

Bathing water results 2009 – The Netherlands

1. Introduction

This report gives a general overview of bathing water quality in the Netherlands during the 2009 bathing season. The Netherlands reported under the Directive 2006/7/EC.

Before the necessary data set for assessment of bathing water quality under the Directive 2006/7/EC is compiled (data for three or four consecutive years) the rules for transition period assessment is done. This means that the classification of bathing waters is defined on the basis of concentrations of intestinal enterococci and *Escherichia coli* that are reported under the Directive 2006/7/EC. The limit values for the classification are taken from the Directive 76/160/EEC. For the conversion of reported parameters under the Directive 2006/7/EC, Article 13.3 of the Directive 2006/7/EC foresees that the parameter *Escherichia coli*, reported under the Directive 2006/7/EC, is assumed to be equivalent to the parameter faecal coliforms of the Directive 76/160/EEC. The parameter intestinal enterococci reported under the Directive 2006/7/EC is assumed to be equivalent to the parameter faecal streptococci.

The results are classified in the following categories:

- Compliant with the mandatory value of the Directive 76/160/EEC for *Escherichia coli* and not compliant with the guide values of the Directive 76/160/EEC for *Escherichia coli* or intestinal enterococci (class CI);
- Compliant with the mandatory value of the Directive 76/160/EEC for *Escherichia coli* and the more stringent guide values for the *Escherichia coli* and intestinal enterococci (class CG);
- Not compliant with the mandatory value of the Directive 76/160/EEC for *Escherichia coli* (class NC);
- Banned or closed (temporarily or throughout the season) (class B).

This year the interval between two samples during the bathing season should not be larger than 41 days. The interval is longer than 31 days as defined in the Directive 2006/7/EC, since we are approaching the year 2012 only when the assessment rules will be in full compliance with the rules of this Directive. Furthermore, the first sample that should be taken shortly before the start of the bathing season could be taken even 10 days after the start of the bathing season.

2. Length of bathing season and number of bathing waters

For all bathing waters the bathing season lasted five months, from 1 May to 1 October 2009.

A total of 644 bathing waters were monitored in the Netherlands during the 2009 bathing season, of which 91 were coastal (77) or transitional bathing waters (14) and 553 freshwater bathing waters (29 on rivers; 524 on lakes).

With 644 bathing waters the Netherlands accounts for about 3% 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 and the Directive 2006/7/EC is presented in Table 1. The number of coastal bathing waters increased significantly since the start of the reporting from 26 in 1990 to 91 in 2009. The number of freshwater bathing waters started with 459 in 1990 and increased afterwards. It fluctuated around 550 bathing waters since 2000 (550-558 bathing waters). There were five more coastal and three less freshwater bathing waters in 2009 than in the previous year. In total, 18 new bathing waters were added to the list compared to the previous year and 16 were de-listed.

Three new bathing waters were opened and five bathing waters were de-listed after the list of bathing waters was reported before the start of the 2009 bathing season. In addition, one new bathing water in the mentioned list of bathing waters was de-listed already in the 2009 bathing season.

3. Results of bathing water quality

The results of the bathing water quality in the Netherlands for the period 1990-2008 as reported in the past reporting years and for the bathing season of 2009 are presented in Figure 1. The previous reports are available on the European Commission's bathing water quality website (http://ec.europa.eu/environment/water/water-bathing/index_en.html; Water and Health/Bathing Water/2005-2009 reports) and the European Environment Agency's bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>; reports for 2008 bathing season).

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

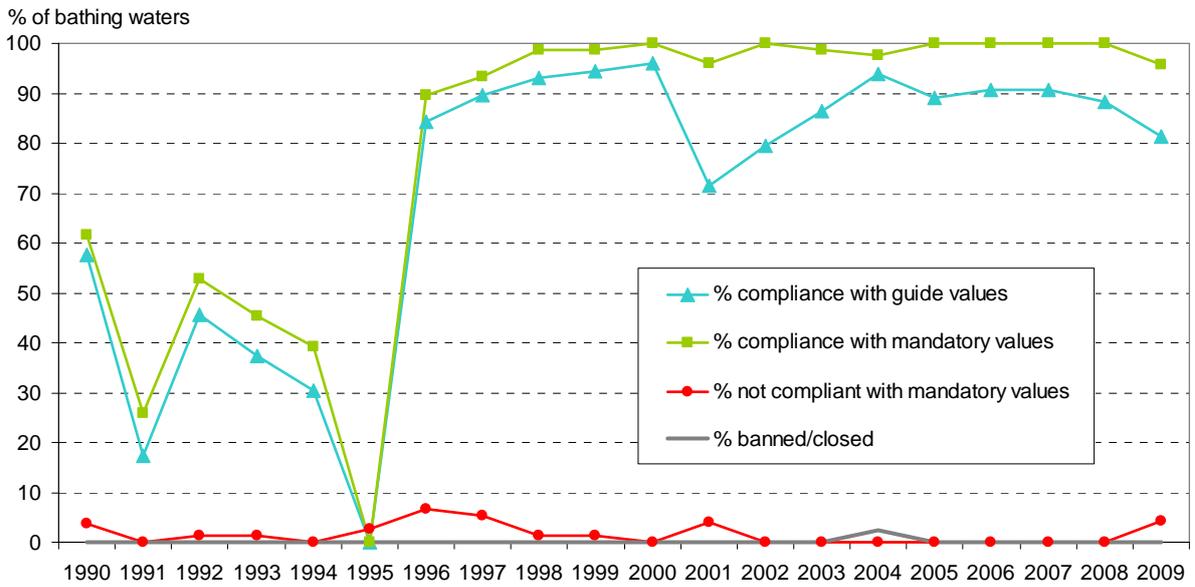
- The percentage of bathing waters that comply with the guide values (class CG, blue line);
- The percentage of bathing waters that comply with the mandatory values (class CI, green line);
- The percentage of bathing waters that do not comply with the mandatory values (class NC, red line);
- The percentage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

Table 1 shows the same information in absolute numbers and in percentages separately for coastal and freshwater bathing waters. Table 2 shows the bathing water quality results for 2009 season in the Netherlands for all bathing waters.

Map 1 shows the location of the reported bathing waters in the Netherlands. The location of the bathing waters is based on the geographic coordinates reported by the Dutch authorities.

Figure 1: Results of bathing water quality in the Netherlands from 1990 to 2009

Coastal bathing waters (NL)



Freshwater bathing waters (NL)

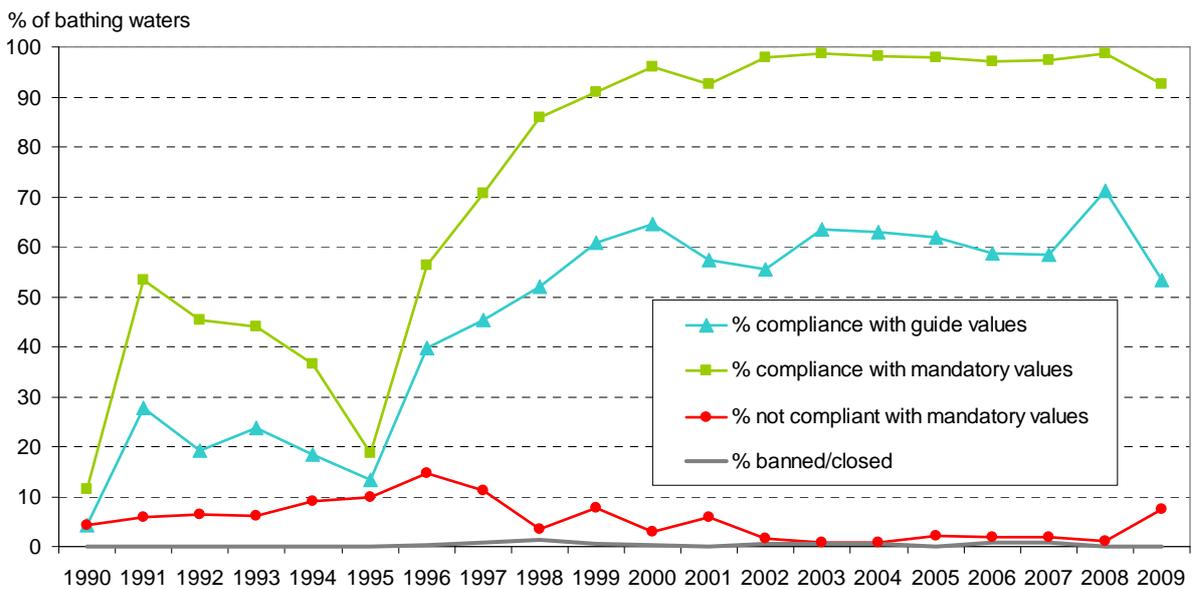


Table 1: Results of bathing water quality in the Netherlands from 1990 to 2009

NL										
		Total number of bathing waters	Compliance with guide values		Compliance with mandatory values		Not compliant		Banned/closed temporarily or throughout the season	
			Number	%	Number	%	Number	%	Number	%
Coastal bathing waters	1990	26	15	57.7	16	61.5	1	3.8	0	0.0
	1991	58	10	17.2	15	25.9	0	0.0	0	0.0
	1992	70	32	45.7	37	52.9	1	1.4	0	0.0
	1993	75	28	37.3	34	45.3	1	1.3	0	0.0
	1994	79	24	30.4	31	39.2	0	0.0	0	0.0
	1995	72	0	0.0	0	0.0	2	2.8	0	0.0
	1996	76	64	84.2	68	89.5	5	6.6	0	0.0
	1997	76	68	89.5	71	93.4	4	5.3	0	0.0
	1998	72	67	93.1	71	98.6	1	1.4	0	0.0
	1999	72	68	94.4	71	98.6	1	1.4	0	0.0
	2000	77	74	96.1	77	100.0	0	0.0	0	0.0
	2001	77	55	71.4	74	96.1	3	3.9	0	0.0
	2002	78	62	79.5	78	100.0	0	0.0	0	0.0
	2003	81	70	86.4	80	98.8	0	0.0	0	0.0
	2004	82	77	93.9	80	97.6	0	0.0	2	2.4
	2005	82	73	89.0	82	100.0	0	0.0	0	0.0
	2006	86	78	90.7	86	100.0	0	0.0	0	0.0
	2007	86	78	90.7	86	100.0	0	0.0	0	0.0
	2008	86	76	88.4	86	100.0	0	0.0	0	0.0
2009	91	74	81.3	87	95.6	4	4.4	0	0.0	
Freshwater bathing waters	1990	459	20	4.4	53	11.5	20	4.4	0	0.0
	1991	571	159	27.8	305	53.4	34	6.0	0	0.0
	1992	545	105	19.3	247	45.3	35	6.4	0	0.0
	1993	491	117	23.8	216	44.0	30	6.1	0	0.0
	1994	511	94	18.4	187	36.6	46	9.0	0	0.0
	1995	522	69	13.2	98	18.8	51	9.8	0	0.0
	1996	516	205	39.7	291	56.4	75	14.5	1	0.2
	1997	511	231	45.2	361	70.6	57	11.2	4	0.8
	1998	528	275	52.1	453	85.8	19	3.6	7	1.3
	1999	534	324	60.7	485	90.8	42	7.9	3	0.6
	2000	558	360	64.5	536	96.1	16	2.9	2	0.4
	2001	554	317	57.2	513	92.6	32	5.8	0	0.0
	2002	556	308	55.4	544	97.8	9	1.6	3	0.5
	2003	558	354	63.4	550	98.6	5	0.9	3	0.5
	2004	550	346	62.9	540	98.2	5	0.9	3	0.5
	2005	550	340	61.8	538	97.8	12	2.2	0	0.0
	2006	553	324	58.6	537	97.1	10	1.8	4	0.7
2007	555	324	58.4	540	97.3	10	1.8	4	0.7	
2008	556	396	71.2	548	98.6	6	1.1	0	0.0	
2009	553	295	53.3	511	92.4	42	7.6	0	0.0	

Note: Bathing waters which were insufficiently sampled or not sampled according to the Bathing Water Directive or the New 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. Bathing waters which were compliant with the guide values were also compliant with the mandatory values for five parameters under the Directive 76/160/EEC (1990-2008) or the mandatory value for *Escherichia coli* (2009).

Table 2: Results of bathing water quality for all bathing waters in the Netherlands in 2009

NL										
		Total number of bathing waters	Compliance with guide values		Compliance with mandatory value for <i>Escherichia coli</i>		Not compliant		Banned/closed temporarily or throughout the season	
			Number	%	Number	%	Number	%	Number	%
Bathing waters	2009	644	369	57.3	598	92.9	46	7.1	0	0.0

Note: Bathing waters which were compliant with the guide values were also compliant with the mandatory value for *Escherichia coli*.

4. Development of bathing water quality

Coastal bathing waters

In the Netherlands, 95.6% of coastal bathing waters met the mandatory water quality in 2009 compared to 100% in the previous year. The rate of compliance with the guide values was 81.3%, which is a decrease of 7.1%. Four bathing waters (4.4%) were non-compliant with the mandatory value for *Escherichia coli*. No coastal bathing water had to be closed during the season.

In the early 90's the compliance rate in coastal bathing waters was low (from 26% to 61% compliance rate with mandatory values). The dip in 1995 can be explained by the large number of bathing waters that were insufficiently sampled. Compliance with both the mandatory values and the more stringent guide values improved from 1996 onwards. The rate of compliance with the mandatory values was above 98% since 1998 (100% compliance in six years) with a dip in 2001, 2004 and 2009. The rate of compliance with the guide values was above 85% since 1997 with a dip in 2001, 2002 and 2009. Since the start of the reporting in 1990, no coastal bathing water had to be closed during the season, except for two bathing waters (2.4%) in 2004.

Freshwater bathing waters

92.4% of the freshwater bathing waters met the mandatory water quality in 2009. This is a decrease of 6.2% compared to the previous year. The rate of compliance with the guide values decreased from 71.2% to 53.3%. The number of non-compliant bathing waters with the mandatory value for *Escherichia coli* increased significantly from six (1.1%) to 42 bathing waters (7.6%). No freshwater bathing water had to be closed during the season.

Similarly as for the coastal bathing waters, the compliance rate was low for the freshwater bathing waters in the early 90's (from 11% to 53% compliance rate with mandatory values). From 1996 onward there is an overall increase in the compliance rate, although it took the Netherlands till the 2002 bathing season to reach a constant level of non-compliant freshwater bathing waters below 5%, except in 2009 (7.6%). The mandatory water quality was met in over 90% of the bathing waters since 1999 and since 2002 in over 97% of the bathing waters, except in 2009 (92.4%). The bathing waters compliant with the more stringent guide values were fluctuating around 60% of the bathing waters from 1999 to 2007. After reaching just above 70% of the bathing waters in 2008, the rate of compliance with the guide values decreased below 60% in 2009 (53.3%). Since 1996, one to seven bathing waters (<1.5%) had to be closed during the season, except in 2001, 2005, 2008 and 2009 season (0%).

5. General information as provided by the Dutch authorities

De-listing of bathing waters

A total of 17 freshwater bathing waters (16 on lakes; one on river) were de-listed in 2009 bathing season due to various reasons.

De Welle (NLBW02_9039): the bathing site is no longer used by bathers.

Breuly Zevenaar (NLBW07_bly01): the bathing site is closed, all arrangements are removed.

Kwartier (NLBW07_kwt01), Borgmeren Oost, Scharmer (NLBW33_5401): the bathing sites are closed and inaccessible to the public, all arrangements are removed.

Camping De Maasvallei B.V. Arcen (NLBW57_OCPMAA10), Gran Dorado Weerterbergen Weert (NLBW57_OGRAND10): the bathing sites are closed, the signs prohibit bathing.

Ter Spegelt Overdekte Plas (NLBW27_245546): the bathing site was unsafe and therefore closed.

Rooyse Plas (NLBW28_145555), De Kuilen (NLBW28_345570), Plas Aan De Radioweg, Noordwestelijke Badzone (NLBW28_345576): current measurement was representative, but it moved to more representative measurement point.

Jachthaven De Vrijbuitter (NLBW11_MBP059): bathing was not safe at this newly identified bathing site due to its location in a marine, all facilities are removed.

Natuurbad Helsdingen (NLBW09_VOP0402): the lake is the nature conservation site. The site will be arranged to allow developing of the natural values in and around the lake. Near the lake, a multipurpose center is built as an amendment.

Ouwerkerksekkreek (NLBW18_MPN1137), Schelphoek, Serooskerke (NLBW18_MPN1143), Otheense Kreek Nabij Reuzenhoeksedijk (NLBW23_O7076R), Otheense Kreek, Jachthaven (NLBW23_O7075R): the sites are no longer used by bathers. A process of public participation has shown that people no longer attach importance to these bathing sites due to more popular bathing sites in the vicinity.

Spui, Bij Oud-Beijerland (NLBW94_OUDBELBSD): the bathing site was no longer safe for bathers due to many shipping.

Information to the public

Procedures for providing the public with information vary from one province to another. In general, material can be obtained from tourist offices and the provincial authorities. In addition, the latest information about areas where bathing is prohibited or where there are certain risks (botulism, blue-green algae, etc.) can be found on teletext (p. 725) or the Internet (www.waterland.net/zwemwater). Information about bathing water quality is available locally in the most popular bathing areas.

Water quality improvement

Considerable effort has been made to reduce pollution from storm water overflows nearby bathing areas. Many discharges due to overflows have either been sanitised or the discharge point has been displaced to surface waters where there is no risk for bathing water quality.

Significant management measures for four bathing waters were reported by the Dutch authorities. The water quality has improved by removal of gabions, sediment excavation and combating/avoiding of cyanobacteria. The information for each bathing waters can be obtained from the report of bathing water quality for the 2009 bathing season, table BWQD_2006_SeasonalInfo, attribute ManMeas (in Dutch) (http://cdr.eionet.europa.eu/nl/eu/bathing/envszhfg/NL_bathing_water_2009.xls).

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

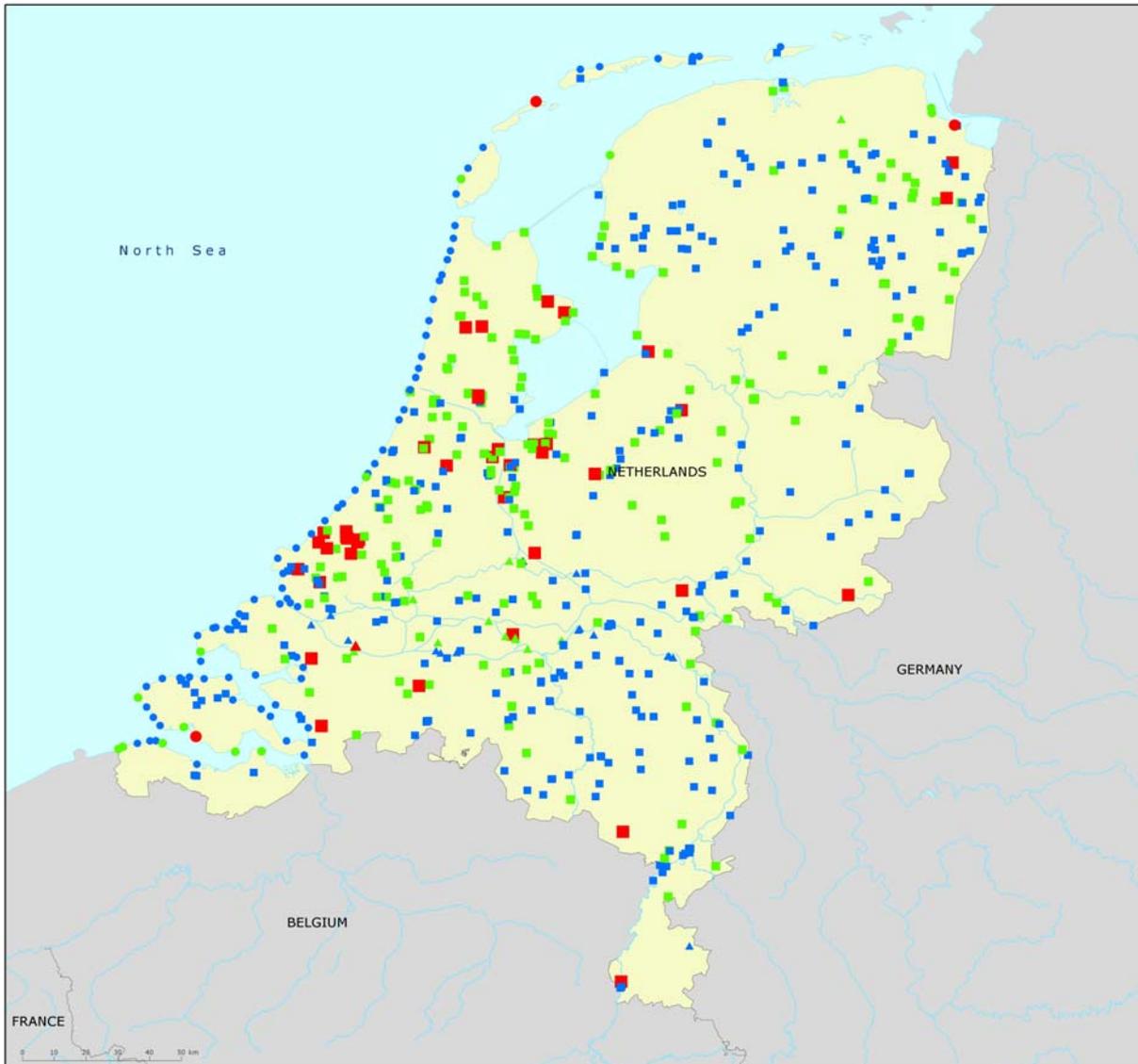
More information on bathing water quality in the European Member States, including the EU summary report, the reports for 27 Member States, Croatia and Switzerland, can be found on the European Commission's bathing water quality website (http://ec.europa.eu/environment/water/water-bathing/index_en.html) and the European Environment Agency's bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>). The reports for the bathing seasons of 2008 and 2009 have been produced by the Institute for Water of the Republic of Slovenia (IWRIS), a partner in the EEA European Topic Centre on Water (ETC/W). Countries have collaborated in the assessment of bathing water quality and supplied additional information when needed.

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. Malta and the Netherlands started to report in 2009 bathing season under the new requirements. Sweden and Malta also sent data for three previous bathing seasons under the new requirements. Luxembourg started to monitor under the new requirements in 2006 bathing season, while reported for the first time 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 Bathing Water Quality 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 2009 bathing season in the Netherlands



Bathing water quality			No data
Bathing waters on rivers	Bathing waters on lakes	Coastal/transitional bathing waters	Outside data coverage (data available, not presented on the map)
▲ Compliant with guide values	■ Compliant with guide values	● Compliant with guide values	□ No data
▲ Compliant with mandatory values	■ Compliant with mandatory values	● Compliant with mandatory values	■ Outside data coverage (data available, not presented on the map)
▲ 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	

Note: * banned or closed (temporarily or 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: Dutch authorities