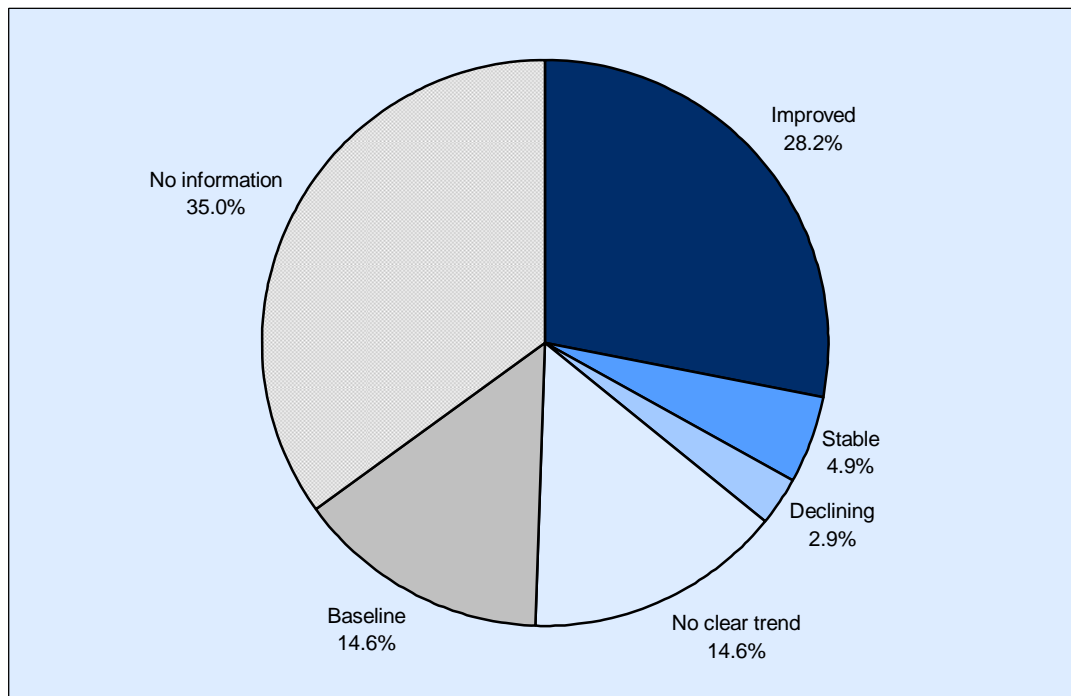


State of the Environment, 2008

This bulletin summarises the latest information on the indicators monitoring progress against the Environment Strategy. The results for individual indicators are presented in a series of electronic reports on StatsWales.

Chart 1: Summary of progress across the State of the Environment indicators



- Of the indicators that have been defined and where information exists, over half show an improvement with just under a third showing no clear trend.
- 5 of the 103 indicators are stable at recent levels;
- 3 of the 103 indicators show a decline.
- Almost 50 per cent of the 103 indicators have yet to be defined or have no data beyond the baseline.

The remainder of this bulletin presents the progress for individual indicators organised by the six main themes of the Environment Strategy. The data for a number of the key indicators, particularly those in common with the previous bulletin "Key Environmental Statistics", are also included as this is the first time the full electronic report has been produced.

Contact: Tel: 029 2082 6399. **E-mail:** stats.environment@wales.gsi.gov.uk **Next Update:** July 2009 (provisional)

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Background

This publication

This bulletin presents an overview of progress against the Welsh Assembly Government's Environment Strategy. The full set of data, analysis, and notes on all of the indicators are available through our [StatsWales](#) website. On StatsWales, the indicators are presented in a series of online reports linked to tables of information which the user can manipulate or download.

The statistics come from a range of sources in Wales and across the UK, which are updated at different times and intervals. The StatsWales reports will be updated periodically throughout the year, and these updates will be highlighted through a pre-announced headline statistics published on our website. This bulletin will be updated annually to provide a snapshot of progress across all the indicators.

The contribution of data and information by organisations which monitor the environment is gratefully acknowledged. Although most indicators are currently measured, some further work is planned to develop the other indicators and in some cases to identify more appropriate indicators, as indicated in the StatsWales reports.

Previous and related publications

Together, the bulletin and StatsWales reports are the first set of information on the Environment Strategy to be published by the Statistical Directorate; they follow on from the [Report on Progress September 2007](#) published by the Welsh Assembly Government.

This bulletin replaces the [Key Environment Statistics](#) publication of previous years, and contains much of the same information. Some of the statistics correspond to or are similar to some of the Assembly Government's sustainable development indicators. Data for these indicators were presented in the bulletin [Sustainable Development Indicators for Wales 2007](#), and will be published in a new form (a booklet accompanied by online information) in August 2008.

The Environment Strategy

The [Environment Strategy](#) was launched in May 2006, and sets out the Welsh Assembly Government's vision for the environment over the next 20 years. The Strategy has an accompanying Action Plan to take forward action on its 39 outcomes. A Sub-Group of the Environment Strategy Reference Group, which represents both internal and external stakeholders, has agreed an initial set of indicators for each outcome.

In many respects it is too early to be able to detect environmental change as a result of the Strategy. This is for several reasons:

- Actions to deliver environmental improvement are in the course of implementation, and in many cases there will be some delay before the resulting environmental change can be detected.
- Monitoring of some indicators is not done continuously but on a campaign basis at set intervals which may be several years apart.
- Some data sets are not available for 1-2 years after the period of monitoring.
- This bulletin and the StatsWales reports set out baseline information, comparators with other areas and some initial trends.

In the period following the annual publication of the State of the Environment report, the Department for Environment, Sustainability and Housing will provide an interpretation of these results in the context of the Environment Strategy vision and desired outcomes, and in relation to the work ongoing throughout Wales to take forward this environmental change. In 2008, this will be in early Autumn.

The Department for Environment, Sustainability and Housing have recently launched a short web-based consultation on a new Environment Strategy Action Plan which will show how the Environment Strategy outcomes are being taken forward through ongoing work, and sets out key areas of activity for the coming years. This will be published in early Autumn 2008.

Enabling Change

Summary

The table below lists all indicators within the theme of Enabling Change, and indicates whether the statistics available to date show that progress has improved, is stable, has declined, or shows no clear trend.

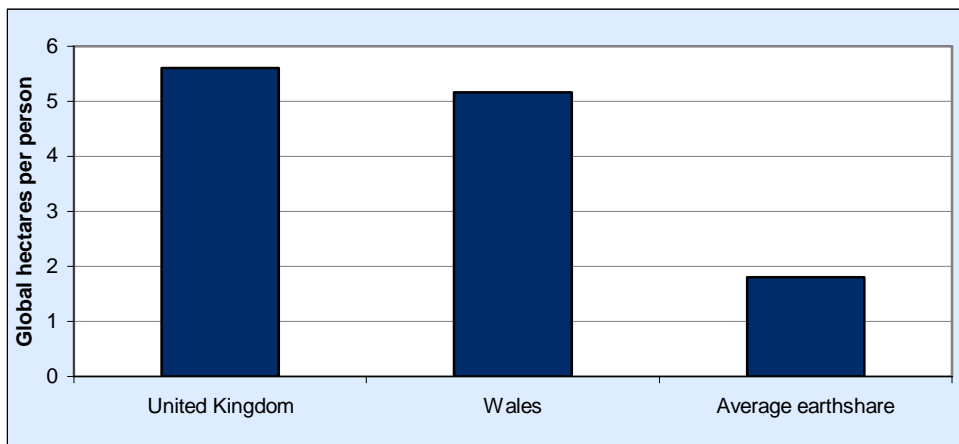
Outcome	Indicator	Improving	Stable	Declining	No clear trend	Baseline	No information
1: The Assembly Government provides clear leadership on environmental issues through its policies, programmes and the way that it conducts its business	1a: Trends in Policy Gateway assessments for contribution of policies to environmental priorities						✓
	1b: Achievement and maintenance of Green Dragon level five by the Assembly Government	✓					
2: Wales demonstrates the contribution a small, developed nation can make to global sustainable development and environmental improvement	2a: Ecological footprint					✓	
	2b: Achievement of Environment Strategy outcomes demonstrated in regular State of the Environment reporting					✓	
3: Environmental considerations are integrated in all policies, programmes and service delivery and that high quality and consistent environmental evidence is available to inform the decision making processes	3: Trends in policy gateway assessments for contribution of policies to environmental priorities						✓
4: The roles and responsibilities of organisations are understood leading to better integration for the delivery of environmental protection and enhancement	4: Indicator to be developed						✓
5: Appropriate education about our environmental impacts is in place and good quality information is available at the point where people make decisions	5: Percentage of people taking action to improve the environment (broken down by reason for taking action), from the Living in Wales survey	✓					
6: Individuals understand and are enabled to take responsibility for their environmental impact, changes in behaviour are apparent that help reduce negative environmental impacts	6a: Percentage of people taking various actions to improve the environment, from the Living in Wales Survey	✓					
	6b: Percentage of municipal waste recycled or composted	✓					
	6c: Additional indicators, including trends in number of people participating in environmental volunteering and greenhouse gas emissions from road transport, to be investigated (to be developed)						✓

Note: Information for Indicator 6b is repeated in Indicator 10a and can be found under the theme Sustainable Use of Resources.

Ecological footprint

The 'ecological footprint' provides a measure of the impact we impose on the natural environment. In our daily lives we consume resources and produce waste. Land is required to produce those resources and to dispose of the waste. The amount of 'productive' land and sea that is required to provide for this current resource consumption and waste production represents the 'ecological footprint'. The footprint is expressed in 'global hectares' where one global hectare is equal to one hectare of biologically productive space with world average productivity. The chart below shows the ecological footprint in Wales and the UK in 2003, and the average earthshare.

Chart 2: Ecological footprint, 2003



Source: Stockholm Environment Institute, York

Estimates suggest that the average 'earthshare' is 1.80 global hectares per person. The total ecological footprint of Wales for 2003 was estimated to be 5.16 global hectares per person. This is nearly three times greater than the average 'earthshare'.

Notes: In March 2005 Stockholm Environment Institute calculated Wales' 2001 ecological footprint as 5.25 global hectares per person. Improvements to the footprint methodology between the 2001 estimate and the 2003 estimate mean that the figures are not directly comparable.

Environmental activities undertaken

Respondents were asked which environmental activities, if any, they and their household had done in the last 12 months. The percentages in the table below do not total 100 as multiple answers could be provided.

Table 1: Percentage of respondents engaging in environmental activities in previous year in Wales, 2005-2007

	2005	2006	2007
Recycled paper, glass, plastic or cans	72.8	80.4	87.3
Cut down the amount of electricity or gas used	46.2	54.1	60.0
Bought goods because they use less energy	36.3	45.4	54.3
Done things to encourage wildlife in garden	41.7	49.0	48.3
Done things to reduce use of water	26.6	39.0	39.3
Bought goods because they are made from recycled materials	26.5	31.5	32.6
Deliberately used public transport/walked/cycled to avoid using car	27.1	30.8	27.6
Cut down on use of a car for short journeys	23.6	27.9	27.2
Made compost from kitchen waste	19.1	21.9	24.9
None	6.6	5.4	4.0

Source: Living in Wales Survey, Welsh Assembly Government

The percentage of households undertaking each environmental activity has either increased or stayed similar between 2005 and 2007. The most common activity undertaken by respondents in 2007 was recycling paper, glass, plastic or cans (87 per cent). This has increased from 73 per cent in 2005.

Addressing Climate Change

Summary

The table below lists all indicators within the theme of Addressing Climate Change, and indicates whether the statistics available to date show that progress has improved, is stable, has declined, or shows no clear trend.

Outcome	Indicator	Improving	Stable	Declining	No clear trend	Baseline	No information
7: Wales' greenhouse gas emissions are minimised, consistent with Wales contributing fully to meeting UK wide targets and in line with more specific Wales targets that are in development	7a: Annual emissions of basket of greenhouse gases (by sector)				✓		
	7b: Ecological footprint					✓	
	7c: Change in soil organic carbon					✓	
8: Wales has improved resilience to the impacts of climate change. A clear flexible programme of measures is in place to enable Wales to respond and adapt to climate change	8a: Adaptation plan prepared, published and updated regularly (to be developed)						✓
	8b: Further indicators to be identified following the conclusion of Defra's work on adaptation targets (to be developed)						✓

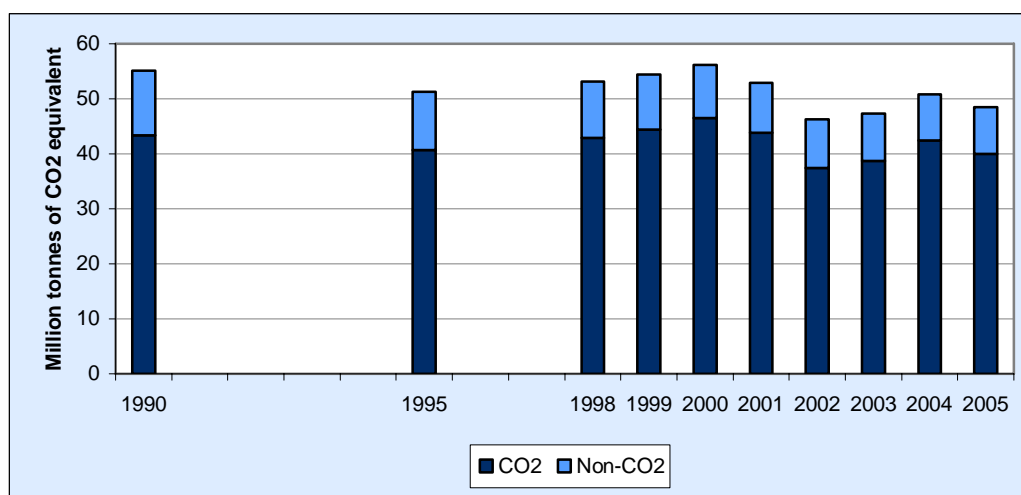
Note: Information for Indicator 7b is repeated in Indicator 2a and can be found under the theme Enabling Change.

Greenhouse Gas Emissions

Increasing atmospheric concentrations of greenhouse gases are leading to enhanced warming of the atmosphere and global climate change. The target for the UK is to achieve a reduction of the global warming potential of the six greenhouse gases of 12.5 per cent by 2008-2012 (based on 1990 and 1995 estimates).

The total estimated emissions in million tonnes of carbon dioxide equivalent for the basket of six greenhouse gases (i.e. carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride) in Wales are shown in the chart below.

Chart 3: Emissions of Greenhouse Gases in Wales, 1990-2005



Source: AEA Energy and Environment

Overall, there has been an estimated decrease of 11.9 per cent in emissions of the basket of greenhouse gases from Wales in 2005 compared to base year emissions.

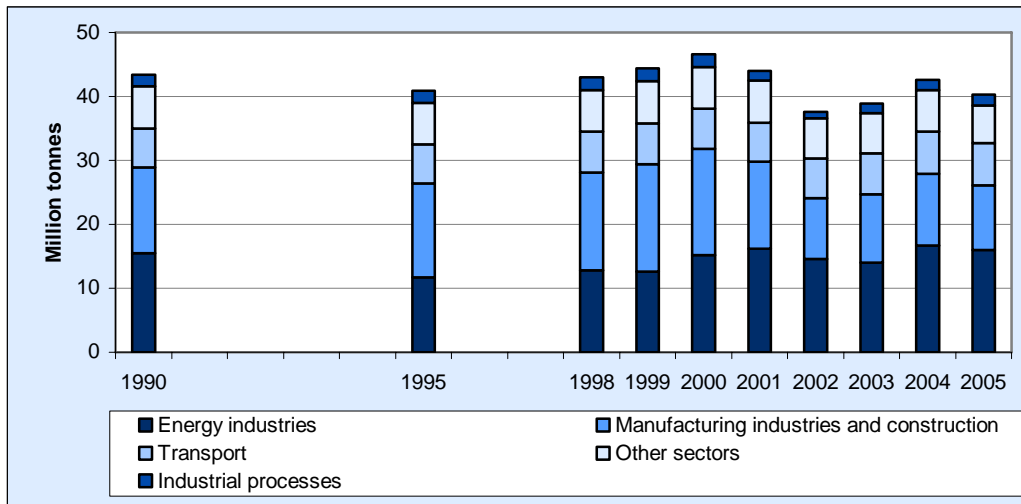
Notes:

1. The base year total for Wales has been calculated on emissions from 1990 for carbon, methane and nitrous oxide, and from 1995 for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride, in the same way as the UK total. This is not, however, comparable with the base year defined by the Kyoto Protocol.
2. Units are in million tonnes of carbon dioxide equivalent. Divide by 3.66 to get million tonnes of carbon equivalent.

Carbon dioxide emissions by source

The information on the previous page shows that carbon dioxide is the main contributor to greenhouse gas emissions in Wales. The chart below shows the annual estimated emissions of carbon dioxide from Wales for each of the main sources of emissions.

Chart 4: Carbon dioxide emissions by source in Wales, 1990-2005



Source: AEA Energy and Environment

In 2005, the largest source of carbon dioxide emissions in Wales was from energy industries, accounting for an estimated 40.0 per cent of the total. Manufacturing industries and construction accounted for a further 25.1 per cent of the total.

Notes:

1. 'Other sectors' includes emissions from fuel use by the residential, commercial/ institutional and agricultural sectors. It also contains Military aircraft and Naval shipping emissions.
2. Units are in million tonnes of carbon dioxide equivalent. Divide by 3.66 to get million tonnes of carbon equivalent.

Sustainable Use of Resources

Summary

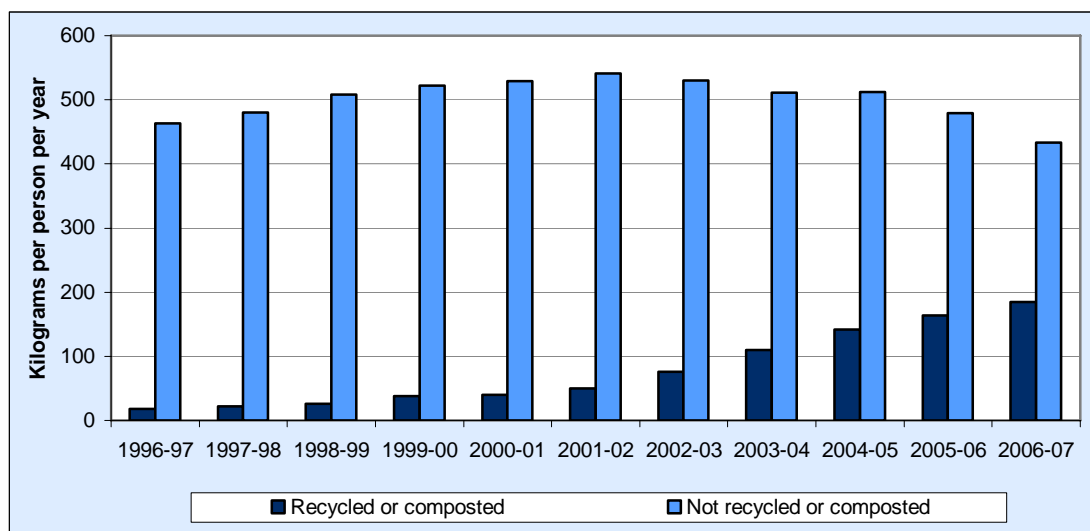
The table below lists all indicators within the theme of Sustainable Use of Resources, and indicates whether the statistics available to date show that progress has improved, is stable, has declined, or shows no clear trend.

Outcome	Indicator	Improving	Stable	Declining	No clear trend	Baseline	No information
9: The amount of waste that is generated in Wales is minimised	9a: Quantity of municipal waste per person per annum				✓		
	9b: Quantity of industrial & commercial waste produced per annum			✓			
	9c: Public sector waste arisings (to be developed)						✓
10: Reduce, re-use and re-cycle is universally accepted in government, business, industry and home life	10a: Proportion of municipal waste recycled or composted	✓					
	10b: Proportion of industrial and commercial waste recycled	✓					
	10c: Proportion of public sector waste recycled (to be developed)						✓
	10d: Proportion of waste reused (to be developed)						✓
11: Appropriate waste management facilities are in place to minimise the amount of waste going to landfill	11a: Proportion of municipal waste sent to landfill	✓					
	11b: Proportion of industrial and commercial waste sent to landfill	✓					
	11c: Proportion of public sector waste sent to landfill (to be developed)						✓
12: Businesses produce well designed products that require less resources in their production, use and end of life, that create minimal waste and are easily reused or recycled	12a: Proportion of end of life vehicles waste reused and recycled in the UK	✓					
	12b: Proportion of packaging waste recovered in the UK	✓					
	12c: Proportion of construction and demolition waste reused and recycled				✓		
	12d: Explore developing an indicator of uptake of lifecycle analysis in business (to be developed)						✓
13: Water resources are managed sustainably meeting the needs of society without causing damage to the environment	13a: Level of leakage				✓		
	13b: The percentage of resource zones meeting target headroom requirements				✓		
	13c: Possible indicator of changes in river flows and of water availability to be explored (to be developed)						✓

Outcome	Indicator	Improving	Stable	Declining	No clear trend	Baseline	No information
14: Water is used more efficiently across all sectors	14a: Per capita consumption of water		✓				
	14b: Volume of water abstracted from the environment				✓		
	14c: Revised indicators will be selected following completion of work by the Environment Agency (to be developed)						✓
15: The high quality of our drinking water is maintained	15a: Compliance with standards for public drinking water	✓					
	15b: Compliance with standards for private water supplies tested annually (to be developed)						✓
16: Soil is managed to safeguard its ability to support plants and animals, store carbon and provide other important ecosystem services	16a: Change in soil carbon					✓	
	16b: Further indicators to be selected when the UK Soil Indicator Consortium reports (to be developed)						✓
17: The extraction of minerals and aggregates minimises the impact on the environment and local communities	17: Number of sites complying with standards as set out in Minerals Planning Policy and the associated Technical Advice Note for the protection of the environment and local communities (to be applied in 2007) (to be developed)						✓
18: The use of alternative materials, secondary and recycled aggregates is maximised where possible in the construction industry	18a: Proportion of construction and demolition waste that is reused and recycled				✓		
	18b: Proportion of aggregates used from secondary and recycled sources (from 2009) (to be developed)						✓

Municipal waste recycled and composted

Chart 5: Kilograms per person per year of municipal waste arising in Wales, 1996-97 to 2006-07



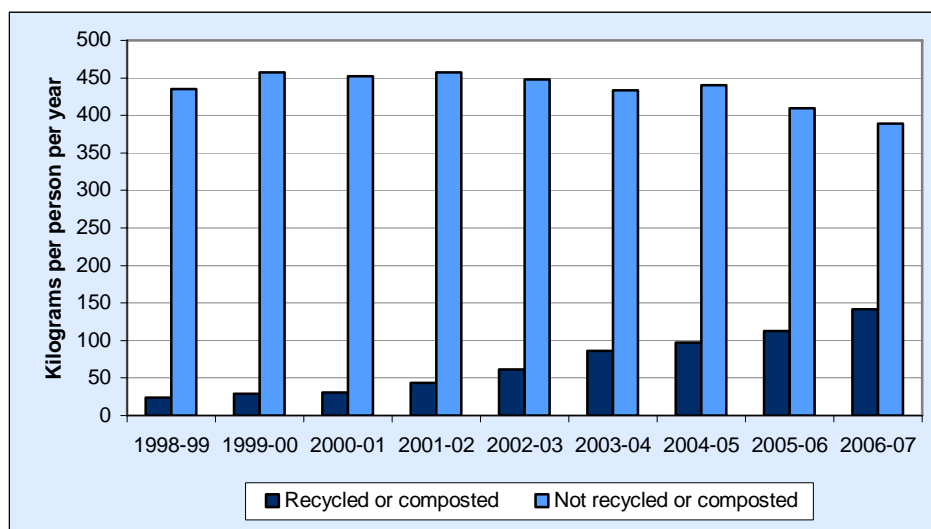
Source: Department for Environment, Food and Rural Affairs and Welsh Assembly Government

The total amount of municipal waste produced in Wales decreased from 643kg per person in 2005-06 to 618kg per person in 2006-07. The percentage of municipal waste recycled or composted in Wales increased from 25.5 per cent in 2005-06 to 29.9 per cent in 2006-07.

Note: Municipal waste refers to household waste plus waste collected from non-household sources, and here excludes abandoned vehicles. Recycling/composting includes waste sent or collected for recycling/composting from household and non-household sources plus waste collected by private and voluntary organisations.

Household waste recycled and composted

Chart 6: Kilograms per person per year of household waste arising in Wales, 1998-99 to 2006-07



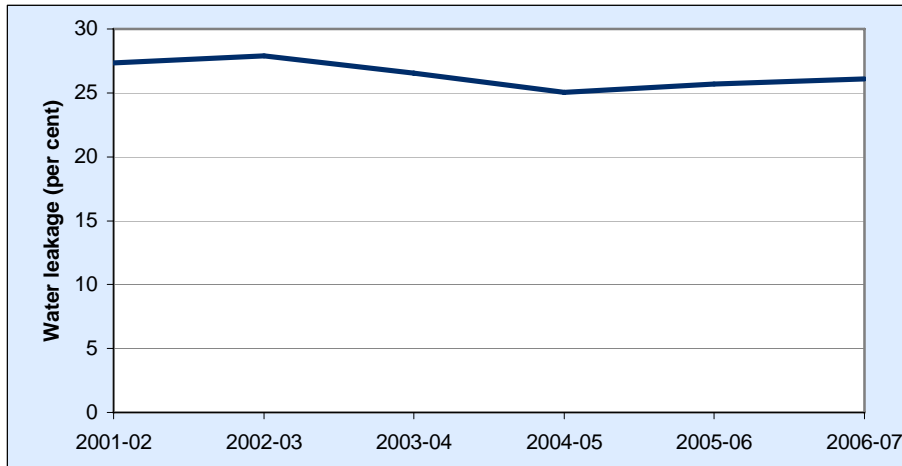
Source: Department for Environment, Food and Rural Affairs and Welsh Assembly Government

The total amount of household waste produced increased from 522kg per person in 2005-06 to 530kg per person in 2006-07, during which time the percentage recycled or composted increased from 21.5 per cent to 26.7 per cent.

Level of water leakage

Leakage is defined as the amount of water that is lost from the water supply network and the supply pipes that supply customer properties. Water companies can control and reduce leakage by rapidly fixing customer reported leaks, actively searching for and fixing unreported leaks, managing water pressure and by renewing old pipes and mains.

Chart 7: Leakage as a percentage of water supplied in Wales, 2001-02 to 2006-07



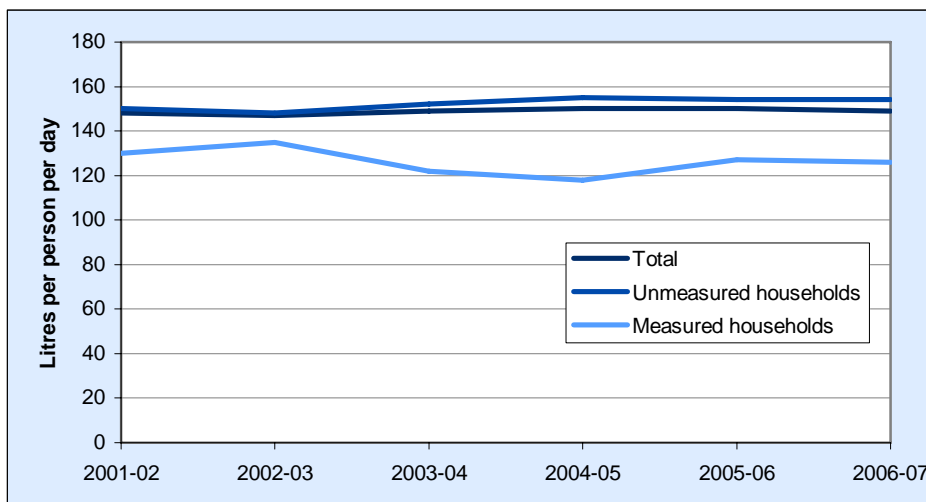
Source: Environment Agency

There has been an overall decrease in water leakage in Wales of 20 megalitres per day from 2001-02 to 2006-07. However, water leakage has increased by 9 megalitres per day from a low of 220 in 2004-05 to 229 in 2006-07.

Per capita consumption of water

The amount of water used in the home is expressed as per capita consumption (pcc). This is the amount of water (in litres) used per person per day (l/h/d). It is usual to distinguish between the pcc of households with meters and those without meters. Typically, measured households use less water than unmeasured households. This is because people living in a house with a meter tend to be more aware of the water they use. Average pcc gives a measure of water consumption in both measured and unmeasured households. The chart below shows the pcc of water from all, unmeasured and measured households.

Chart 8: Per capita consumption (pcc) of water in Wales, 2001-02 to 2006-07



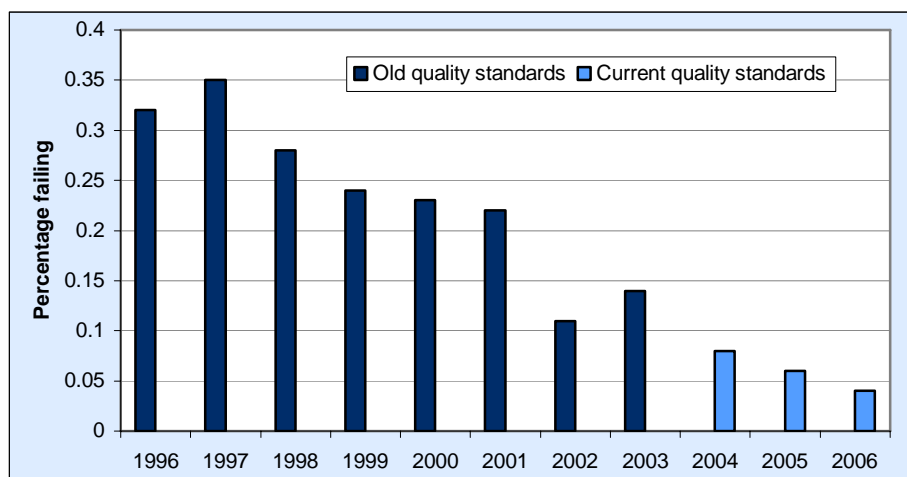
Source: Environment Agency

Overall, average consumption in Wales has remained fairly stable from 2001-02 to 2006-07, peaking at 150 litres of water per person per day in 2004-05 and 2005-06. In 2006-07, people in measured households used an average of 126 litres per day, compared with 154 litres per day in unmeasured households.

Compliance with standards for public drinking water

New drinking water regulations came into force in December 2003. From 2004, compliance with drinking water standards is assessed for zones, based on population (maximum 100,000).

Chart 9: Percentage of tests on drinking water which failed to meet quality standards in Wales, 1996-2006



Source: Environment Agency

In Wales, the tests failing the old quality standards decreased from 0.32 per cent in 1996 to 0.14 per cent in 2003 and the tests failing the new quality standards decreased from 0.08 per cent in 2004 to 0.04 per cent in 2006.

Distinctive Biodiversity, Landscapes & Seascapes

Summary

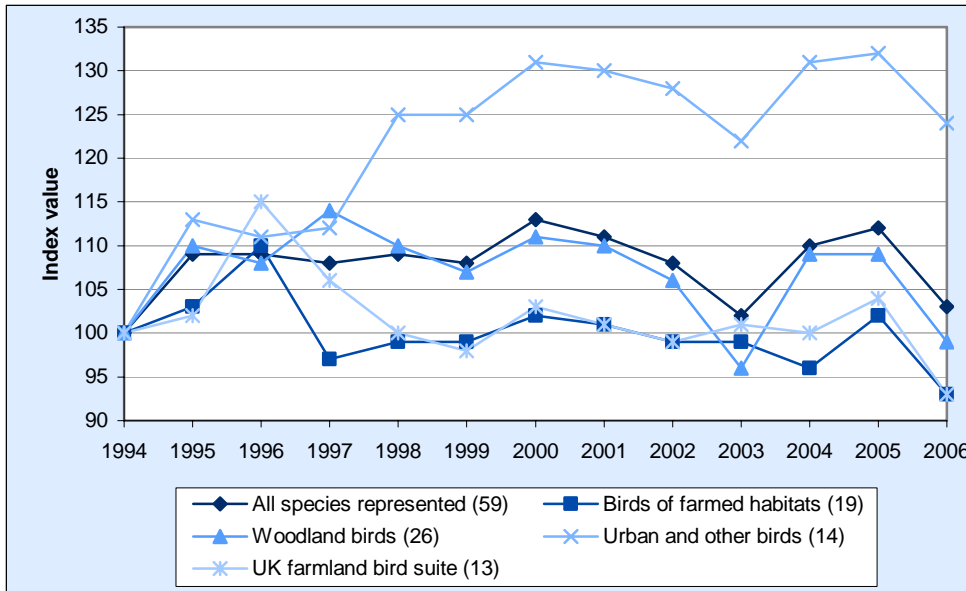
The table below lists all indicators within the theme of Distinctive Biodiversity, Landscapes & Seascapes, and indicates whether the statistics available to date show that progress has improved, is stable, has declined, or shows no clear trend.

Outcome	Indicator	Improving	Stable	Declining	No clear trend	Baseline	No information
19: The loss of biodiversity has been halted and we can see a definite recovery in the number, range and genetic diversity of wildlife, including those species that need very specific conditions to survive	19a: Trends in Biodiversity Action Plan species and habitats	✓					
	19b: Trends in wild birds population index				✓		
	19c: Indicators to illustrate range and genetic diversity (to be developed)						✓
20: The wider environment is more favourable to biodiversity through appropriate management, reduced habitat fragmentation and increased extent and interconnectivity of habitats	20a: Proportion of land under agri-environment agreement (by scheme), or which is organic or which is in conversion to organic					✓	
	20b: Proportion of woodland that is certified		✓				
	20c: Additional indicators to be identified following completion of research into biodiversity indicators (to be developed)						✓
21: Sites of international, Welsh and local importance are in favourable condition to support the species and habitats for which they have been identified	21: Percentage of features on Natura 2000 sites in favourable or recovering condition					✓	
22: Our seas will be clean and support healthy ecosystems that are biologically diverse and productive and managed sustainably	22a: Indicators, including coastal zone indicators, to be reviewed in the context of progress of the Marine Bill (to be developed)						✓
	22b: Number of Marine stewardship council certified sustainable fisheries in Welsh waters (to be developed)						✓
	22c: Number of fisheries assessed by ICES (International Council for the Exploration of the Sea) and Sea Fisheries Committees to be in safe biological condition - based on stock assessments, fish catches and catch per unit effort (to be developed)						✓
	22d: Input of hazardous substances to the marine environment	✓					
	22e: Additional indicators to be identified following completion of UK and CCW research on marine ecosystems and work to investigate possibility of developing a seabird indicator (to be developed)						✓
23: The quality and diversity of the natural and historic character of our landscape and seascape is maintained and enhanced	23: Indicators, measuring quality and diversity, to be selected on completion of CCW landscape characterisation work (to be developed)						✓

Population of wild birds – Short-term changes

The chart below shows the combined change in abundance (numbers) of widespread native breeding birds in Wales. These species are also grouped into the two major habitat groups; farmed habitats and woodland, with urban and other habitats shown as a separate combined group. The UK farmland bird suite is shown for reference, but is represented by fewer species in Wales (13) than in the UK (19).

Chart 10: Short-term abundance of widespread breeding birds in Wales (1994=100), 1994-2006



Source: Bird Breeding Survey by the British Trust for Ornithology and the Royal Society for the Protection of Bird's

*Values less than 100 indicate a decline in abundance since 1994.

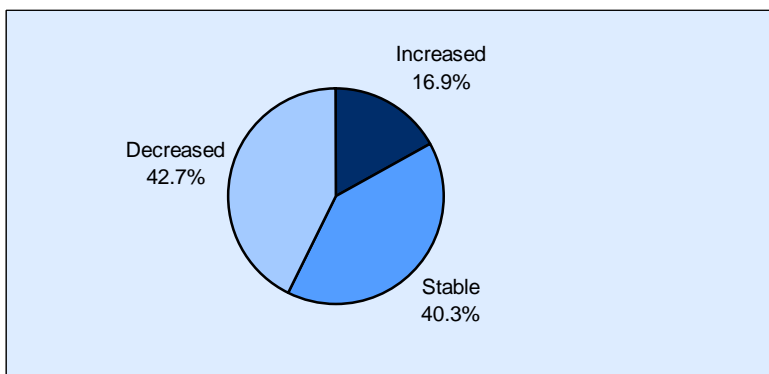
*Numbers in brackets indicate the number of species represented by each category.

In Wales, the short term abundance of all groups has declined from 2005 to 2006. The indicator shows no sign of recovery for those groups with long-term declines in range.

Population of wild birds – Long-term changes

The chart below is included to provide historic context for the short-term abundance changes between 1994 and 2006. It shows the percentage of bird species in Wales whose ranges are estimated to have increased, decreased or remained stable over a 20-year period from 1968-1972 to 1988-91, including five species that are not native to Wales.

Chart 11: Long-term changes in the ranges of widespread breeding birds, 1968-1972 to 1988-1991



Source: Bird Breeding Survey by the British Trust for Ornithology and the Royal Society for the Protection of Bird's

Overall, from 124 bird species in Wales, 16.9 per cent increased, 40.3 per cent remained stable and 42.7 per cent decreased in range between 1968-1972 and 1988-1991.

Agri-environment schemes

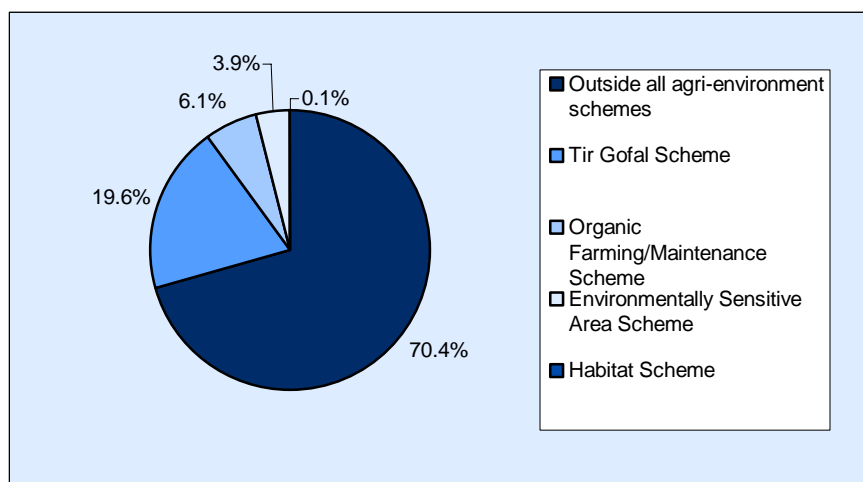
The Tir Gofal scheme aims to encourage farmers throughout Wales to maintain and enhance the agricultural landscape and its wildlife. As of 2008, there are 2,931 schemes covering a total area of around 329,000 hectares.

The Organic Farming Scheme aims to help farmers convert to organic farming and to manage their land in an environmentally friendly way. As of 2008, there are 795 schemes covering a total area of around 102,000 hectares.

The Environmentally Sensitive Area scheme was designed to help farmers in Environmentally Sensitive Areas run their business whilst helping them to maintain and protect the landscape and habitats etc. As of 2008, there are 754 schemes covering a total area of around 65,000 hectares.

The Habitat scheme aims to help farmers to protect and enhance the wildlife value of specifically important habitats in Wales. As of 2008, there are 210 schemes covering a total area of around 2,000 hectares.

Chart 12: Percentage of agricultural land in agri-environment schemes in Wales, 2008

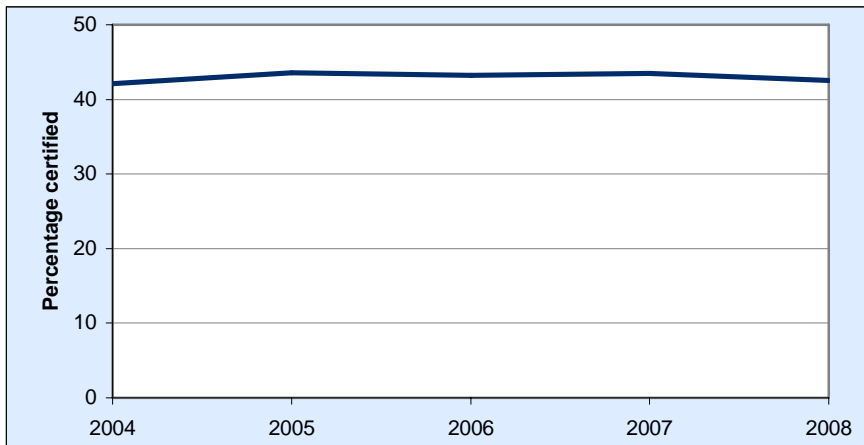


Source: Welsh Assembly Government

Proportion of woodland that is certified

Forest certification is based on assessing forest management practices against agreed environmental standards. A label is awarded to forests and forest products that meet those standards. Certification ensures that forest management does not put the forest's natural heritage at risk, and assures that areas of important wildlife habitat are not negatively affected. Furthermore, certification requires that the management activities are appropriate, that wood harvesting is legal and that the benefits of forests are protected for future generations.

Chart 13: Percentage of certified woodland area in Wales, 2004-2008



Source: Forestry Commission, Forest Service, Forest Stewardship Council

Approximately 121,000 hectares of Welsh woodland were certified in March 2008, 42.5 per cent of the total woodland area. The percentage of woodland under certificated management schemes in Wales has remained fairly stable over the last few years, peaking at 43.6 per cent in March 2005.

Our Local Environment

Summary

The table below lists all indicators within the theme of Our Local Environment, and indicates whether the statistics available to date show that progress has improved, is stable, has declined, or shows no clear trend.

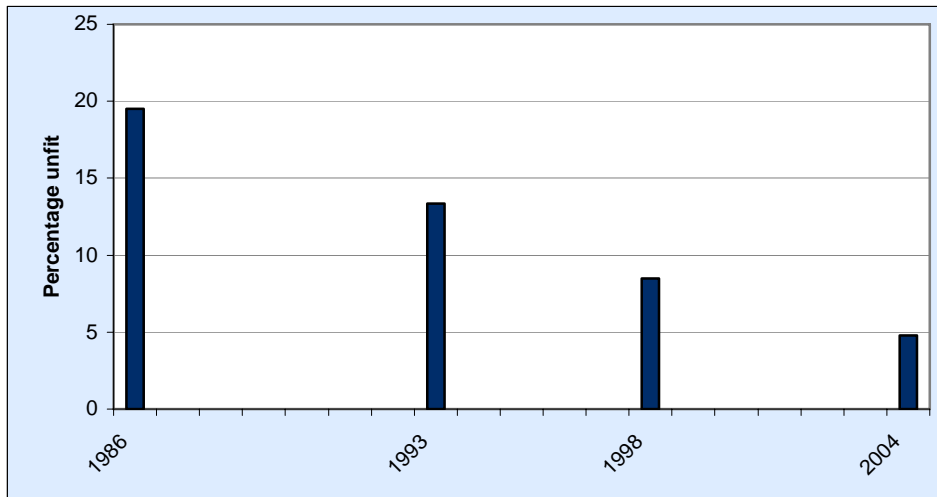
Outcome	Indicator	Improving	Stable	Declining	No clear trend	Baseline	No information
24: The built environment is high quality and vibrant, reflecting local distinctiveness and supporting strong communities, which are actively engaged in the management of their local environment	24a: Percentage of unfit dwellings	✓					
	24b: Percentage of people who feel safe in the local area - from Living in Wales Survey					✓	
	24c: Percentage of people volunteering formally or informally at least once over the last 3 years.			✓			
25: New buildings in Wales meet high environmental quality standards and the environmental quality standards of existing building stock is improving	25a: Percentage of properties owned by local authority and registered social landlords that meet the Welsh Housing Quality Standards (WHQS)					✓	
	25b: Develop an indicator of energy savings from public sector buildings – local authority, NHS and Welsh Assembly Government (to be developed)						✓
26: The historic building stock and character is maintained to a high standard	26: The number of historic assets deemed to be at risk				✓		
27: There is easy, equitable access to ample, high quality green space	27a: Percentage of people stating that they could access a park or open space easily in the Living in Wales Survey					✓	
	27b: Additional indicator to be developed from rollout of CCW's green space toolkit (to be developed)						✓
28: Environmental nuisances such as litter, flytipping, graffiti, dog fouling, fly-posting, noise pollution and light pollution are minimised.	28a: Percentage of highways and relevant land inspected of a high or acceptable standard of cleanliness, from NAWPIs				✓		
	28b: Trends in level of flytipping			✓			
	28c: Indicators will be reviewed following consultation on National Assembly for Wales Performance Indicators (NAWPIs), and proposal to adopt LEAMS (Local Environment Audit and Management Scheme) measures(to be developed)						✓

Outcome	Indicator	Improving	Stable	Declining	No clear trend	Baseline	No information
29: There is sustainable, widespread and equitable access to the countryside and coast, which recognises the need for a balance between tranquil areas and areas supporting larger numbers of people and a range of activities. Damaging access will be discouraged	29a: Percentage of total length of footpaths and other rights of way which were easy to use by the public, from NAWPIs				✓		
	29b: An indicator of damaging impacts of access will be developed (to be developed)						✓
	29c: Change in number and extent of tranquil areas as defined in CCW mapping work (to be developed)						✓
	29d: Additional indicator to be considered following the development of the new Outdoor Recreation Survey (to be developed)						✓
30: The number of people choosing to walk or cycle as a means of transport is increasing	30a: Percentage of people whose main mode of travel to work is a) walking b) cycling		✓				
	30b: Percentage of pupils whose main mode of travel to school is walking	✓					
31: Appropriate measures are in place to manage the risk of flooding from rivers and the sea and help adapt to climate change impacts	31a: Annual cost of damage due to flooding	✓					
	31b: Probability of flooding of assets at risk					✓	
	31c: Indicator of percentage of new development permitted in the floodplain (to be developed)						✓
32: Everyone who lives in a flood risk area understands the flood risk they are subject to, the consequences of that risk and how to live with that risk	32a: Level of use of Floodline				✓		
	32b: Households registered for flood warnings as a percentage of total number of households at risk of flooding	✓					
	32c: Indicators of trends in awareness of flood risk to be developed based on a new survey					✓	

Unfit dwellings

'Unfitness' is a technical and legal term that relates to the physical fabric of houses and their condition. Each house is judged on 11 aspects (e.g. disrepair, dampness, ventilation). Should the house not meet the required standard for any one of the items, it will be classified as unfit for human habitation.

Chart 14: Percentage of dwellings classed as unfit in Wales, 1986, 1993, 1998 and 2004.



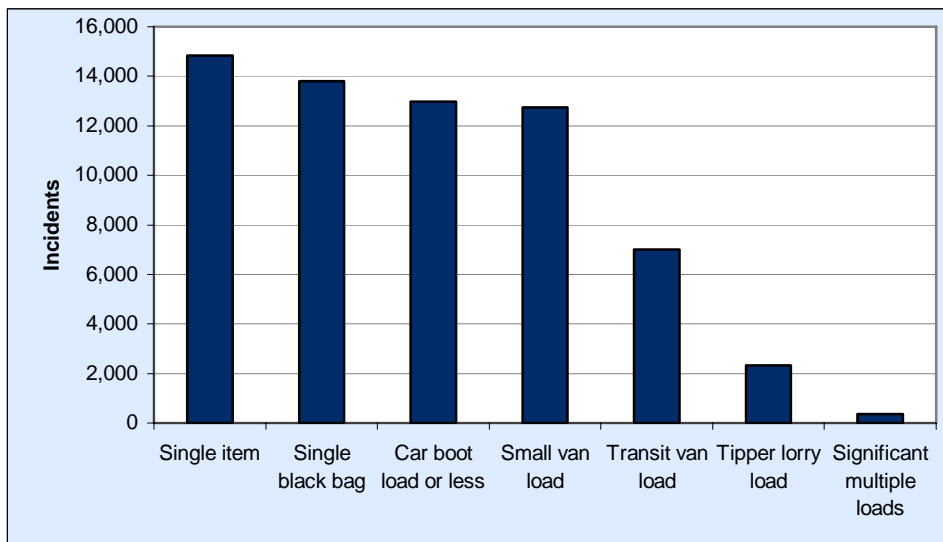
Source: Welsh House Condition Surveys and Living in Wales Survey 2004, Welsh Assembly Government

Even though the overall number of homes has steadily increased since 1986, the rate of unfitness has continued to fall. The number of unfit dwellings in Wales has decreased from 199,000 (19.5 per cent of the total) in 1986 to 57,700 (4.8 per cent of the total) in 2004.

Level of flytipping

The Environment Agency and local authorities have used a web-based database called Flycapture since 2004, to record the flytipping incidents that they have dealt with. This is mainly for incidents on public land, for which the Local Authorities are responsible. Incidents on private land are normally the responsibility of the landowner but the Agency will engage in enforcement on public or private land where the incident involves large quantities, organised crime, or hazardous waste. Incidents dealt with by private landowners are not currently recorded formally. They are estimated to be the equivalent of the numbers dealt with by Local Authorities and the Environment Agency.

Chart 15: Recorded flytipping incidents by size in Wales in 2007-08

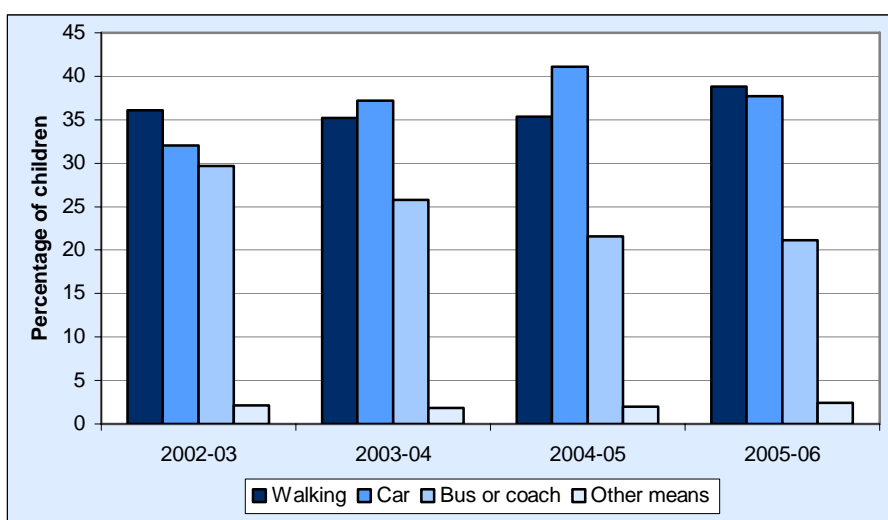


Source: Environment Agency

The total number of recorded flytipping incidents in Wales has increased from approximately 55,000 in 2006-07 to 61,000 in 2007-08. In 2007-08, single items, single black bags, car boot loads or less and small van loads were the most common records of flytipping in Wales, each accounting for between 20 and 25 per cent of the total.

Main mode of travel to school for children

Chart 16: Main mode of travel to school for children in Wales, aged 5-16, 2002-03 to 2005-06



Source: 2006 National Travel Survey, Department for Transport

The percentage of children in Wales aged 5-16 whose main mode of travel to school is walking has increased from 36.1 per cent in 2002-03 to 38.8 per cent in 2005-06. Travel by car has also increased, however, travel by bus or coach has decreased from 29.7 per cent to 21.1 per cent over the same period.

Environmental Hazards

Summary

The table below lists all indicators within the theme of Environmental Hazards, and indicates whether the statistics available to date show that progress has improved, is stable, has declined, or shows no clear trend.

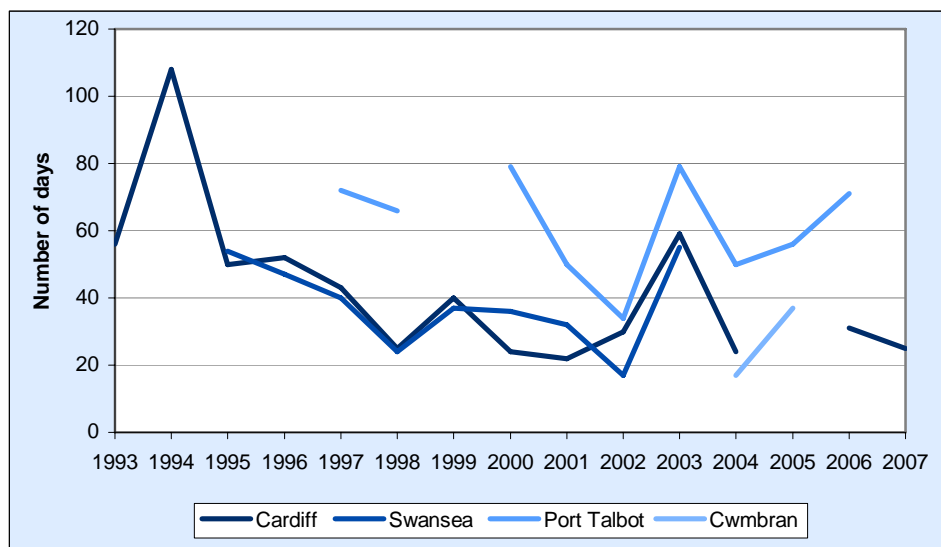
Outcome	Indicator	Improving	Stable	Declining	No clear trend	Baseline	No information
33: Trends in number of days when air pollution is moderate or higher in rural zones and urban agglomerations	33a: Trends in number of days when air pollution is moderate or higher in rural zones and urban agglomerations				✓		
	33b: Air concentrations of Heavy Metals				✓		
	33c: Number of Air Quality Management Areas within Wales	✓					
	33d: Level of emissions from Wales of sulphur dioxide	✓					
	33e: Level of emissions from Wales of ammonia	✓					
	33f: Level of emissions from Wales of nitrogen oxides	✓					
	33g: Level of emissions from Wales of fine particulates	✓					
	33h: Level of emissions from Wales of Non Methane Volatile Organic Compounds (NMVOC)	✓					
	33i: Level of emissions from Wales of CO	✓					
	33j: Area of natural and semi-natural habitat where deposition of (a) acid and (b) nitrogen compounds exceeds critical loads	✓					
34: The extent of contaminated land is better understood and actions are being taken to remediate contaminated land for beneficial use where appropriate	34: Further work to be done to identify a suitable indicator for contaminated land (to be developed)						✓
35: The quality of our groundwater, rivers, lakes and coastal waters is maintained and enhanced	35a: River water quality - biological and chemical		✓				
	35b: Bathing water quality	✓					
	35c: Compliance with 'good status' under the Water Framework Directive in due course (to be developed)						✓

Outcome	Indicator	Improving	Stable	Declining	No clear trend	Baseline	No information
36: Diffuse pollution is better understood and action is being taken to reduce and manage diffuse pollution	36a: River water quality - biological and chemical		✓				
	36b: Bathing water quality	✓					
	36c: Compliance with 'good status' under the Water Framework Directive in due course (to be developed)						✓
	36d: Area of Wales designated as Nitrate Vulnerable Zones					✓	
37: The risks posed by exposure to chemicals is minimised with emphasis on protecting vulnerable members of society	37a: Emissions of toxic air pollutants, and concentrations in the air (compared with standards) (to be developed)						✓
	37b: Intake of persistent organic chemicals and metals via food intake in relation to WHO guidelines	✓					
	37c: Following implementation of REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) (to be developed)						✓
38: Those at risk from radon will be aware of the risk that they face and what they can do to minimise the risk	38a: Number of houses with radon levels above the Action Level					✓	
	38b: Number of houses where radon remediation has been completed					✓	
39: Radioactive discharges in Wales and doses to the public will be minimised. Discharges to the marine environment will be minimised to the extent that additional concentrations in the marine environment above historic levels are close to zero	39a: Trends in radioactive discharges from major sources in Wales	✓					
	39b: Doses to most exposed members of the public				✓		

Air quality in urban and rural areas

Levels of individual pollutants are measured at various National Automated Monitoring Network sites across Wales. Concentrations of the pollutants were analysed to determine the number of days at each site on which the pollution was moderate or higher, i.e. when concentrations for at least one of the pollutants exceeded the National Air Quality Standards.

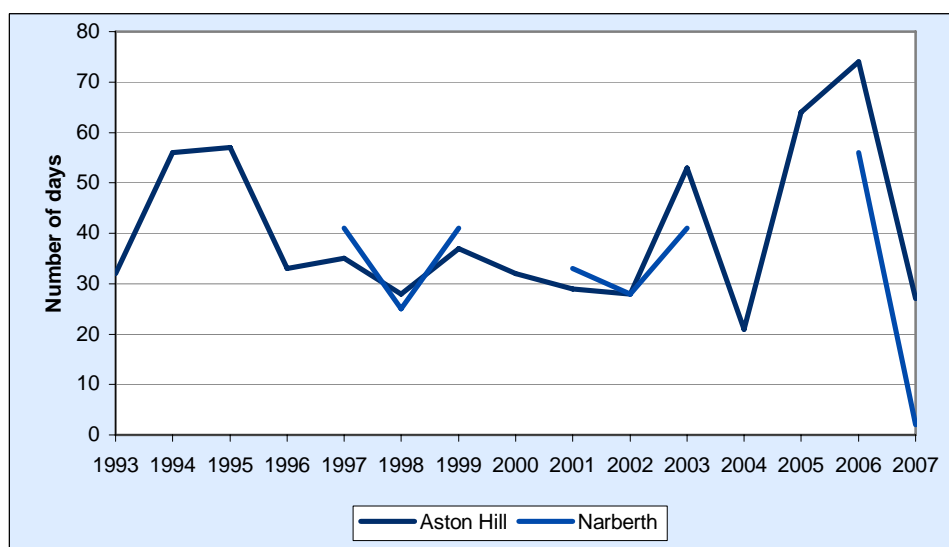
Chart 17: Days with moderate or higher pollution levels at urban sites in Wales, 1993-2007



Source: Department for Environment, Food and Rural Affairs, AEA Energy and Environment, Welsh Air Quality Database

The number of days when air pollution was moderate or higher was 25 in Cardiff in 2007 and 71 in Port Talbot in 2006. No data is available for Swansea or Cwmbran in 2006 or 2007. The main causes of moderate or higher pollution at urban sites are fine particles (PM₁₀) and ozone.

Chart 18: Days with moderate or higher pollution levels at rural sites in Wales, 1993-2007



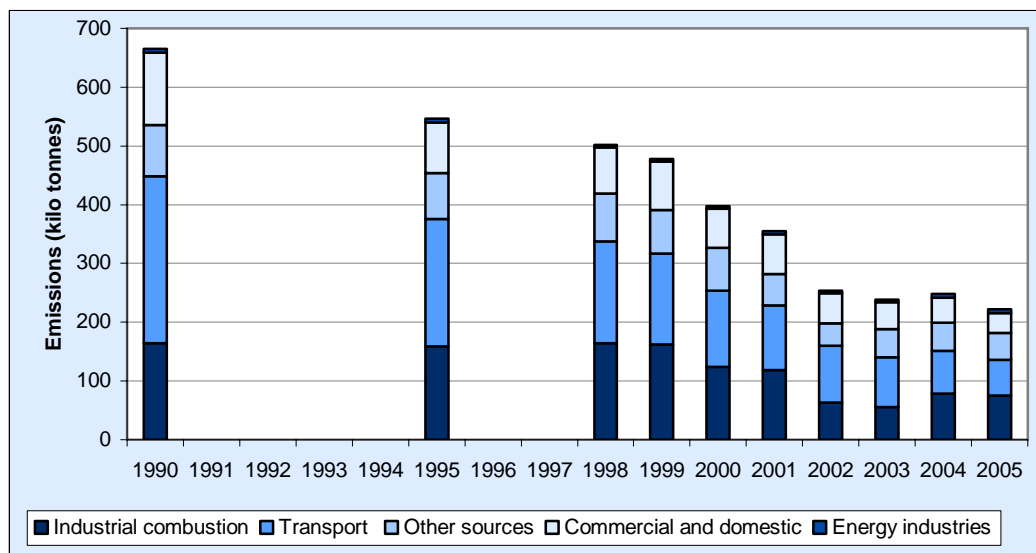
Source: Department for Environment, Food and Rural Affairs, AEA Energy and Environment, Welsh Air Quality Database

In 2007, the number of days when air pollution was moderate or higher was 27 at Aston Hill and 2 at Narberth. At each rural site, the number of days when pollution was moderate or higher has fluctuated from year to year. This is a reflection of the variation in ozone levels, which is the main cause of pollution in rural areas and which is affected by the weather.

Emissions of carbon monoxide

Carbon Monoxide (CO) can cause detrimental impacts on health. The chart below gives a summary of the CO emissions in Wales by broad Nomenclature For Reporting (NFR) sector categories, defined by the UN Economic Committee for Europe guidelines for estimating and reporting emission data under the Convention on Long-range Transboundary Air Pollution.

Chart 19: Level of emissions of carbon monoxide in kilo tonnes in Wales by source, 1990-2005



Source: National Atmospheric Emissions Inventory 2007, AEA Energy and Environment

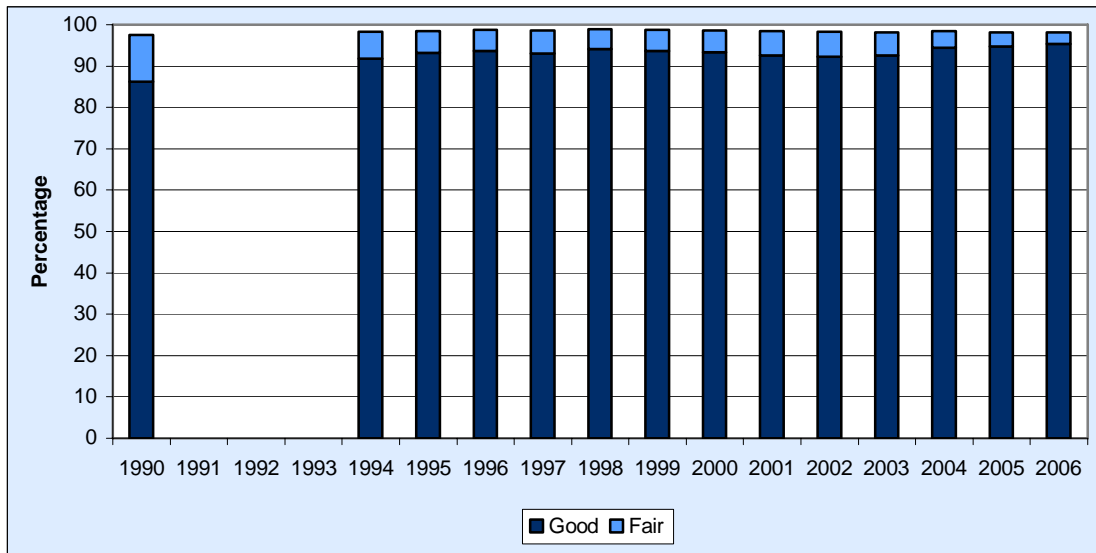
There is a clear downward trend in emissions of carbon monoxide in Wales since 1990.

Industrial combustion is the largest source of carbon monoxide emissions in Wales, accounting for 33.9 per cent of the total in 2005. Transport sources accounted for a further 27.3 per cent.

Chemical and biological river water quality

The charts below show the percentage of river lengths in Wales (surveyed as part of the general quality assessment scheme) that are classified as being of either good or fair chemical and biological quality.

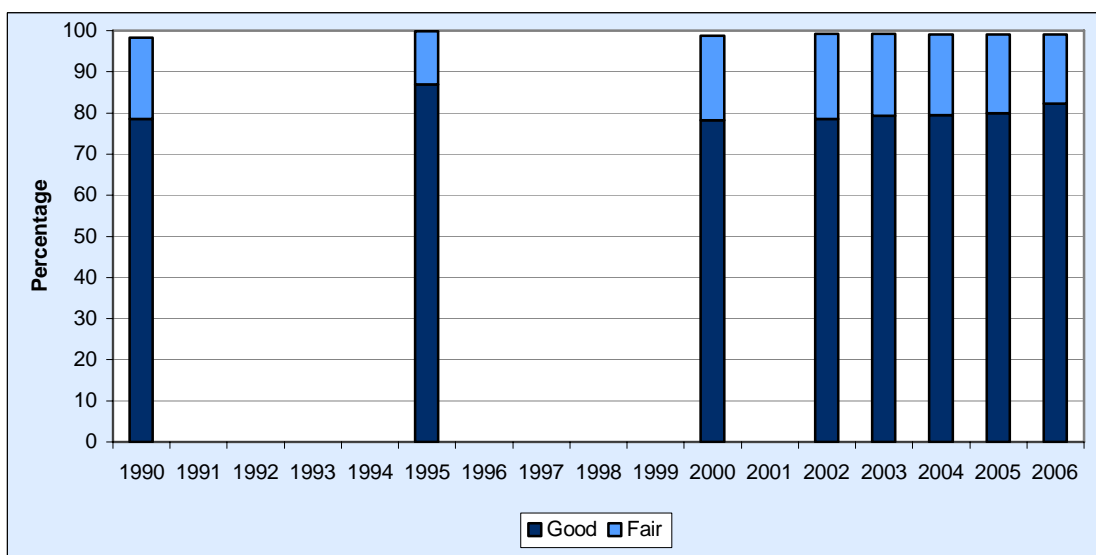
Chart 20: Percentage of river lengths of good or fair chemical quality in Wales, 1990-2006



Source: Environment Agency

The percentage of river lengths in Wales of good or fair chemical quality has consistently been higher than 98 per cent since 1994.

Chart 21: Percentage of river lengths of good or fair biological quality in Wales, 1990-2006



Source: Environment Agency

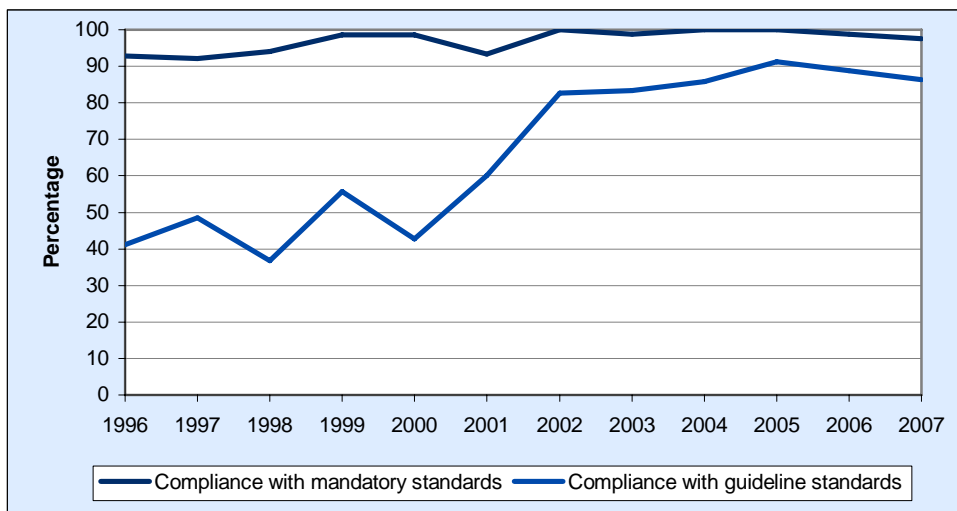
The percentage of river lengths in Wales of good or fair biological quality has consistently been 99 per cent or higher since 2002.

Notes: Chemical data is presented for three-year periods, e.g. 2006 includes results of samples in 2004-06. Biological quality testing was carried out every 5 years but since 2002 one third of sites have been tested e.g. results for 2005 include results of samples in 2004-06.

Bathing water quality

There are currently 80 European Commission (EC) designated bathing waters in Wales which are monitored between 1st May and 30th September each year. The percentage of bathing waters that complied with the mandatory bacterial standards and the more stringent guideline standards set out in the European Commission Bathing Water Directive are shown in the chart below.

Chart 22: Percentage of bathing waters which satisfy EC mandatory and guideline standards in Wales, 1996-2007



Source: Environment Agency

The percentage of bathing waters which comply with the mandatory EC standards in Wales has remained above 90 per cent since 1996, but more recently has decreased from 100 per cent in 2005 to 97.5 per cent in 2007. The proportion of bathing waters which comply with the guideline EC standards in Wales increased from just over 40 per cent in 1996 to over 90 per cent in 2005, but then decreased to 86.3 per cent in 2007.

Key Quality Information

1. The statistics come from a range of sources in Wales and across the UK, which are updated at different times and intervals. Figures are shown for the latest available year and in many cases some comparisons with earlier years are also included. The full set of data, analysis, and notes on all of the indicators are available through our [StatsWales](#) website, which also shows comparisons between local authorities and with the UK or its constituent countries where possible. The StatsWales reports will be updated periodically throughout the year. Please refer to the StatsWales reports for information about specific data issues.

2. Each indicator in the Welsh Assembly Government's Environment Strategy has been categorised as improving, stable, declining, having no clear trend, baseline or having no information:

Improving – There is a clear improvement in the indicator in recent years.

Stable – There has been very little change in the indicator in recent years.

Declining – There has been a clear decline in the indicator in recent years.

No clear trend – There are fluctuations in the data, making it difficult to identify a clear trend.

Baseline – Currently only data for the base year are available.

No information – The indicator has either not yet been developed, or there is no information available.