



MINISTRY OF  
ENVIRONMENT AND  
ENERGY

Special Secretariat for Water

---

# BATHING WATER QUALITY IN GREECE

---

Reference year 2018

---



JULY 2019

# Bathing water Quality in Greece

## Reference year 2018

### INTRODUCTION

Bathing water quality for the year 2018 was monitored and assessed in the framework of the *Monitoring Programme of Bathing Water Quality* that was implemented under the supervision of the Special Secretariat for Water of the Ministry of Environment and Energy and the Directorates for Waters of Decentralized Administration. This monitoring programme is co-financed by national development funds and the European Union under the National Strategic Reference Framework (NSRF) during 2014-2020.

The implementation of the monitoring programme is based on the provisions of the Directive 2006/7/EC concerning the management of bathing water quality and repealing Directive 76/160/EEC, which has been incorporated to the Greek national legislation with the Common Ministerial Decree 8600/416/E103/2009 (Official Government Gazette 356B/2009).

The *length of the bathing season* for the year 2018 was defined by a decision of the Minister of Environment and Energy, from June 1<sup>st</sup> to October 31<sup>st</sup>.

In total, *the monitoring programme includes 1598 bathing water sites*, three of which are located in inland waters (lakes), while the rest 1595 bathing water sites are located in coastal waters.

The *quality parameters* monitored have been selected in accordance to the obligations of the Directive 2006/7/EC and they are distinguished in two groups:

- ✓ *Microbiological*: “Escherichia coli” and “Intestinal enterococci”, determined in accordance to the reference methods of analysis of Annex I of the Directive 2006/7/EC and
- ✓ *Other parameters, visually assessed*: color, mineral oils, tarry residues, seaweed, jelly-fish and floating material.

The programme was implemented as scheduled during the bathing water season for 2018, without delays and with the frequency that is specified in the Directive 2006/7/EC. At each bathing water site, *a minimum number of 6 samples* were collected, one pre-seasonal and the other samples are distributed throughout the bathing season, with the interval between sampling dates not exceeding one month. All monitoring sites were reviewed in terms of their coordinates and their description in order to enable the bathers and public authorities to locate and approach the desired bathing water.

## BATHING WATER QUALITY MONITORING NETWORK

In 2014 the revision of the monitoring network was initiated and completed. The main principle of the revision was to assign a single representative monitoring point at each bathing water according to the provisions of the Directive 2006/7/EC. In accordance with this principle, an existing bathing water with more than one monitoring points is now monitored at one representative site.

During the updating process of the bathing waters monitoring network, the sampling points were relocated to more representative positions, maintaining nevertheless their historical background. The selection of the representative sampling point follows the provisions of Articles 1 and 3 of the Directive 2006/7/EC. The process of including or excluding bathing waters is based on a standard procedure, which is determined by the Special Secretariat for Water and carried out every two years in cooperation with the Directorates for Waters of Decentralized Administration.

For the 2018 bathing water season, the bathing water network includes **1598 monitoring sites at respective bathing waters**.

## BATHING WATER QUALITY ASSESSMENT 2018

The **bathing water quality assessment** was performed with statistical analysis, according to the provisions of article 4 and Annex I of the Directive 2006/7/EC, for the set of bathing

water quality data compiled for 2018 in relation to that bathing season and the three preceding bathing seasons (i.e. 2015-2017).

As a result of the aforementioned analysis bathing waters have been classified to the following categories/classes:

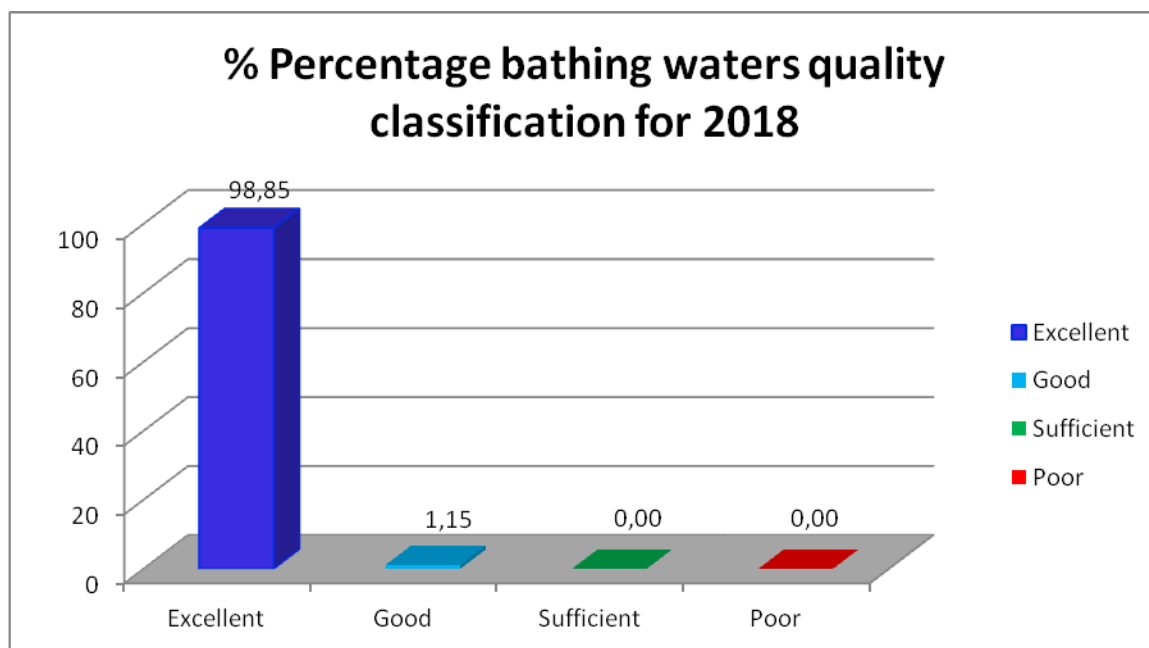
Class	Definition
1	Excellent quality
2	Good quality
3	Sufficient quality
4	Poor quality

**From the 1598 bathing waters, 1568 were assessed**, as 58 points were monitored for the first time during the period from 2017 to 2018 and 30 of them have not been evaluated for 2018, since the minimum number of samples required by the Directive 2006/7/EC has not yet been collected. However, from the preliminary results of 2017 and 2018 it is evident that the concentrations of microbiological parameters remain below the respective criteria values of excellent quality.

For the remaining 1568 bathing waters, the classification results are the following:

- ↪ **The total of 1568 bathing waters** are classified as at least “sufficient quality”.
- ↪ **From them**
- ↪ **1550 bathing waters** are classified as “excellent quality”. Two of them are inland waters.
- ↪ **18 bathing waters** are classified as “good quality” which one of them is inland water.
- ↪ **None** of bathing waters was classified as “sufficient quality”.
- ↪ **None** of bathing waters was classified as “poor quality”.
- ↪ **30 new bathing waters** were not assessed.

The following figure and table present *the results of the assessment for the 2018 bathing season*.



*Figure 1: Bathing waters classification according to Directive 2006/7/EC for the year 2018*

From the total number of 1568 monitoring sites which were evaluated, **98.85% is of excellent water quality**, while **100% of the monitoring sites are in full compliance with the requirements of the Directive 2006/7/EC**, regarding the obligation of at least “sufficient quality” by the end of 2015 bathing season.

*Table 1: Classification of bathing waters for the year 2018 according to the requirements of the Directive 2006/7/EC*

Number of assessed monitoring points	Class	Quality	% Percentage
1550	Class 1	excellent quality	98.85 %
18	Class 2	good quality	1.15%
0	Class 3	sufficient quality	0,00%
0	Class 4	poor quality	0,00%

From the 1568 bathing waters which were evaluated, 1566 are located in **coastal waters**. The assessment of coastal waters is also carried out according to the provisions of the Directive 2006/7/EC and on the basis of the set of bathing water quality data from 2015 to 2018. The coastal bathing waters are classified in the following categories:

*Table 2: Classification of Coastal bathing waters for the year 2018 according to the requirements of the Directive 2006/7/EC*

Numbers of monitoring points	Class	Quality	% Percentage
1549	Class 1	excellent quality	98.91%
17	Class 2	good quality	1.09%
0	Class 3	sufficient quality	0,00%
0	Class 4	poor quality	0,00%

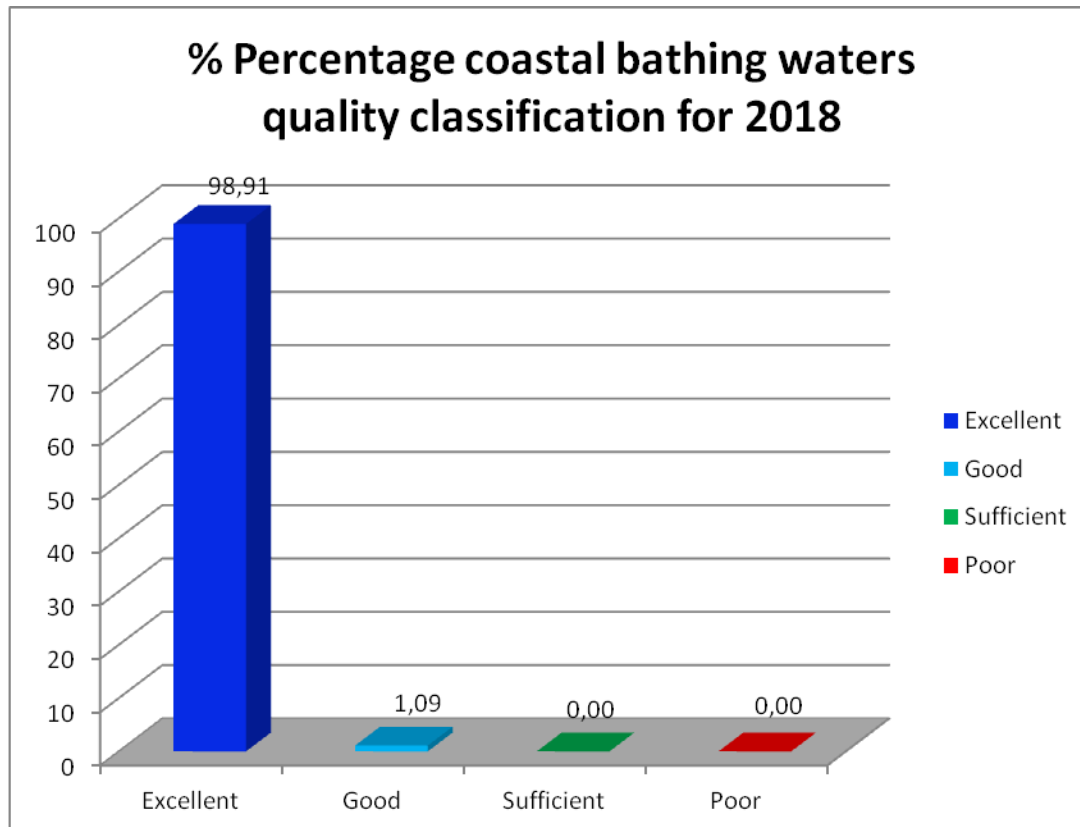
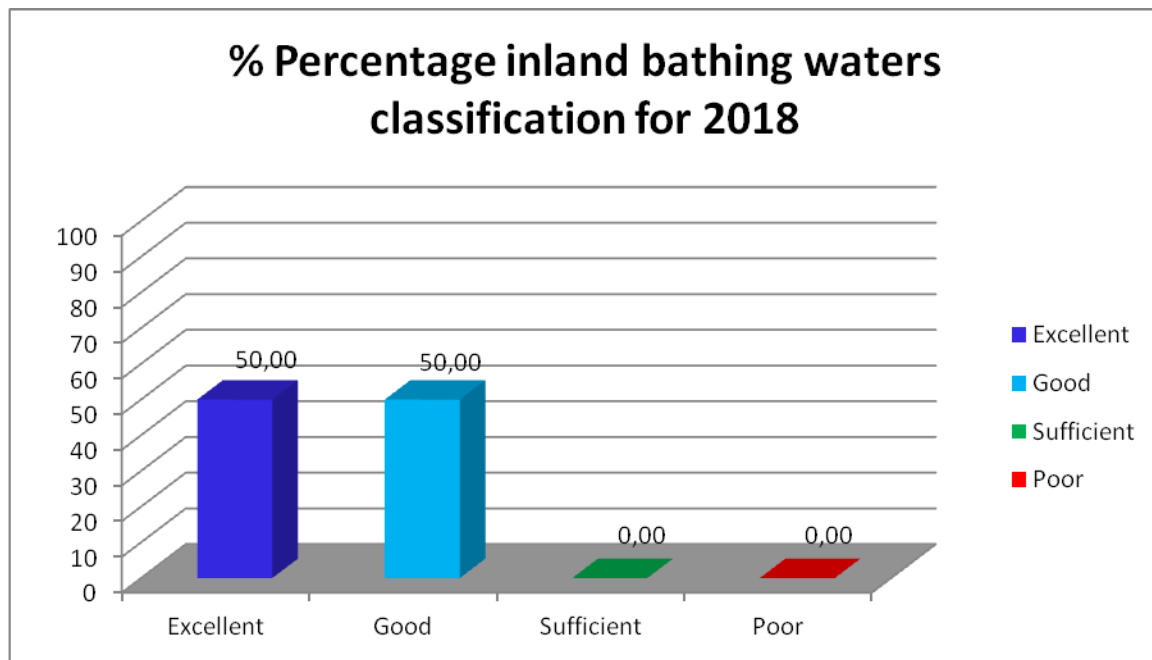


Figure 2: Coastal bathing waters classification according to Directive 2006/7/EC for the year 2018

In the monitoring network of the year 2018 three bathing sites are included in **inland waters**, in Megali Prespa Lake, Vouliagmeni Lake and Vegoritida Lake. Bathing water in Megali Prespa was not assessed as new. The assessment of inland waters is also carried out according to the provisions of the Directive 2006/7/EC and on the basis of the set of bathing water quality data from 2015 to 2018. The inland bathing waters are classified in the following categories:

Table 3: Classification of inland bathing waters for the year 2018 according to the requirements of the Directive 2006/7/EC

Numbers of monitoring points	Class	Quality	% Percentage
1	Class 1	excellent quality	50,00%
1	Class 2	good quality	50,00%
0	Class 3	sufficient quality	0%
0	Class 4	poor quality	0%



*Figure 3: Inland bathing waters classification according to Directive 2006/7/EC year 2018*

## EVOLUTION OF BATHING WATER QUALITY IN GREECE

Greece, since 1990, has systematically monitored the bathing waters quality under the provisions of the Directive 76/160/EEC and then based on the provisions of the Directive 2006/7/EC. The quality of the coastal bathing waters since 1990 is presented in Figure 4, clearly presenting that the compliance to the stricter guide values of the Directive 76/160/EEC exceeds 93% since 1995. The quality of the inland waters is presented in Figure 5 and has sharp fluctuations due to the small number of the monitored points (only 6 points).

Since 2010, Special Secretariat for Water assesses bathing waters in accordance with the Directive 2006/7/EC, *where for the year 2018 the 100% of bathing waters reached again full of compliance.*

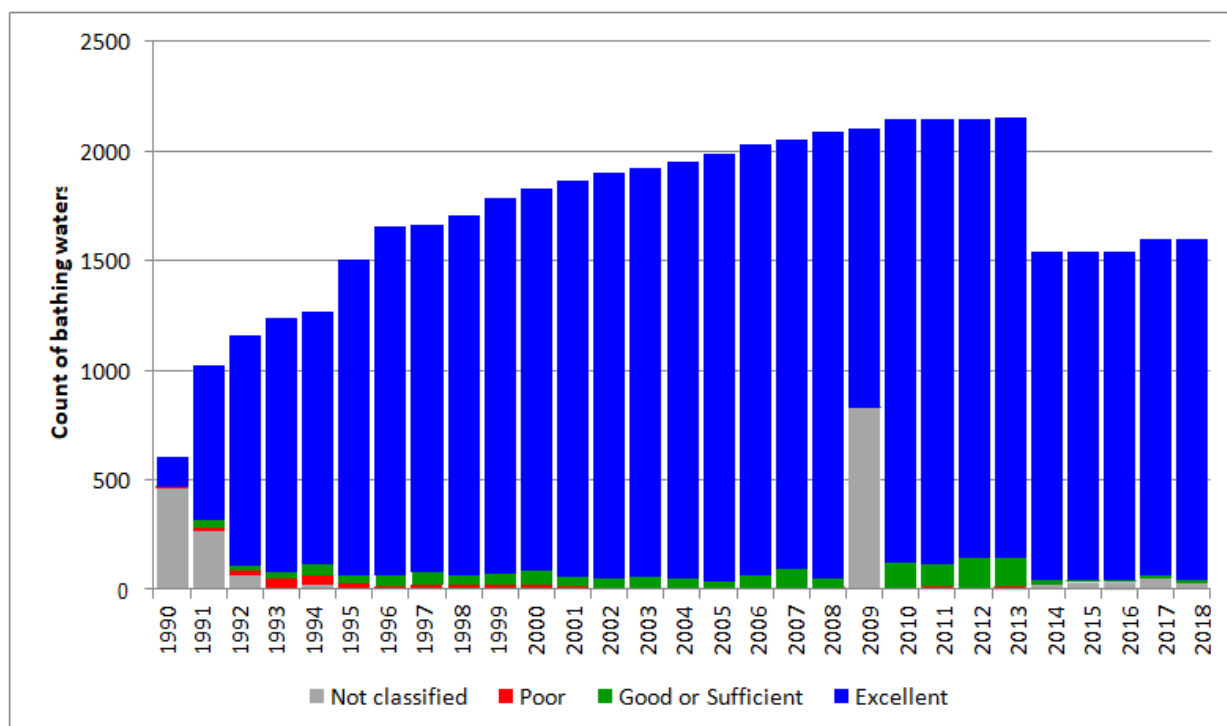


Figure 4: Coastal bathing water quality for the period 1990-2018

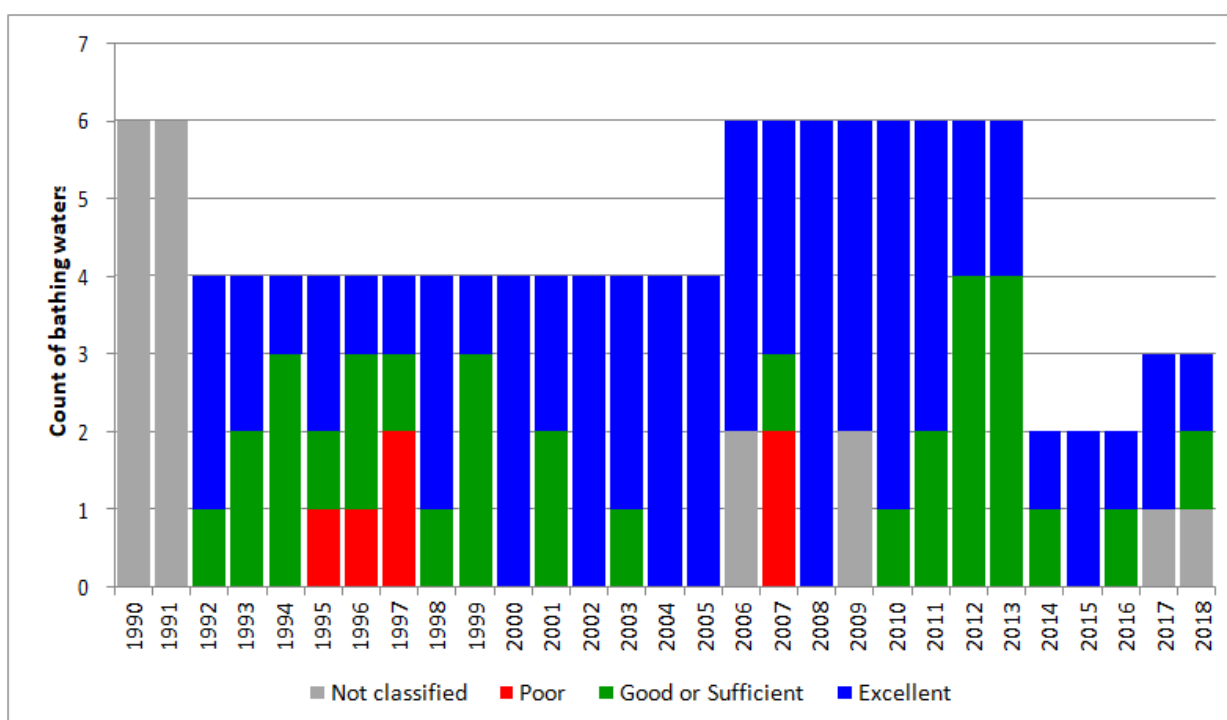


Figure 5: Inland bathing water quality for the period 1990-2018

## REGISTRY OF THE GREEK BATHING WATER PROFILES

The *Registry of the Greek Bathing Water Profiles*, which has been established for the first time in 2012, is being updated and adjusted annually, under the supervision of the the Special Secretariat for Water, in order to take into account possible modifications in monitoring network, the bathing water quality, the relation of the bathing waters to water bodies or protected areas, pressures from sources of pollution and related measures.

The aim of the Registry of Bathing Water Profiles is to describe and present the key characteristics of the bathing waters, identify the pollution sources that may affect water quality and assess the magnitude of the effects. The Registry serves also a guide for selecting appropriate measures in order to minimise the impact of pressures in bathing waters and allows for a more efficient management of resources.



For this purpose an *interactive website* presents the *Greek bathing water profiles*, in order to inform the public about the bathing water quality and the appropriate measures taken. Additionally there is possibility for the website visitors to accommodate comments.

All relevant data and information are available through the web-site

<http://www.bathingwaterprofiles.gr/>

## USEFUL LINKS

Ministry of Environment and Energy- Aquatic Environment – Bathing Waters	<a href="http://www.ypeka.gr/Default.aspx?tabid=253&amp;locale=el-GR&amp;language=en-US=el-GR">http://www.ypeka.gr/Default.aspx?tabid=253&amp;locale=el-GR&amp;language=en-US=el-GR</a>
Ministry of Environment and Energy - Greek Bathing Water Profiles Registry	<a href="http://www.bathingwaterprofiles.gr/">http://www.bathingwaterprofiles.gr/</a>
Ministry of Environment and Energy– Aquatic Environment- Bathing Water quality in Greece- Reference year 2018	<a href="http://www.ypeka.gr/LinkClick.aspx?fileticket=8brSa%2f%2bOSQo%3d&amp;tabid=253&amp;language=el-GR">http://www.ypeka.gr/LinkClick.aspx?fileticket=8brSa%2f%2bOSQo%3d&amp;tabid=253&amp;language=el-GR</a>
European Environmental Agency- Country reports	<a href="http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water">http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water</a>
European Commission – Bathing water quality	<a href="http://ec.europa.eu/environment/water/water-bathing/index_en.html">http://ec.europa.eu/environment/water/water-bathing/index_en.html</a>
European Environmental Agency - Central Data Repository	<a href="http://cdr.eionet.europa.eu/gr/eu/nbwd">http://cdr.eionet.europa.eu/gr/eu/nbwd</a>
European Environment Agency – Interactive map	<a href="http://www.eea.europa.eu/themes/water/interactive/bathing/state-of-bathing-waters">http://www.eea.europa.eu/themes/water/interactive/bathing/state-of-bathing-waters</a>

## CONTACT DETAILS

### Ministry of Environment and Energy/ Special Secretariat for Water

17 Amaliados Str. , 115 23 Athens,

Tel: (+30) 210 6475101 (+30) 2131515421

Email: [bathingwaterprofiles@prv.ypeka.gr](mailto:bathingwaterprofiles@prv.ypeka.gr)

[info.egy@prv.ypeka.gr](mailto:info.egy@prv.ypeka.gr)

Web: <http://www.ypeka.gr/Default.aspx?tabid=253&locale=el-GR&language=en-US=el-GR>  
<http://www.bathingwaterprofiles.gr/>

## MAP OF THE BATHING WATER MONITORING SITES AND CHARACTERISATION FOR THE 2018 BATHING SEASON



### Bathing Water Quality

- Excellent Quality
- Good Quality
- Επαρκής ποιότητα
- Ανεπαρκής ποιότητα
- Νέες ακτές