

Bathing water results 2009 – Spain

1. Introduction

This report gives a general overview of bathing water quality in Spain during the 2009 bathing season. Spain reported under the Directive 2006/7/EC in 2008 and 2009 bathing season.

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

The bathing season varies by locations. In the Canarias, it lasted four months, from 1 June to 30 September or nine months, from 1 March to 30 November 2009. Most bathing waters were opened nine months. In the Baleares, it lasted 5.5 months, from 1 May to 16 October 2009. The Canarias and the Baleares have no freshwater bathing waters. In mainland Spain, it started from 15 May to 15 June 2009 for coastal bathing waters, except for seven bathing waters opened on 1 July. Most of these bathing waters opened in June. It closed from 15 to 30 September 2009. In mainland Spain, it opened from 1 June to 13 July 2009 for freshwater bathing waters, except for seven bathing waters opened on 15 May. It closed from 30 August to 30 September 2009. Most of these bathing waters opened in June and closed in September.

A total of 2 117 bathing waters were reported in Spain during the 2009 bathing season, of which 1 910 were coastal and 207 freshwater bathing waters (116 on rivers; 91 on lakes). 16 coastal bathing waters and three freshwater bathing waters were insufficiently sampled. 13 coastal bathing waters are situated in regions subject to special geographical constraints.

With 2 117 bathing waters Spain accounts for about 9.8% 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 and the Directive 2006/7/EC is presented in Table 1. There is a significant increase in number of coastal bathing waters since the start of the reporting from 1 189 in

1990 to 1 910 in 2009. There were 11 more coastal bathing waters in 2009 than in the previous year: 16 new bathing waters were added to the list and four were de-listed. The number of freshwater bathing waters decreased from 217 in 1990 to 165 in 2005. It increased afterwards to 207 in 2009. However, the total number of reported freshwater bathing waters in 2009 was still lower than the numbers reported in the period 1990-1999. There were 21 more freshwater bathing waters in 2009 than in the previous year: 25 new bathing waters were added to the list and four were de-listed. In addition, three coastal bathing waters and one freshwater bathing water were re-opened in 2009 after a closure in 2008.

3. Results of bathing water quality

The results of the bathing water quality in Spain 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:

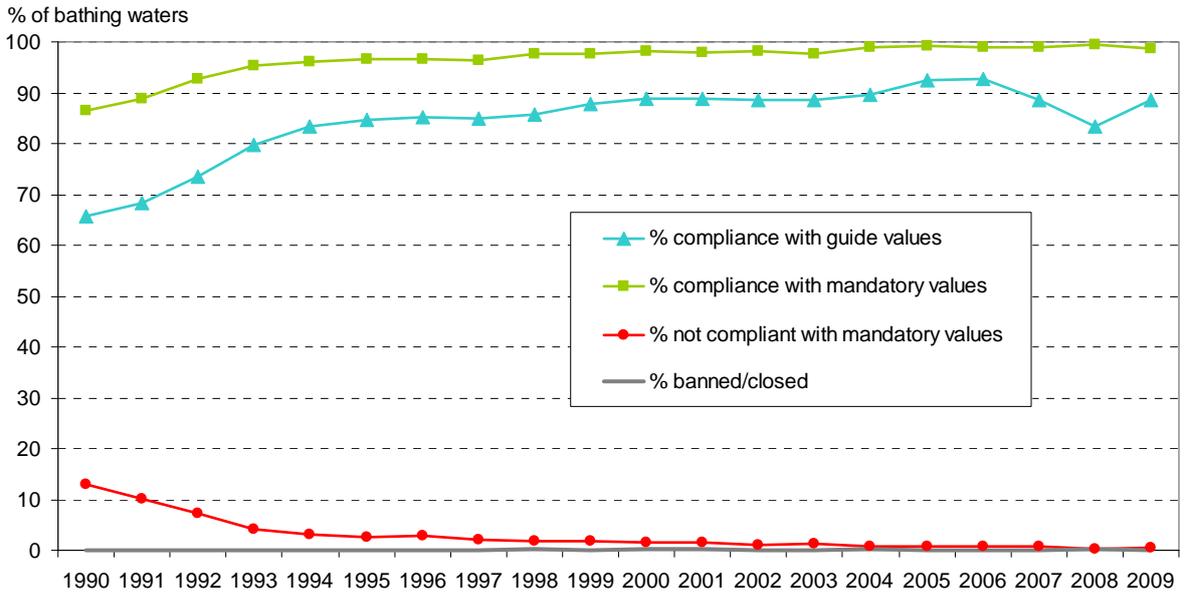
- The percentage of bathing waters that comply with the guide values (class CG, blue line);
- The percentage of bathing waters that comply with the mandatory values (class CI, green line);
- The percentage of bathing waters that do not comply with the mandatory values (class NC, red line);
- The percentage 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 Spain for all bathing waters.

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

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

Coastal bathing waters (ES)



Freshwater bathing waters (ES)

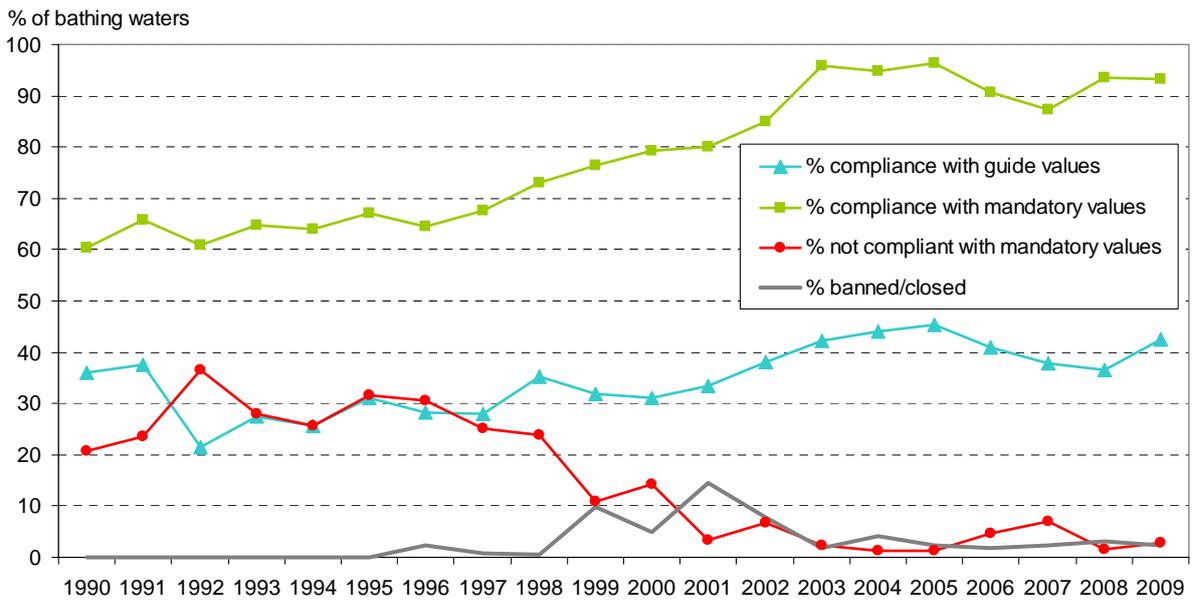


Table 1: Results of bathing water quality in Spain from 1990 to 2009

ES										
		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	1189	782	65.8	1028	86.5	155	13.0	0	0.0
	1991	1302	889	68.3	1157	88.9	132	10.1	0	0.0
	1992	1334	979	73.4	1238	92.8	96	7.2	0	0.0
	1993	1404	1120	79.8	1340	95.4	58	4.1	0	0.0
	1994	1489	1242	83.4	1431	96.1	47	3.2	0	0.0
	1995	1517	1284	84.6	1465	96.6	41	2.7	0	0.0
	1996	1571	1340	85.3	1516	96.5	46	2.9	0	0.0
	1997	1587	1349	85.0	1531	96.5	33	2.1	0	0.0
	1998	1596	1366	85.6	1558	97.6	30	1.9	4	0.3
	1999	1623	1424	87.7	1587	97.8	31	1.9	2	0.1
	2000	1634	1451	88.8	1603	98.1	24	1.5	3	0.2
	2001	1638	1453	88.7	1605	98.0	26	1.6	4	0.2
	2002	1773	1571	88.6	1743	98.3	20	1.1	1	0.1
	2003	1779	1576	88.6	1737	97.6	21	1.2	1	0.1
	2004	1826	1634	89.5	1806	98.9	14	0.8	4	0.2
	2005	1824	1685	92.4	1808	99.1	14	0.8	1	0.1
	2006	1863	1727	92.7	1843	98.9	13	0.7	0	0.0
	2007	1901	1686	88.7	1883	99.1	17	0.9	1	0.1
	2008	1899	1584	83.4	1887	99.4	4	0.2	4	0.2
2009	1910	1691	88.5	1883	98.6	9	0.5	2	0.1	
Freshwater bathing waters	1990	217	78	35.9	131	60.4	45	20.7	0	0.0
	1991	271	102	37.6	178	65.7	64	23.6	0	0.0
	1992	301	65	21.6	183	60.8	110	36.5	0	0.0
	1993	312	86	27.6	202	64.7	87	27.9	0	0.0
	1994	346	89	25.7	221	63.9	89	25.7	0	0.0
	1995	222	69	31.1	149	67.1	70	31.5	0	0.0
	1996	302	85	28.1	195	64.6	92	30.5	7	2.3
	1997	251	70	27.9	170	67.7	63	25.1	2	0.8
	1998	215	76	35.3	157	73.0	51	23.7	1	0.5
	1999	213	68	31.9	163	76.5	23	10.8	21	9.9
	2000	202	63	31.2	160	79.2	29	14.4	10	5.0
	2001	185	62	33.5	148	80.0	6	3.2	27	14.6
	2002	181	69	38.1	154	85.1	12	6.6	14	7.7
	2003	171	72	42.1	164	95.9	4	2.3	3	1.8
	2004	170	75	44.1	161	94.7	2	1.2	7	4.1
	2005	165	75	45.5	159	96.4	2	1.2	4	2.4
	2006	171	70	40.9	155	90.6	8	4.7	3	1.8
2007	174	66	37.9	152	87.4	12	6.9	4	2.3	
2008	186	68	36.6	174	93.5	3	1.6	6	3.2	
2009	207	88	42.5	193	93.2	6	2.9	5	2.4	

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 (1990-2007) or the mandatory value for *Escherichia coli* (2008, 2009).

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

ES										
	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	2117	1779	84.0	2076	98.1	15	0.7	7	0.3

Note: Bathing waters which were insufficiently sampled according to the New 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. 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 Spain, 98.6% of the coastal bathing waters met the mandatory water quality in 2009. This is a slight decrease of 0.8% compared to the previous year. The rate of compliance with the guide values was 88.5%, which is an increase of 5.1%. The number of non-compliant bathing waters with the mandatory value for *Escherichia coli* increased from four (0.2%) to nine (0.5%). Two coastal bathing waters (0.1%) were closed during the season compared to four (0.2%) in 2008.

Since 1990, bathing water quality improved in the Spanish coastal bathing waters. Since 2004, around 99% of the bathing waters met the mandatory water quality, which is a very good result. The compliance with the guide values reached above 90% in 2005 and 2006. Since 1998, less than 0.5% of the bathing waters were closed during the season, except for the 2006 season with no closed bathing water.

Freshwater bathing waters

93.2% of the freshwater bathing waters met the mandatory water quality in 2009. This is approximately the same as in the previous year (- 0.3%). 42.5% of the bathing waters met the more stringent guide values, which is an increase of 5.9%. The number of non-compliant bathing waters with the mandatory value for *Escherichia coli* increased from three (1.6%) to six bathing waters (2.9%). Five bathing waters (2.4%) have to be closed during the season compared to six (3.2%) in 2008.

From 1990 onward there is an overall increase in the bathing water quality. The compliance with the mandatory values decreased in 2006 and 2007. This can be explained by the increasing number of freshwater bathing waters that did not comply with mandatory values. However, the compliance rate increased again since 2008, almost reaching the level of around 95% as in 2003, 2004 and 2005. The percentage of bathing waters compliant with the more stringent guide values is fluctuating around 40% since 2002. Since 1996, the number of freshwater bathing waters that were closed during the season fluctuated between one (0.5%) in 1998 and 27 (14.6%) in 2001.

5. General information as provided by the Spanish authorities

De-listing and closing of bathing waters

In 2009, four coastal and four freshwater bathing waters were reported as de-listed.

Three coastal bathing waters (Playa Zahara De Los Atunes PM2 (ES612M0071356), Playa Mazagon/Castilla PM3 (ES615M0501488), Playa Mazagon/Castilla PM4 (ES615M0501489)) were de-listed due to structural changes in the sampling.

One coastal bathing water (Playa Dels Prats PM1 (ES514M171847) and four freshwater bathing waters (Rio Alcazar Alcaucin PM1 (ES617C0022064), Rio Genal Gaucin PM1 (ES617C0562069), Lago Montemayor Navarrés PM1 (ES523C1792042), Embalse Zujar Castuera PM1

(ES431C0362018)) were de-listed due to change of circumstances for which they were designated as bathing waters.

Seven bathing waters were closed during the 2009 bathing season. They were not monitored. Two of them were coastal bathing waters (Playa Lourido - Sada PM1, Playa Bocabarranco PM1) and five of them were freshwater bathing waters (Embalse La Viñuela Viñuela PM2, Rio Jucar Cuenca 02 PM1, Rio Jucar Cuenca 03 PM1, Rio Maitena Güejar Sierra PM1, Rio Genil Güejar Sierra PM1). They were closed due to various reasons.

Playa Lourido - Sada PM1 (ES111M075221) was closed because of objective security risks on the access to the bathing water (abrupt way, rockfalls and other geographical limitations).

Playa Bocabarranco PM1 (ES701M0091707) was closed because of health reasons related to quality of water, due to a waste in one margin of the bathing water from a wastewater treatment plant and a desalinization plant, until a proper outfall is constructed.

Embalse La Viñuela Viñuela PM2 (ES617C0992071) was closed because of no swimmers affluence, access difficulties because of rainfall this season and works on access road.

Rio Jucar Cuenca 02 PM1 (ES423C0782106) and Rio Jucar Cuenca 03 PM1 (ES423C0782107) were closed because of security reasons related to water drops from reservoirs upstream. River basin agency authorisation is required.

Rio Maitena Güejar Sierra PM1 (ES614C0942049) and Rio Genil Güejar Sierra PM1 (ES614C0942050) were closed because of health reasons related to quality of water.

Information to the public

In Spain, during the implementation of new legislation and as a tool for managing the quality of bathing waters and to facilitate the collection of information, the Ministry of Health has developed a national information system of bathing waters called "Nayade" <http://nayade.msc.es> supported by a web application, which was launched in January 2008 to be used by the competent authorities during the 2008 season and subsequent. The data have been provided by the regional authorities responsible for monitoring the quality of bathing water in its territory, solely through the information system "Nayade".

Development of the basic and complementary legislation on water

The legislative action taken to reduce emissions of contaminants to the aquatic environment and thereby to help to improve the quality of bathing water has involved major amendments to the Water Act and the Regulation on Public Water Resources, which constitute the basic legislation on water, and the drafting of complementary legislation on the control and management of waste water discharges to the aquatic environment.

"Action plan" for zero tolerance on waste water discharges

In April 2005 the Environment Ministry launched an "Action plan" for waste water discharges. This consists of providing the Water Boards with the appropriate human, material and technical resources and setting priorities according to the volume of discharges and the danger they pose so that the action to be taken is as effective as possible and quickly benefits the receiving environment. These measures also make it possible to review discharge permits more quickly with a view to bringing them into line with the current legislation.

Initially, a budget of €2,752,704.89 was set aside for the "Action plan", and the work was planned to be carried out over a period of 12 months. Subsequently, this period was extended to 24 months and the budget was increased to €3,327,806.97. In addition, a scheme has been launched for the inspection of all urban waste water discharges in every catchment area, with a budget of approximately €1.5 million per annum.

National water quality plan: Waste-water disposal and treatment 2007-2015

In cooperation with the Autonomous Communities, the Environment Ministry has drawn up the National water quality plan: waste-water disposal and treatment 2007-2015.

With this plan it will be possible to achieve a good status, in compliance with the requirements of the Water Framework Directive and the Environment Ministry's Programme for the management and use of water (Programa A.G.U.A.).

The National water quality plan forms part of a series of measures aimed at full compliance with Directive 91/271/EEC and is intended to contribute to achieving the objective of good status by 2015 as provided for in the Water Framework Directive. The total budget estimation for the National water quality plan 2007-2015 is €19 007 million.

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 (IWRs), 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 Spain

