

# BWD Report For the Bathing Season 2014

## Cyprus

The report gives a general overview of information acquired from the reported data, based on provisions of the Bathing Water Directive<sup>1</sup>. The reporting process is described below, as well as state and trends of bathing water quality in Cyprus.

### 1. BWD reporting in the season 2014

In 2014 bathing season, 112 bathing waters have been reported in Cyprus. For each bathing water, five groups of parameters have been delivered<sup>2</sup>:

- *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 Cyprus in 2014	
Total reported	112
Max season period	184 days 1 May to 31 Oct
Samples taken	1013
Share of bathing waters with good or excellent water quality	100 %
New BWD implemented in	2008

The authorities of Cyprus report data according to the new BWD (2006/7/EC) since the season 2008. The data for the season 2014 were delivered to the European Commission by **17 December 2014**.

Altogether, **112 bathing waters** have been reported – 0.5% of all bathing waters in Europe. Out of all bathing waters in Cyprus, none have been newly identified in 2014 season. All bathing waters in Cyprus are of coastal type. **1013 samples** were taken at bathing waters throughout the season – 9 per bathing water on average.

The maximum bathing season period was from 1 May to 31 October, i.e. 184 days altogether.

<sup>1</sup> Directive BWD 2006/7/EC, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF>

<sup>2</sup> See the BWD Data Dictionary for detailed explanations: <http://dd.eionet.europa.eu/datasets/3151#tables>

Detailed information on bathing waters is available from national portal at <http://www.moa.gov.cy/moa/environment/environment.nsf/All/1D1F9531D9C13AE3C22579180037063B?OpenDocument>.

## 2. Assessment methodology<sup>3</sup>

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.

The monitoring requirements under the New Bathing Water Directive are:

- taking of a pre-season sample (taken shortly before the start of the bathing season) <sup>4</sup>;
- a minimum of four samples per season<sup>5</sup>;
- a minimum of one sample per month<sup>6</sup>.

The conditions described above must be met for all bathing waters. If these rules are satisfied, the bathing water is categorised as 'sampling frequency satisfied'. If not all monitoring requirements are fulfilled the bathing water is categorised as 'sampling frequency not satisfied'. 83.0% of bathing waters met the described monitoring requirements set by the Directive, while the rest did not satisfy monitoring requirements or was either new, changed or closed. Table 1 shows the statistics of bathing waters according to satisfied BWD monitoring requirements.

---

<sup>3</sup> The methodology used by the EC and the EEA is described here, while results of assessment by national authorities may somewhat differ. However, the provisions of the Directive should be followed in any case.

<sup>4</sup> A pre-season sample is taken into account at total number of samples per season.

<sup>5</sup> Three samples are sufficient if the season does not exceed eight weeks or the region is subject to special geographical constraints.

<sup>6</sup> If, for any reason, it is not possible to take the sample at the scheduled date, a delay of four extra days is allowed. Thus, the interval between two samples should not exceed 31 + 4 days.

**Table 1: Bathing waters in 2014 according to compliance with BWD monitoring provisions**

	Count	Share of total [%]
<b>BWs with sampling frequency satisfied and are not new, have no changes or were not closed in 2014</b> These bathing waters have been monitored according to BWD provisions (monitoring frequency satisfied and have pre-season sample. They have been quality-classified (excellent, good, sufficient, poor).	93	83.0%
<b>BWs with sampling frequency not satisfied and that are not new, have no changes or were not closed in 2014.</b> These bathing waters have not been monitored according to BWD provisions (monitoring frequency not satisfied). They may be quality-classified if there is a reasonable volume of samples available.	19	17.0%
<b>BWs that are new, changed or closed in 2014</b> These bathing waters are new or have been subject to changes that could affect bathing water quality.	0	0.0%
<b>Total number of bathing waters in 2014</b>	<b>112</b>	<b>100%</b>

Bathing waters where sampling frequency was not satisfied can still be quality assessed if at least four samples per season (three samples if the season does not exceed eight weeks or the region is subject to special geographical constraints) are available and are more or less equally distributed throughout the season. Assessment of bathing water quality is possible when the bathing water sample dataset is available for four consecutive seasons. Bathing waters are accordingly classified to one of the bathing water quality classes (excellent, good, sufficient, or 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.

Quality assessment is not possible for all bathing waters. In these cases, they are instead classified as either:

- not enough samples<sup>7</sup>;
- new<sup>8</sup>;
- changes<sup>9</sup>;
- closed<sup>10</sup>.

<sup>7</sup> Not enough samples have been provided for the 2014 season or throughout the whole assessment period.

<sup>8</sup> Classification not yet possible because bathing water is newly identified and a complete set of samples is not yet available.

<sup>9</sup> Classification is not yet possible after changes affecting bathing water quality have been implemented.

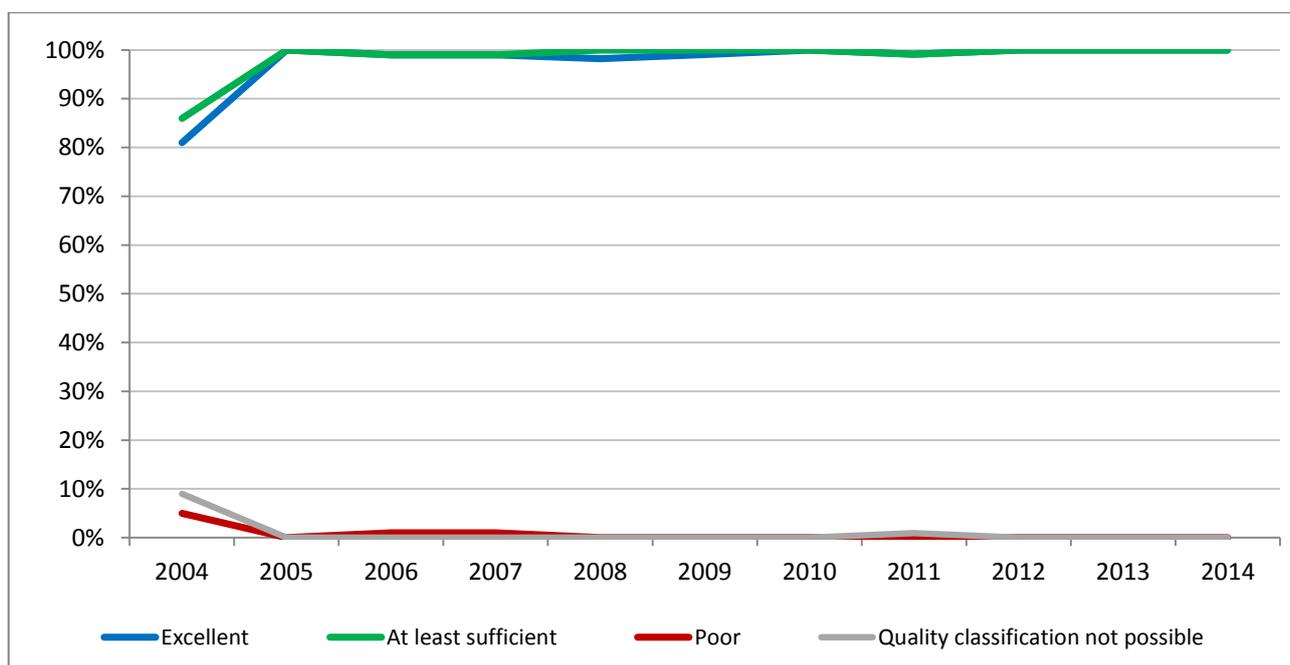
<sup>10</sup> Bathing water is closed temporarily or throughout the bathing season.

### 3. Bathing water quality

The results of the bathing water quality in Cyprus for the period of 2011–2014 as reported in the past reporting years and for the bathing season of 2014 are presented in Figure 1. The previous reports are available on the European Commission's bathing water quality website<sup>11</sup> and the European Environment Agency's bathing water website<sup>12</sup>.

#### 3.1 Coastal bathing waters

In Cyprus, all existing coastal bathing waters met at least sufficient water quality standards in 2014. 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%.

#### 3.2 Inland bathing waters

There are no inland bathing waters in Cyprus.

<sup>11</sup> [http://ec.europa.eu/environment/water/water-bathing/index\\_en.html](http://ec.europa.eu/environment/water/water-bathing/index_en.html)

<sup>12</sup> <http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>

#### **4. Information regarding management and other issues**

A total of 112 coastal areas were monitored in Cyprus during the 2014 bathing season. 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. Comparing the list of 2014 bathing waters to that of 2013, all bathing waters remained the same. At least 7 samples were taken for all bathing areas. For the blue flag areas (57 sites) that correspond to 51% of the bathing water sites at least 10 samples were taken.

Karafa bathing water was temporarily excluded from the list of bathing waters for 2010 bathing season, since there were plans for coastal works nearby and the site wasn't available for bathing. The site was closed for 2010, 2011, 2012, and 2013 bathing seasons, and no samplings took place. Moreover, for 2014 bathing season, Karafa bathing water remained closed so no sampling was taken place. The site will reopen when the works will be finished.

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.

In the 2014 bathing season, a number of 26 short term pollution incidents were reported. Investigation of all incidents shown that no land based source of pollution were detected. The pollution was most probably caused by illegal dumping of waste from a boat or a ship.

There is some influx from agricultural areas runoff during periods of heavy rainfall. Implementation of the action programme of 2013 to 2015 will further reduce this source of pollution to the sea.

Five incidents of pollution as a consequence of heavy rainfall before the sampling have also occurred. At the five bathing sites there is a storm ditch in (CY0003100000000013 - PANTACHOU), (CY0004000000000046 - KASTELLA), (CY0004000000000048 - MAKENZY 1), (CY0004000000000049 - MAKENZY 2) and (CY0004000000000050 - AIRPORT).

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.

## **5. Bathing water quality assessment presentation in online viewers**

The new legislation requires more effective monitoring and management of bathing waters, greater public participation and improved information dissemination. More on the bathing and other water legislation can be found on the European Commission's website: [http://ec.europa.eu/environment/water/index\\_en.htm](http://ec.europa.eu/environment/water/index_en.htm).

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 21 000 coastal beaches and inland sites across Europe. The data on bathing water quality in 2014 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 bathing water's locations and achieved quality.

Citizens have now access to more bathing water information than ever and are encouraged to make full use of disseminated information.

## Appendix 1: Results of bathing water quality in Cyprus from 2011 to 2014

Table 2: Bathing waters in the season 2014 according to quality

		Total number of bathing waters	Excellent quality or compliant with guide values		At least sufficient quality or compliant with mandatory values		Poor quality or non-compliant		Quality classification not possible: not enough samples /new bathing waters/bathing waters with changes/closed	
			No	%	No	%	No	%	No	%
<b>Total</b>	2011	112	111	99.1	111	99.1	0	0.0	1	0.9
	2012	112	112	100.0	112	100.0	0	0.0	0	0.0
	2013	112	112	100.0	112	100.0	0	0.0	0	0.0
	<b>2014</b>	<b>112</b>	<b>112</b>	<b>100.0</b>	<b>112</b>	<b>100.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>

Note: the class "At least sufficient" also includes bathing waters which are of excellent quality, the sum of shares is therefore not 100%.

## Appendix 2: Bathing water quality map

**Map 1: Bathing waters reported during the 2014 bathing season in Cyprus**



### Bathing water quality

- Excellent water quality
- Good water quality
- Sufficient water quality
- Poor water quality
- Quality classification not possible: not enough samples / new bathing waters / bathing waters with changes / closed
- 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