

## Bathing water results 2009 – Slovenia

### 1. Introduction

This report gives a general overview of bathing water quality in Slovenia during the 2009 bathing season.

Slovenia reported five parameters under the Directive 76/160/EEC (1 Total coliforms, 2 Faecal coliforms, 8 Mineral oils, 9 Surface-active substances reacting with methylene blue, 10 Phenols (phenol indices)).

The parameters to be taken into account for assessment according to the assessment rules of the Directive 76/160/EEC are microbiological (1 Total coliforms, 2 Faecal coliforms) and physico-chemical (8 Mineral oils, 9 Surface-active substances reacting with methylene blue, 10 Phenols (phenol indices)).

The bathing waters are classified in the following categories:

- Compliant with mandatory values of the Directive for the five parameters (class CI);
- Compliant with mandatory and more stringent guide values of the Directive for the five parameters (class CG);
- Not compliant with mandatory values of the Directive for the five parameters (class NC);
- Banned or closed (temporarily or throughout the season) (class B).

### 2. Length of bathing season and number of bathing waters

The bathing season lasted 3.5 months, from 1 June to 15 September 2009, for coastal bathing waters and 2.5 months, from 15 June to 31 August 2009, for freshwater bathing waters.

A total of 45 bathing waters were monitored in Slovenia during the 2009 bathing season, of which 20 were coastal bathing waters and 25 freshwater bathing waters (17 on rivers; eight on lakes).

With 45 bathing waters Slovenia accounts for about 0.2% of the reported bathing waters of the European Union.

The evolution of the reported number of bathing waters since monitoring of the water quality began under the Directive 76/160/EEC is presented in Table 1. The number of coastal bathing waters remained stable since the start of the reporting in 2004. It started with 19 and increased to 20 in 2009 with one new bathing water added to the list compared to the previous year. The number of freshwater bathing waters increased from 18 in 2004 to 25 in 2009. There were seven more freshwater bathing waters in 2009 than in the previous five years of the reporting: eight new bathing waters were added to the list and one was de-listed.

### 3. Results of bathing water quality

The results of the bathing water quality in Slovenia for the period 2004-2008 as reported in the past reporting years and for the bathing season of 2009 are presented in Figure 1. The previous reports are available on the European Commission's bathing water quality website ([http://ec.europa.eu/environment/water/water-bathing/index\\_en.html](http://ec.europa.eu/environment/water/water-bathing/index_en.html); Water and Health/Bathing Water/2005-2009 reports) and the European Environment Agency's bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>; reports for 2008 bathing season).

The graphs show, for coastal and freshwater bathing waters separately:

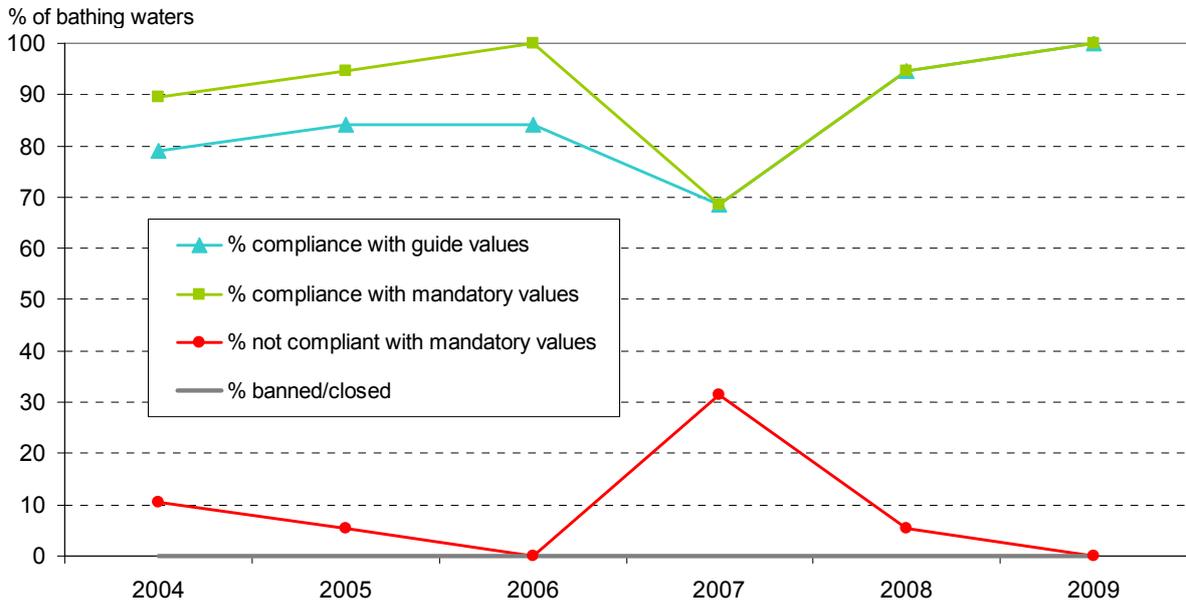
- The percentage of bathing waters that comply with the guide values (class CG, blue line);
- The percentage of bathing waters that comply with the mandatory values (class CI, green line);
- The percentage of bathing waters that do not comply with the mandatory values (class NC, red line);
- The percentage of bathing waters that are banned or closed (temporarily or throughout the season) (class B, grey line).

Table 1 shows the same information in absolute numbers and in percentages separately for coastal and freshwater bathing waters. Table 2 shows the bathing water quality results for the 2009 season in Slovenia for all bathing waters.

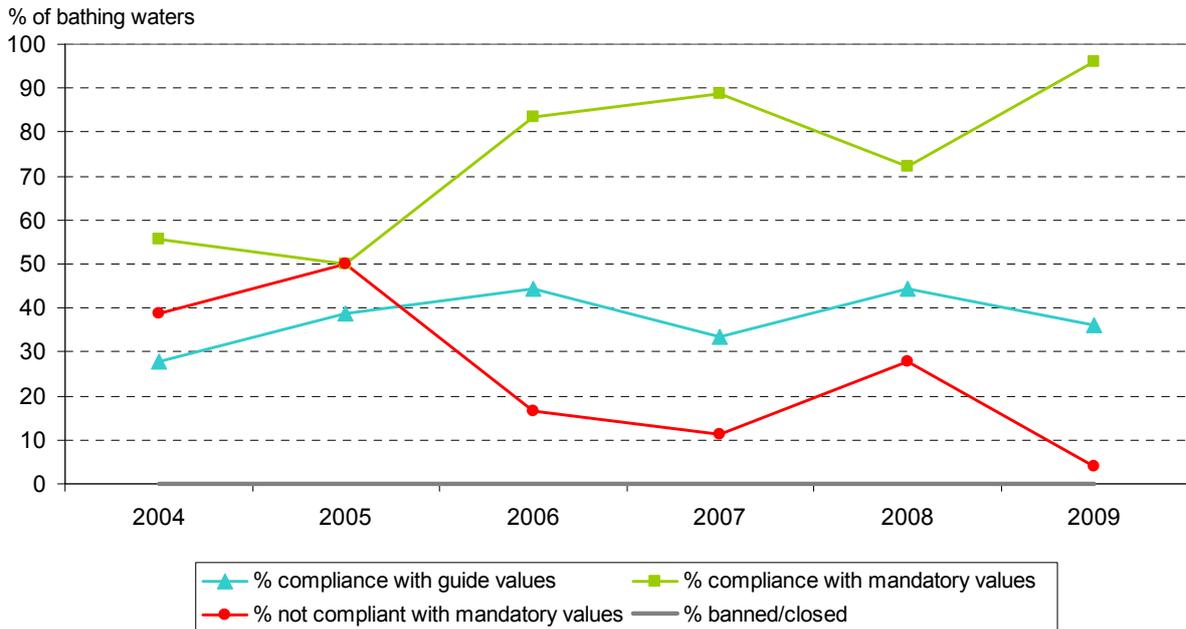
Map 1 shows the location of the reported bathing waters in Slovenia. The location of the bathing waters is based on the geographic coordinates reported by the Slovenian authorities.

**Figure 1: Results of bathing water quality in Slovenia from 2004 to 2009**

**Coastal bathing waters (SI)**



**Freshwater bathing waters (SI)**



**Table 1: Results of bathing water quality in Slovenia from 2004 to 2009**

		SI								
		Total number of bathing waters	Compliance with guide values		Compliance with mandatory values		Not compliant		Banned/closed temporarily or throughout the season	
			Number	%	Number	%	Number	%	Number	%
Coastal bathing waters	2004	19	15	78.9	17	89.5	2	10.5	0	0.0
	2005	19	16	84.2	18	94.7	1	5.3	0	0.0
	2006	19	16	84.2	19	100.0	0	0.0	0	0.0
	2007	19	13	68.4	13	68.4	6	31.6	0	0.0
	2008	19	18	94.7	18	94.7	1	5.3	0	0.0
	2009	20	20	100.0	20	100.0	0	0.0	0	0.0
Freshwater bathing waters	2004	18	5	27.8	10	55.6	7	38.9	0	0.0
	2005	18	7	38.9	9	50.0	9	50.0	0	0.0
	2006	18	8	44.4	15	83.3	3	16.7	0	0.0
	2007	18	6	33.3	16	88.9	2	11.1	0	0.0
	2008	18	8	44.4	13	72.2	5	27.8	0	0.0
	2009	25	9	36.0	24	96.0	1	4.0	0	0.0

Note: Bathing waters which were insufficiently sampled or not sampled according to the Bathing Water Directive were not included in this table. Therefore, in some cases, the sum of the different categories will not be equal to the total number of bathing waters. Bathing waters which were compliant with the guide values were also compliant with the mandatory values.

**Table 2: Results of bathing water quality for all bathing waters in Slovenia in 2009**

		SI								
		Total number of bathing waters	Compliance with guide values		Compliance with mandatory values		Not compliant		Banned/closed temporarily or throughout the season	
			Number	%	Number	%	Number	%	Number	%
Bathing waters	2009	45	29	64.4	44	97.8	1	2.2	0	0.0

Note: Bathing waters which were compliant with the guide values were also compliant with the mandatory values.

## 4. Development of bathing water quality

### Coastal bathing waters

In Slovenia, 100% of the coastal bathing waters met both the mandatory values and the more stringent guide values in 2009. This is an increase compared to the previous year, when 94.7% of the bathing waters met both the mandatory values and the guide values. Since the start of the reporting in 2004, no coastal bathing water had to be closed during the season.

Since 2004, there was an improvement in the quality of the coastal bathing waters, both in terms of compliance with the mandatory values and the guide values, with a drop below 70% in 2007. 100% compliance rate was reached in 2006 and 2009 for the mandatory values and in 2009 for the guide values.

### Freshwater bathing waters

96 % of the freshwater bathing waters met the mandatory values in 2009. This is a significant increase of 23.8% compared to the previous year. The rate of compliance with the guide values, however, decreased from 44.4% to 36%. The number of non-compliant bathing waters with the mandatory values decreased from five (27.8%) to only one bathing water (4%). Since the start of the reporting in 2004, no freshwater bathing water had to be closed during the season.

There was an improvement in compliance with the mandatory values since 2004 with a drop in 2008. The compliance with the guide values fluctuated between 27.8% in 2004 and 44.4% in 2006 and 2008.

## **5. General information as provided by the Slovenian authorities**

### **Monitoring**

The bathing water quality monitoring was carried out by the Environmental Agency of the Republic of Slovenia (bathing areas) and the operators of natural bathing sites. The operators provide the monitoring results to the National Institute of Public Health as the registry operator of bathing waters. Sampling frequency complied with the requirements of the Directive 76/160/EEC at all bathing waters (at least 1-fold in 14 days). In bathing areas with variable water quality during the period 2004 - 2008, the Environmental Agency of the Republic of Slovenia increased the frequency of sampling in order to provide more data and to improve statistically reliable monitoring results. In these areas, the sampling took place each week. According to the Annex 1 of the Directive 76/160/EEC, the sampling frequency can be reduced. Republic of Slovenia did not use this option in order to provide as much data as possible about the quality of bathing waters for planning of eventual actions.

### **Non-complying bathing water**

The results of the monitoring of bathing water quality show that non-compliance with the mandatory values is due to microbiological contamination of water. In 2009, only one freshwater bathing water Soča, Solkan was non-compliant (one sample for faecal coliforms). Analyses of the catchment area of the bathing water show that urban waste water disposal and treatment system is of key importance for ensuring adequate quality of bathing water. It is estimated that leaching from agricultural and other contaminated surfaces contributes to microbiological contamination to a certain extent.

### **Public participation and information to public**

In 2008, the Republic of Slovenia adopted new regulations for the management of bathing water quality that transpose the requirements of the Directive 2006/7/EC into Slovenian law:

1. Rules on the detailed criteria for assessment of bathing waters (Official Journal RS, No. 39/08);
2. Regulation on the management of bathing waters (Official Journal RS, No. 25/08).

That Regulation also lays down a list of bathing waters, which are divided into natural sites where bathing is organized, and the bathing areas, where the bathing is traditionally practiced freely. The regulation with a draft list of bathing waters was a subject of public hearing. A few comments were received, especially from local communities to extend the list. Additional nine bathing waters were added to the list of bathing waters in 2009. The extended list has been communicated with public via official web page of the Ministry of Environment and Physical Planning prior to the start of the bathing season. In addition, the list of bathing waters differs from the previous year after de-listing of bathing area Dolenje jezero-Otok (intermittent Cerknica lake) due to decreased number of bathers since 2004 and extremely vulnerable and important protected area (Regional park and Natura 2000 site). Positive opinion on the proposal for de-listing also gave the local community and the Institute of the Republic of Slovenia for Nature Conservation.

In 2009, a publication informing the public on bathing water quality was issued in printed and electronic form. Here detailed description is given for all bathing waters in Slovenia and can be downloaded at <http://www.arso.gov.si/vode/kopalne%20vode/kopalne%20vode09web.pdf>.

The publication has been prepared by six institutions involved in miscellaneous aspects of bathing: Environmental Agency of the Republic of Slovenia, National Institute of Public Health, Administration of the Republic of Slovenia for Civil Protection and Disaster Relief, Police, foundation Doves and Institute of the Republic of Slovenia for Nature Conservation. The publication was sent to municipalities, tourist offices, operators of bathing sites and others. Information to public has also been provided on press conferences, information points and notice boards set up in bathing areas. Since the River Krka freshwater bathing water is problematic for years, Slovenian authorities (Tourist board of Novo mesto) organized a symposium "When bathing will be possible along its whole river flow". Coastal bathing waters, their quality and plans in the future were presented in an exhibition

Internautica. In the context of document-educational films "Slovenian water cycle", the topic on bathing waters was presented in broadcast of the Piran Bay.

All national reports on the quality of bathing water and reports to the European Commission on the implementation of Directive 76/160/EEC in Slovenia are published on the websites of the Environmental Agency of the Republic of Slovenia and the National Institute of Public Health (<http://www.arso.gov.si/vode/kopalne%20vode/poro%c4%8dila/>; [http://www.ivz.si/Mp.aspx?ni=116&pi=5&5\\_PageIndex=0&5\\_groupId=246&5\\_action=ShowList](http://www.ivz.si/Mp.aspx?ni=116&pi=5&5_PageIndex=0&5_groupId=246&5_action=ShowList)). The latter are also accessible via the website of the Ministry of the Environment and Spatial Planning, which also provides information on ongoing projects relating to the fulfilment of the requirements of Directive 76/160/EEC and Directive 2006/7/EC ([http://www.mop.gov.si/si/delovna\\_podrocja/direktorat\\_za\\_okolje/sektor\\_za\\_vode/kopalne\\_vode/](http://www.mop.gov.si/si/delovna_podrocja/direktorat_za_okolje/sektor_za_vode/kopalne_vode/)).

Information was supplied to the public also through the websites of the Ministry of the Environment and Spatial Planning, the Environmental Agency of the Republic of Slovenia (<http://www.arso.gov.si/vode/kopalne%20vode/>) and the National Institute of Public Health, as well as through other media (radio, newspapers).

Information of the bathing water quality in 2009 for each location can be found at [http://www.arso.gov.si/vode/kopalne%20vode/amp/kopalne\\_vode\\_map.html](http://www.arso.gov.si/vode/kopalne%20vode/amp/kopalne_vode_map.html).

Detailed report by the Slovenian authorities to the European Commission in regard to bathing water quality in Slovenia for the 2009 bathing season (in Slovene) can be obtained at [http://cdr.eionet.europa.eu/si/eu/bathing/envszimca/SI\\_BW\\_report\\_2009.pdf](http://cdr.eionet.europa.eu/si/eu/bathing/envszimca/SI_BW_report_2009.pdf).

## **Wastewater treatment**

Development of the systems for urban waste water treatment is one of the major environmental investment in the Republic of Slovenia lately. It is coordinated at the national level. The key implementing act for the achievement of the objectives in this field is the Operational programme for the discharge and treatment of urban waste water (Government Decision No 352-08/2001-2 of 14 October 2004), which sets the timeframe for the construction of urban waste water collecting systems and treatment plants and provides a cost estimate. The operational programme specifies the individual agglomerations' deadlines for ensuring that urban waste water is disposed of and treated in accordance with the provisions of Directive 91/271/EEC, taking into account the provisions of the Act concerning the conditions of accession of the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia, Slovakia and the adjustments to the Treaties on which the European Union is founded (OJ C 227 E, 23 September 2003), which lays down the deadlines for meeting the individual requirements of Directive 91/271/EEC in Slovenia.

In 2009, the novelation of the Operational programme for the discharge and treatment of urban waste water was prepared. It is in the final stage of government adoption procedure. The programme is upgraded with the more stringent requirements relating to the discharge and treatment of urban waste water from the agglomerations situated in bathing water catchment areas or areas having a direct impact on bathing water, which were established in 2007, namely:

- tertiary treatment must be applied to urban waste water in all agglomerations with a population equivalent of more than 2 000 situated in the catchment area of sensitive areas due to bathing waters,
- supplementary treatment of urban waste water for the elimination of microbiological contamination must be ensured during the bathing season in addition to the tertiary treatment in all agglomerations with a population equivalent of more than 2 000 and in addition to the adequate treatment in all agglomerations with a population equivalent of less than 2 000, if the agglomeration is situated in the areas having a direct impact on bathing water,
- adequate individual arrangement of discharge and treatment must be applied to urban waste water in areas where public urban waste water collecting system is not foreseen.

## 6. More information on bathing water quality in the European Union

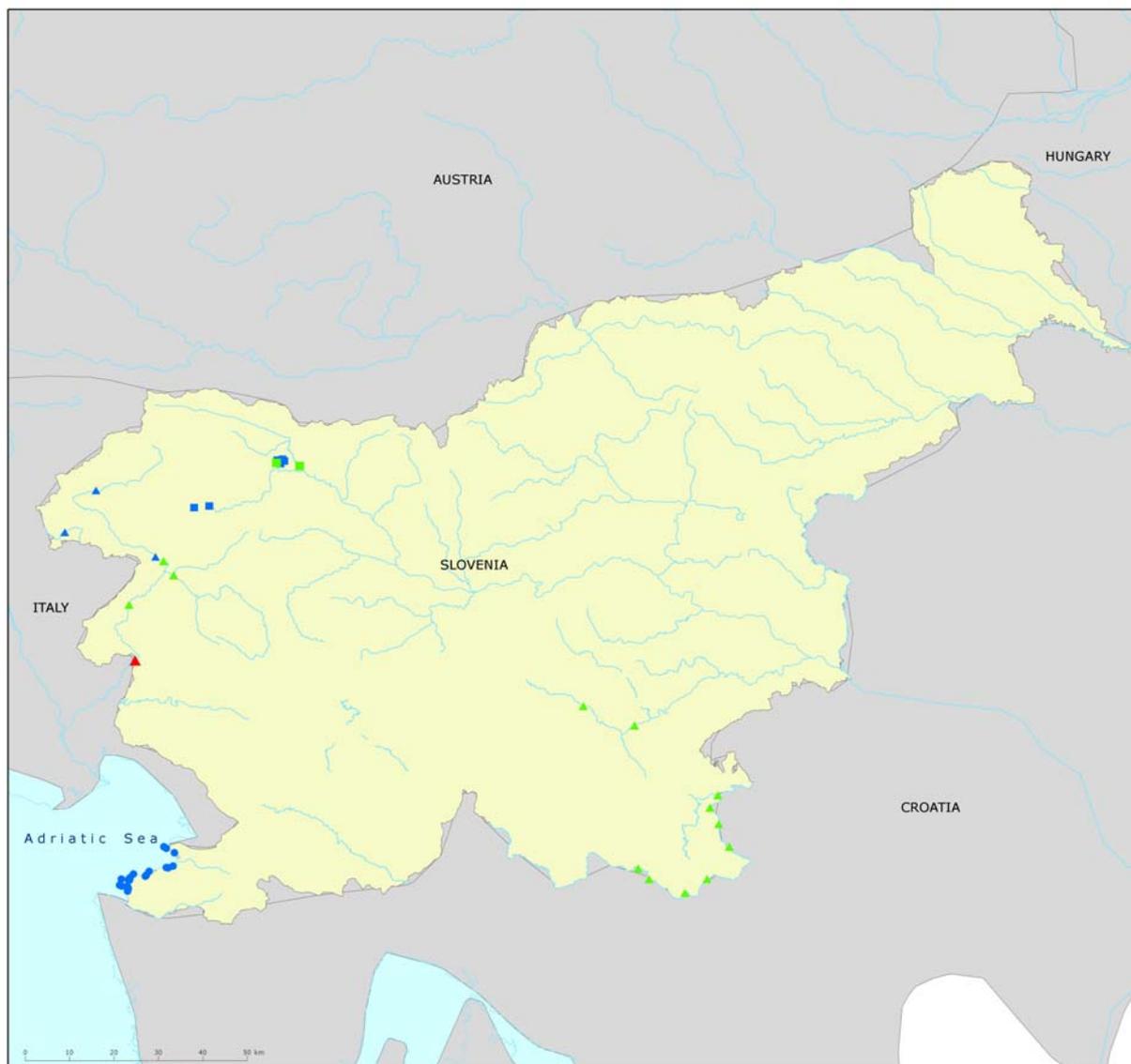
More information on bathing water quality in the European Member States, including the EU summary report, the reports for 27 Member States, Croatia and Switzerland, can be found on the European Commission's bathing water quality website ([http://ec.europa.eu/environment/water/water-bathing/index\\_en.html](http://ec.europa.eu/environment/water/water-bathing/index_en.html)) and the European Environment Agency's bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>). The reports for the bathing seasons of 2008 and 2009 have been produced by the Institute for Water of the Republic of Slovenia (IWRS), a partner in the EEA European Topic Centre on Water (ETC/W). Countries have collaborated in the assessment of bathing water quality and supplied additional information when needed.

By 2015, Member States will have to comply with the stricter and more ambitious requirements laid out in the New Bathing Water Directive (Directive 2006/7/EC). This Directive requires more effective monitoring and management of bathing waters, greater public participation and improved information. More information on the new Directive can be found on the bathing water quality website and on <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF>.

Cyprus, Denmark, Estonia, Finland, Germany, Hungary, Latvia, Lithuania, Slovakia, Spain and Sweden started to report according to more stringent new requirements in 2008 bathing season. Malta and the Netherlands started to report in 2009 bathing season under the new requirements. Sweden and Malta also sent data for three previous bathing seasons under the new requirements. Luxembourg started to monitor under the new requirements in 2006 bathing season, while reported for the first time in 2007 bathing season.

WISE - Water Information System for Europe ([www.water.europa.eu](http://www.water.europa.eu)) is a gateway to all water related information. Among other water related data, information on individual bathing water quality can be found in the WISE map viewer and WISE Bathing Water Quality data viewer through interactive maps and graphs (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>).

**Map 1: Bathing waters reported during the 2009 bathing season in Slovenia**



Bathing water quality			No data
<b>Bathing waters on rivers</b>	<b>Bathing waters on lakes</b>	<b>Coastal/transitional bathing waters</b>	□ No data
▲ Compliant with guide values	■ Compliant with guide values	● Compliant with guide values	■ Outside data coverage (data available, not presented on the map)
▲ Compliant with mandatory values	■ Compliant with mandatory values	● Compliant with mandatory values	
▲ Closed*	■ Closed*	● Closed*	
▲ Insufficiently sampled or not sampled	■ Insufficiently sampled or not sampled	● Insufficiently sampled or not sampled	
▲ Not compliant with mandatory values	■ Not compliant with mandatory values	● Not compliant with mandatory values	

**Note:** \* banned or closed (temporarily or throughout the season)  
 More data on bathing water quality on: <http://www.eea.europa.eu/themes/water/mapviewers/bathing>  
**Source:** National boundaries: GISCO; Large rivers and lakes: EEA, WFD Article 3; Bathing waters data and coordinates: Slovenian authorities