

Bathing Water Directive report 2013

Cyprus

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 Cyprus.

1. BWD reporting in 2013 season

In 2013 bathing season, 112 bathing waters have been reported in Cyprus. 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;

Total reported	112
Coastal	112
Inland	/
Season period	183 days
Coastal	1 May to 31 Oct
Inland	/
Samples taken	967
Share of bathing waters with good or excellent water quality	100 %
New BWD implemented in	2008

The authorities of Cyprus initiated new BWD (2006/7/EC) reporting in 2008 season. The 2013 season data were delivered to the European Commission by **17 December 2013**.

Altogether, **112 bathing waters** have been reported – 0.5% of all bathing waters in Europe. None have been newly identified and none have been delisted² in season 2013. All bathing waters are of coastal type. **967 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 1 May to 31 October for coastal bathing waters, i.e. 183 days altogether.

Short-term pollution events have been reported at six bathing waters. Investigation of all incidents shown that no land base sources of pollution were detected. The pollution was most probably by the illegal dumping of waste from a boat or a ship.

Detailed information on individual bathing waters is available from national bathing water profiles at http://www.moh.gov.cy/moh/mphs/phs.nsf/DMLwater1_gr/DMLwater1_gr?OpenDocument.

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
112	112	0	0	0	0

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

- excellent

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

- good
- sufficient
- poor

The classification is based on pre-defined percentile values for microbiological enumerations, falling in the certain class given in Annex I of the Directive. This defines different limit values for coastal and inland waters.

3. Bathing water quality

The results of the bathing water quality in Cyprus 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 Cyprus, all 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.

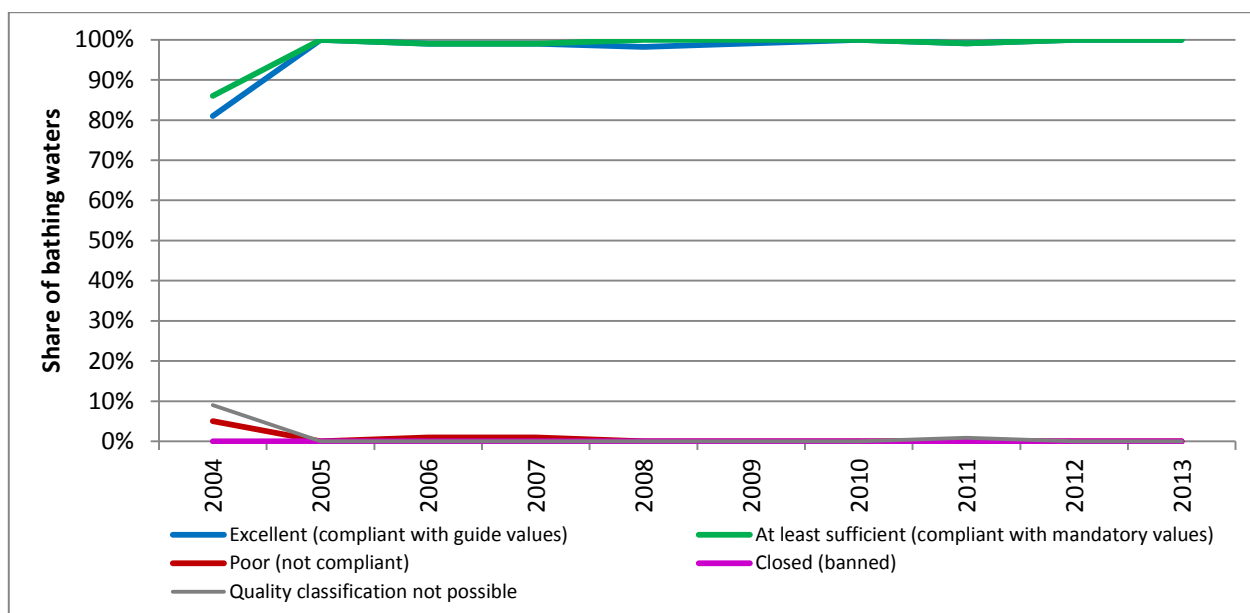


Figure 1: Coastal bathing water quality trend in Cyprus. Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

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>

3.2 Inland bathing waters

There are no inland bathing waters in Cyprus.

4. Information regarding management and other issues

The assessment shows that all bathing waters are of excellent quality. Authorities note that climatic conditions (increased sunlight and high temperature) and salinity of the coastal waters in the region are quite unfavorable to the survival of microorganisms.

The coastal areas monitored cover all the coastal area of the Republic of Cyprus in which the Government of Cyprus exercises effective control and are used for bathing. No freshwaters are used for bathing purposes in Cyprus.

According to authorities of Cyprus, the list of bathing areas was established following the public consultation procedure. Cyprus has established a formalized procedure through a Ministerial Degree (No.423/2012) to ensure the implementation of the public consultation procedure. The bathing water quality has also been published at the press conference and online.

Wastewater treatment plants are in operation for the 4 large agglomerations on the coast of Cyprus. Wastewater effluent is almost entirely reused for irrigation. There is no disposal of untreated wastewater (municipal or industrial) to the sea. Two of these treatment plants, i.e. the Limassol/Amathousa STP and the Larnaca STP, periodically dispose tertiary treated effluent to the sea during the winter months. The Urban Wastewater Treatment Directive (91/271/EEC) is implemented. Two sensitive areas have been designated.

In implementing the Nitrates Directive (91/676/EEC) in 2013, six nitrate-vulnerable zones have been designated. An action programme has been developed for these areas, aimed at preventing and reducing nitrate pollution from agricultural sources.

The analysis of pressures to water bodies performed under Article 5 of the WFD, has verified the occurrence of sea water intrusion in groundwater bodies in the coastal areas and, therefore, the limited influx of nutrients from aquifers to the sea. There is, however, some influx from runoff from agricultural areas during periods of heavy rainfall. Implementation of the action programme of 2013 to 2015 aims to further reduce this source of pollution to the sea.

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 Cyprus 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	%
Total	2010	112	112	100.0	112	100.0	0	0.0	0	0.0	0	0.0
	2011	112	111	99.1	111	99.1	0	0.0	0	0.0	1	0.9
	2012	112	112	100.0	112	100.0	0	0.0	0	0.0	0	0.0
	2013	112	112	100.0	112	100.0	0	0.0	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 Cyprus



Bathing water quality

- Excellent water quality
 - Good water quality
 - Sufficient water quality
 - Poor water quality
 - Closed temporarily or throughout the season
 - Quality classification not possible: new bathing waters / bathing waters with changes / not enough samples
- No data
- Outside data coverage (data available, not presented on the map)

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