

STATISTICAL RELEASE

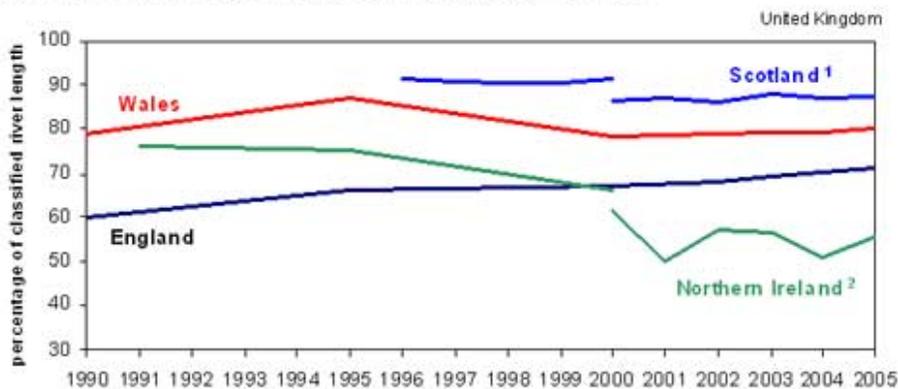
Nobel House, 17 Smith Square, London SW1P 3JR
Out of hours telephone 020 7270 8960

River water quality indicator for sustainable development: 2005

The river water quality indicator is one of the UK Government's sustainable development indicators, as outlined in the sustainable development strategy 'Securing the future' published in March 2005. It comprises indicators of good biological and chemical quality.

Section a: Biological river quality

Figure (a): Rivers of good biological quality: 1990-2005



1. Scottish combined classification encompassing chemical, biological and aesthetic quality. Scottish river classification network changed in 2000.
 2. Northern Ireland classified network significantly expanded in 2000.

Source: EA, SEPA, BHS

In England

- 71 per cent of river length was of good biological quality in 2005 compared with 67 per cent in 2000 and 60 per cent in 1990.

In Wales :

- 80 per cent of river length was of good biological quality in 2005, compared with 78 per cent in 2000 and 79 per cent in 1990.

In Northern Ireland:

- in 2005, 56 per cent of monitored river length was of good biological quality, compared with 61 per cent in 2000.
- The length of rivers monitored increased greatly between 1995 and 2000, but there was a fall in river length of good quality over this period in those rivers that were monitored in both years.

In Scotland :

- comparisons between Scotland and the rest of the UK should be treated with caution as the data are on a different

basis (see *Notes to Editors*).

- 87 per cent of monitored river lengths were of good quality in 2005, the same as in 2000 and 2004, using a combined classification which includes, chemical, biological, nutrient and aesthetic elements.
- changes in river length allocations and the extent of monitoring between 1990 and 2005 mean that it is difficult to draw conclusions about longer term Scottish trends.

In the UK, it is estimated that about 76 per cent of rivers were of good biological quality in 2005. This estimate is approximate because the classification scheme in Scotland differs from that in England, Wales and Northern Ireland. It is not possible to show reliable trends for the UK because of changes in definitions and the length of river monitored.

Table a: Biological river quality: 1990-2005

Percentage of total river length that is of 'good' quality ¹

	England	Wales	Northern Ireland ²	Scotland ³
1990 ⁴	59.7	78.5	76.1	..
1995	66.3	87.0	75.4	..
2000 ²	67.3	78.3	66.1	86.7
2000 ²			61.5	
2001	49.9	86.9
2002	68.0	78.5	57.3	86.2
2003	69.2	79.3	56.6	87.5
2004	70.4	79.4	51.1	86.8
2005	71.0	80.0	55.7	87.2

Notes:

¹See *Notes to Editors*

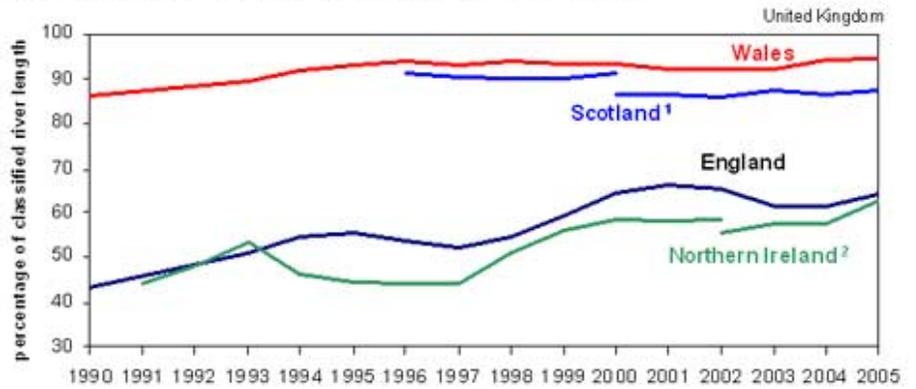
²The river length monitored in Northern Ireland more than doubled between 1995 and 2000. Results for 2000 are shown on both bases for comparison, with the older network first.

³Data for Scotland are a combined measure of chemical, biological, nutrient and aesthetic quality (see *Notes to Editors*).

⁴1991 in Northern Ireland.

Section b: Chemical river quality

Figure (b) Rivers of good chemical quality: 1990-2005



1. Scottish combined classification encompassing chemical, biological and aesthetic quality. Scottish river classification network changed in 2000.

2. Northern Ireland classified network significantly expanded in 2002.

Source: EA, SEPA, EHS

In England :

- 64 per cent were of good quality in 2005, compared with 64 per cent in 2000 and 43 per cent in 1990.

In Wales :

- 95 per cent were of good chemical quality in 2005, compared with 93 per cent in 2000 and 86 per cent in 1990.

In Northern Ireland :

- 63 per cent were of good quality in 2005 compared with 55 per cent in 2002 and 44 per cent in 1991.

In Scotland:

- comparisons between Scotland and the rest of the UK should be treated with caution as the data are on a different basis (see *Notes to Editors*).
- 87 per cent were of good quality in 2005, the same as in 2004 and 2000 using the same combined classification based on chemical, biological, nutrient and aesthetic elements reported for the biological indicator.
- changes in river length allocations and the extent of monitoring between 1990 and 2005 mean that it is difficult to draw conclusions about longer term Scottish trends.

In the UK, it is estimated that about 74 per cent of rivers in 2005 were of good chemical quality. This estimate is approximate because the classification scheme in Scotland differs from that in England, Wales and Northern Ireland.

There has been relatively little overall change in the proportion of rivers of good quality in the UK since 2000, but there has been an improvement since 1990. This conclusion is based on a comparison of the trends for individual countries – an exact percentage change cannot be given because of changes in monitoring methods and monitored river networks through the period.

Table b: Chemical river quality: 1990-2005

Percentage of total river length which is of 'good' quality ¹

	England	Wales	Northern Ireland ²	Scotland ³
1990 ⁴	43.5	86.3	44.3	..
1995	55.4	93.2	44.7	..
2000	64.4	93.4	58.8	86.7

2001	66.1	92.5	58.4	86.9
2002 ²	65.5	92.2	58.6	86.2
2002 ²			55.4	
2003	61.6	92.5	57.6	87.5
2004	61.5	94.4	57.9	86.8
2005	64.2	94.7	63.4	87.2

Notes:

¹ See *Notes to Editors*.

² The length of rivers chemically classified in Northern Ireland increased by about 40 per cent between 1991 and 1994, and by a further 100 per cent (compared with the 1991 network) between 2001 and 2002. For 2002 figures are shown for both networks, the older network first.

³ Data for Scotland are a combined measure of chemical, biological, nutrient and aesthetic quality (see *Notes to Editors*).

⁴ 1991 in Northern Ireland.

Source: Environment Agency, SEPA, EHS

Section c: About the indicator

The river water quality indicator updated here is one of the UK's Government's sustainable development indicators and supports both the UK Government Strategy *Securing the future* and the UK Framework for Sustainable Development *One future - different paths*, which is shared with the devolved administrations in Scotland, Wales and Northern Ireland.

New or changed monitoring schemes will be needed to assess water quality for the Water Framework Directive (WFD), and the UK environmental agencies are working to develop these, with the aim of having them in place by the end of 2006. The presentation of indicators of water quality will be reviewed in the light of new monitoring plans as they are developed. In the mean time it is anticipated that there will be at least one further update of this indicator based on the present monitoring systems. Of the present indicators, the biological quality measure is more closely aligned with the ecological objectives which are being introduced with the WFD than the chemical quality measure, important though this is.

Notes to editors

- River water quality is one of 68 indicators outlined in the UK Government's sustainable development strategy *Securing the future*. It is also one of 20 indicators outlined in *One Future - different paths: The UK's shared framework for sustainable development*, which is shared by the UK government and the devolved administrations of Scotland, Wales and Northern Ireland. (Both the Strategy and the Framework were published on 7 March 2005.)
- All 68 indicators are published in a pocket-sized booklet *Sustainable development indicators in your pocket 2006*, available free of charge from:
Defra Publications
Admail 6000
London SW1A 2XX
Tel: 08459 556000

Quote publication reference PB12045. A large print A4 version is also available, quote PB12045A.

- More detailed results and descriptions of the current monitoring methods and river networks are available as follows:
 - Scottish Environmental Protection Agency <http://www.sepa.org.uk/data/classification/index.htm>.
 - Northern Ireland Environment and Heritage Service http://www.ehsni.gov.uk/environment/waterManage/quality/rivers/river_monitor.shtml
 - Environment Agency for England and Wales http://www.environment-agency.gov.uk/yourenv/eff/1190084/water/213902/river_qual/?version=1&lang=_e
 - Defra e-Digest of Environmental Statistics (includes England and Wales results summarised at local authority and English Government Office level) <http://www.defra.gov.uk/environment/statistics/index.htm>
- Chemical data from rolling three-year sampling windows are presented to reduce the bias which might be caused by unusual weather conditions in any one year. In Scotland, since 1996, an overall classification has been used combining chemical, biological, nutrient and aesthetic quality. The Scottish classification system and criteria for determining which river lengths should be monitored are different from the other countries. Comparisons between Scotland and other countries should therefore be treated with caution.
- In England, Wales and Northern Ireland, three measurements are used for chemical quality classification: biochemical oxygen demand, dissolved oxygen and ammonia. Biological testing provides a fuller picture of the health of rivers and canals. Biological grading is based on monitoring tiny animals (i.e. macro-invertebrates) living in or on the river bed. Species groups recorded at a site are compared with those which would be expected to be present in the absence of pollution, allowing for the different environmental characteristics in different parts of the country.
- In Scotland, iron and pH are also included in chemical monitoring in addition to the other three measurements. Biological (ecological) grading is similar to that used in the other countries. The final allocation of the quality class assigned to a river stretch is based on the lowest class determined from chemical, biological, aesthetic and toxicity assessments available for the associated monitoring point.
- For this indicator 'Good' in England, Wales and Northern Ireland is taken as corresponding to GQA classes A and B. For Scotland, 'Good' is taken as corresponding to Scottish Classes A1 and A2 plus unclassified river stretches. Unclassified river stretches are mostly located in rural upland catchments, and have been increasingly brought within the scope of monitoring since 2000.
- Today the Environment Agency for England and Wales also released GQA results for nutrients, together with more detailed chemical and biological results for England and Wales, including figures for river catchment regions and for individual river stretches. These results are published on its website. http://www.environment-agency.gov.uk/yourenv/eff/1190084/water/213902/river_qual/?version=1&lang=_e

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