

## STATISTICAL RELEASE

# River water quality headline indicator for sustainable development: 2002

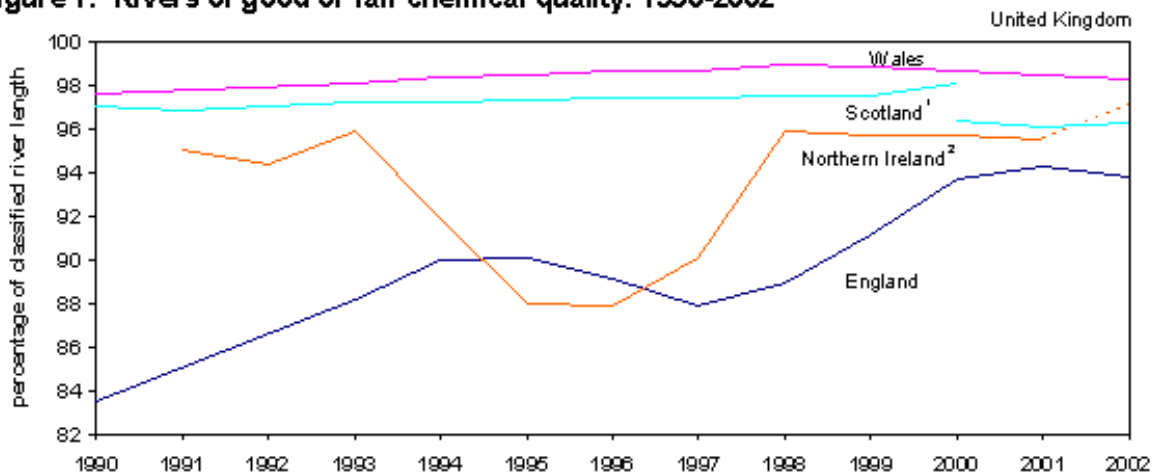
The river water quality headline is one of the 15 headline indicators of sustainable development. It comprises indicators of chemical quality and biological quality.

### Section 1: Chemical river quality

In the UK, it is estimated that about 95 per cent of rivers were of **good or fair** chemical quality in 2002, and about 75 per cent of rivers in 2002 were of **good** chemical quality. These estimates are 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 or fair 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.

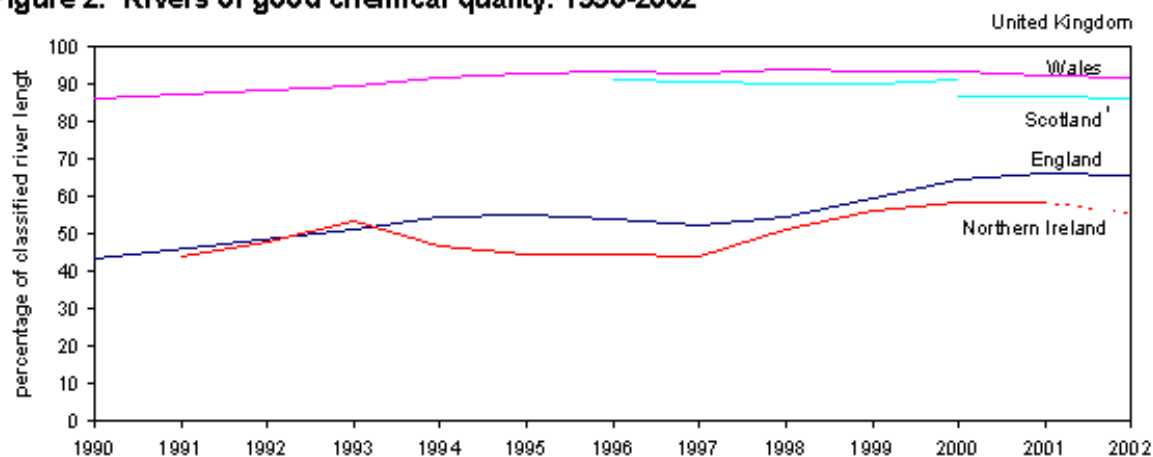
**Figure 1: Rivers of good or fair chemical quality: 1990-2002**



1. Scottish river classification network changed in 2000.
2. Northern Ireland classified network significantly expanded in 2002.

Source: Environment Agency, SEPA, EHS

**Figure 2: Rivers of good chemical quality: 1990-2002**



1. Scottish river classification network changed in 2000.

2. Northern Ireland classified network significantly expanded in 2002.

Source: Environment Agency, SEPA, EHS

**In England:**

- 94 per cent of river lengths were of **good or fair** chemical quality in 2002, compared with 84 per cent in 1990.
- 65 per cent were of **good** quality in 2002, compared with 43 per cent in 1990.

**In Wales:**

- 98 per cent were of **good or fair** chemical quality in 2002, similar to the level in 1990.
- 92 per cent were of **good** chemical quality in 2002, compared with 86 per cent in 1990.

**In Northern Ireland:**

- 97 per cent were of **good or fair** chemical quality in 2002, following a fall in quality to 88 per cent in 1995 from 95 per cent in 1991.
- 55 per cent were of **good** quality in 2002 compared with 44 per cent in 1991.

**In Scotland**

- 96 per cent of rivers in Scotland were of **good or fair** quality in 2002, using a combined but predominantly chemical classification.
- 86 per cent were of **good** quality in 2002

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](#)).

**Table 1: Chemical river quality: 1990-2001**

Class <sup>3</sup>	England		Wales		Northern <sup>1</sup> Ireland		Scotland <sup>2</sup>		
	Good	Fair	Good	Fair	Good	Fair	Unpolluted	Good	Fair
1990 <sup>4</sup>	43.5	40.1	86.3	11.3	44.2	50.8	97.0	..	..
1995	55.4	34.6	93.2	5.3	44.7	43.2	97.3	..	..
2000 <sup>5</sup>	64.4	29.3	93.4	5.2	58.8	36.9	..	91.3	6.8
2000 <sup>6</sup>							..	86.7	9.6
2001 <sup>6</sup>	66.1	28.1	92.5	6.0	58.4	37.1	..	86.9	9.2
2002	65.5	28.3	92.2	6.1	55.4	41.7	..	86.2	10.1

Notes:

<sup>1</sup> 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.

<sup>2</sup> The classification system for Scotland was revised in 1996 to an overall classification

combining chemical, biological, nutrient and aesthetic quality. In 2000 a new Digitised River Network (DRN) was introduced - data are shown on both old and new networks for 2000 (see *Notes to Editors*).

<sup>3</sup> See *Notes to Editors*.

<sup>4</sup> 1991 in Northern Ireland.

<sup>5</sup> Data for Scotland relate to the old river network as used.

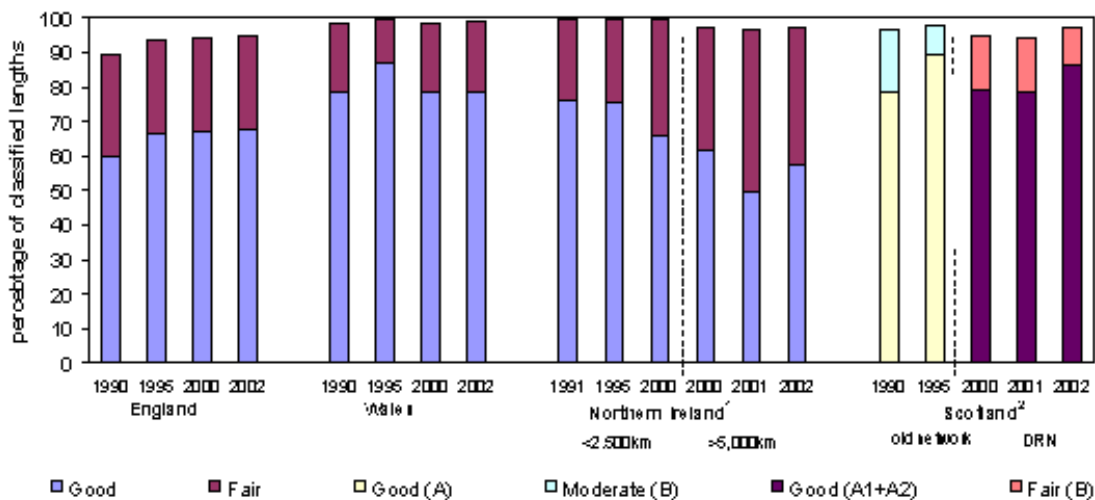
<sup>6</sup> Data for Scotland relate to the new DRN and are consistent for years 2000 onwards.

Source: Environment Agency, SEPA, EHS

## Section 2: Biological river quality

In the UK, it is estimated that approximately 95 per cent of rivers were assessed as being of good or fair biological quality in 2002. It is not possible to show reliable trends for the UK because of differences in definitions and the network length used for Scotland in 1990, 1995 and 2000.

**Figure 3: Biological river quality: 1990-2002**



1 The length of rivers monitored in Northern Ireland more than doubled between 1995 and 2000.

2 Between 1995 and 2000 Scotland changed to a Digitised River Network.

- **In England**, 95 per cent of river lengths were of **good or fair** biological quality in 2002 compared with 89 per cent in 1990. 68 per cent were of **good** biological quality in 2002 compared with 60 per cent in 1990.
- **In Wales**, almost all river lengths are of **good or fair** biological quality. 79 per cent were of **good** biological quality in 2002, the same as in 1990.
- **In Northern Ireland**, in 2002, 97 per cent of monitored river length was of **good or fair** quality and 57 per cent of good quality, compared with 97 per cent and 61 per cent respectively in 2000. The length of rivers monitored increased greatly in 2000, but there was a fall in river length of **good** quality between 1995 and 2000 in those rivers that were monitored in both years.
- **In Scotland**, biological river quality is generally high, but changes in river length allocations between 1995 and 2002 mean that it is difficult to draw conclusions about trends between 1990 and 2002. Data for a consistent set of sites (ECN sites) shows that biological quality in Scotland improved over the period.

**Table 2: Biological river quality: 1990-2002**

Percentage of total river length

	England	Wales	Northern Ireland <sup>1</sup>	Scotland <sup>2</sup>

Class <sup>3</sup>	Good	Fair	Good	Fair	Good	Fair	Good	Moderate	Fair
1990 <sup>4</sup>	59.7	29.7	78.5	19.8	76.1	23.5	78.5	18.0	..
1995	66.3	27.2	87.0	12.8	75.4	24.1	89.5	8.1	..
2000 <sup>5</sup>	67.3	27.1	78.3	20.4	66.1	33.4	78.9	..	16.2
2000 <sup>6</sup>					61.5	35.9			
2001 <sup>6</sup>	..	..	..	..	49.9	46.6	78.6	..	15.8
2002 <sup>6</sup>	68.0	26.6	78.5	20.7	57.3	39.8	86.1	..	11.4

Notes:

- <sup>1</sup> The river length monitored in Northern Ireland more than doubled between 1995 and 2000. Results for 2000 are shown on both bases for comparison.
- <sup>2</sup> Data for Scotland is normally presented as a combined measure of chemical, biological, nutrient and aesthetic quality, but the biological component only is shown here to enable comparison with other countries in the UK. Data for 2000 onwards relate to the new Digitised River Network (see *Notes to Editors*).
- <sup>3</sup> See *Notes to Editors*
- <sup>4</sup> 1991 in Northern Ireland.
- <sup>5</sup> Figures for Northern Ireland relate to the shorter monitored river length (<2,500 kms).
- <sup>6</sup> Figures for Northern Ireland relate to the longer monitored river length (>5,000 kms)

Source: Environment Agency, SEPA, EHS

Notes for editors

1. River water quality is one of the Government's 15 headline indicators of sustainable development. These are a 'quality of life barometer' measuring everyday concerns like housing development, health, jobs, air quality, educational achievement, wildlife and economic prosperity. They are intended to focus public attention on what sustainable development means and to give a broad overview of whether we are "achieving a better quality of life for everyone, now and for generations to come". [1], [2]
2. The headline indicators together with over 130 other indicators of sustainable development can be accessed on <http://www.sustainable-development.gov.uk/indicators>. A leaflet, *Quality of Life Barometer*, summarising progress in all 15 headline indicators, is issued roughly once a quarter to coincide with the update of indicators or other key publications. For copies of the *Quality of Life Barometer* leaflet please telephone: 020 7944 6516.
3. The regional version of this headline indicator, giving results for the English Government Office Regions, is also updated today and can be accessed on the Sustainable Development web site <http://www.sustainable-development.gov.uk/indicators>. Alternatively paper copies may be requested on 020 7944 6516.
4. River water quality is important because rivers are a major source of water used for drinking and by industry. Rivers also support a wide variety of wildlife and are used extensively for recreation. Chemical and biological quality is affected by how abstractions from rivers and groundwaters, and effluent returns to them, are managed, and by the design and maintenance of navigation and flood control measures.
5. More detailed results and descriptions of 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](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/water/213902/river\\_qual/](http://www.environment-agency.gov.uk/yourenv/eff/water/213902/river_qual/).  
 Defra e-Digest of Environmental Statistics (includes England and Wales results summarised at local authority level)  
<http://www.defra.gov.uk/environment/statistics/index.htm>
6. 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.
7. In England, Wales and Northern Ireland, three determinands are used for chemical quality classification: biochemical oxygen demand, dissolved

oxygen and ammonia. In Scotland, iron and pH are also included. Biological testing provides a more comprehensive picture of the health of rivers and canals. Biological grading in the United Kingdom is based on the monitoring of tiny animals (ie macro-invertebrates) which live in or on the bed of the river. 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.

8. In England, Wales and Northern Ireland, the General Quality Assessment (GQA) chemical classification system comprises six quality classes A-F. For this indicator: 'Good' = GQA classes A+B and 'Fair' = GQA classes C+D. In Scotland, for chemical quality up to 1995, 'Unpolluted' is approximately equivalent to GQA classes A to C. From 1996, 'Good' = Scottish Classes A1+A2 and is very closely equivalent to GQA A+B, and 'Fair' = Scottish Class B, but is similarly equivalent to GQA C.

9. Changes in river lengths monitored from year to year may affect trends. In Scotland a new digitised river network was introduced in 2000. Data for chemical quality for 2000 are shown using the combined classification on both the old network basis to be consistent with data for 1996-1999 and the new digitised network basis to be consistent with 2001 data. Data for biological quality from 2000 are only available for the new network, and are not normally shown separately. The river length used for chemical monitoring in Northern Ireland was greatly increased between 1991 and 1993, and again in 2002, and that used for biological monitoring was more than doubled between 1995 and 2000.

10. 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 web site as given above.

[1] *Quality of life counts: Indicators for a strategy for sustainable development for the United Kingdom*. DETR, 1999, London (ISBN 1851123431).

[2] *Achieving a better quality of life: Review of progress towards sustainable development*. Defra, 2002 (PB6811)

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