Country report

Cypriot bathing water quality in 2018

Cyprus

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European Environment Agency

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Bathing Water Quality in the Season 2018

Cyprus

Under the provisions of the Bathing Water Directive, more than 21 000 bathing waters are monitored in Europe each season. The monitoring data and other information regarding bathing water management are reported to the European Environment Agency by 30 reporting countries in Europe, to be assessed for the annual European report and more detailed national reports.

1. BWD reporting in the season 2018

In the season 2018, Cyprus identified and reported **113 bathing waters**, which is 0.5% of all bathing waters in Europe. No bathing waters in Cyprus have been newly identified for the season 2018.

Bathing waters of Cyprus in the season 2018	
Total reported	113
Coastal	113
Inland	0
Total reported samples	1007

Bathing water quality in the season 2018	
Excellent	112 (99.1%)
Good	0 (0%)
Sufficient	0 (0%)
Poor	0 (0%)
Not classified	1 (0.9%)

The bathing waters are quality classified according to the two microbiological parameters (Escherichia coli and Intestinal enterococci) defined in the Bathing Water Directive. 99.1% of reported bathing waters are in line with the minimum quality standards of the Directive, thus classified “sufficient” or better.

More detailed information on bathing waters of Cyprus is available at the national bathing water portal http://www.moa.gov.cy/moa/environment/environmentnew.nsf/All/9E7057F0FB6B8067C2257F6200327E0D?OpenDocument.

2. BWD monitoring

Each bathing water that is identified by the reporting country needs to have a monitoring calendar established before the bathing season. The monitoring calendar requirements can be summarised as follows: (1) a pre-season sample is to be taken shortly before the start of each bathing season; (2) no fewer than four (alternatively, three for specific cases) samples are to be taken and analysed per bathing season; and (3) an interval between sampling dates never exceeds one month.

From the reported data, the assessment also designates effective implementation of the monitoring calendar. In Cyprus, monitoring calendar for 2018 was not implemented at one bathing water.

Table 1: Bathing waters in 2018 according to implementation of the monitoring calendar

	Count	Share of total [%]
Monitoring calendar implemented A bathing water satisfies monitoring calendar conditions listed above.	112	99.10%
Monitoring calendar not implemented A bathing water does not satisfy monitoring calendar conditions listed above. They may be quality-classified if enough samples are available in the last assessment period.	1	0.90%

In addition to the monitoring calendar, management specifics of the last assessment period of four years are also assessed. The status primarily indicates whether the complete dataset of four seasons is available, but also points out the reasons as to why the bathing waters do not have the complete last assessment period dataset. The latter may indicate developing conditions at the site – most importantly, whether the bathing water has been newly identified within the period, or any changes have occurred that are likely to affect the classification of the bathing water.

Table 2: Management specifics in the last assessment period of 2015–2018

	Count	Share of total [%]
Continuously monitored A bathing water has been monitored in each bathing season in the last assessment period.	112	99.10%
Newly identified A bathing water was identified for the first time within the last assessment period. Such status is assigned until the complete four-year dataset is available, i.e. for three years after the first reporting.	0	0%
Quality changes A bathing water was subject to changes described in BWD Art. 4.4 within the last assessment period. Such status is assigned until the complete four-year dataset of samples taken after changes took effect is available.	0	0%
Monitoring gap A bathing water was not monitored for at least one season in the last assessment period. No quality	1	0.90%

classification is made if no samples are reported for the most recent season.		

3. Bathing water quality

3.1 Coastal bathing waters

Coastal bathing waters are situated on the sea or transitional water coastline, with respective parameter thresholds defined in Annex I of the Directive. They are subject to more strict thresholds than the inland bathing waters. Quality trend in Cyprus for the period 1990–2018 if historical data are available is shown in Figure 1. Count of bathing waters by quality class for the last assessment period 2015–2018 is given in Annex I.

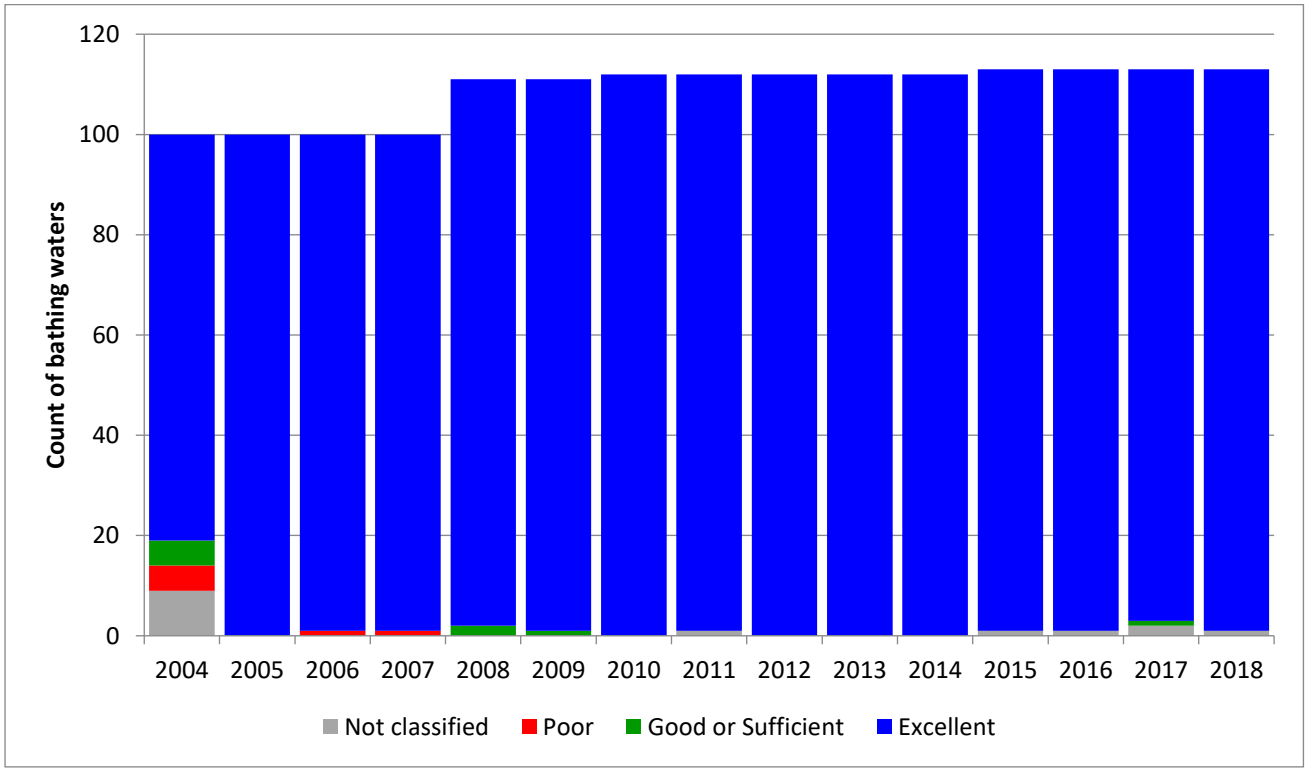

Figure 1: Trend of coastal bathing water quality in Cyprus. Notes: Each column represents an absolute count of bathing waters in the season. Quality classes "good" and "sufficient" are merged for comparability with classification of the preceding Bathing Water Directive 76/160/EEC.

4. Bathing water management in Cyprus

In addition to monitoring data, reporting countries also provide information on bathing water management in the country. The information is used to exchange good practices, discuss issues on the European level, and understand the specifics of implementation of the Directive.

For the 2018 bathing season, Cyprus monitored and reported under the Bathing Water Directive 2006/7/EC. The two parameters, “intestinal enterococci” and “Escherichia coli”, were analysed at least monthly and once before the start of the bathing season according to Article 3. A total of 112 coastal areas were monitored in Cyprus during the 2018 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.

For the 2018 bathing season, Cyprus has implemented the requirements of the Directive 2006/7/EC regarding the review and updating of the list of bathing areas. The bathing areas were, therefore, defined following public consultation.

In the 2018 bathing season, a number of 18 short term pollution incidents review that were reported. Investigation of all incidents shown that no land base source of pollution was detected. The pollution was most probably cost by the illegal discharges of waste from ships. Also 5 incidents of short term pollution were reported that were due to heavy rainfall just before sampling. As regards the bathing waters areas for which the results have exceeded the levels defined in the Directive, measures were taken by inspectors from various departments applying provisions for the relevant Environmental Laws.

It is worth mentioning that the Cyprus climatic conditions (increased sunlight and high temperature) and the salinity of the coastal waters in the Eastern Mediterranean are quite unfavourable to the survival of microorganisms.

Public Consultation

The procedure for public consultation used in Cyprus includes written communication with all local authorities involved, uploading the list of 2018 bathing waters to the website of the Department of Environment in order for the public to have the opportunity to formulated suggestions remarks or complains, press releases to local newspapers to inform the public of the procedure urging the public to participate in the preparation of the list of 2018 bathing waters, conference with the participation of involved municipalities and communities, communication with involved local authorities that had succession/comments, meeting of the Committee of the implementing authorities, establishment of the final list of bathing waters, notification of the EC of the list of bathing waters before the start of the 2018 via report through EIONET (identified bathing water excel sheet) and uploading of the list of bathing waters to the website of Department of Environment.

All 112 bathing areas were monitored monthly without missing any samplings. A total of 1007 samples were taken for each bathing area and analysed using the standard reference methods specified in the Directive

2006/7/EC. At least 7 samples were selected for all bathing areas. For the blue flag areas (62 sites) that correspond to 52% of the bathing water areas at least 10 samples were taken for each blue flag area.

Public information

The list of bathing areas was established following the public consultation procedure as described above. Cyprus has established a formalized procedure through a Ministerial Degree (No. 423/2012) to ensure the implementation of the public consultation procedure.

The monitoring calendar was uploaded at the beginning of the bathing season on the website of the Department of Environment.

All monitoring results and other related information are available to the public on registers held by the Department of Medical and Public Health Services and the Department of Environment or through the website of the Department of Environment. (www.moa.gov.cy/environment)

The bathing water profiles of all bathing areas can be observed through the website of the department of Environment on the following link:
http://www.moa.gov.cy/moa/environment/environmentnew.nsf/All/9E7057F0FB6B8067C2257F6200327E0D?OpenDocument

Wastewater treatment and treatment of diffuse sources of pollution

Wastewater treatment plants are in operation for five 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 only during the winter months. Cyprus defined 1 Sensitive Area for Urban Waste Water Discharge (Polemidia Dam) which is subject to eutrophication and one Catchment of Sensitive Area (Catchment of Polemidia).

There are seven areas which have been designated as Nitrates Vulnerable Zones under Nitrates Directive (91/676/EEC). An Action Program 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.

Assessment for cyanobacteria proliferation

Assessment for cyanobacteria proliferation in the bathing waters of Cyprus indicate that the risk of having systematically persistent blooms in the bathing waters of Cyprus is fairly low. This is due to the fact that overall the bathing waters of Cyprus are oligotrophic and chlorophyll levels are usually low. According to the risk assessment, you have chances of having blooms forming is at specific locations (near the coastline) which nutrient concentrations are above average (i.e., near harbours, where ships are present and especially when poor management practices of ballast water are applied) where cyanobacteria species can make it into the marine environment and in combination with stagnant waters and increased nutrients concentrations a bloom is formed. These areas are not in bathing areas. As far as contamination of bathing waters from inland

waterbodies, there is only one cyanobacterial contaminated water body in Cyprus and that is Polemidia Dam and there is no flow from this dam to the sea. In case of cyanobacterial proliferation, the Dept. of Fisheries and Marine Research will investigate it and propose action measures to involved parties. The risk of cyanobacteria appearance in Cypriot waters is included in the bathing water profiles.

Management of short term pollutions

Cyprus has taken measures in 2017 and 2018 to handle the increased number of short term pollution incidents. A Committee for Sea Pollution was established under the General Director of the Ministry of TCW and with the participation of the Commissioner for the Environment. This committee is composed of competent authorities. Important decisions and measures have been taken to manage the quality of bathing waters and short-term pollution incidents. In particular:

- Inspections campaigns for possible land based source at the seafront;
- inspections at ships and meetings with ship owners;
- improve and control port waste management practices;
- funding of the Limassol Municipality's combating and preventing pollution actions.

The above mentioned corrective measures and the clear policy of keeping the excellent quality of bathing waters in Cyprus have reduced the number of incidents in 2017 and 2018.

Furthermore the monitoring mechanism established since 2012 provide access to citizens to report incidents of pollution. Citizens can call Cyprus number (7004055), which is posted on signs located in bathing water areas, so that necessary measures will be taken.

Annex I Bathing water quality in Cyprus in 2015–2018

Table 3: Bathing water quality by water category and season

		Total count of bathing waters	Excellent		Good		Sufficient		Poor		Not classified	
			Count	%	Count	%	Count	%	Count	%	Count	%
Total	2015	113	112	99.1	0	0.0	0	0.0	0	0.0	1	0.9
	2016	113	112	99.1	0	0.0	0	0.0	0	0.0	1	0.9
	2017	113	110	97.3	1	0.9	0	0.0	0	0.0	2	1.8
	2018	113	112	99.1	0	0.0	0	0.0	0	0.0	1	0.9

Annex II Bathing water quality map

Map 1: Bathing waters reported during the 2018 bathing season in Cyprus

Source: National boundaries: EEA; Large rivers and lakes: EEA, WFD Article 3; Bathing waters data and coordinates: Cypriot authorities; Digital Elevation Model over Europe (EU-DEM): EEA.