

Bathing Water Directive report 2013

Bulgaria

The report gives a general overview of information acquired from the reported data, based on provisions of the Bathing Water Directive¹. The reporting process is described below, as well as state and trends of bathing water quality in Bulgaria.

1. BWD reporting in 2013 season

In 2013 bathing season, 94 bathing waters have been reported in Bulgaria. For each bathing water, five groups of parameters have been delivered:

- *basic identification data* – including name, location, geographic type of bathing water and availability to bathers;
- *seasonal data* – including season start and end, national quality classification in present season, potential management measures and changes in quality;
- *monitoring results* – disaggregated numerical values of two microbiological parameters – intestinal enterococci and *Escherichia coli* (also known as *E. coli*), recorded at each water sample taken;
- *abnormal situation periods* – periods of unexpected situations that have, or could reasonably be expected to have, an adverse impact on bathing water quality and on bathers' health; reporting is optional;
- *short-term pollution periods* – identifiable events that adversely affect water quality by faecal contamination; reporting is optional;

Bathing waters of Bulgaria in 2013	
Total reported	94
Coastal	90
Inland	4
Season period	91 / 138 days
Coastal	15 May to 30 Sep
Inland	1 Jun to 31 Aug
Samples taken	822
New BWD implemented in	2011

The authorities of Bulgaria initiated new BWD (2006/7/EC) reporting in 2011 season. The 2013 season data were delivered to the European Commission by **9 January 2014**.

Altogether, **94 bathing waters** have been reported – 0.4% of all bathing waters in Europe. Out of all bathing waters in Bulgaria, one (1.06%) has been newly identified in 2013 season. No bathing waters have been delisted². 96% of bathing waters in Bulgaria are of coastal type; the other 4% are inland. **822 samples** were taken at bathing waters throughout the season – nine per bathing water on average.

¹ Available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF>

² Bathing waters which were identified in 2012 season, but not in 2013 season

The bathing season period was from 15 May to 30 September for coastal bathing waters, i.e. 138 days altogether. Season duration varies for coastal bathing waters. Inland bathing season period was from 1 June to 31 August, i.e. 91 days. Season duration varies for inland bathing waters.

Detailed information on individual bathing waters is available from national bathing water profiles at <http://www.mh.government.bg/Articles.aspx?lang=bg-BG&pageid=507>.

2. Assessment methodology

During the bathing season, water samples are taken and analysed for two bacteria, *Escherichia coli* and intestinal enterococci which may indicate the presence of pollution, usually originating in sewage or livestock waste. The results of the analysis are used to assess the quality of the bathing waters concerned and to provide information to the public on the quality of the water in the bathing sites concerned.

According to the BWD, the bathing water sample dataset should satisfy the following conditions:

- a minimum of one sample per month³
- a minimum of four samples per season⁴
- a minimum of 16 samples in total⁵
- four consecutive seasons⁶
- a pre-season sample⁷

The monitoring took place at 100% of total identified bathing waters, likewise all bathing waters satisfied the described sampling frequency rules set by the Directive. Table 1 shows the share of bathing waters that did not satisfy monitoring frequency, as well as corresponding reasons.

Table 1: Number of assessed bathing waters in 2013

Total number of bathing waters in 2013	Bathing waters with sampling frequency satisfied	Bathing waters with sampling frequency not satisfied			
		Insufficiently sampled	Closed	Not sampled	Total
94	94	0	0	0	0

Since the data series of four consecutive years has not been collected yet, the assessment of bathing waters has been done according to transitional rules. This means that only the most recent season's data have been considered, while quality classification is based on criteria of the old BWD (76/160/EEC).

³ The interval between two samples should not exceed 31 + 4 days, provided that the next sampling is done according to the monitoring calendar; exception applies for temporarily closed bathing waters

⁴ Three samples if the season does not exceed eight weeks or the region is subject to special geographical constraints

⁵ 12 samples if the season does not exceed eight weeks or the region is subject to special geographical constraints

⁶ The condition does not apply if the bathing water is newly identified or any changes have occurred that are likely to affect the classification

⁷ A pre-season sample is taken into account at total number of samples per season

Bathing waters are accordingly classified to one of the BWD quality classes:

- compliant with guide values
- compliant with mandatory values
- not compliant
- banned

3. Bathing water quality

The results of the bathing water quality in Bulgaria for the period of 2010–2013 as reported in the past reporting years and for the bathing season of 2013 are presented in Figure 1 (for coastal bathing waters) and Figure 2 (for inland bathing waters). The previous reports are available on the European Commission's bathing water quality website⁸ and the European Environment Agency's bathing water website⁹.

3.1 Coastal bathing waters

In Bulgaria, 98.9% of coastal bathing waters met at least sufficient water quality in 2013. No coastal bathing waters had to be closed during the bathing season. See Appendix 1 for numeric data.

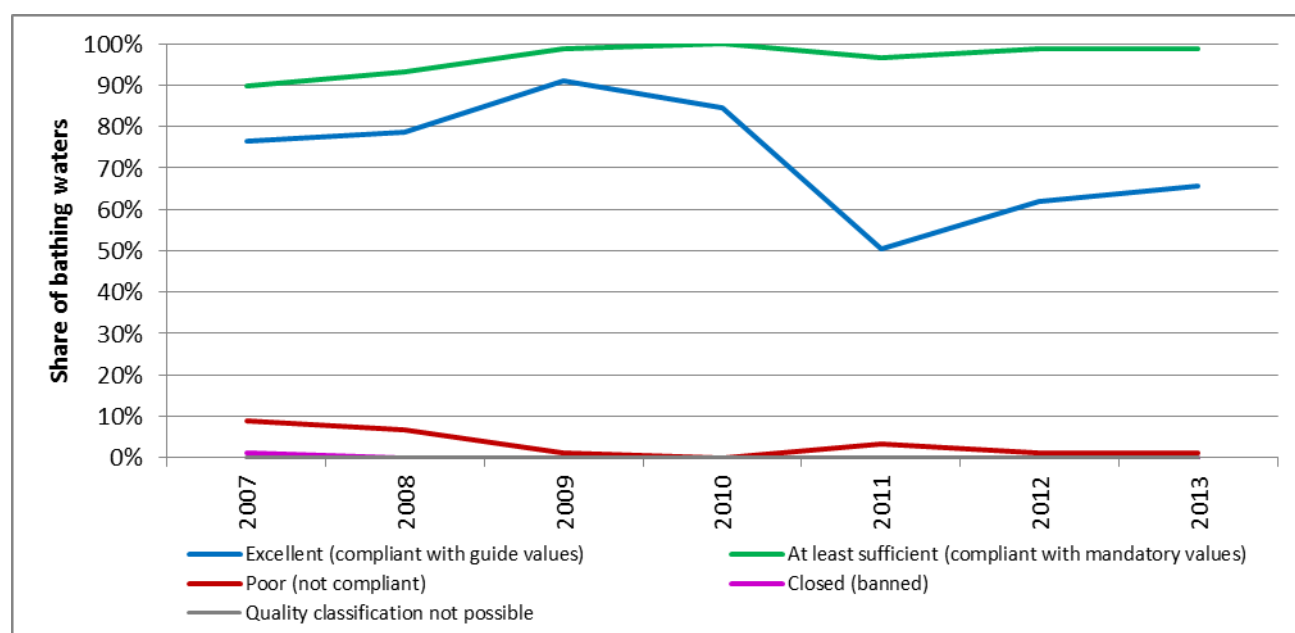


Figure 1: Coastal bathing water quality trend in Bulgaria. Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

3.2 Inland bathing waters

⁸ http://ec.europa.eu/environment/water/water-bathing/index_en.html

⁹ <http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>

All inland bathing waters met the mandatory water quality in 2013. No bathing waters had to be closed during the bathing season. See Appendix 1 for numeric data.

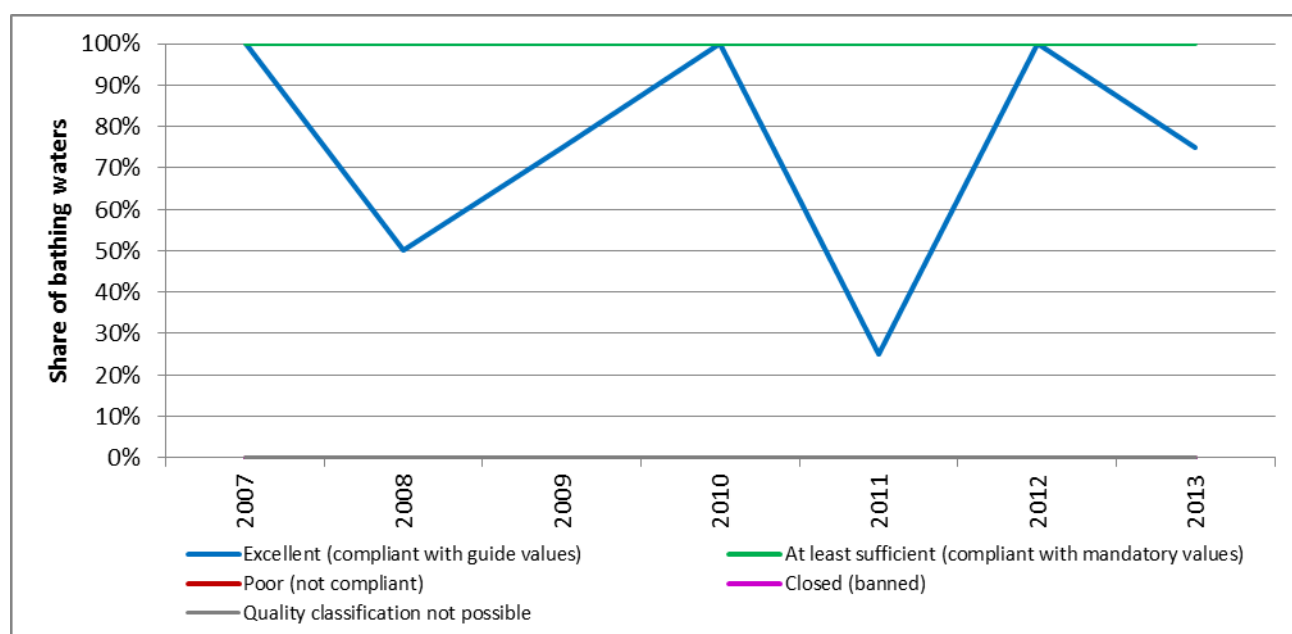


Figure 2: Inland bathing water quality trend in Bulgaria. Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

4. Information regarding management and other issues

A vast majority of bathing waters in Bulgaria are coastal. According to national authorities, small number of inland bathing waters is due to lack of interest by the communities to establish and maintain inland bathing waters zones according to all requirements, lack of tradition to visit such places and national legislation on Water Live Saving Service which prohibits bathing in all areas where there is no such service.

The competent authorities concerning bathing water are the Ministry of Health at national level and its 28 Regional Health Inspectorates that carry out sampling and monitoring of bathing waters. The samples are analyzed in the regional CA’s laboratories and the analytical methods used are relevant to the methods laid down in the Annex I of the Directive 2006/7/EC – BDS EN ISO 9308-3 and BDS ISO EN 7899-1.

The results from bathing water quality monitoring are made public through websites of the regional CAs and through the media (local press, radio and TV). Information is also available on the website of Ministry of Health. During the bathing season every week the regional CAs give pressconference incl. the current bathing water quality status on their territory. There is also a practice the actual information for bathing water quality to be made available to the guests of the big sea hotels.

In order to achieve the objectives of the Urban Wastewater Treatment Directive (UWWTD; 91/271/EEC) concerning urban wastewater treatment Republic of Bulgaria developed an

Implementation Program with of a set of measures and deadlines. Bulgaria has identified part of the national territory as a sensitive area according to the requirements of the Directive, including the whole Bulgarian Black Sea Region. The implementation program is regularly updated, under the reporting procedure, identifying all agglomerations within the scope of the Directive. The information from the 2009 report is included also in River Basin Management Plan for the Black sea region.

According to the 2013 report, 59 agglomerations are identified falling in the scope of the UWWTD. Out of these, 33 treat wastewater in WWTPs, as two of the treatment plants have been rehabilitated in 2013. For the rest, 26 agglomerations of above 2,000 p.e. in the Black Sea basin with no treatment, the necessary treatment should be provided by the end of 2020, as foreseen by the regional master plans for water supply and sewage. In the current year, several major projects have been launched for collection and treatment of the wastewater of the agglomerations Pomorie, Nessebar-Ravda-Slunchev bryag, Sozopol and Banevo-Vetren-Mineralni bani. The necessary investment costs for the construction of the wastewater collection systems and WWTPs to comply with the goals laid down in the Directive are estimated on 3,563.2 million EUR for the whole country.

For decreasing the diffuse pollution sources, Republic of Bulgaria provides a system of measures, aiming full implementation of the Nitrates Directive (91/676/EEC) concerning the protection of waters against pollution caused by nitrates from agricultural sources that include the following:

- defining in 2004 the polluted water, the water in risk of pollution and the vulnerable zones. The area of vulnerable zones in Bulgaria is 34% of the whole territory;
- adoption in 2005 of the Code of Good Agricultural Practice;
- adoption in 2006 of the Action Program;
- development of Training program for farmers on how to implement measures of the Code of GAP.

Although significant pollution of the superficial waters and significant level of eutrophication have not been ascertained on the national territory, the above mentioned Action Program provides concrete measures for the prevention and the reduction of the surface waters's pollution from agricultural sources. The Black Sea Coast Law establishes two kinds of protection zones (up to 2.1 km from the sea coast and alongside the whole Bulgarian coast's length) where the use of mineral fertilizers and plant protection products is forbidden.

5. 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/interactive/bathing/state-of-bathing-waters>), allows users to view the bathing water quality at more than 22 000 coastal beaches and inland sites across Europe. Data is aggregated and visualized on national and station level. Detailed information regarding specific bathing site are given in pop-up windows (can be activated with a click on a selected bathing location) and bathing water profiles which can be opened through hyperlinks in pop-up windows.

The data on bathing water quality in 2013 and previous years can also be viewed in WISE bathing water data viewer, an application prepared by TC Vode (<http://bwd.eea.europa.eu/>). The WISE bathing water quality data viewer combines text and graphical visualisation, providing a quick overview of the locations of coastal and inland bathing waters, as well as statistics on their quality. Specific bathing water locations can be observed on Google Earth, Google maps or Bing maps.

Appendix 1: Results of bathing water quality in Bulgaria from 2010 to 2013

		Total	Excellent (compliant with guide values)		At least sufficient (compliant with mandatory values)		Poor (not compliant)		Closed (banned)		Quality classification not possible*	
			No	%	No	%	No	%	No	%	No	%
Coastal	2010	90	76	84.4	90	100.0	0	0.0	0	0.0	0	0.0
	2011	89	45	50.6	86	96.6	3	3.4	0	0.0	0	0.0
	2012	89	55	61.8	88	98.9	1	1.1	0	0.0	0	0.0
	2013	90	59	65.6	89	98.9	1	1.1	0	0.0	0	0.0
Inland	2010	4	4	100.0	4	100.0	0	0.0	0	0.0	0	0.0
	2011	4	1	25.0	4	100.0	0	0.0	0	0.0	0	0.0
	2012	4	4	100.0	4	100.0	0	0.0	0	0.0	0	0.0
	2013	4	3	75.0	4	100.0	0	0.0	0	0.0	0	0.0
Total	2010	94	80	85.1	94	100.0	0	0.0	0	0.0	0	0.0
	2011	93	46	49.5	90	96.8	3	3.2	0	0.0	0	0.0
	2012	93	59	63.4	92	98.9	1	1.1	0	0.0	0	0.0
	2013	94	62	66.0	93	98.9	1	1.1	0	0.0	0	0.0

Note: the "At least sufficient" class also includes bathing waters which are of excellent quality, the sum of shares is therefore not 100%. * This includes new bathing waters, bathing waters with changes that affect or could have affected bathing water quality, and bathing waters that do not have enough samples.

Appendix 2: Bathing water quality map

Map 1: Bathing waters reported during the 2013 bathing season in Bulgaria



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