

Bathing water results 2011 – Sweden

1. Reporting and assessment

This report gives a general overview of bathing water quality in Sweden for the 2011 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 samples of intestinal enterococci and *Escherichia coli* for bathing water are available for three or four consecutive years, the assessment is done according to assessment rules of Directive 2006/7/EC. The frequency of sampling is set out in Annex IV of the Directive. Including a sample to be taken shortly before the start of the bathing season, the minimum number of samples taken per bathing season is four. However, only three samples are sufficient when the bathing season does not exceed eight weeks or the region is subject to special geographical constraints. Sampling dates are to be distributed throughout the bathing season.

Strictly speaking, there should be one pre-season sample and the interval between sampling should not exceed one month. Since a late start of monitoring and/or low frequency do not necessarily indicate unsatisfactory bathing water quality, it has been accepted that the first sample in the 2011 season could be taken shortly after the start of the season (but within 10 days after the start), and the maximum interval between two samples taken into account is 41 days. The number of samples for the period 2008-2011 should be at least 16. These criteria are described as less strict. In the opposite, under the strict rules, pre-season samples should be available in all four years, the interval between sampling in the 2011 season should have not exceeded one month, but 41 days were acceptable for the 2008, 2009 and 2010 seasons. In this report a quality class under the strict rules and less strict criteria are presented.

Bathing waters quality classified according to the Directive 2006/7/EC are 'excellent', 'good', 'sufficient' and 'poor'. Some bathing waters cannot be classified according to their quality but are instead classified as 'closed', 'new' (classification not yet possible), 'insufficiently sampled' or 'changes' (bathing water is not new and classification not yet possible since a set of monitoring data is incomplete).

2. Length of bathing season and number of bathing waters

The bathing season started on 21 June or 15 July 2011 and ended on 15 or 20 August 2011 for both coastal and inland bathing waters.

A total of 447 bathing waters were monitored in Sweden during the 2011 bathing season, of which 249 were coastal bathing waters and 198 were inland bathing waters (two on rivers; 196 on lakes). A total of 11 coastal and nine inland bathing waters were reported as de-listed (permanently closed) compared to the previous year. Six coastal and no inland bathing waters were added to the list.

With 447 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 1995-2010 as reported in the past reporting years and for the bathing season of 2011 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; Water/ Bathing Water/ 2005-2011 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, 2009 and 2010 bathing seasons).

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, grey line).

The same graphs show the classification under the Directive 2006/7/EC, for coastal and inland bathing waters from 2009 to 2011:

- 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 (grey bar);
- The percentage of bathing waters that are insufficiently sampled, new or with changes (orange bar).

For the years 2009 and 2010 the classification for assessed coastal and inland bathing waters under the Directive 2006/7/EC is presented.

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 2011 season. For the year 2010 results applying the less strict rules are presented if they differ from results applying the strict rules.

A map given in Appendix 1 shows the location and quality of the bathing waters.

Coastal bathing waters

For the purpose of commenting the improvement or deterioration of bathing water quality from 2010, 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; and poor quality is compared with not compliant with mandatory value for *Escherichia coli*.

In Sweden, 55.0 % of the coastal bathing waters were of excellent quality in 2011. This is a decrease of 19.8 % compared to the previous year when 74.8 % of the bathing waters met the guide values. A total of 47 bathing waters (18.9 %) were of good quality and 13 bathing waters (5.2 %) were of sufficient quality compared to 55 bathing waters compliant with the mandatory value for *Escherichia coli* and not the guide values (21.7 %) in 2010. Seven bathing waters (2.8 %) had poor quality compared to nine bathing waters non-compliant with the mandatory value for *Escherichia coli* (3.5 %) in 2010. No bathing waters (0.0 %) had to be closed during the bathing season, the same as in 2010. A total of 39 bathing waters (15.7 %) were insufficiently sampled compared to none (0.0 %) in 2010. Six bathing waters (2.4 %) were classified as new bathing waters.

For comparison since the start of the reporting please see Figure 1.

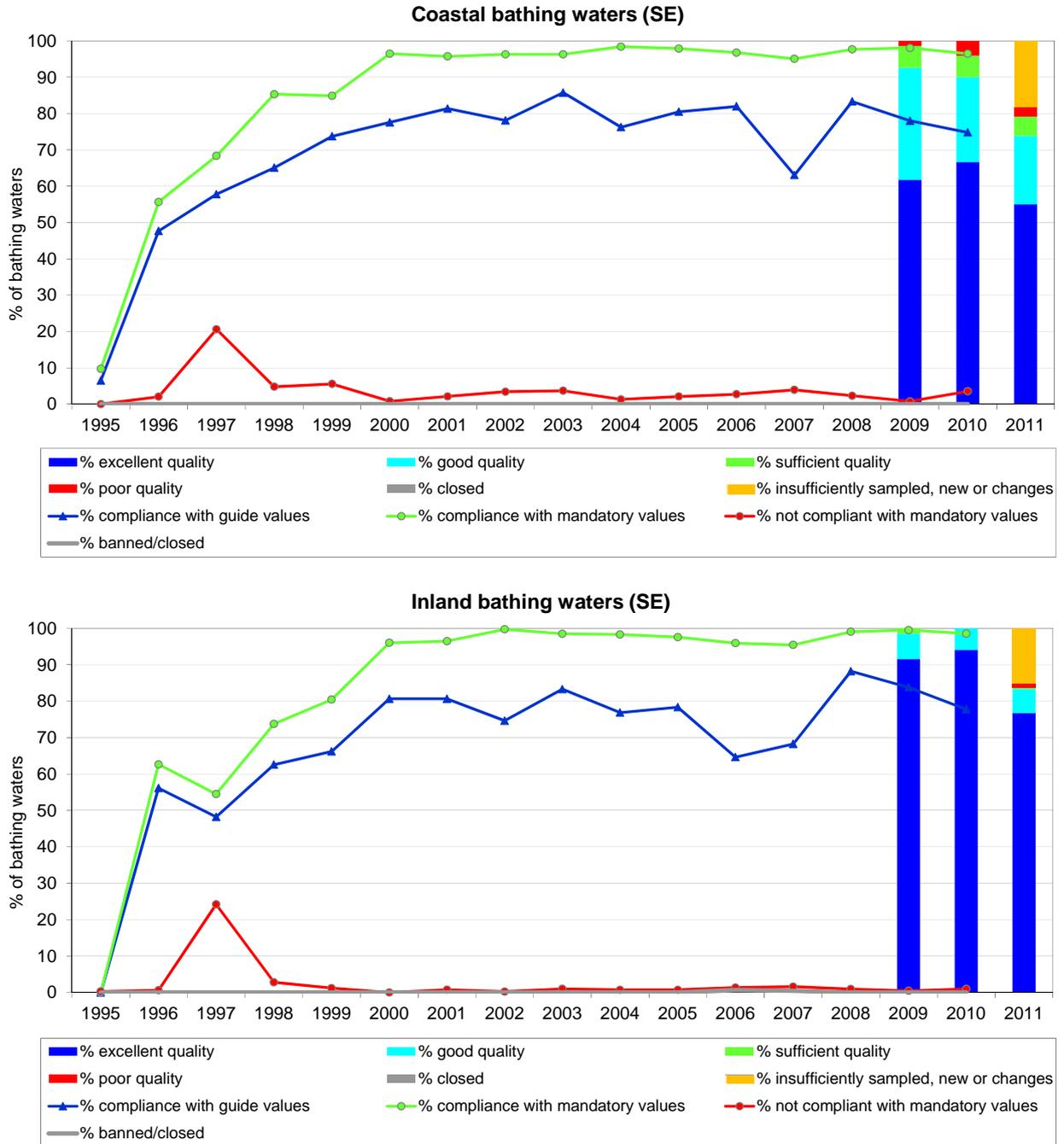
Inland bathing waters

Some 76.8 % of the inland bathing waters were of excellent quality in 2011. This is a decrease of 1.0 % compared to the previous year when 77.8 % of the bathing waters met the guide values. A total of 13 bathing waters (6.6 %) were of good quality and one bathing water (0.5 %) was of sufficient quality compared to 43 bathing waters compliant with the mandatory value for *Escherichia coli* and not the guide values (20.8 %) in 2010. Two bathing waters (1.0 %) had poor quality, as well as two bathing waters were non-compliant with the mandatory value for *Escherichia coli* (1.0 %) in 2010. No bathing waters (0.0 %) had to be closed during the bathing season, the same as in 2010. A total of 29 bathing

waters (14.6 %) were insufficiently sampled compared to one (0.5 %) in 2010. One bathing water (0.5 %) was classified as new bathing water.

For comparison since the start of the reporting please see Figure 1.

Figure 1: Results of bathing water quality in Sweden from 1995 to 2011



Note: For 2009 and 2010, two assessments are shown. 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.

Data until 2008 is available in the previous reports at http://ec.europa.eu/environment/water/water-bathing/index_en.html; Water/Bathing Water/ 2005-2011 reports.

Table 1: Results of bathing water quality in Sweden from 2008 to 2010. 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											
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											
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											

*Bathing waters which were compliant with the guide values were also compliant with the mandatory value for *Escherichia coli*.

Table 2: Results of bathing water quality in Sweden for 2011. Assessment under Directive 2006/7/EC.

SE																		
	Year/Total number of bathing waters	Excellent quality		Good quality		Sufficient quality		Poor quality		Closed		Insufficiently sampled		New		Changes		
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
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
	2011 ^(s)	249	135	54.2	47	18.9	13	5.2	7	2.8	0	0.0	41	16.5	6	2.4	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
	2011 ^(s)	198	143	72.2	13	6.6	1	0.5	2	1.0	0	0.0	38	19.2	1	0.5	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
	2011 ^(s)	447	278	62.2	60	13.4	14	3.1	9	2.0	0	0.0	79	17.7	7	1.6	0	0.0

^(s)Strict rules applied (see Chapter 1 of this report).

4. Important information as provided by the Swedish authorities

The Swedish authorities have reported for some bathing waters also reasons for changes (Table 3). In Table 3 short-term pollution duration is also given. Additional information is provided in a separate document

(http://cdr.eionet.europa.eu/se/eu/colsgtzfa/envtv12ug/Supplementary_file_Sweden_2011.doc).

Table 3: Reasons for changes for the 2011 season as reported by the Swedish authorities

Unique Identification Code of Bathing Water	Bathing Water Name	Bathing Water Category	Comments, Management Measures
SE0441292000000334	Rålöcka	Coastal	Short term pollution reported: 2011-08-16 - 2011-08-19
SE0A21480000000534	Saltholmen	Coastal	Short term pollution reported: 2011-08-16 - 2011-08-19
SE0940980000000227	Visby, Norderstrand	Coastal	Permanently closed. Kontroller av antalet badande har gjorts vid Visby, Norderstrand 2010-07-01, 2010-07-08, 2010-07-13, 2010-07-22. Antalet badande bedöms vara 30-150 stycken.
SE0940980000000230	Tingstäde träsk	Lake	Permanently closed. Kontroller av antalet badande har gjorts vid Tingstäde träsk 2010-07-01, 2010-07-02, 2010-07-08 och antalet badande bedöms vara 15-40 stycken.
SE0940980000000256	Sproge, Kvarnäckershamn	Coastal	Permanently closed. Kontroller av antalet badande har gjorts vid Sproge, Kvarnäckershamn 2010-06-30, 2010-07-07, 2010-07-21. Antalet badande bedöms vara 20-50 stycken.
SE0940980000003923	Sandhamn	Coastal	Permanently closed. Kontroller av antalet badande har gjorts vid Sandhamn 2010-06-30, 2010-07-07, 2010-07-21 och antalet badande bedöms vara 20-50 stycken.
SE0940980000000255	Näs, Nisseviken	Coastal	Permanently closed. Kontroller av antalet badande har gjorts vid Näs, Nisseviken 2010-06-30, 2010-07-21 och antalet badande bedöms vara 75-100 stycken.
SE0940980000000237	Hellvi, Hideviken	Coastal	Permanently closed. Kontroller av antalet badande har gjorts vid Hide, Hideviken 2010-07-01, 2010-07-08, 2010-07-08, 2010-07-13 och 2010-07-22. Antalet badande bedöms vara 30-100 stycken.
SE0940980000000231	Färö, Ekeviken	Coastal	Permanently closed. Kontroller av antalet badande har gjorts vid Färö, Ekeviken 2010-07-02 och 2010-07-14. Antalet badande bedöms vara 100-150 stycken.
SE0940980000000266	Etelhem, Sigvalde träsk	Lake	Permanently closed. Kontroller av antalet badande har gjorts vid Etelhem, Sigvalde träsk 2010-06-30, 2010-07-07, 2010-07-12, 2010-07-21. Antalet badande bedöms vara 40-75 stycken.
SE0940980000000251	Vamlingbo, Holmhällar	Coastal	Permanently closed. Kontroller av antalet badande har gjorts 2010-06-30, 2010-07-12. Antalet badande bedöms vara 75-100 stycken.
SE0822580000003231	Kängsön, Råneå	Coastal	Permanently closed. Efter kontroller under 2010 har vi konstaterat att antalet badande < 200 i snitt per dag
SE0822580000003232	Rörbäcken	Coastal	Permanently closed. Efter kontroller under 2010 har vi konstaterat att antalet badande < 200 i snitt per dag
SE0822580000003233	Klubbviken	Coastal	Permanently closed. Efter kontroller under 2010 har vi konstaterat att antalet badande < 200 i snitt per dag
SE0822580000003234	Trolltjärn	Lake	Permanently closed. Efter kontroller under 2010 har vi konstaterat att antalet badande < 200 i snitt per dag
SE0822580000003236	Gyltzauden	River	Permanently closed. Efter kontroller under 2010 har vi konstaterat att antalet badande < 200 i snitt per dag
SE0822580000003238	Storsand	River	Permanently closed. Efter kontroller under 2010 har vi konstaterat att antalet badande < 200 i snitt per dag
SE0822580000003242	Lulsundet	River	Permanently closed. Efter kontroller under 2010 har vi konstaterat att antalet badande < 200 i snitt per dag
SE0611763000002279	Abborrtjärn	Lake	Permanently closed. Antalet badande har kontrollerats vid minst 5 tillfällen under badsäsongen 2010, vid samtliga tillfällen var antalet färre än 200 badande.
SE0611763000002282	Skivtjärn	Lake	Permanently closed. Antalet badande har kontrollerats vid minst 5 tillfällen under badsäsongen 2010, vid samtliga tillfällen var antalet färre än 200 badande.
SE0611763000002284	Visten	Lake	Permanently closed. Antalet badande har kontrollerats vid minst 5 tillfällen under badsäsongen 2010, vid samtliga tillfällen var antalet färre än 200 badande.
SE0940980000003924	Färö, Norsta Aurar	Coastal	Permanently closed. Allmänheten har inte tillträde till badplatsen pga "Infart förbjuden". Kontroller av antalet badande har gjorts vid Färö, Norsta Aurar 2010-07-02 och 2010-07-14. Antalet badande bedöms vara 50-100 stycken.

5. More information on bathing water quality in Europe

Of the more than 21 000 bathing areas monitored throughout the European Union in 2011, two thirds were in coastal waters and the rest in rivers and lakes. The largest numbers of coastal bathing waters can be found in Italy, Greece, France and Spain, while Germany and France have the highest numbers of inland bathing waters.

During recent years, including the 2011 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. Austria, Belgium - Walloon Region, France, Greece, Italy, Portugal and Slovenia reported under the new directive for the first time in 2010, while Belgium - Flemish Region, Bulgaria, Ireland and Poland reported under this Directive for the first time in 2011. Historical data of two microbiological parameters, *Escherichia coli* and intestinal enterococci were sent by Sweden (2005-2007), Luxembourg (2006), Malta (2006-2008), Belgium - Walloon Region (2007-2009), Belgium - Flemish Region (2008-2010), Greece (2007-2009), Hungary (2007) and Portugal (2007-2009).

Three non-EU countries, Croatia, Montenegro and Switzerland have reported monitoring results under the new directive. Croatia and Switzerland started to report in 2009, while Montenegro reported for the first time in 2010. Switzerland sent data on *Escherichia coli* for all bathing waters but only for some data on intestinal enterococci.

For the 2011 season, bathing water quality has been assessed under the new bathing water directive in 16 European countries. This is 13 more than for 2010 bathing season. Only three countries - the Czech Republic, Romania and the United Kingdom - are still assessed under the old bathing water directive. Eleven countries are assessed under the transition period rules.

Overall in 2011, 92.1 % of bathing waters in the EU met the minimum water quality standards set by the bathing water directives. Bathing water quality increased at 0.6 % of sites in 2011 compared to 2010. The proportion of bathing waters with excellent quality (or complying with the more stringent guide values) increased by 3.5 percentage points compared to 2010, reaching 77.1 %. The share of non-compliant bathing waters was 1.8 %, which was a 0.1 percentage point increase from 2010. In 2011, 207 bathing waters were banned or closed (1 %), which was 57 more than in the 2010 bathing season.

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 (IWRs), 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 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 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 visualising European spatial water data. It includes a lot of 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 inland 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 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 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 added by users. For historical data Water Watch uses a simplified index of bathing water quality data. The Czech Republic, Croatia, Denmark, Estonia, Finland (one municipality), Greece, Hungary, Lithuania, Luxembourg, Malta, Slovakia, Slovenia, England and Wales were also sending near real time information on bathing water quality to the Eye on Earth application. The bathing water quality for Austria, Belgium, Bulgaria, France, Germany, Iceland, Italy, Ireland, the Netherlands, Portugal, Sweden, Scotland and Northern Ireland was also presented on the Eye on Earth - Water Watch.

National and local information on bathing water quality

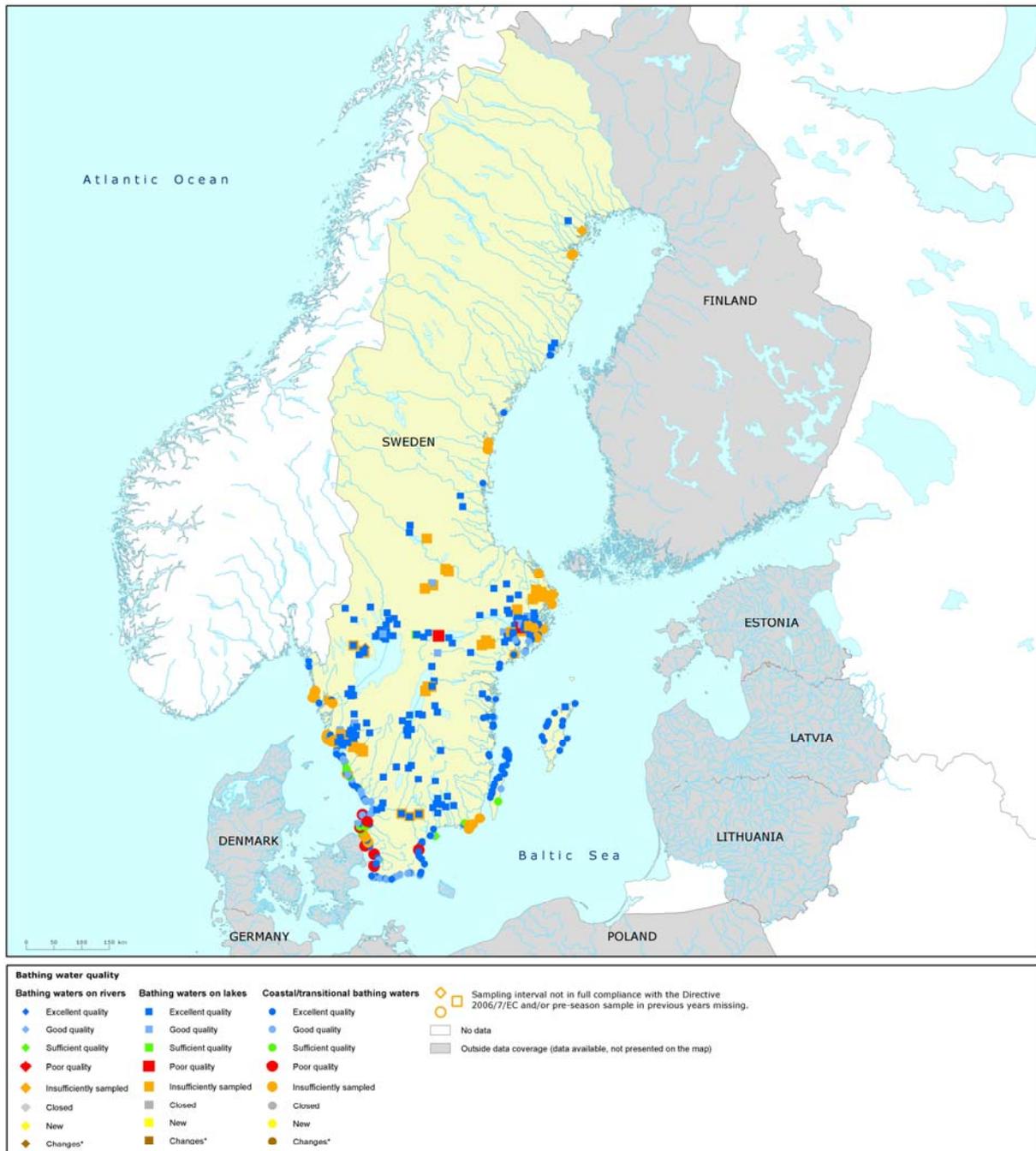
In order to make information to the public more effective, all EU countries have national or local web portals with detailed information for each bathing water. Websites generally include a map search function and public access to the monitoring results both in real time and for previous seasons.

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>.

Appendix 1

Map 1: Bathing waters reported during the 2011 bathing season in Sweden



Note: * Changes (bathing water where changes occur that affect the classification of a bathing water)
 More data on bathing water quality on: <http://www.eea.europa.eu/themes/water/mapviewers/bathing>
Source: National boundaries: GISCO; Large rivers and lakes: FFA, WFD Article 3; Bathing waters data and coordinates: Swedish authorities