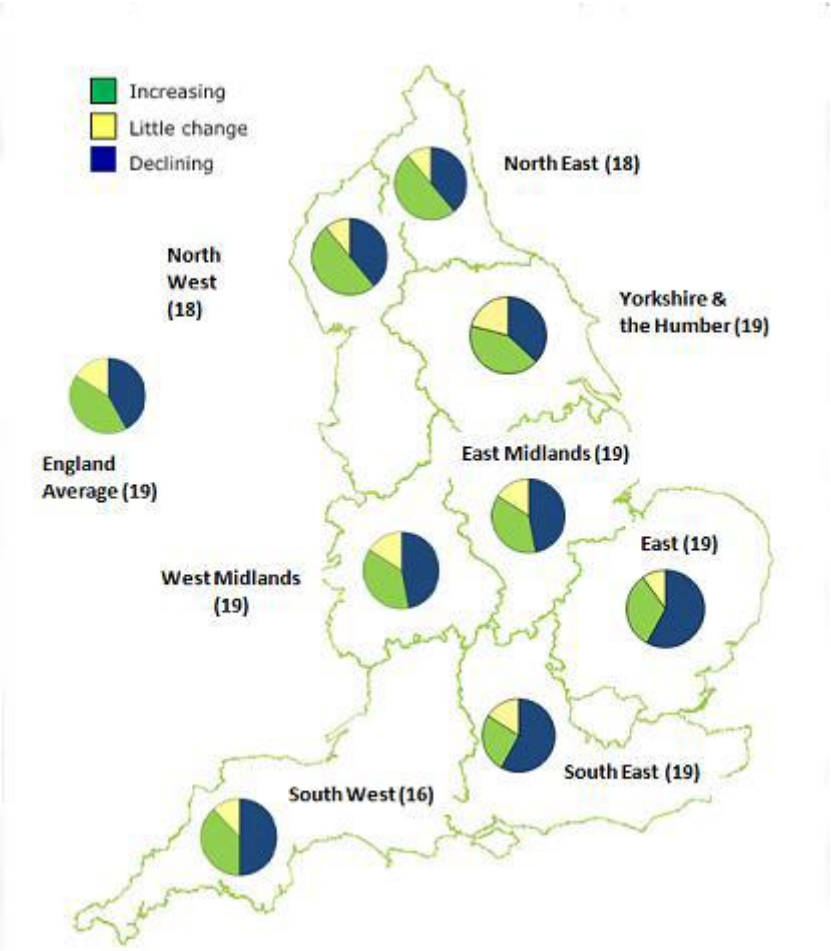
Regional farmland birds indices

[The National Statistics release of regional birds species trends has been discontinued from 2011 onwards, as a result of resource constraints and changes in regional governance. The latest published release covered trends up to 2008, published in 2010. However, the statistical releases drew upon results from the Joint BTO/JNCC/RSPB Breeding Bird Survey and some regional analysis will continue to be published as part of the Breeding Bird Survey. If you have any comments or queries relating to the discontinuation please contact us via enviro.statistics@defra.gov.uk]

Between 1994 and 2008, the population index of farmland wild birds for England fell by 11 per cent.

Why is this important – Bird populations are considered to be a good indicator of the broad state of wildlife and the countryside because they occupy a wide range of habitats and tend to be near the top of the food chain.

Changes in farmland bird populations by region:England, 1994-2008



Between 1994 an 2008, the regional farmland bird indicator showed a decline of more than 10 per cent in the South East, the East Midlands, the West Midlands and the South West.

Comparisons between regions should be treated with caution because each regional indicator covers different species.

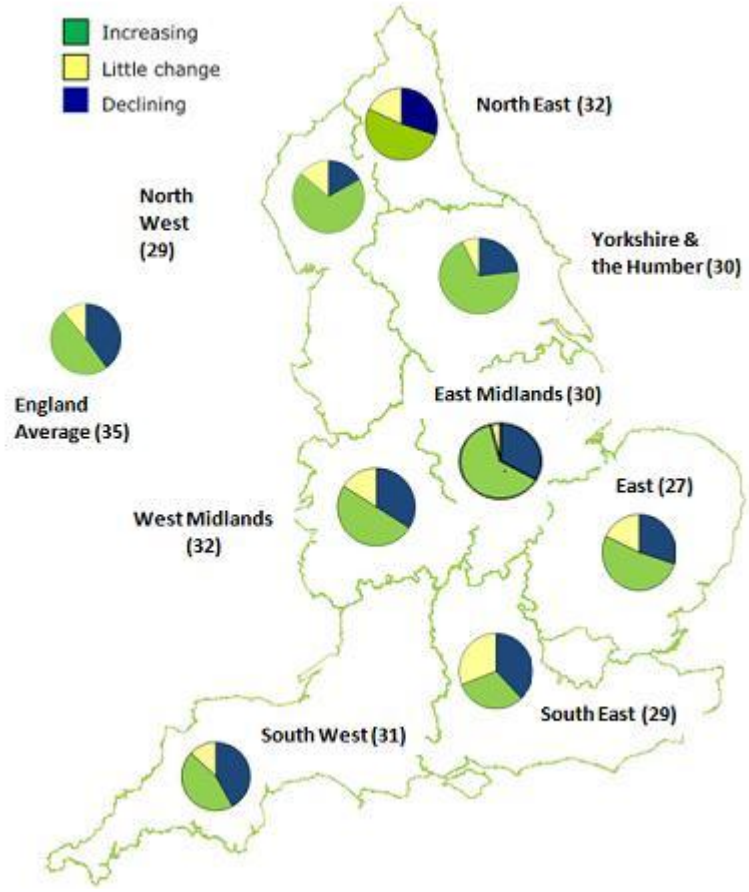
Data download

Regional woodland birds indices

[The National Statistics release of regional birds species trends has been discontinued from 2011 onwards, as a result of resource constraints and changes in regional governance. The latest published release covered trends up to 2008, published in 2010. However, the statistical releases drew upon results from the Joint BTO/JNCC/RSPB Breeding Bird Survey and some regional analysis will continue to be published as part of the Breeding Bird Survey. If you have any comments or queries relating to the discontinuation please contact us via enviro.statistics@defra.gov.uk]

Between 1994 and 2008, the population index of woodland wild birds for England fell by six per cent.

Why is this important – Bird populations are considered to be a good indicator of the broad state of wildlife and the countryside because they occupy a wide range of habitats and tend to be near the top of the food chain.



Between 1994 and 2008, the regional woodland bird indicator showed an increase of more than 10 per cent in the North West, Yorkshire and the Humber, the East Midlands, and the North East.

During the same period, the woodland bird indicator declined by more than 10 per cent in the South East and the South West.

Comparisons between regions should be treated with caution because each regional indicator covers different species.

Data download

Biodiversity and wildlife further information

Biodiversity Indicators in Your Pocket 2012

Government policy on wildlife and biodiversity

Provisional technical document on data collection and indicator methodology

UK Government Sustainable Development Strategy indicators

Royal Society for the Protection of Birds

British Trust for Ornithology

Joint Nature Conservation Committee

Biodiversity Indicators in Your Pocket 2011

Breeding Bird Survey

Annexe

Some of the statistics included in this publication are designated as National Statistics. Such statistics were originally identified as National Statistics owing to their importance as measures relating to nationally important issues, and owing to the rigorous processes in place to ensure their quality and integrity. National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They undergo regular quality assurance reviews to ensure they meet customer needs. Other statistics that are not designated as National Statistics, may not be designated merely because Defra does not have full control of the data collection or reporting processes, and hence Defra cannot fully comply with the Code of Practice. However, these statistics are reviewed carefully before inclusion and are regarded as the best available and fit for purpose. Indeed in many cases the data are compiled to high degrees of rigor by Defra's agencies or by non-governmental organisations, involved leading experts, such that were they produced directly by Defra they would be regarded as meeting the standards of the Code of Practice and would be considered fit for designation as National Statistics.

The following statistics are designated as National Statistics: