

Bathing water results 2010 – The Czech Republic

1. Reporting and assessment

This report gives a general overview of bathing water quality in the Czech Republic during the 2010 bathing season.

The Czech Republic reported 13 parameters under the Directive 76/160/EEC (1 Total coliforms, 2 Faecal coliforms, 3 Faecal streptococci, 4 Salmonella, 5 Enteroviruses, 6 pH, 7 Colour, 8 Mineral oils, 9 Surface-active substances reacting with methylene blue, 10 Phenols (phenol indices), 11 Transparency, 12 Dissolved oxygen, 13 Tarry residues and floating materials).

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);
- Insufficiently sampled (class NF);
- Not sampled (class NS).

2. Length of bathing season and number of bathing waters

The bathing season started from 3 May to 26 July 2010 with most bathing waters opened in June. Bathing waters closed from 2 August to 21 September 2010.

A total of 186 bathing waters were reported in the Czech Republic during the 2010 bathing season. All of these bathing waters are inland bathing waters, all located on lakes.

With 186 bathing waters the Czech Republic accounts for about 0.9 % 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 bathing waters has increased since the start of the reporting from 176 in 2004 to 188 in 2006. It decreased to 186 in 2010 since two bathing waters were de-listed (one in 2009 and one in 2010).

3. Bathing water quality

Figure 1 presents the results of the bathing water quality in the Czech Republic for the period 2004-2010. 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; Water and Health/Bathing Water/2005-2010 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 the 2008 and 2009 bathing seasons).

The graph shows, for inland 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 inland bathing waters. Table also presents numbers and percentages of insufficiently sampled or not sampled bathing waters.

Map 1 shows the location and bathing water quality of the reported bathing waters in the Czech Republic.

In the Czech Republic, 86.6 % of the inland bathing waters met the mandatory values in 2010. This is a decrease of 4.8 % compared to the previous year. The rate of compliance with the guide values decreased from 63.1 % to 53.2 %. The number of non-compliant bathing waters with the mandatory values increased by one bathing water, reaching three bathing waters (1.6 %). The number of inland bathing waters that were closed (banned) during the season increased from eight (4.3 %) to 16 bathing waters (8.6 %).

At the beginning of the monitoring in 2004, the number of inland bathing waters that complied with the mandatory values was rather low due to the high number of insufficiently sampled bathing waters. From 2004 to 2009, the compliance with the mandatory values increased from below 50 % to above 90 %. Similarly, the compliance with the more stringent guide values increased from below 40 % to above 60 %, but with a drop by almost 10 % in 2010. The percentage of closed (banned) bathing waters varied from 4.3 % in 2009 to 13.3 % in 2007.

Figure 1: Results of bathing water quality in the Czech Republic from 2004 to 2010

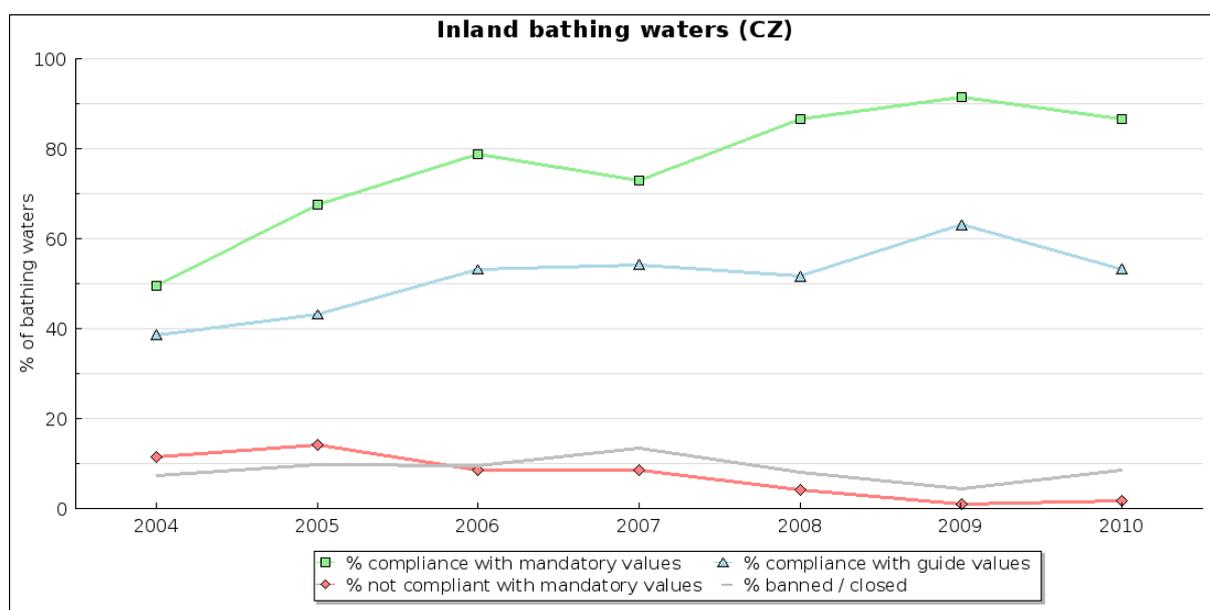
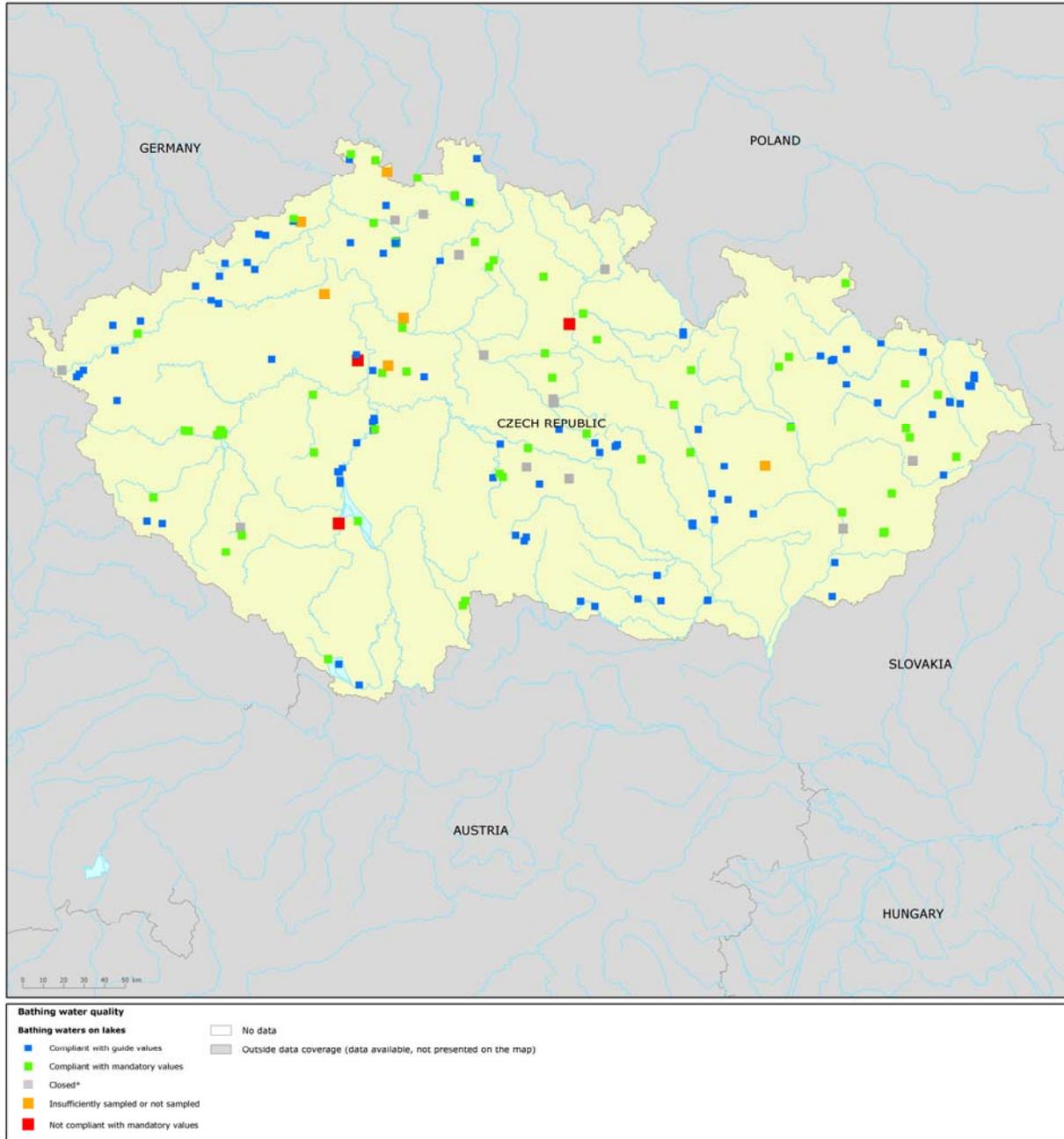


Table 1: Results of bathing water quality in the Czech Republic from 2004 to 2010

CZ												
		Total number of bathing waters	Compliance with guide and mandatory values*		Compliance with mandatory values		Not compliant		Banned/closed temporarily or throughout the season		Insufficiently sampled or not sampled	
			number	%	number	%	number	%	number	%	number	%
Inland bathing waters	2004	176	68	38.6	87	49.4	20	11.4	13	7.4	56	31.8
	2005	176	76	43.2	119	67.6	25	14.2	17	9.7	15	8.5
	2006	188	100	53.2	148	78.7	16	8.5	18	9.6	6	3.2
	2007	188	102	54.3	137	72.9	16	8.5	25	13.3	10	5.3
	2008	188	97	51.6	163	86.7	8	4.3	15	8	2	1.1
	2009	187	118	63.1	171	91.4	2	1.1	8	4.3	6	3.2
	2010	186	99	53.2	161	86.6	3	1.6	16	8.6	6	3.2

*Bathing waters, which were compliant with the guide values, were also compliant with the mandatory values.

Map 1: Bathing waters reported during the 2010 bathing season in the Czech Republic



4. Important information as provided by the Czech Republic authorities

De-listing of bathing water

The bathing site "Rybník Vajgar" (CZ0313545881310551) was de-listed in the 2010 season since the number of bathers considerably decreased due to opening of a new large aqua park on the other side of the lake.

Communication to the public

Central web pages (<http://www.mzcr.cz/>; <http://www.szu.cz/chzp/koupani/> so far only in Czech) were created to keep the public informed about water quality, offering general information focused mostly on potential health risks of bathing in natural water bodies, as well as recommendations on how to limit those risks. The pages also contain links to web pages of the relevant regional Public Health Authorities where information about the current quality of water on particular sites is published. Moreover, current information about water quality of bathing places is displayed at the map server of the Portal of the Public Administration (<http://geoportal.cenia.cz>) and at the maps of several other tourist portals.

A set of symbols was designed for simple and clear communication with the public. Information concerning water quality is also published in press (mostly regional) and occasionally in other media (radio and TV stations), and in the summer bathing season, were sent in regular week intervals by the Ministry of Health to the Czech Press Agency a summary of actual water quality report for every bathing place.

Water quality

Water quality problems were most frequently related to mass proliferation of cyanobacteria. The WHO recommendation was adopted for the limit value of the "cyanobacteria" indicator, i.e. a three-level water quality assessment with the ban imposed if a visual inspection reveals the presence of water bloom. There were 16 bathing bans in the 2010 bathing season only due to the presence of cyanobacteria.

The Czech Republic authorities reported the following bathing waters that were closed due to mass occurrence of cyanobacteria as follows:

Bathing water identification code	Bathing water name	Commune	Period of closure
CZ0204533858211001	PÍSNÍK HRADIŠTKO I	VELTRUBY	from 20100805 to 20100812
CZ0207536041211601	KOMÁROVSKÝ RYBNÍK - PLÁŽ V LESE	KNĚŽMOST	from 20100802 to 20100820
CZ0207571946211602	KOMÁROVSKÝ RYBNÍK - PLÁŽ KŘINEC	BRANŽEŽ	from 20100802 to 20100820
CZ0322542083320501	RYBNÍK HNAČOV	HNAČOV	from 20100813 to 20100913
CZ0411554481410203	VN SKALKA - U ATC PODHOŘÍ	CHEB	from 20100715 to 20100913
CZ0511544337510155	HAMERSKÝ RYBNÍK	HAMR NA JEZEŘE	from 20100730 to 20100810
CZ0511562262510158	KOUPALIŠTĚ ZÁKUPY	ZÁKUPY	from 20100806 to 20100809
CZ0523573990520901	VN ROZKOŠ - U AUTOKEMPINKU	ČESKÁ SKALICE	from 20100614 to 20100830
CZ0531572225530401	VN SEČ - POD SEMTÍNEM	SEČ	from 20100818 to 20100906
CZ0531572225530402	VN SEČ - HOJEŠÍN	SEČ	from 20100818 to 20100906
CZ0531572225530403	VN SEČ - ÚSTUPKY	SEČ	from 20100818 to 20100906
CZ0611573558610201	RYBNÍK KACHLIČKA	BOŇKOV	from 20100812 to 20100830
CZ0612587711610551	KOUPALIŠTĚ PEKLO	POLNÁ	from 20100716 to 20100812

Bathing water identification code	Bathing water name	Commune	Period of closure
CZ0723541711721201	VN BYSTRÍČKA - PLÁŽ U HRÁZE	BYSTRÍČKA	from 20100720 to 20100729
CZ0723541711721202	VN BYSTRÍČKA - HLAVNÍ PLÁŽ	BYSTRÍČKA	from 20100720 to 20100729
CZ0724585513720501	SLEPÉ RAMENO MORAVY - PAHRBEK	NAPAJEDLA	from 20100805 to 20100819

Management measures

Unsatisfactory water quality had certain bathing sites and during certain part of the bathing season. The most problems were associated with the excessive growth of cyanobacteria. Measures to reduce eutrophication of waters in the Czech Republic, including bathing waters, are part of programs implementing the Directive 91/271/EEC concerning urban wastewater treatment and the Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources. Bathing sites, based on the unsatisfactory quality results of the previous bathing seasons, have been included into the operational water-monitoring program. Mitigation measures are part of river basin management plans.

5. More information on bathing water quality in Europe

Of the more than 21 000 bathing areas monitored throughout the European Union in 2010, two-thirds were in coastal waters and the rest in rivers and lakes. The largest number of coastal bathing waters can be found in Italy, Greece, France, Spain and Denmark, while Germany and France have the highest number of inland bathing waters.

During recent years, including the 2010 bathing season, majority of Member States have adjusted their monitoring programmes to meet the requirements of the new bathing water directive (2006/7/EC). Luxembourg was the first country to report under this Directive in 2007. Cyprus, Denmark, Estonia, Finland, Germany, Hungary, Latvia, Lithuania, Slovakia, Spain and Sweden started to report under the new directive in 2008. Malta and the Netherlands started to report in 2009, while Austria, Belgium - Walloon Region, France, Greece, Italy, Portugal and Slovenia reported under this Directive for the first time in 2010. Historical data of two microbiological parameters, *Escherichia coli* and intestinal enterococci were sent by Sweden (since 2005), Luxembourg and Malta (since 2006), Belgium - Walloon Region, Greece, Hungary and Portugal (since 2007), and France (since 2009). To conclude, 20 Member States and the Walloon Region of Belgium monitored and reported under the new directive (Directive 2006/7/EC) in 2010.

Assessment of the status of all bathing waters in 2010 under the rules of the new directive (Directive 2006/7/EC) is made for Luxembourg, Malta and Hungary. Assessment of the bathing water quality on a country level for the other countries that reported under the new directive has been done using transition rules. Bathing water quality for individual bathing waters having four year set of data can be seen on the interactive maps and data viewer that are described below.

Three non-EU countries, Croatia, Montenegro and Switzerland have reported monitoring results under the new directive. Switzerland sent data on *Escherichia coli* for all bathing waters but only for some data on intestinal enterococci.

Overall, in 2010, 92.1 % of Europe's coastal bathing waters and 90.2 % of inland bathing waters met the minimum water quality standards set by the bathing water directives. During recent years, there has been deterioration in bathing water quality but still more than nine in ten bathing waters meet the minimum quality standards. The share of non-compliant bathing waters was 1.2 % for coastal bathing waters and 2.8 % for inland bathing waters. The decrease reflects in part year-to-year variation but also indicates that further work is necessary to ensure that the quality of bathing waters is constantly improved and maintained.

More information on bathing water quality in the European Member States, including the EU summary report, the reports for 27 Member States, Croatia, Montenegro 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) and the European Environment Agency's bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>). The Institute for Water of the Republic of Slovenia (IWRIS), a partner in the EEA European Topic Centre on Inland, Coastal and Marine Waters (ETC/ICM) has produced the reports for the bathing seasons from the 2008 bathing season on. Countries have collaborated in the assessment of bathing water quality and supplied additional information when needed.

Interactive information on bathing water quality

The bathing water section of the Water Information System for Europe (WISE), which is accessible at the EEA bathing water website, allows users to view the quality of the bathing water at more than 22 000 coastal beaches and inland bathing waters across Europe. Users can check bathing water quality on an interactive map or can download data for a selected country or region and make comparisons with previous years.

The WISE map viewer (<http://www.eea.europa.eu/themes/water/interactive//bathing>) is an online map viewer for visualisation of European spatial water data. It includes many interactive layers, allowing water themes to be visualised at different scales. Broad resolutions display the aggregated data by Member State. At finer resolutions, the locations of monitoring stations are displayed.

The WISE Bathing Water Quality data viewer (<http://www.eea.europa.eu/themes/water/status-and-monitoring/bathing-water-data-viewer>) combines text and graphical visualisation, providing a quick check on locations and statistics on the quality of coastal and freshwater bathing waters. It also documents how bathing waters have changed throughout Europe in recent years and provides a full summary of Europe's bathing water quality. Users can search information at three spatial levels - country, region and province - and observe specific bathing water locations on the Google Earth, Google maps or Bing maps.

The Eye On Earth - Water Watch application (<http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/eye-on-earth>) allows users to zoom in on a given section of the coast, riverbank or lake, both in street map or, where available, bird's eye viewing formats. A 'traffic-light' indicator (red, amber, green) of bathing water quality, based on the official bathing water data, is put alongside the ratings of people who have visited the bathing site, including any comments users wish to make. For historical data, Water Watch uses a simplified index of bathing water quality data. The Czech Republic, Estonia, Finland (one municipality), Hungary, Lithuania, Luxembourg, Malta, the Netherlands, Norway (one municipality), Slovenia, Slovakia and England and Wales were also sending near real time information on bathing water quality to the Eye On Earth application. The Eye on Earth Water Watch also presents the bathing water quality in Austria, Belgium, Bulgaria, Croatia, Denmark, France, Germany, Ireland, Italy, Poland, Portugal, Spain, Sweden and Scotland and Northern Ireland.

National and local information on bathing water quality

In order to make information to the public more effective, all EU countries have national or local web portals with detailed information for each bathing site. Websites generally include a map search function and public access to the monitoring results both in real time and for previous seasons.

Information on EU bathing water legislation

EU Member States will have to comply with the stricter and more ambitious requirements laid out in Directive 2006/7/EC by 2015 at the latest. The new legislation requires more effective monitoring and management of bathing waters, greater public participation and improved information dissemination. By March 2011, Member States have to have established bathing water profiles. More on the new legislation can be found on the European Commission's websites and on <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF>.