

Bathing water results 2012 – Portugal

1. Reporting and assessment

In 2012 the Portuguese authorities reported under Directive 2006/7/EC provisions a list of their bathing waters, start and end of bathing season for each bathing water, short term pollution events, events impacting bathing water quality and measured values of concentrations of two microbiological parameters — intestinal enterococci and *Escherichia coli* (also known as *E. coli*). This report gives a general overview of bathing water quality in Portugal for the 2012 bathing season. Portugal has reported under the Directive 2006/7/EC since 2010. In 2010 Portugal sent historical data with two parameters of this Directive for some bathing waters for the years 2007-2009, while in 2011 historical data was sent for all bathing waters for 2008-2009.

When four consecutive years of samples of intestinal enterococci and *Escherichia coli* for bathing water are available, the assessment is done according to assessment rules of the new bathing water Directive 2006/7/EC. The Annex IV of the directive requires a sample to be taken shortly before the start of the bathing season. Sampling dates are to be distributed throughout the bathing season, with the interval between sampling dates never exceeding one month. Taking into account one pre-season sample, no fewer than four samples are to be taken and analysed per bathing season. Three samples need to be taken and analysed per bathing season in the case of bathing water with either bathing season not exceeding eight weeks or being situated in a region subject to special geographical constraints. The result of such monitoring is used to build up the sets of bathing water quality data. The number of samples for the assessment period should thus be at least 16 or 12 if season duration is less than eight weeks or the region is subject to special geographical constraints.

Bathing water quality in 2012 season in Portugal is assessed under the rules of the new bathing water Directive 2006/7/EC. The new Directive assessment provisions are transformed into the following technical rules: a) one pre-season sample should be available, b) the interval between sampling dates in 2012 should never exceed 35 days, provided that the next sampling is done according to the monitoring calendar; c) the yearly number of samples in the previous years should be four or three if bathing season does not exceed eight weeks.

Bathing waters quality classes according to the Directive 2006/7/EC are 'excellent', 'good', 'sufficient' and 'poor'. Bathing waters are classified on the basis of the percentile values for microbiological enumerations falling in the certain class given in Annex I of the Directive. Some bathing waters cannot be classified according to their quality but are instead classified as 'insufficiently sampled', 'new', 'changes' and 'closed'.

The bathing water is classified as 'insufficiently sampled' in 2012 if pre-season sample is missing, sampling frequency is not satisfied or the set of data is not complete. If the bathing water is newly identified and the data set is not complete yet, it is classified as 'new'. If changes occur that affect quality and the data set is not complete yet, it is classified as 'changes'. Temporarily closed bathing waters or closed bathing waters throughout 2012 season are classified if there is a complete set of data available. Otherwise, they are classified as 'closed'.

2. Length of bathing season and number of bathing waters

The bathing season started between 1 May and 1 July 2012 and ended between 31 August and 21 October 2012 for coastal bathing waters. Inland bathing waters opened between 12 May and 1 July 2012 and closed between 30 August and 30 September 2012. This includes the Azores and Madeira.

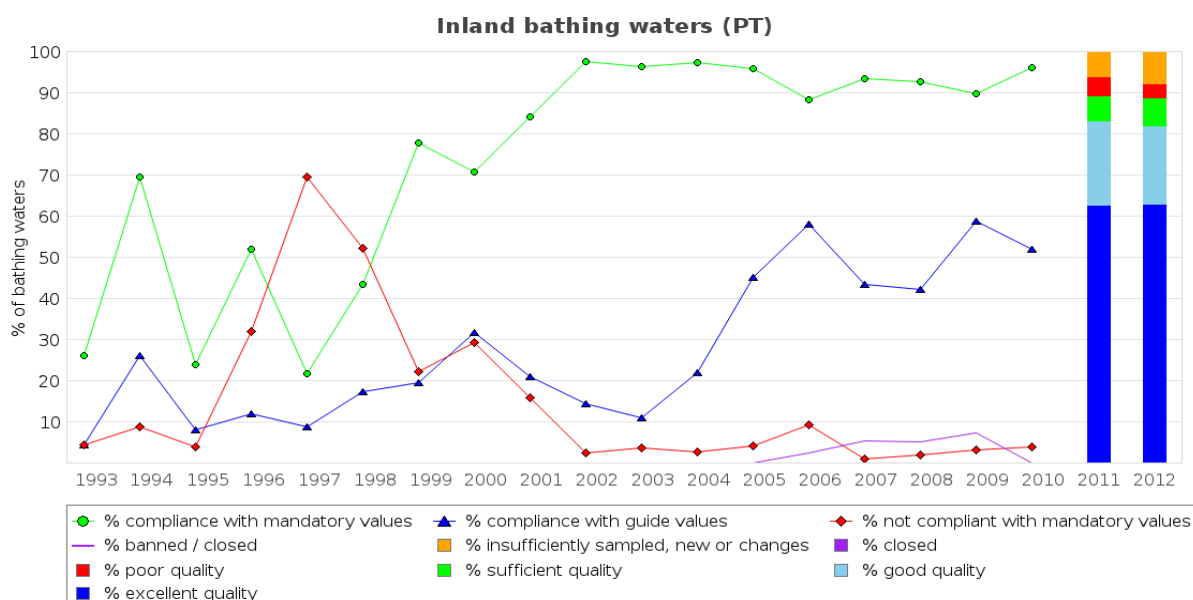
A total of 526 bathing waters were monitored in Portugal during the 2012 bathing season, of which 437 were coastal (421) or transitional bathing waters (16) and 89 were inland bathing waters (67 on rivers; 22 on lakes). No coastal and no inland bathing waters were reported as de-listed (permanently closed) compared to the previous year. Five coastal and six inland bathing waters were added to the list.

With 526 reported bathing waters Portugal accounts for about 2.5 % of the reported bathing waters of the European Union.

3. Bathing water quality

The results of the bathing water quality in Portugal for the period 1991-2012 are presented in Figure 1¹. 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) and the European Environment Agency's bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>).

Figure 1: Results of bathing water quality in Portugal from 1991 to 2012.

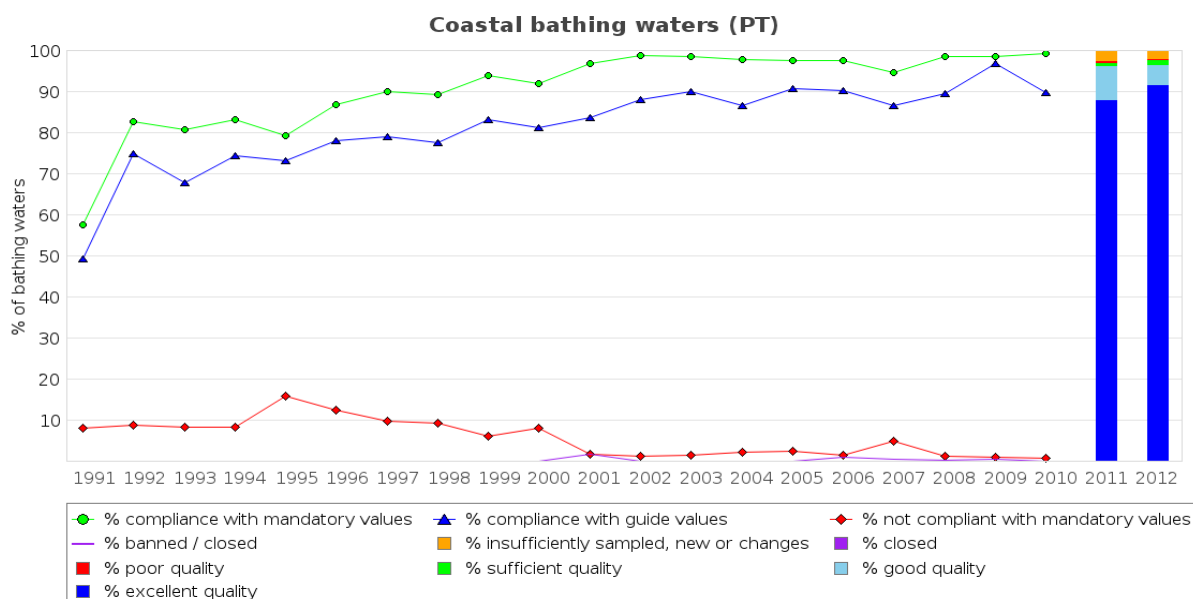


¹ The graphs show the classification under the Directive 76/160/EEC and during transition period, for coastal and inland bathing waters from 1991 to 2010:

- 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 (class B, violet line).

The same graphs show the classification under the Directive 2006/7/EC, for coastal and inland bathing waters for 2011 and 2012:

- The percentage of bathing waters that have excellent quality (dark blue bar);
- The percentage of bathing waters that have good quality (light blue bar);
- The percentage of bathing waters that have sufficient quality (green bar);
- The percentage of bathing waters that have poor quality (red bar);
- The percentage of bathing waters that are closed (violet bar);
- The percentage of bathing waters that are insufficiently sampled, new or with changes (orange bar).



Note: Data until 2008 is available in the previous reports at http://ec.europa.eu/environment/water/water-bathing/index_en.html.

Table 1 and Table 2 show results of bathing water quality for coastal, inland and all bathing waters from 2008 on as assessed in the previous annual reports and under the Directive 2006/7/EC for the 2012 season. A map given in Appendix 1 shows the location and quality of the bathing waters.

Coastal bathing waters

In Portugal, 91.8 % of coastal bathing waters had excellent quality in 2012. This is an increase of 3.6 % compared to the previous year. A total of 21 bathing waters (4.8 %) had good quality and five bathing waters (1.1 %) had sufficient quality compared to 35 (8.1 %) bathing waters with good quality and 3 with sufficient quality in 2011. This means that a share of bathing waters with at least sufficient quality in 2012 has not changed from 2011 though there are more bathing waters monitored. One bathing water (0.2 %) had poor quality and no bathing waters were classified as closed during the season. In 2011 there were two (0.5 %) poor bathing waters and none were closed. This is an overall improvement in comparison with bathing season 2012.

Inland bathing waters

In 2012, 62.9 % of inland bathing waters were of excellent quality. This is an increase of 0.2 % compared to the previous year. A total of 17 bathing waters (19.1 %) were of good quality and seven bathing waters (9.9 %) were of sufficient quality compared to 17 (20.5 %) and five (6.0 %) in 2011 respectively. Three bathing waters had poor quality (3.4 %) and no bathing waters were classified as closed. In 2011 there were four poor bathing waters (4.8 %) and no closed. This is an overall improvement in comparison with bathing season 2012.

Table 1: Results of bathing water quality in Portugal. Assessment during transition period.

PT												
		Total number of bathing waters	Compliance with guide and mandatory values*		Compliance with mandatory value		Not compliant		Banned/closed		Insufficiently sampled or not sampled	
			number	%	number	%	number	%	number	%	number	%
Coastal bathing waters	2008	436	390	89.4	430	98.6	5	1.1	1	0.2	0	0.0
	2009	443	429	96.8	437	98.6	4	0.9	2	0.5	0	0.0
	2010	417	374	89.7	414	99.3	3	0.7	0	0.0	0	0.0
	2011											
	2012											
Inland bathing waters	2008	97	41	42.3	90	92.8	2	2.1	5	5.2	0	0.0
	2009	97	57	58.8	87	89.7	3	3.1	7	7.2	0	0.0
	2010	75	39	52.0	72	96.0	3	4.0	0	0.0	0	0.0
	2011											
	2012											
All bathing waters	2008	533	431	80.9	520	97.6	7	1.3	6	1.1	0	0.0
	2009	540	486	90.0	524	97.0	7	1.3	9	1.7	0	0.0
	2010	492	413	83.9	486	98.8	6	1.2	0	0.0	0	0.0
	2011											
	2012											

*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 or the mandatory value for *Escherichia coli*.

Table 2: Results of bathing water quality in Portugal for 2010-2012. Assessment under Directive 2006/7/EC.

		Total number of bathing waters	Excellent quality		Good quality		Sufficient quality		Poor quality		Closed		Insufficiently sampled		New		Changes	
			number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%
Coastal bathing waters	2009																	
	2010																	
	2011	431	380	88.2	35	8.1	3	0.7	2	0.5	0	0.0	0	0.0	10	2.3	1	0.2
	2012	437	401	91.8	21	4.8	5	1.1	1	0.2	0	0.0	0	0.0	9	2.1	0	0.0
Inland bathing waters	2009																	
	2010																	
	2011	83	52	62.7	17	20.5	5	6.0	4	4.8	0	0.0	0	0.0	4	4.8	1	1.2
	2012	89	56	62.9	17	19.1	7	7.9	3	3.4	0	0.0	0	0	6	6.7	0	0.0
All bathing waters	2009																	
	2010																	
	2011	514	432	84.0	52	10.1	8	1.6	6	1.2	0	0.0	0	0.0	14	2.7	2	0.4
	2012	526	457	86.9	38	7.2	12	2.3	4	0.8	0	0.0	0	0	15	2.9	0	0.0

4. Important information as provided by the Portuguese authorities

Before the bathing season (BS), a monitoring calendar was established for every BW to take samples for all identified BW, for example to verify if additional measures are needed, with all interested parties/competent authorities. The sample to be taken shortly before the start of the bathing season (pre-season sample) is understood in PT as being 15 days interval before the start of the bathing season. Analytical methods used for monitoring vary in PT, vary in Regional Basin Administrations services of APA but always reference laid down in Directive 2006/7/EC.

BWQ information appears on the website and is also disseminated at accessible places near vicinity of BW/ beach access, by Regional Basin Administrations services of APA, at information points, panels/boards/posters set up in bathing areas - sampling results obtained under official sampling calendar on microbiological parameters *E. Coli* and Int. Ent., registers held by competent authorities, etc. The bathing water data are available on the website (<http://snirh.pt/index.php?idMain=1&idItem=2.1>).

A lot of Portuguese beaches are near the mouth of streams that acquire water from rainwater collectors. According to elaborated BW profiles, a situation can occur from untreated discharges or clandestine heavy rains, network overload and/or in case of high rainfall. The pluvial drainage system could also be possible pollution source for the BW, probably due to illegal wastewater discharge.

Even with supervision, discharges and illegal connections occur and causes contamination of beaches due to these connections/timely discharges from the collectors of rainwater, for example. The municipalities have a team on the ground accompanying the shoreline, trying to avoid contamination by illegal dumping and continuing trying to eliminate illegal connections. In some situations, the STP events have occurred during some works (during one day) to improve waste water treatment systems laid to discharges of waste water into BW.

There are incentives to implement a solution to increase the efficiency of urban waste water treatment systems to ensure that no residual discharges of urban waste waters are made (illegal situations/illegal discharges of domestic wastewater into the water stream or accidently discharges).

Information on management measures and reasons for changes for the 2012 season as reported by the Portuguese authorities can be found in Seasonal information and Inventory (Identified bathing waters) datasheets.

Four bathing waters were classified as poor quality, shown in Table 3.

Table 3: Poor quality bathing waters

BWID	BW name	2012 status
PTCD8N	AGROAL	poor
PTCK7V	FRAGAS DE S. SIMÃO	poor
PTCT7E	PONTILHÃO DA VALETA	poor
PTMU2P	S. ROQUE	poor

5. General information on bathing water quality in Europe in 2012

From more than 22 000 bathing areas monitored throughout Europe in 2012, around two thirds were in coastal waters and the rest were in rivers and lakes. In the 2012 bathing season, the monitoring of bathing sites has been adjusted to the provisions in the EU's new bathing water directive (Directive 2006/7/EC). The sampling of water quality in most of the bathing water sites meets the frequency standards (this involves a pre-season sample of the water quality, followed up by monthly samples thereafter). As regards assessment, the provisions in the new bathing water directive have been applied in 19 European countries (Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Hungary, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Spain, Spain, Sweden). This involved taking data from four years of monitoring to make the 2012 assessment. For the remaining ten countries, the 2012 assessment has been carried out under a set

of transitional rules that do not yet meet all the requirements of the new directive using the results from the 2012 monitoring.

In 2012, the quality of 94 % of all bathing waters met at least the minimum 'mandatory' level (corresponding to a rating of sufficient quality under the new directive). Bathing water quality improved at 1.8 % of sites in 2012 compared with 2011, and at 2.5 % of sites compared with 2010. There has also been a marked decline compared with 2011 in the number of bathing waters that were closed or that prohibited bathing.

In 2012, 95.3 % of coastal bathing waters in the EU-27 achieved the minimum quality standards requested by the EU directives — an increase of 2.0 % compared with 2011. The share of coastal bathing waters with excellent quality (or complying with the guide values) in 2012 reached 81.2 % (an increase of 0.9 % from 2011).

The percentage of inland bathing waters with excellent quality is 72 % in 2012, a 1.6 % increase from 2011. In 2012, 91 % of inland bathing waters in the European Union had good or sufficient quality. This is a 1.0 % point increase from 2011. Only 2.3 % of inland bathing waters in the EU did not satisfy the minimum quality level. This is 0.1 % decrease from the previous year, continuing the slow but steady reduction in the percentage of poor quality bathing waters.

The "European bathing water quality in 2012" report presents the results and trends in bathing water quality in 2012 in Europe (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>). More information on bathing water quality as prepared for all reporting countries can be found on the European Environment Agency's bathing water website. The reports for the 2012 season have been produced by TC Vode, European Topic Center ICM Waters partner with support of the Institute for Water of the Republic of Slovenia (IWRS). Countries have collaborated in the assessment of bathing water quality and supplied additional information when needed.

6. Interactive information on bathing water quality in Europe

The bathing water section of the Water Information System for Europe (WISE), which is accessible at the EEA bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>), allows users to view the bathing water quality at more than 22 000 coastal beaches and inland sites across Europe. Users can check bathing water quality on an interactive map, download data for a selected country or region, and make comparisons with previous years.

The Eye on Earth — Water Watch application (<http://eyeonearth.org/map/WaterWatch/>) allows users to zoom in on a section of coast, riverbank or lake, both in street map or, where available, bird's eye viewing formats.

The data on bathing water quality in 2012 and previous years can also be viewed in WISE bathing water data viewer, an application prepared by TC Vode (<http://bwd.eea.europa.eu/>).

In order to make information to the public more effective, all EU countries have national or local web portals with detailed information for each bathing water site. Websites generally include a map search function and public access to the monitoring results both in real time and for previous seasons. Citizens now have access to more bathing water information than ever, giving them the tools to become more actively involved in protecting the environment and helping to improve Europe's bathing areas.

Appendix 1

Map 1: Bathing waters reported during the 2012 bathing season in Portugal



Source: National boundaries: EEA; Large rivers and lakes: EEA, WFD Article 3; Bathing waters data and coordinates: Portuguese authorities