

## Bathing water results 2009 – Slovakia

### 1. Introduction

This report gives a general overview of bathing water quality in Slovakia during the 2009 bathing season. Slovakia reported under the Directive 2006/7/EC in 2008 and 2009 bathing season.

Before the necessary data set for assessment of bathing water quality under the Directive 2006/7/EC is compiled (data for three or four consecutive years) the rules for transition period assessment is done. This means that the classification of bathing waters is defined on the basis of concentrations of intestinal enterococci and *Escherichia coli* that are reported under the Directive 2006/7/EC. The limit values for the classification are taken from the Directive 76/160/EEC. For the conversion of reported parameters under the Directive 2006/7/EC, Article 13.3 of the Directive 2006/7/EC foresees that the parameter *Escherichia coli*, reported under the Directive 2006/7/EC, is assumed to be equivalent to the parameter faecal coliforms of the Directive 76/160/EEC. The parameter intestinal enterococci reported under the Directive 2006/7/EC is assumed to be equivalent to the parameter faecal streptococci.

The results are classified in the following categories:

- Compliant with the mandatory value of the Directive 76/160/EEC for *Escherichia coli* and not compliant with the guide values of the Directive 76/160/EEC for *Escherichia coli* or intestinal enterococci (class CI);
- Compliant with the mandatory value of the Directive 76/160/EEC for *Escherichia coli* and the more stringent guide values for the *Escherichia coli* and intestinal enterococci (class CG);
- Not compliant with the mandatory value of the Directive 76/160/EEC for *Escherichia coli* (class NC);
- Banned or closed (temporarily or throughout the season) (class B).

This year the interval between two samples during the bathing season should not be larger than 41 days. The interval is longer than 31 days as defined in the Directive 2006/7/EC, since we are approaching the year 2012 only when the assessment rules will be in full compliance with the rules of this Directive. Furthermore, the first sample that should be taken shortly before the start of the bathing season could be taken even 10 days after the start of the bathing season.

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

The bathing season lasted three months, from 15 June to 15 September 2009, except for two bathing waters opened on 1 July, 10 bathing waters closed on 31 August and one bathing water closed on 10 September. The actual beginning and end of bathing season is set by the bathing area operator depending on weather, operation readiness, water quality, technical state and visit rate of the bathing area.

A total of 36 freshwater bathing waters on lakes were monitored in Slovakia during the 2009 bathing season. There are no coastal bathing waters in Slovakia.

With 36 bathing waters Slovakia 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 and the Directive 2006/7/EC is presented in Table 1. The number of reported bathing waters decreased since the start of the reporting from 67 in 2004 to 39 in 2005 and remained rather stable afterwards. In 2009, 36 bathing waters were reported, the same as in the previous year. One bathing water was re-opened in 2009 after a closure in 2008.

### 3. Results of bathing water quality

The results of the bathing water quality in Slovakia 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).

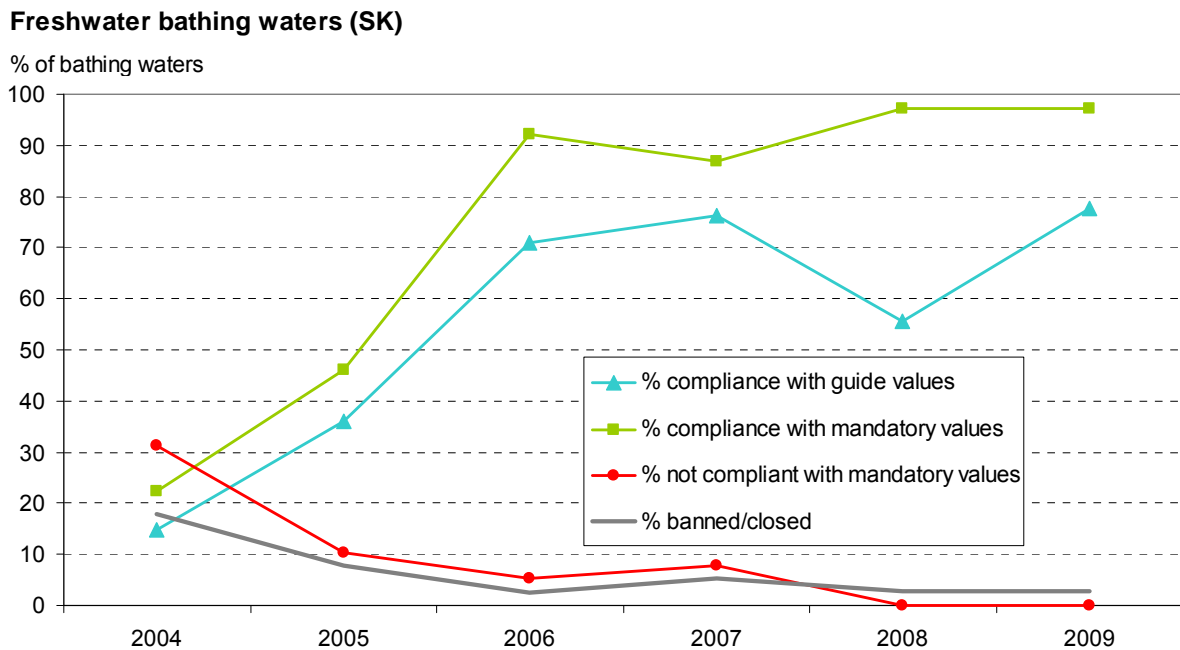
The graph shows, for freshwater bathing waters:

- 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 for freshwater bathing waters.

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

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



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

		SK								
		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	%
Freshwater bathing waters	2004	67	10	14.9	15	22.4	21	31.3	12	17.9
	2005	39	14	35.9	18	46.2	4	10.3	3	7.7
	2006	38	27	71.1	35	92.1	2	5.3	1	2.6
	2007	38	29	76.3	33	86.8	3	7.9	2	5.3
	2008*	36	20	55.6	35	97.2	0	0.0	1	2.8
	2009	36	28	77.8	35	97.2	0	0.0	1	2.8

Note: Bathing waters which were insufficiently sampled or not sampled according to the Bathing Water Directive or the New 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 for five parameters under the Directive 76/160/EEC (2004-2007) or the mandatory value for *Escherichia coli* (2008, 2009).

\* : Changes after official report for 2008 bathing season.

#### 4. Development of bathing water quality

In Slovakia, 97.2% of the freshwater bathing waters met the mandatory water quality in 2009, the same as in the previous year. The compliance with the guide values increased significantly from 2008 to 2009 (by 22.2%) and reached 77.8% of the bathing waters. In the last two years no bathing water was non-compliant with the mandatory value for *Escherichia coli* compared to three bathing waters (7.9%) in 2007. One bathing water (2.8%) was closed during the season, the same as in 2008.

In 2004, a large number of bathing waters, almost 30%, could not be assessed because they were insufficiently sampled. Since 2005, there has been a strong increase in the percentage of the bathing waters compliant with the mandatory values (dip in 2007), an increase in the percentage of the bathing waters compliant with the guide values (dip in 2008) and an important decrease of non-compliant bathing waters. The number of closed bathing waters was the highest in 2004 (17.9%), but it dropped significantly to 2.8% lately.

#### 5. General information as provided by the Slovakian authorities

The Directive 2006/7/EC was transposed into the national legislation by the Government Regulation No. 87/2008, valid from 5 March 2008. On the basis of long-term monitoring and assessment of water quality 36 natural water sites were declared as being suitable for bathing. They are gravel or sand pits or water reservoirs on rivers and streams with significant recreational use. Veľké Kolpašské jazero that was closed in 2008 was monitored again in 2009 after reconstruction.

#### Monitoring and quality of bathing water

Act No. 355/2007 on the protection, promotion and development of public health and amending some laws as amended by Law No. 140/2008, as well as the Governmental Regulation No. 87/2008 of the requirements for natural bathing waters, gave the responsibility for ensuring the monitoring of water suitable for bathing to the Slovak Public Health Authority (PHA SR) and regional public health authorities (RPAH). The monitoring is carried out at frequencies and by methods in line with Directive 2006/7/EC. PHA SR and RPAH (36) also give instructions to correct deficiencies detected, levy payments and impose penalties.

In 2009, the Slovak Republic authorities observed 75 natural waters, of which 36 were declared as water suitable for bathing. Nevertheless, regular checks of hygienic conditions have been performed at all sites. The limit value for intestinal enterococci has been exceeded at Dolno Hodrušské jazero (one sample), Kunovská priehrada (two samples) and Gazarka (one sample). The limit values for *Escherichia coli* have been exceeded in one sample at Veľký Draždiak and Zlaté piesky.

At Gazarka (Senica district) a ban has been issued on 7 July due to presence of cyanobacteria with the ability to form flower water and drop in chlorophyll a. The prohibition of bathing water lasted until the end of the bathing season (15 September) also due to high toxicity of water. Poor water quality was also resembled in low transparency, colour, found floating pollution, total phosphorus. A similar situation also occurred last year.

Two bathing waters were affected by short term pollution.

### **Public participation and information**

Before the start of the bathing season, a list of proposed bathing waters and a report on their suitability were published at PHA SR. Ten comments have been received by electronic mail mostly in regard to water quality. The final list of waters suitable for bathing was published at PHA SR in the first week of June. Each week during the season, RPAH updated information on water quality of bathing waters and regularly published articles on possible health risks for bathers. There have been a lot of discussion programs on television and radio broadcasts. At the end of the season, PHA SR prepared an evaluation report on the monitoring of the hygienic situation of bathing waters in 2009. Documents were obtained from RPAH. Further information is available on two websites: <http://vodanakupanie.sazp.sk> and <http://www.uvzsr.sk>. Reports on water quality suitable for bathing, submitted to the European Commission are also available at the Slovak Environmental Agency (<http://www.sazp.sk>).

### **Water protection measures**

The basic water-management legislation consists of the Water Act No 364/2004, which provides for comprehensive protection of waters including aquatic ecosystems, improvement of water status and sustainable exploitation of waters. Water quality is affected by natural processes and human activity. There are various sources of pollution of bathing waters, the main ones being populated areas and agricultural activity. The following measures have been taken to improve water status:

- programme to reduce water pollution by harmful and hazardous substances;
- agricultural activities programme and the Code of Good Farming Practice;
- water monitoring programme;
- guidelines for the work of the regional environmental authorities on bathing waters.

The river-basin management plans and programmes of measures under the terms of the Water Framework Directive are prepared. The implementation programme for Directive 91/271/EEC concerning urban waste water treatment has been updated. The bathing water profiles are under the preparation. Work is under way on constructing waste water collection and drainage systems and treatment facilities and on stepping up wastewater treatment processes. Measures are implemented under the Farming Activities Programme.

The report by the Slovakian authorities in regard to bathing water quality in Slovakia for 2009 bathing season (in Slovak) can be obtained from [http://cdr.eionet.europa.eu/sk/eu/bathing/envsy\\_jza/SK\\_BWD\\_report\\_2009.pdf](http://cdr.eionet.europa.eu/sk/eu/bathing/envsy_jza/SK_BWD_report_2009.pdf).

## **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 Slovakia**

