European Environment Agency

Bathing water results 2012 – Sweden

1. Reporting and assessment

In 2012 the Swedish 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 Sweden for the 2012 bathing season. Sweden started to monitor under the Directive 2006/7/EC in 2005, while reported for the first time in 2008. Until 2007, samples of intestinal enterococci were monitored only for part of bathing waters.

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 Sweden 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 changes occur that affect quality and the data set is not complete yet, it is 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 started on 21 June or 15 July 2012 and ended on 15 or 20 August 2012 for coastal bathing waters. Inland bathing waters opened on 21 June or 15 July 2012 and closed on 15 or 20 August 2012.

A total of 448 bathing waters were reported in Sweden during the 2012 bathing season, of which 248 were coastal bathing waters and 200 were inland bathing waters (two on rivers; 198 on lakes). No

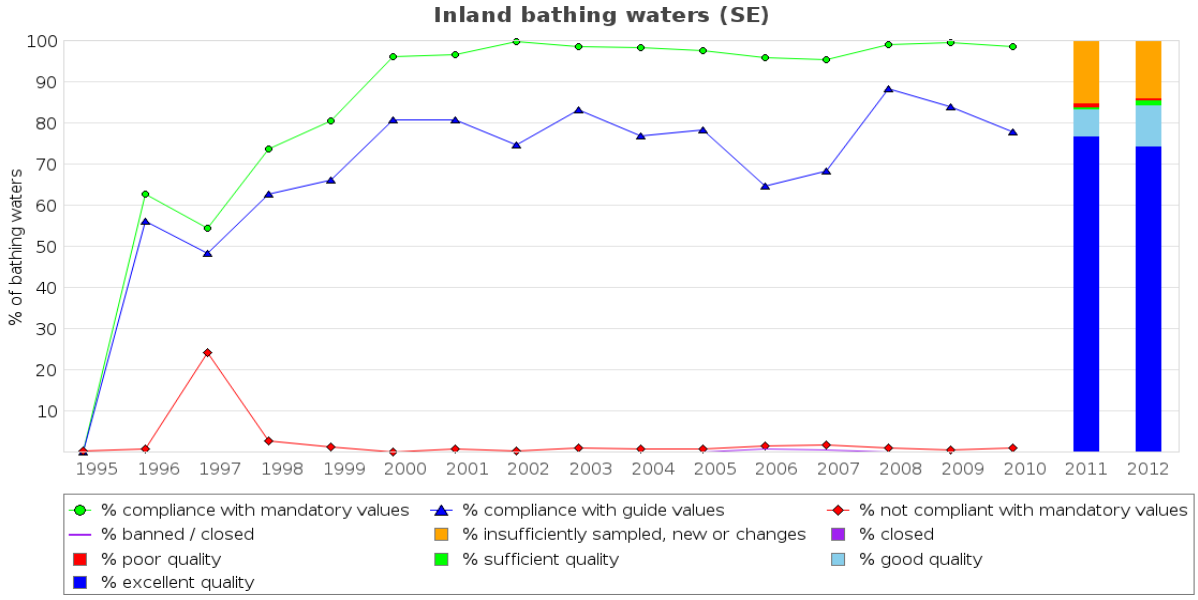
coastal and no inland bathing waters were reported as de-listed (permanently closed) compared to the previous year. No coastal and three inland bathing waters were added to the list.

With 448 reported bathing waters Sweden accounts for about 2.1 % of the reported bathing waters of the European Union.

3. Bathing water quality

The results of the bathing water quality in Sweden for the period 1995-2012 are presented in Figure 1[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) 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 Sweden from 1995 to 2012.

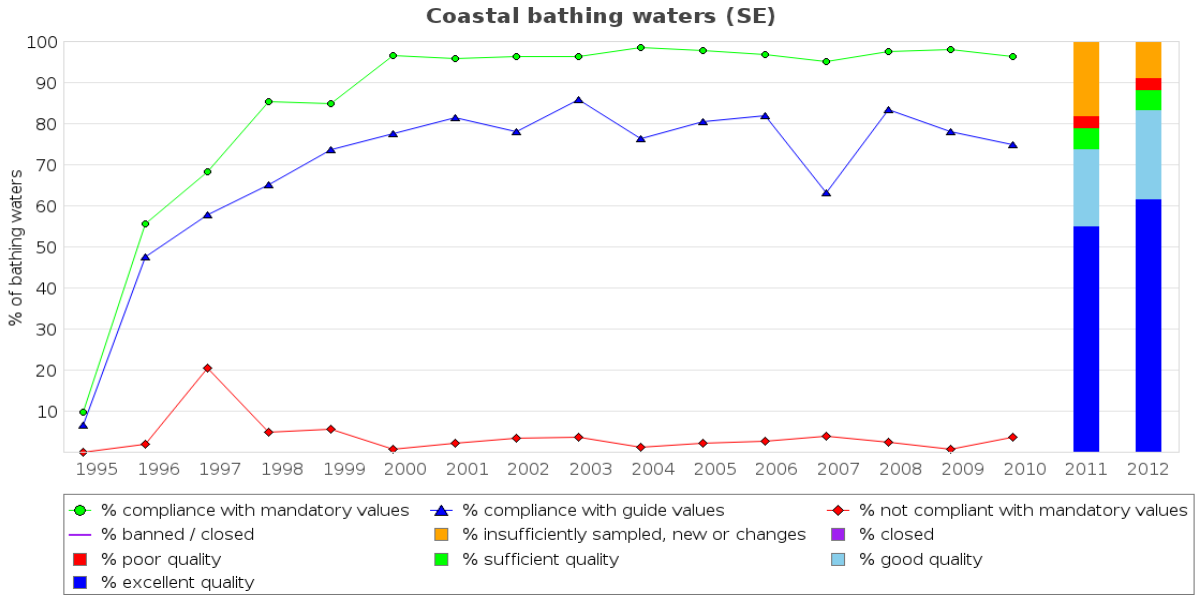


[1] The graphs show the classification under the Directive 76/160/EEC and during transition period, for coastal and inland bathing waters from 1995 to 2010:

- 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 graphs show the classification under the Directive 2006/7/EC, for coastal and inland bathing waters for 2011 and 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).



Note: Data until 2008 is available in the previous reports at http://ec.europa.eu/environment/water/water-bathing/index_en.html. The points that are part of three time series (lines) represent assessment results using transition period rules. The bars represent assessment results for assessed coastal and inland bathing waters using rules under the Directive 2006/7/EC.

Table 1 and Table 2 show results of bathing water quality for coastal, inland and 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.

Coastal bathing waters

In Sweden, 61.7 % of coastal bathing waters had excellent quality in 2012. This is an increase of 6.7 % compared to the previous year. A total of 54 bathing waters (21.8 %) had good quality and 12 bathing waters (4.8 %) had sufficient quality. In 2011, 47 (18.9 %) bathing water were good and 13 (5.2 %) were sufficient. This is an overall improvement of bathing water quality from 2011. Seven bathing waters (2.8 %) had poor quality and no bathing waters were classified as closed during the 2012 bathing season, similarly as in 2011.

Inland bathing waters

Some 74.5 % of inland bathing waters had excellent quality in 2012. This is a decrease of 2.3 % compared to the previous year. A total of 20 bathing waters (10.0 %) were of good quality and two bathing waters (1.0 %) were of sufficient quality. In 2011, 13 (6.6 %) bathing waters had good quality and one (0.5 %) had sufficient quality. The share of good and excellent bathing waters in 2012 is larger than in 2011. One bathing water had poor quality (0.5 %), one less than in 2011 (0.1 %). No bathing waters were classified as closed during the last two seasons.

Table 1: Results of bathing water quality in Sweden. Assessment during transition period.

SE												
		Total number of bathing waters	Compliance with guide and mandatory values*		Compliance with mandatory value		Not compliant		Banned/closed		Insufficiently sampled or not sampled	
			number	%	number	%	number	%	number	%	number	%
Coastal bathing waters	2008	258	215	83.3	252	97.7	6	2.3	0	0.0	0	0.0
	2009	259	202	78.0	254	98.1	2	0.8	0	0.0	3	1.2
	2010	254	190	74.8	245	96.5	9	3.5	0	0.0	0	0.0
	2011											
	2012											
Inland bathing waters	2008	212	187	88.2	210	99.1	2	0.9	0	0.0	0	0.0
	2009	210	176	83.8	209	99.5	1	0.5	0	0.0	0	0.0
	2010	207	161	77.8	204	98.6	2	1.0	0	0.0	1	0.5
	2011											
	2012											
All bathing waters	2008	470	402	85.5	462	98.3	8	1.7	0	0.0	0	0.0
	2009	469	378	80.6	463	98.7	3	0.6	0	0.0	3	0.6
	2010	461	351	76.1	449	97.4	11	2.4	0	0.0	1	0.2
	2011											
	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 or the mandatory value for *Escherichia coli*.

Table 2: Results of bathing water quality in Sweden for 2011 and 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	%
Coastal bathing waters	2009																	
	2010																	
	2011	249	137	55.0	47	18.9	13	5.2	7	2.8	0	0.0	39	15.7	6	2.4	0	0.0
	2012	248	153	61.7	54	21.8	12	4.8	7	2.8	0	0.0	19	7.7	3	1.2	0	0.0
Inland bathing waters	2009																	
	2010																	
	2011	198	152	76.8	13	6.6	1	0.5	2	1.0	0	0.0	29	14.6	1	0.5	0	0.0
	2012	200	149	74.5	20	10.0	2	1.0	1	0.5	0	0.0	25	12.5	3	1.5	0	0.0
All bathing waters	2009																	
	2010																	
	2011	447	289	64.7	60	13.4	14	3.1	9	2.0	0	0.0	68	15.2	7	1.6	0	0.0
	2012	448	302	67.4	74	16.5	14	3.1	8	1.8	0	0.0	44	9.8	6	1.3	0	0.0

4. Important information as provided by the Swedish authorities

Most Swedish households are connected to a sewage treatment plant. The majority of such plants have both chemical and biological treatment, but do not generally have disinfection. Considerable efforts are made to supervise the maintenance of private septic tanks and to ensure their connections to treatment plants. Sweden historically used to have a large number of wetland areas, which played an important part in reducing nutrient and bacteria loads to nearby watercourses. Many of these wetlands have been drained, in the post war decades but now new ones are being established in some parts of the country in order to reduce pollution from non-point sources.

Increased concentrations of bacteria have been detected in some bathing waters during the bathing season. This could be due to semi-permanent or permanent causes such as leaching wastewater from individual households and municipal wastewater treatment plants. Several beaches have problems with pollution from birds, mainly geese. Such problems are difficult to control but many municipalities implement measures to reduce the number of birds at the bathing area.

One short-term pollution event and two abnormal situations have been reported for bathing waters in 2012 season:

Unique Identification Code of Bathing Water	Bathing Water Name	Bathing Water Category	Short-term pollution and abnormal situations
SE0110187000001351	Tenöbadet	Coastal	Short-term pollution: 2012-06-25 - 2012-06-28
SE0441284000000495	Mölle, Solviken	Coastal	Abnormal situation: 2012-07-09 - 2012-07-12
SE0441284000002331	Mölle, Ransvik	Coastal	Abnormal situation: 2012-07-09 - 2012-07-12

The bathing data for the season are reported to the website “Badplatsen” (http://badplatsen.smi.se), where the public can consult the latest quality assessments. It is also possible to search for previous years’ assessments and bathing water profiles. This website can be accessed via the home page of the Swedish Agency for Marine and Water Management or at the Swedish Institute for Communicable Disease Control. Bathing water profiles have been published online and accessible via links in Seasonal information datasheet.

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

From more than 22 000 bathing areas monitored throughout Europe in 2012, roughly 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, 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 Sweden

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