Bathing water results 2008 – United Kingdom

1. Introduction

This report gives a general overview of bathing water quality in the United Kingdom during the 2008 bathing season.

The United Kingdom reported 12 parameters under the Directive 76/160/EEC (1 Total coliforms, 2 Faecal coliforms, 3 Faecal streptococci, 4 Salmonella, 5 Entero viruses, 6 pH, 7 Colour, 8 Mineral oils, 9 Surface-active substances reacting with methylene blue, 10 Phenols (phenol indices), 11 Transparency, 13 Tarry residues and floating materials).

The parameters to be taken into account for assessment according to the assessment rules of the Directive 76/160/EEC are microbiological (1 Total coliforms, 2 Faecal coliforms) and physico-chemical (8 Mineral oils, 9 Surface-active substances reacting with methylene blue, 10 Phenols (phenol indices).

The bathing waters are classified in the following categories:

- Compliant with mandatory values of the Directive for the 5 parameters (class CI)
- Compliant with mandatory and more stringent guide values of the Directive for the 5 parameters (class CG)
- Not compliant with mandatory values of the Directive for the 5 parameters (class NC)
- Banned (temporarily closed) or closed throughout the season (class B)

2. Length of bathing season and number of bathing waters

In England and Wales, the bathing season lasted 4.5 months, from 15 May to 30 September 2008. In Scotland and Northern Ireland, the bathing season lasted 3.5 months, from 1 June to 15 September 2008. However, there are some variations depending on geographical and climatic factors. In Gibraltar, the bathing season lasted 6.5 months, from 15 April to 30 October 2008.

A total of 608 bathing waters were reported in the United Kingdom during the 2008 bathing season, of which 596 were coastal bathing waters (512; including six in Gibraltar) or in estuaries (80) and 12 freshwater bathing waters on lakes. Three coastal bathing waters were not monitored because they were inaccessible due to planned engineering works or other access problems. The frequency of sampling was reduced for two coastal bathing waters. The number of freshwater bathing waters is very low compared to the coastal bathing waters reported because there is a tradition in the UK of swimming in the sea.

With 608 reported bathing waters the United Kingdom accounts for about 2.8% of the reported bathing waters of the European Union.

The evolution of the reported number of bathing waters since monitoring of the water quality began under the Directive 76/160/EEC is presented in Table 1. The number of coastal bathing waters increased since the start of the reporting from 437 in 1990 to 596 in 2008. There were 23 more coastal bathing waters in 2008 than in the previous year: 23 new coastal bathing waters were added to the list, two were re-opened, one was not sufficiently sampled due to limited access and three were de-listed. The reporting of freshwater bathing waters started in 1998. The number of freshwater bathing waters increased from 9 in 1998 to 12 in 2008. In 2008, one freshwater bathing water was added to the list compared to the previous year.

3. Results of bathing water quality

The results of the bathing water quality in United Kingdom for the period 1990-2007 as reported in 2008 report and for the bathing season of 2008 are presented in Figure 1.

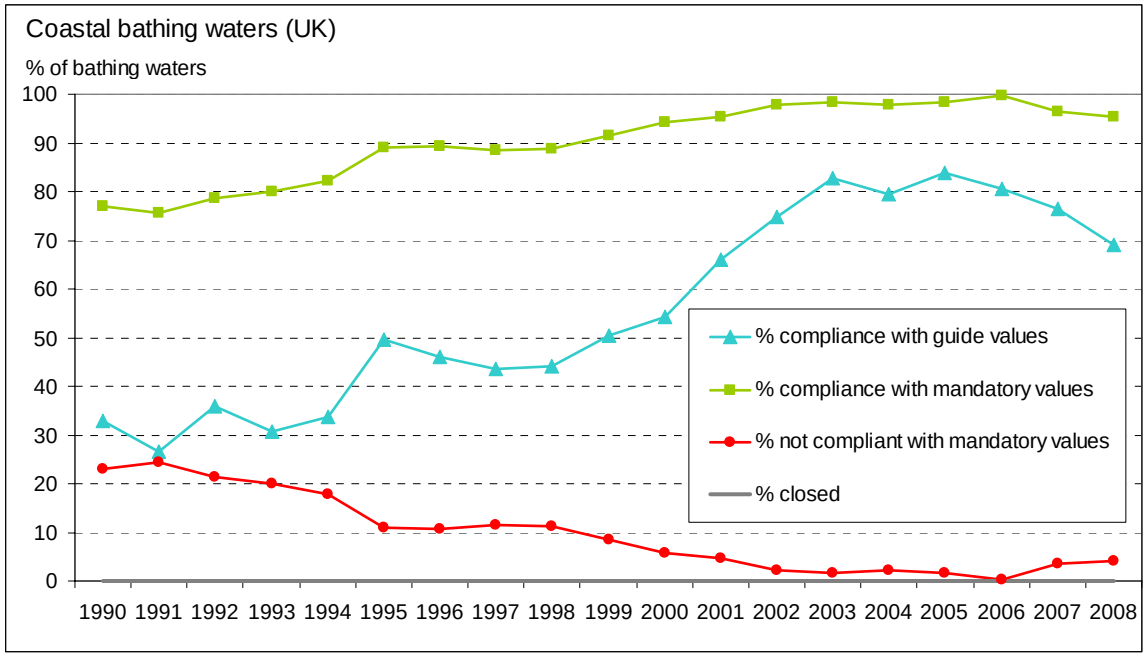
The graphs show, for coastal and freshwater bathing waters separately:

- The percentage of bathing waters that comply with the guide values (class CG, blue line)
- The percentage of bathing waters that comply with the mandatory values (class CI, green line)
- The percentage of bathing waters that do not comply with the mandatory values (class NC, red line)
- The percentage of bathing waters that are banned (temporarily closed) or closed throughout the season (class B, grey line)

Table 1 and Table 2 show the same information in absolute numbers and in percentages separately for coastal and freshwater bathing waters. Table 3 shows the bathing water quality results for the 2008 season in the United Kingdom for all bathing waters.

Map 1 shows the locations of the reported bathing waters in the United Kingdom. The location of the bathing waters is based on the geographic coordinates reported by the U.K. authorities.

Figure 1: Results of bathing water quality in the United Kingdom from 1990 to 2008



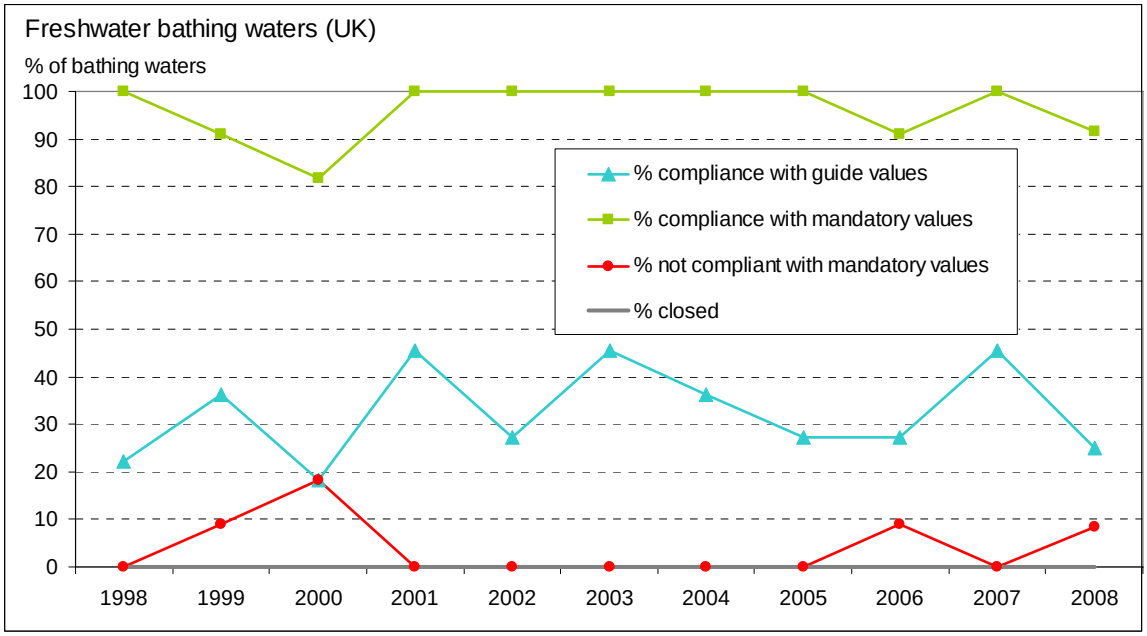

Freshwater bathing waters (UK)
% of bathing waters
100
90
80
70
60
50
40
30
20
10
0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
% compliance with guide values
% compliance with mandatory values
% not compliant with mandatory values
% closed

Table 1: Results of bathing water quality in the United Kingdom from 1990 to 2008 as absolute numbers

	Year	Total number of bathing waters	Compliance with guide values	Compliance with mandatory values	Not compliant	Banned/closed throughout the season
		UK				
Coastal bathing waters	1990	437	144	337	100	0
	1991	453	120	343	110	0
	1992	455	163	358	97	0
	1993	457	140	365	92	0
	1994	457	154	376	81	0
	1995	464	230	413	51	0
	1996	472	217	422	50	0
	1997	492	214	435	57	0
	1998	502	222	446	56	0
	1999	541	273	495	46	0
	2000	551	299	520	31	0
	2001	552	364	526	26	0
	2002	553	414	541	12	0
	2003	560	464	551	9	0
	2004	562	446	549	13	0
	2005	565	473	555	10	0
	2006	567	456	565	2	0
	2007	573	438	553	20	0
	2008	596	412	569	24	0
Fresh water bathing waters	1998	9	2	9	0	0
	1999	11	4	10	1	0
	2000	11	2	9	2	0
	2001	11	5	11	0	0
	2002	11	3	11	0	0
	2003	11	5	11	0	0
	2004	11	4	11	0	0
	2005	11	3	11	0	0
	2006	11	3	10	1	0
	2007	11	5	11	0	0
	2008	12	3	11	1	0

Note: Bathing waters which were insufficiently sampled or not sampled according to the Bathing Water Directive were not included in this table. Therefore, in some cases, the sum of the different categories will not be equal to the total number of bathing waters.

Table 2: Results of bathing water quality in the United Kingdom from 1990 to 2008 as percentages

	Year	Total number of bathing waters	% compliance with guide values	% compliance with mandatory values	% not compliant	% banned/closed throughout the season
		UK				
Coastal bathing waters	1990	437	33.0	77.1	22.9	0.0
	1991	453	26.5	75.7	24.3	0.0
	1992	455	35.8	78.7	21.3	0.0
	1993	457	30.6	79.9	20.1	0.0
	1994	457	33.7	82.3	17.7	0.0
	1995	464	49.6	89.0	11.0	0.0
	1996	472	46.0	89.4	10.6	0.0
	1997	492	43.5	88.4	11.6	0.0
	1998	502	44.2	88.8	11.2	0.0
	1999	541	50.5	91.5	8.5	0.0
	2000	551	54.3	94.4	5.6	0.0
	2001	552	65.9	95.3	4.7	0.0
	2002	553	74.9	97.8	2.2	0.0
	2003	560	82.9	98.4	1.6	0.0
	2004	562	79.4	97.7	2.3	0.0
	2005	565	83.7	98.2	1.8	0.0
	2006	567	80.4	99.6	0.4	0.0
	2007	573	76.4	96.5	3.5	0.0
	2008	596	69.1	95.5	4.0	0.0
Fresh water bathing waters	1998	9	22.2	100.0	0.0	0.0
	1999	11	36.4	90.9	9.1	0.0
	2000	11	18.2	81.8	18.2	0.0
	2001	11	45.5	100.0	0.0	0.0
	2002	11	27.3	100.0	0.0	0.0
	2003	11	45.5	100.0	0.0	0.0
	2004	11	36.4	100.0	0.0	0.0
	2005	11	27.3	100.0	0.0	0.0
	2006	11	27.3	90.9	9.1	0.0
	2007	11	45.5	100.0	0.0	0.0
	2008	12	25.0	91.7	8.3	0.0

Note: Bathing waters which were insufficiently sampled or not sampled according to the Bathing Water Directive are not included in this table. Therefore, in some cases, the sum of the percetanges is not equal to 100%.

Table 3: Results of bathing water quality for all bathing waters in the United Kingdom in 2008

		UK				
		Total number of bathing waters	Compliance with guide values	Compliance with mandatory values	Not compliant	Banned/closed throughout the season
Bathing Waters	2008	608	415	580	25	0

Note: Bathing waters which were not sampled according to the Bathing Water Directive were not included in this table. Therefore the sum of the different categories is not equal to the total number of bathing waters.

4. Development of bathing water quality

Coastal bathing waters

In the United Kingdom, the mandatory values were met for 95.5% of the coastal bathing waters (569) in 2008. This is a slight decrease compared to the previous year (- 1%). 69.1% of the bathing waters (412) met the more stringent guide values, which is also a decrease of 7.3%. 26.3% less bathing waters met the guide values compared to the mandatory values. 24 bathing waters were non-compliant with the mandatory values. The percentage of these bathing waters (4%) was a little higher than in the previous year (3.5%). Since the start of reporting in 1990, no coastal bathing water had to be closed during the season.

The water quality of coastal bathing waters has improved since 1990. From 1999 to 2001, the percentage of bathing waters complying with mandatory values was above 90%. Later this percentage has been above 95%. Since 1997, the percentage of bathing waters complying with the more stringent guide values has improved, with a slight drop below 80% in 2004 and 2007. In 2008, the compliance with the guide values decreased below 70%.

Freshwater bathing waters

11 freshwater bathing waters (91.7%) met the mandatory values in 2008. This is a decrease compared to the previous year, when all freshwater bathing waters (11) met the mandatory values. Three bathing waters (25%) met the more stringent guide values, which is also a decrease of two bathing waters. One bathing water (8.3%) was not compliant with mandatory values. Since the start of reporting in 1998, no freshwater bathing water had to be closed during the season.

Since 2001, all freshwater bathing waters complied with mandatory values, except in 2006 and 2008, when one bathing water was non-compliant. Since 2001, the percentages of freshwater bathing waters that complied with the more stringent guide values fluctuated between 25% and 45.5%.

5. General information as provided by the United Kingdom authorities

Monitoring

The national mandatory limit values for the UK and Gibraltar are the mandatory values set in the Annex to the Directive 76/160/EEC. The national monitoring is based on a minimum of 20 samples taken at approximately weekly intervals throughout the bathing season. Sampling has been reduced at 7 bathing sites in Scotland. In Gibraltar, 28 samples were taken at 4 of the identified bathing waters and of the remaining 2 sites, 27 samples were taken at Little Bay and 26 at Camp Bay. The competent authorities in the UK have used the guidelines concerning sampling and sample handling, as agreed in the Bathing Water Committee. The main microbiological parameters are analysed using Membrane Filtration methods.

Information to the public

Bathing water quality information in the UK can be accessed through a wide range of sources, including the traditional poster scheme, which is operated at many UK bathing waters, and the internet, where up-to-date results of samples taken in 2008 were posted on the websites of the Environment Agency for bathing waters in England and Wales (www.environment-agency.gov.uk), the Scottish Environment Protection Agency for Scotland (www.sepa.org.uk) and in Northern Ireland, the Northern Ireland Environment Agency: (www.ni-environment.gov.uk/water/quality/bathingqualityni.htm). Monitoring information is also available to the public on registers held by the competent authorities and detailed summaries are published annually.

A proactive bathing water management system, including the use of electronic signage for real-time bathing water quality predictions and a text messaging service, has continued at several locations in Scotland in 2008.

Treatment of wastewater

The UK is continuing to invest in its water and sewerage infrastructure through a programme of improvements and investigations to maintain and enhance bathing water quality. The previous programme of improvements brought water quality benefits to over 200 identified bathing sites. This included upgrades to more than 100 continuous discharges, such as the addition of ultra-violet disinfection, and to several hundred intermittent discharges that impacted on bathing waters. In the current programme of work, for example, in the 6 months following the 2007 bathing season and prior to the 2008 season a further 9 improvements or investigations were undertaken by the water industry in England and Wales. This brings the total number of investigations and improvements of water industry assets to over 45 in the last two years alone.

In Northern Ireland, the Strategic Business Plan programme running from 2007 to 2010 has resulted in a significant infrastructure investment to ensure compliance with the bathing water standards. This included two major projects to improve wastewater discharges impacting on 7 of Northern Ireland's 24 identified bathing waters.

In Scotland, the investment programme 'Quality and Standards 3' runs from 2006-14 and takes account of infrastructure investment requirements to ensure compliance with bathing water standards.

Work is underway in England, Wales and Northern Ireland to determine the further additional investment required during 2010-15.

Treatment of sources of diffuse pollution

Tackling diffuse water pollution from agriculture is a major part of UK water quality policy and a key element of achieving the objectives of the Bathing Water Directive and Water Framework Directive. UK authorities are working with farmers and others to develop measures to reduce diffuse water pollution from agricultural and urban sources, and to provide information and advice on how to achieve this.

One such programme is the England Catchment Sensitive Farming Delivery Initiative in 50 catchments across England, which includes a number with identified bathing sites. These catchments were identified as priority areas for action to improve farm practices and reduce water pollution from agriculture. Since April 2007, the Initiative has been complemented by a limited capital grants scheme providing support for farmers investing in farm infrastructure items, such as fencing, that restrict the entry of faecal indicator organisms to water.

The UK is continuing and enhancing its implementation of the EC Nitrates Directive, which aims to reduce pollution of water by nitrates from agricultural sources. New Regulations come into force from 1 January 2009 in England, Scotland and Wales, establishing revised Nitrate Vulnerable Zones (NVZs) and a tougher Action Programme. A revised Action Programme covering the total territory of Northern Ireland and applicable to all farmers has been operational from 1 January 2007. The mandatory measures within the Action Programme control the use and management of chemical nitrogen fertiliser and organic manures on farms located within the NVZs and across Northern Ireland. Studies have shown that these measures, although specifically designed to tackle nitrate pollution, will also reduce losses of faecal indicator organisms to water.

In England, policy projects to tackle non-agricultural diffuse water pollution include: increasing the uptake of Sustainable Drainage Systems through clarifying the responsibility for ownership and maintenance of SUDS; a range of options to correct sewer misconnections, both voluntary (public awareness raising and training for plumbers) and regulatory (new powers for sewerage undertakers); proposals to introduce General Binding Rules to regulate based on best practice, covering abuse of the drainage system,

commercial washing activities, surface water control plans on construction sites and management of industrial, institutional and commercial sites.

In Scotland, a number of innovative projects have been undertaken to improve compliance at sites susceptible to diffuse pollution, including the introduction of specific farm measures and installation of farm-scale anaerobic digestion plants. The Water Environment (Diffuse Pollution) (Scotland) Regulations 2008 introduced a set of General Binding Rules designed to reduce diffuse pollution, including losses of manure and slurry. The Scotland Rural Development Programme, introduced in 2008, offers funding to land managers towards the cost of certain measures to reduce diffuse pollution.

In Northern Ireland, in support of the revised Action Programme, the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2006 came into operation, limiting the use of chemical phosphorus fertiliser to crop requirement. Agri-environment schemes providing for farm nutrient and pollution controls support agricultural methods to protect water quality. By the close of the Northern Ireland Rural Development Programme (NIRDP) 2000 – 2006 some 13,000 farmers were participants, with approximately 455,000 hectares of land under management. As with England and Scotland, there is also ongoing development of similar policy projects to tackle non-agricultural diffuse water pollution within Northern Ireland.

6. More information on bathing water quality in the European Union

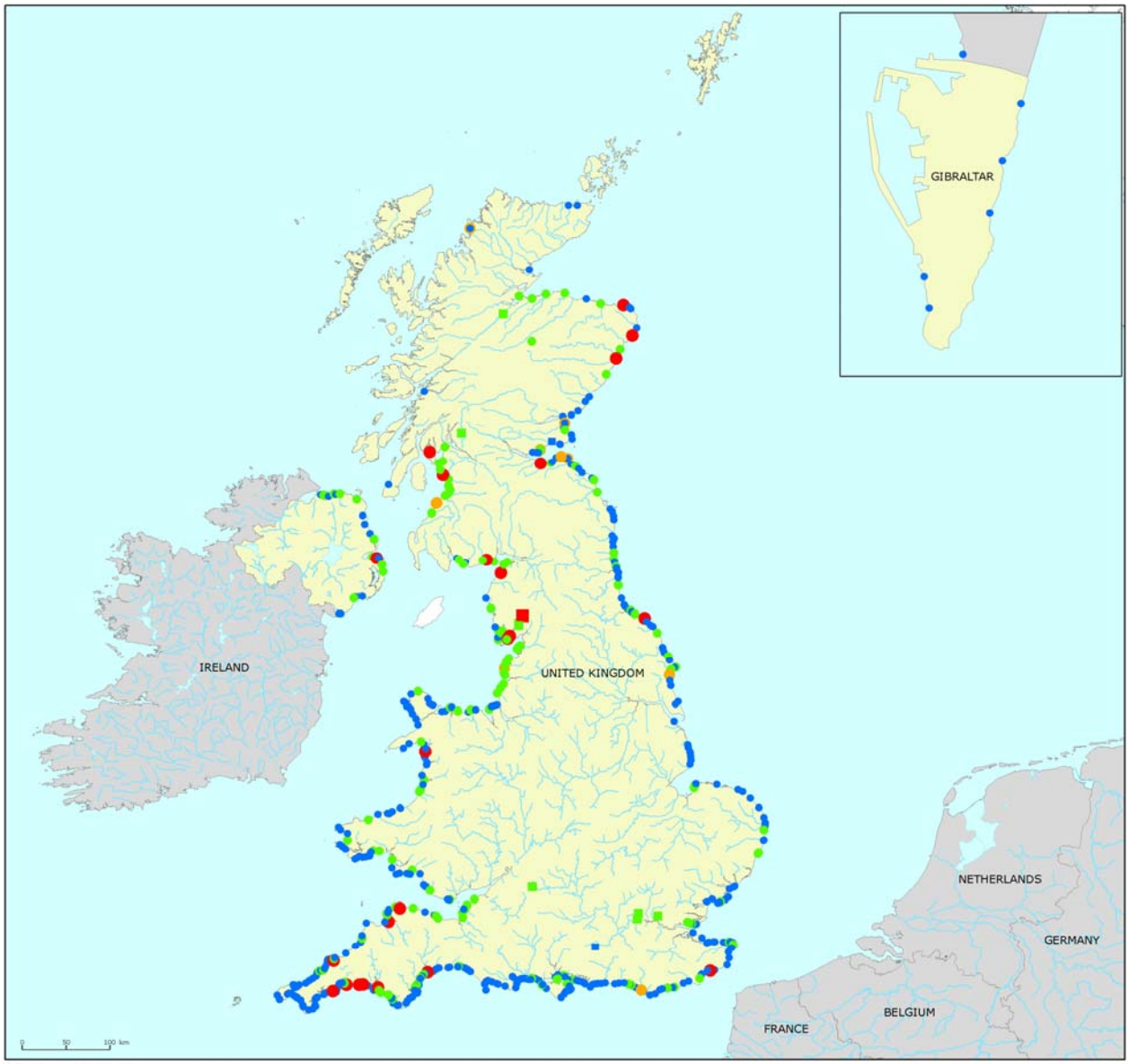
More information on bathing water quality in the European Member States, including the reports for 27 Member States and the EU summary report, can be found on the bathing water quality website (http://ec.europa.eu/environment/water/water-bathing/index_en.html).

By 2015, Member States will have to comply with the stricter and more ambitious requirements laid out in the new Bathing Water Directive (Directive 2006/7/EC). This Directive requires more effective monitoring and management of bathing waters, greater public participation and improved information. More information on the new Directive can be found on the bathing water quality website and on http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF.

Cyprus, Denmark, Estonia, Finland, Germany, Hungary, Latvia, Lithuania, Slovakia, Spain and Sweden started to report according to more stringent new requirements in 2008 bathing season, while Luxembourg already started in 2007 bathing season.

WISE - Water Information System for Europe (www.water.europa.eu) is a gateway to all water related information. Among other water related data, information on individual bathing water quality can be found in the WISE Map viewer and WISE Data viewer through interactive maps and graphs (http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water).

Map 1: Bathing waters reported during the 2008 bathing season in the United Kingdom



Bathing water quality

Bathing waters on rivers	Bathing waters on lakes	Coastal/transitional bathing waters
Compliant with guide values	Compliant with guide values	Compliant with guide values
Compliant with mandatory values	Compliant with mandatory values	Compliant with mandatory values
Closed*	Closed*	Closed*
Insufficiently sampled or not sampled	Insufficiently sampled or not sampled	Insufficiently sampled or not sampled
Not compliant with mandatory values	Not compliant with mandatory values	Not compliant with mandatory values

No data

Outside data coverage (data available, not presented on the map)

Note: * banned (temporarily closed) or closed throughout the season
More data on bathing water quality on: http://www.eea.europa.eu/themes/water/mapviewers/bathing

Source: National boundaries: GISCO
Large rivers and lakes: EEA, WFD Article 3
Bathing waters data and coordinates: U.K. authorities