

Bathing water results 2012 – The Czech Republic

1. Reporting and assessment

In 2012 the Czech authorities reported under Directive 2006/7/EC provisions a list of their bathing waters, start and end of bathing season for each bathing water, short term pollution events, events impacting bathing water quality and measured values of concentrations of two microbiological parameters — intestinal enterococci and *Escherichia coli* (also known as *E. coli*). This report gives a general overview of bathing water quality in the Czech Republic for the 2012 bathing season. In 2012 the Czech Republic sent historical data with two parameters of this Directive for 2009-2011.

When four consecutive years of samples of intestinal enterococci and *Escherichia coli* for bathing water are available, the assessment is done according to assessment rules of the new bathing water Directive 2006/7/EC. The Annex IV of the directive requires a sample to be taken shortly before the start of the bathing season. Sampling dates are to be distributed throughout the bathing season, with the interval between sampling dates never exceeding one month. Taking into account one pre-season sample, no fewer than four samples are to be taken and analysed per bathing season. Three samples need to be taken and analysed per bathing season in the case of bathing water with either bathing season not exceeding eight weeks or being situated in a region subject to special geographical constraints. The result of such monitoring is used to build up the sets of bathing water quality data. The number of samples for the assessment period should thus be at least 16 or 12 if season duration is less than eight weeks or the region is subject to special geographical constraints.

Bathing water quality in 2012 season in the Czech Republic is assessed under the rules of the new bathing water Directive 2006/7/EC. The new Directive assessment provisions are transformed into the following technical rules: a) one pre-season sample should be available, b) the interval between sampling dates in 2012 should never exceed 35 days, provided that the next sampling is done according to the monitoring calendar; c) the yearly number of samples in the previous years should be four or three if bathing season does not exceed eight weeks.

Bathing waters quality classes according to the Directive 2006/7/EC are 'excellent', 'good', 'sufficient' and 'poor'. Bathing waters are classified on the basis of the percentile values for microbiological enumerations falling in the certain class given in Annex I of the Directive. Some bathing waters cannot be classified according to their quality but are instead classified as 'insufficiently sampled', 'new', 'changes' and 'closed'.

The bathing water is classified as 'insufficiently sampled' in 2012 if pre-season sample is missing, sampling frequency is not satisfied or the set of data is not complete. If the bathing water is newly identified and the data set is not complete yet, it is classified as 'new'. If any changes have occurred that are likely to affect the classification of the bathing water and a data set is not complete yet, bathing waters are classified as 'changes'. Temporarily closed bathing waters or closed bathing waters throughout 2012 season are classified if there is a complete set of data available. Otherwise, they are classified as 'closed'.

2. Length of bathing season and number of bathing waters

The bathing season opened between 23 April and 2 July 2012 and closed between 25 June and 17 September 2012.

A total of 160 inland bathing waters (0 on rivers; 160 on lakes) were reported in the Czech Republic during the 2012 bathing season. Three bathing waters were reported as de-listed compared to the

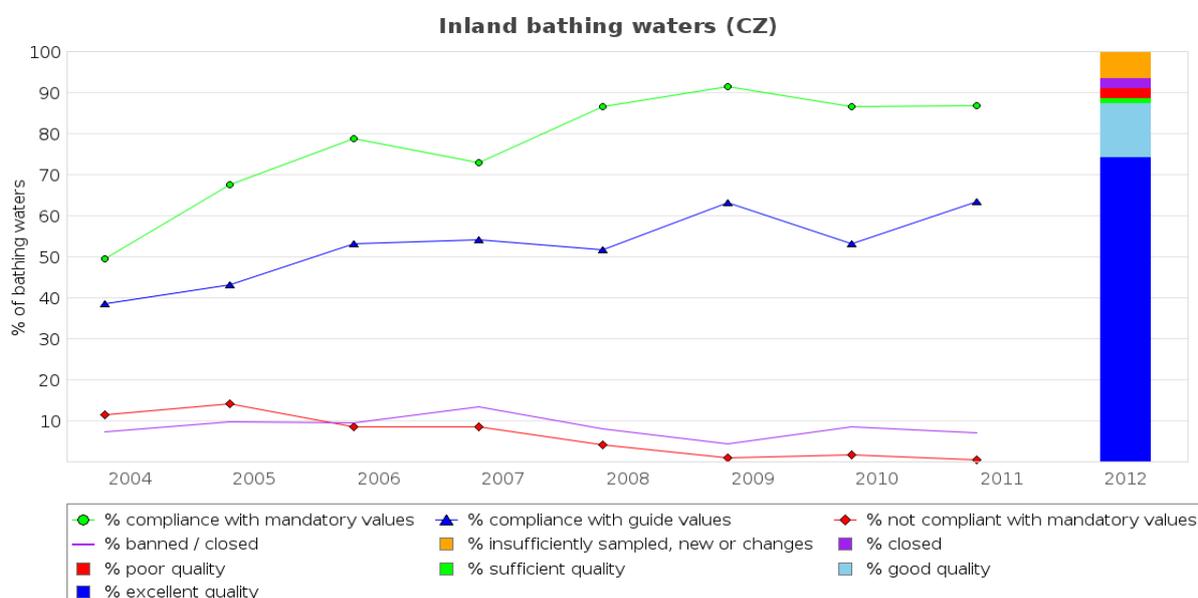
previous year. A total of 26 bathing waters were reported as de-listed (permanently closed) compared to the previous year and one bathing water was added to the list.

With 160 reported bathing waters the Czech Republic accounts for about 0.8 % of the reported bathing waters of the European Union.

3. Bathing water quality

The results of the bathing water quality in the the Czech Republic for the period 2004-2012 are presented in Figure 1¹. 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) and the European Environment Agency's bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>).

Figure 1: Results of bathing water quality in the Czech Republic from 2004 to 2012.



Note: Data until 2008 is available in the previous reports at http://ec.europa.eu/environment/water/water-bathing/index_en.html.

Table 1 and Table 2 show results of bathing water quality for all bathing waters from 2008 on as assessed in the previous annual reports and under the Directive 2006/7/EC for the 2012 season. A map given in Appendix 1 shows the location and quality of the bathing waters.

For the purpose of commenting the improvement or deterioration of bathing water quality from 2011, excellent quality is compared with compliance with the guide values; good quality and sufficient quality are compared with compliance with the mandatory value for *Escherichia coli* and not the guide values; poor quality is compared with not compliant with mandatory value for *Escherichia coli*.

In the Czech Republic, 75.0 % of the inland bathing waters were of excellent quality in 2012. This is an increase of 11.6 % compared to the previous year when 63.4 % of the bathing waters met the guide

¹ The graph shows the classification under the Directive 76/160/EEC for inland bathing waters from 2004 to 2011:

- 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 (class B, violet line).

The same graph shows the classification under the Directive 2006/7/EC, for inland bathing waters for 2012:

- The percentage of bathing waters that have excellent quality (dark blue bar);
- The percentage of bathing waters that have good quality (light blue bar);
- The percentage of bathing waters that have sufficient quality (green bar);
- The percentage of bathing waters that have poor quality (red bar);
- The percentage of bathing waters that are closed (violet bar);
- The percentage of bathing waters that are insufficiently sampled, new or with changes (orange bar).

values. A total of 21 bathing waters (13.1 %) were of good quality and two bathing waters (1.3 %) were of sufficient quality compared to 43 bathing waters compliant with the mandatory value for *Escherichia coli* and not the guide values (23.5 %) in 2011. Four bathing waters (2.5 %) had poor quality and three bathing waters (1.9 %) had to be closed during the season compared to one that was non-compliant with the mandatory value for *Escherichia coli* (0.5 %) and 13 closed bathing waters (7.1 %) in 2011 respectively.

Table 1: Results of bathing water quality in the Czech Republic. Assessment under Directive 76/160/EEC.

CZ												
		Total number of bathing waters	Compliance with guide and mandatory values*		Compliance with mandatory values		Not compliant		Banned/closed		Insufficiently sampled or not sampled	
			number	%	number	%	number	%	number	%	number	%
All bathing waters	2008	188	97	51.6	163	86.7	8	4.3	15	8.0	2	1.1
	2009	187	118	63.1	171	91.4	2	1.1	8	4.3	6	3.2
(Inland bathing waters)	2010	186	99	53.2	161	86.6	3	1.6	16	8.6	6	3.2
	2011	183	116	63.4	159	86.9	1	0.5	13	7.1	10	5.5
	2012											

*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.

Table 2: Results of bathing water quality in the Czech Republic for 2012. Assessment under Directive 2006/7/EC.

		Total number of bathing waters	Excellent quality		Good quality		Sufficient quality		Poor quality		Closed		Insufficiently sampled		New		Changes	
			number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%
All bathing waters (Inland bathing waters)	2009																	
	2010																	
	2011																	
	2012	160	120	75.0	21	13.1	2	1.3	4	2.5	3	1.9	8	5.0	1	0.6	1	0.6

4. Important information as provided by the Czech authorities

The list of annually updated bathing waters is presented to **public** with invitation to submit comments and proposals to the Ministry of Health of the Czech Republic. For each bathing water a monitoring calendar was prepared before the bathing season. Bathing water profiles (links included in the table SeasonalInfo column ManMeas) were created in time and information boards were produced and placed in an easily accessible place in the near vicinity of each bathing water. Central web pages (http://geoportal.gov.cz/koupaci_vody, 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 reduce the risk.

Water quality problems were most frequently related to mass proliferation of cyanobacteria. In the 2012 bathing season were 16 bathing bans (9 due to the presence of cyanobacteria, 6 due to faecal pollution and 1 due to outbreak of cercarial dermatitis).

The most important **management measures** are:

- Sediment removal
- Intensification/reconstruction/construction of wastewater treatment plant and sewer construction in the immediate vicinity or in the basin of bathing waters clearly affecting the water quality
- Preparation of the study concerning the assessment of current situation, identification of causes of pollution and proposal of measures
- Added programmes of monitoring
- Action on reservoirs or ponds – aeration, manipulation with fish stock, coagulant dosage to the inflow into the reservoir
- Reconstruction of the reservoir or pond – dam repair, bank alteration
- Reduction of intensity of aquaculture production
- Application of chemicals to reduce the nutrients needed for the development of cyanobacteria and undesirable aquatic flora.

The Czech authorities have provided additional comments and data on BWD assessment, available in a separate document

(http://cdr.eionet.europa.eu/cz/eu/nbwd/envun1yeq/Annex_to_ManMeas_correction.doc).

There are four bathing waters classified as poor for 2012 season, listed below:

Unique Identification Code of Bathing Water	Bathing Water Name	Water Body Name	Bathing Water Category	2012 status
CZ_KO310802	VN ORLÍK - VEŘEJNÉ TÁBOŘIŠTĚ VOJNÍKOV	v.n. Orlík II - Otava po ústí do Vltavy	Lake	Poor
CZ_KO421401	ZBYTKOVÁ JÁMA DOLU VARVAŽOV	Ohře a dolní Labe	Lake	Poor
CZ_KO421402	CHLUMECKÝ RYBNÍK	Ždírnický potok po soutok s tokem Zalužanský	Lake	Poor
CZ_KO810602	VN BRUŠPERK I	Ondřejnice po ústí do toku Odry	Lake	Poor

5. General information on bathing water quality in Europe in 2012

Out of more than 22 000 bathing areas monitored throughout Europe in 2012, around two thirds were in coastal waters and the rest were in rivers and lakes. In the 2012 bathing season, the monitoring of bathing sites has been adjusted to the provisions in the EU's new bathing water directive (Directive 2006/7/EC). The sampling of water quality in most of the bathing water sites meets the frequency standards (this involves a pre-season sample of the water quality, followed up by monthly samples thereafter). As regards assessment, the provisions in the new bathing water directive have been applied in 19 European countries (Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Hungary, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Spain, Spain, Sweden). This involved taking data from four years of monitoring to make the 2012

assessment. For the remaining ten countries, the 2012 assessment has been carried out under a set of transitional rules that do not yet meet all the requirements of the new directive using the results from the 2012 monitoring.

In 2012, the quality of 94 % of all bathing waters met at least the minimum 'mandatory' level (corresponding to a rating of sufficient quality under the new directive). Bathing water quality improved at 1.8 % of sites in 2012 compared with 2011, and at 2.5 % of sites compared with 2010. There has also been a marked decline compared with 2011 in the number of bathing waters that were closed or that prohibited bathing.

In 2012, 95.3 % of coastal bathing waters in the EU-27 achieved the minimum quality standards requested by the EU directives — an increase of 2.0 % compared with 2011. The share of coastal bathing waters with excellent quality (or complying with the guide values) in 2012 reached 81.2 % (an increase of 0.9 % from 2011).

The percentage of inland bathing waters with excellent quality is 72 % in 2012, a 1.6 % increase from 2011. In 2012, 91 % of inland bathing waters in the European Union had good or sufficient quality. This is a 1.0 % point increase from 2011. Only 2.3 % of inland bathing waters in the EU did not satisfy the minimum quality level. This is 0.1 % decrease from the previous year, continuing the slow but steady reduction in the percentage of poor quality bathing waters.

The "European bathing water quality in 2012" report presents the results and trends in bathing water quality in 2012 in Europe (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>). More information on bathing water quality as prepared for all reporting countries can be found on the European Environment Agency's bathing water website. The reports for the 2012 season have been produced by TC Vode, European Topic Center ICM Waters partner with support of the Institute for Water of the Republic of Slovenia (IWRs). Countries have collaborated in the assessment of bathing water quality and supplied additional information when needed.

6. Interactive information on bathing water quality in Europe

The bathing water section of the Water Information System for Europe (WISE), which is accessible at the EEA bathing water website (<http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>), allows users to view the bathing water quality at more than 22 000 coastal beaches and inland sites across Europe. Users can check bathing water quality on an interactive map, download data for a selected country or region, and make comparisons with previous years.

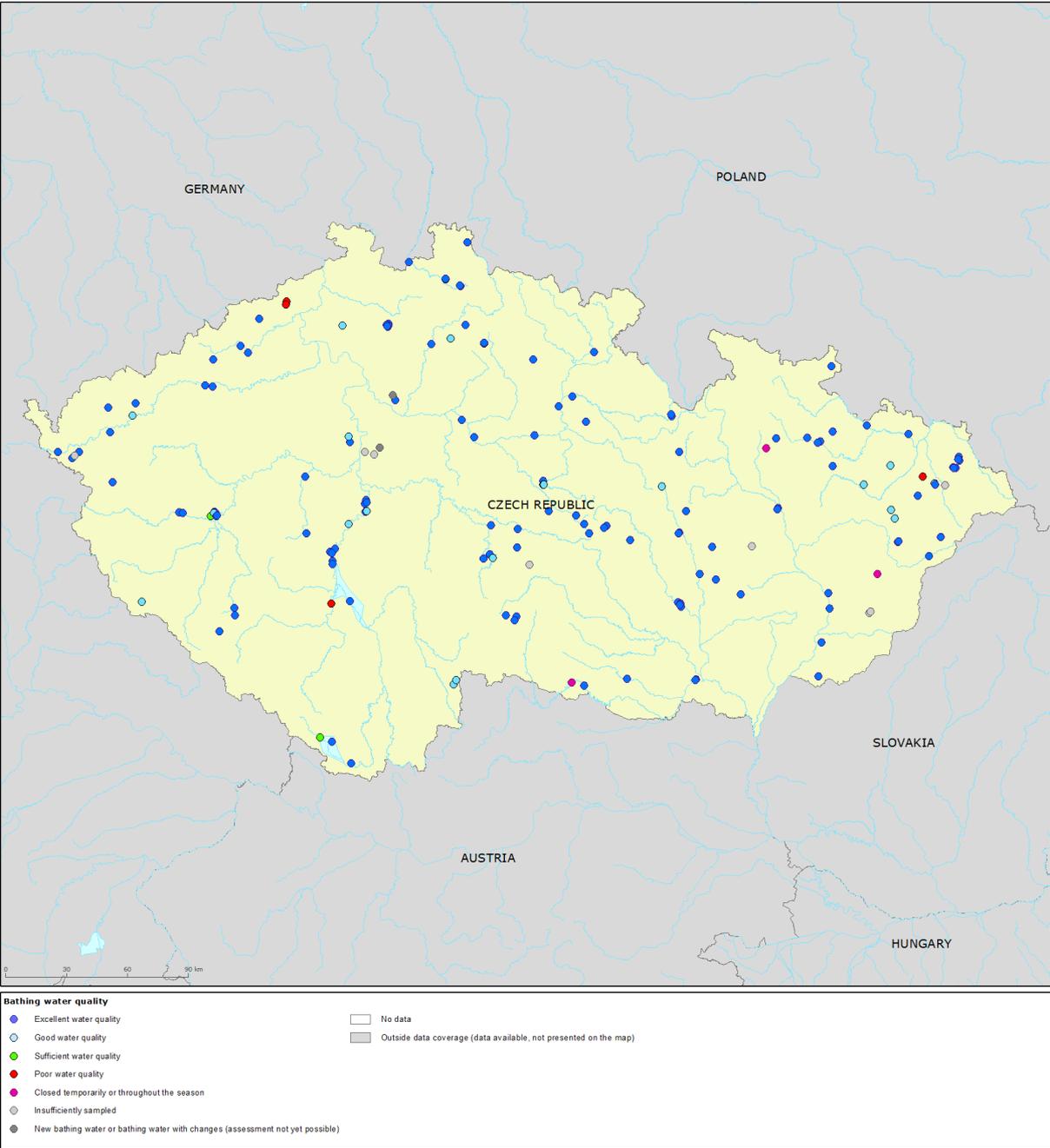
The Eye on Earth — Water Watch application (<http://eyeonearth.org/map/WaterWatch/>) allows users to zoom in on a section of coast, riverbank or lake, both in street map or, where available, bird's eye viewing formats.

The data on bathing water quality in 2012 and previous years can also be viewed in WISE bathing water data viewer, an application prepared by TC Vode (<http://bwd.eea.europa.eu/>).

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 water site. Websites generally include a map search function and public access to the monitoring results both in real time and for previous seasons. Citizens now have access to more bathing water information than ever, giving them the tools to become more actively involved in protecting the environment and helping to improve Europe's bathing areas.

Appendix 1

Map 1: Bathing waters reported during the 2012 bathing season in the Czech Republic



Source: National boundaries: EEA; Large rivers and lakes: EEA, WFD Article 3; Bathing waters data and coordinates: Czech authorities