

## Bathing water results 2010 – Sweden

### 1. Reporting and assessment

This report gives a general overview of bathing water quality in Sweden for the 2010 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.

Sweden has 254 coastal and 207 inland bathing waters. Assessment of bathing water quality according to assessment rules of the Directive 2006/7/EC is possible for 171 (67.3 %) coastal and 68 (32.9 %) inland bathing waters, since samples of intestinal enterococci and *Escherichia coli* for those bathing waters are available for the period 2007-2010. The overall assessment is done under transition period rules.

#### Assessment during the transition period

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 are applied. 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:

- **Class CI:** 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 CG:** 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 NC:** Not compliant with the mandatory value of the Directive 76/160/EEC for *Escherichia coli*;
- **Class B:** Banned or closed (temporary or throughout the season);
- **Class NF:** Insufficiently sampled;
- **Class NS:** Not sampled.

The new bathing water directive (2006/7/EC) requires Member States to start sampling shortly before the start of the bathing season. It also requires that the interval between sampling should not exceed one month. In some cases these required changes in regard to the old bathing water directive (76/160/EEC) have not yet been implemented, resulting in a late start date of sampling at some sites and/or insufficiently frequent sampling. For that reason two rules in regard to sampling frequency are considered in the assessment of monitoring results in 2010. By the first rule, 41 days were taken as a maximum difference between two samples (less strict rule), whereas by the second rule the maximum days between two samples considered were 32 days (strict rule). The new directive also requires that the first sample must be taken shortly before the start of a bathing season. However, in the assessment of bathing water quality in 2010, the first sample could be taken not later than 10 days after the start of the bathing season. If this was a case, the second sample should have been taken no later than 41 days after the start of the bathing season when the less strict rules or 32 days when the strict rules are used in the assessment. The bathing water is classified as insufficiently sampled or not sampled when the pre-season sample is missing or when the difference between two consecutive samples is larger than 41 days by the less strict rule or 32 days by the strict rule. In graphs results applying the less strict rules are presented.

## Assessment under Directive 2006/7/EC

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, with the interval between sampling dates never exceeding one month.

In the assessment of bathing water quality in 2010 the two rules in regard to sampling frequency are considered in the assessment of the monitoring results in the 2010 bathing season. By the first rule, 41 days were taken as a maximum difference between two samples (less strict rule), whereas by the second rule the maximum days between two samples considered were 32 days (strict rule). The new directive also requires that the first sample must be taken shortly before the start of a bathing season. However, in the assessment of bathing water quality in 2010, the first sample could be taken not later than 10 days after the start of the bathing season. If this was a case, the second sample should have been taken no later than 41 days after the start of the bathing season when the less strict rules or 32 days when the strict rules are used in the assessment. The bathing water is classified as insufficiently sampled or not sampled when the pre-season sample is missing or when the difference between two consecutive samples is larger than 41 days using by the less strict rule or 32 days by the strict rule. In graphs results applying the less strict rules are presented.

To assess bathing water under the Directive 2006/7/EC in 2010, four (or three if bathing season shorter than eight weeks) samples per season must be available for the 2007, 2008, 2009 and 2010 bathing seasons.

Bathing waters assessed according to the Directive 2006/7/EC are classified as 'excellent', 'good', 'sufficient' and 'poor' quality. Some bathing waters cannot be classified according to their quality but are instead classified as 'closed' (temporarily or throughout the bathing season), '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 2010, except for 18 bathing waters opened on 15 July, and ended on 15 or 20 August 2010.

A total of 461 bathing waters were monitored in Sweden during the 2010 bathing season, of which 254 were coastal bathing waters and 207 inland bathing waters (five on rivers; 202 on lakes).

With 461 bathing waters Sweden accounts for about 2.2 % 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 coastal bathing waters increased since the start of the reporting from 247 in 1995 to 406 in 2007. It decreased significantly afterwards to 258 in 2008. There were 254 bathing waters in 2010, when five bathing waters were de-listed compared to the previous year. The number of inland bathing waters increased from 353 in 1995 and fluctuated till 2007 between 398 in 2001 and 525 in 1997. It decreased significantly afterwards to 212 in 2008 and later to 207 in 2010. There were three less inland bathing waters in 2010 than in the previous year: one new bathing water was added to the list and four bathing waters were de-listed.

### 3. Bathing water quality

The results of the bathing water quality in Sweden for the period 1995-2009 as reported in the past reporting years and for the bathing season of 2010 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/2005-2010 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 graphs show the classification under the Directive 76/160/EEC and during transition period, for coastal and inland bathing waters separately 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 (temporarily or throughout the season) (class B, grey line).

Table 1 shows the same information in absolute numbers and in percentages separately for coastal and inland bathing waters. The numbers and percentages of insufficiently sampled or not sampled bathing waters are also presented. Table 2 shows the bathing water quality results of assessment during transition period for the 2009 and 2010 seasons in Sweden for all bathing waters.

The same graphs show the classification under the Directive 2006/7/EC, for coastal and inland bathing waters separately for 2009 and 2010:

- 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 temporarily closed or closed throughout the season (grey bar).

Table 3 shows the same information in absolute numbers and in percentages separately for assessed coastal and inland bathing waters under Directive 2006/7/EC for the 2009 and 2010 seasons in Sweden. It also shows bathing water quality results of assessment under Directive 2006/7/EC for all bathing waters having a four-year set of data.

Map 1 and Map 2 show the location of the reported bathing waters in Sweden. Map 1 shows the bathing water quality results of overall assessment during transition period. Map 2 shows the bathing water quality results of assessment under Directive 2006/7/EC. The results applying the less strict rules are presented. In addition, insufficiently sampled bathing waters by the strict rules are presented as an orange outline. The location of the bathing waters is based on the geographic coordinates reported by the Swedish authorities.

#### Coastal bathing waters

In Sweden, 96.5 % of the coastal bathing waters met the mandatory water quality in 2010. This is a decrease of 1.6 % compared to the previous year. The compliance rate with the more stringent guide values decreased from 78 % to 74.8 %. Nine bathing waters (3.5 %) were non-compliant with the mandatory value for *Escherichia coli* compared to two (0.8 %) in 2009. Since the start of the reporting in 1995, no coastal bathing water had to be closed during the season.

Until 1999, a large number of bathing waters were insufficiently sampled and could therefore not be taken into account in the water quality assessment. This largely explains the low compliance rate in those years. From 2000 onwards more than 95 % of the bathing waters were compliant with the mandatory values. Concerning the more stringent guide values there is a stronger fluctuation in the number of bathing waters that are compliant, although the rate is around 80 % of the bathing waters since 2000, with a dip in 2007 (63.1 %). This can be explained by the fact that the summer of 2007 was exceptionally rainy for several areas, which also affected the quality of the bathing waters.

In Sweden, two thirds of the coastal bathing waters (67.3 %) can be assessed under the Directive 2006/7/EC in 2010. Some 66.7 % of the assessed coastal bathing waters were of excellent quality, 23.4 % were of good quality and 5.8 % were of sufficient quality. Seven bathing waters (4.1 %) were of poor quality.

### **Inland bathing waters**

Some 98.6 % of the inland bathing waters met the mandatory water quality in 2010. This is a decrease of 0.9 % compared to the previous year. The percentage of bathing waters compliant to the guide values decreased to 77.8 % (by 6 %). There were two bathing waters non-compliant with the mandatory value for *Escherichia coli* (1 %), one more than in 2009. None inland bathing water was closed.

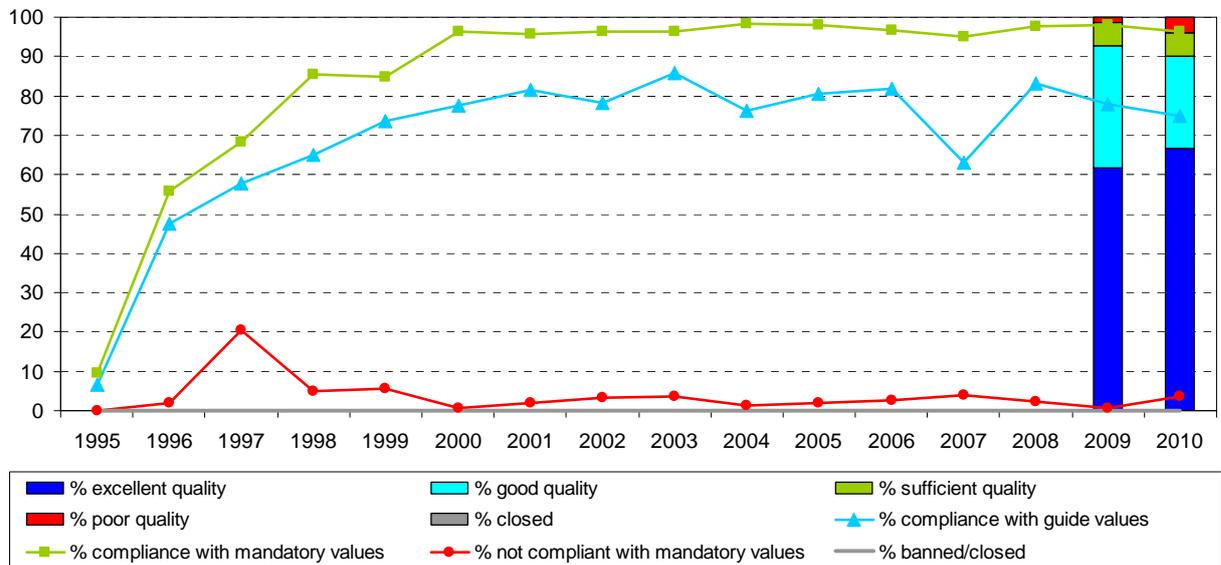
Similar as for the coastal bathing water, until 1999, a large number of bathing waters were insufficiently sampled and could therefore not be taken into account in the water quality assessment. This largely explains the low compliance rate in those years. From 2000 onwards more than 95 % of the bathing waters were compliant with the mandatory values, reaching almost 100 % in 2002. Since then there has been a slight decrease in the number of compliant bathing waters. Since 2008, the compliance has increased again, reaching close to 100 % in 2009. A similar evolution can be seen for the number of bathing waters complying with the more stringent guide values, although the fluctuations are more distinct. In 2006 and 2007, the level of complying bathing waters dropped again to a level below 70 % after reaching about 80 % of the bathing waters in 2000, 2001 and 2003. In 2008 and 2009, the compliance rate reached again more than 80 % of the bathing waters, but it decreased to 77.8 % in 2010. Inland bathing waters had to be closed only in the 2006 and 2007 seasons (<1%).

One third of the inland bathing waters (32.9 %) can be assessed under the Directive 2006/7/EC in 2010. Some 94.1 % of the assessed inland bathing waters were of excellent quality and 5.9 % were of good quality. No bathing water was of poor quality.

**Figure 1: Results of bathing water quality in Sweden from 1995 to 2010**

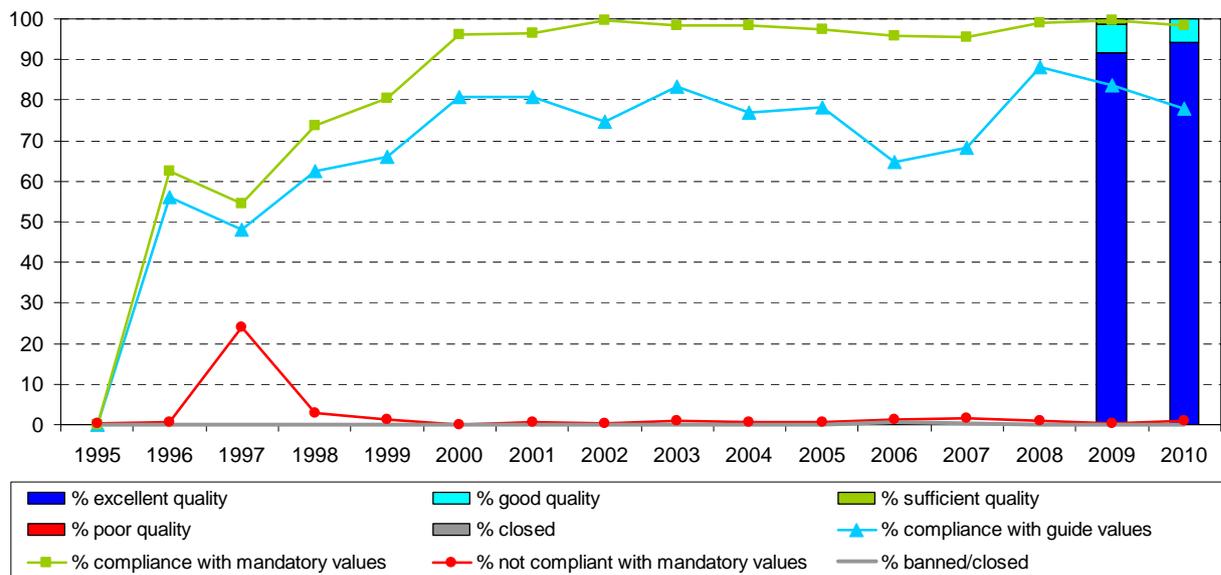
**Coastal bathing waters (SE)**

% of bathing waters



**Inland bathing waters (SE)**

% of bathing waters



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. For the year 2010 results applying the less strict rules are presented.

**Table 1: Results of bathing water quality in Sweden from 1995 to 2010.**

SE												
		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	%
Coastal bathing waters	1995	247	16	6.5	24	9.7	0	0.0	0	0.0	223	90.3
	1996	388	185	47.7	216	55.7	8	2.1	0	0.0	164	42.3
	1997	398	230	57.8	272	68.3	82	20.6	0	0.0	44	11.1
	1998	375	244	65.1	320	85.3	18	4.8	0	0.0	37	9.9
	1999	377	278	73.7	320	84.9	21	5.6	0	0.0	36	9.5
	2000	370	287	77.6	357	96.5	3	0.8	0	0.0	10	2.7
	2001	376	306	81.4	360	95.7	8	2.1	0	0.0	8	2.1
	2002	379	296	78.1	365	96.3	13	3.4	0	0.0	1	0.3
	2003	379	325	85.8	365	96.3	14	3.7	0	0.0	0	0.0
	2004	379	289	76.3	373	98.4	5	1.3	0	0.0	1	0.3
	2005	379	305	80.5	371	97.9	8	2.1	0	0.0	0	0.0
	2006	405	332	82.0	392	96.8	11	2.7	0	0.0	2	0.5
	2007	406	256	63.1	386	95.1	16	3.9	0	0.0	4	1.0
	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
2010	254	189	74.4	242	95.3	9	3.5	0	0.0	3	1.2	
Inland bathing waters	1995	353	0	0.0	0	0.0	1	0.3	0	0.0	352	99.7
	1996	490	275	56.1	307	62.7	3	0.6	0	0.0	180	36.7
	1997	525	253	48.2	286	54.5	127	24.2	0	0.0	112	21.3
	1998	465	291	62.6	343	73.8	13	2.8	0	0.0	109	23.4
	1999	414	274	66.2	333	80.4	5	1.2	0	0.0	76	18.4
	2000	403	325	80.6	387	96.0	0	0.0	0	0.0	16	4.0
	2001	398	321	80.7	384	96.5	3	0.8	0	0.0	11	2.8
	2002	402	300	74.6	401	99.8	1	0.2	0	0.0	0	0.0
	2003	407	339	83.3	401	98.5	4	1.0	0	0.0	2	0.5
	2004	415	319	76.9	408	98.3	3	0.7	0	0.0	4	1.0
	2005	416	326	78.4	406	97.6	3	0.7	0	0.0	7	1.7
	2006	444	287	64.6	426	95.9	6	1.4	3	0.7	9	2.0
	2007	441	301	68.3	421	95.5	7	1.6	2	0.5	11	2.5
	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
2010	207	158	76.3	197	95.2	2	1.0	0	0.0	8	3.9	

\*Less strict rules applied (41 days taken as a maximum difference between two samples for reporting under Directive 2006/7/EC). \*\*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 (1995-2007) or the mandatory value for *Escherichia coli* (2008-2010).

**Table 2: Results of bathing water quality for all bathing waters in Sweden in 2009 and 2010. Assessment during the transition period.**

SE												
		Total number of bathing waters	Compliance with guide and mandatory values**		Compliance with mandatory value		Not compliant		Banned/closed temporarily or throughout the season		Insufficiently sampled or not sampled	
			number	%	number	%	number	%	number	%	number	%
All bathing waters	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
	2010	461	347	75.3	439	95.2	11	2.4	0	0.0	11	2.4

\*Less strict rules applied (41 days taken as a maximum difference between two samples for reporting under Directive 2006/7/EC). \*\*Bathing waters which were compliant with the guide values were also compliant with the mandatory value for *Escherichia coli*.

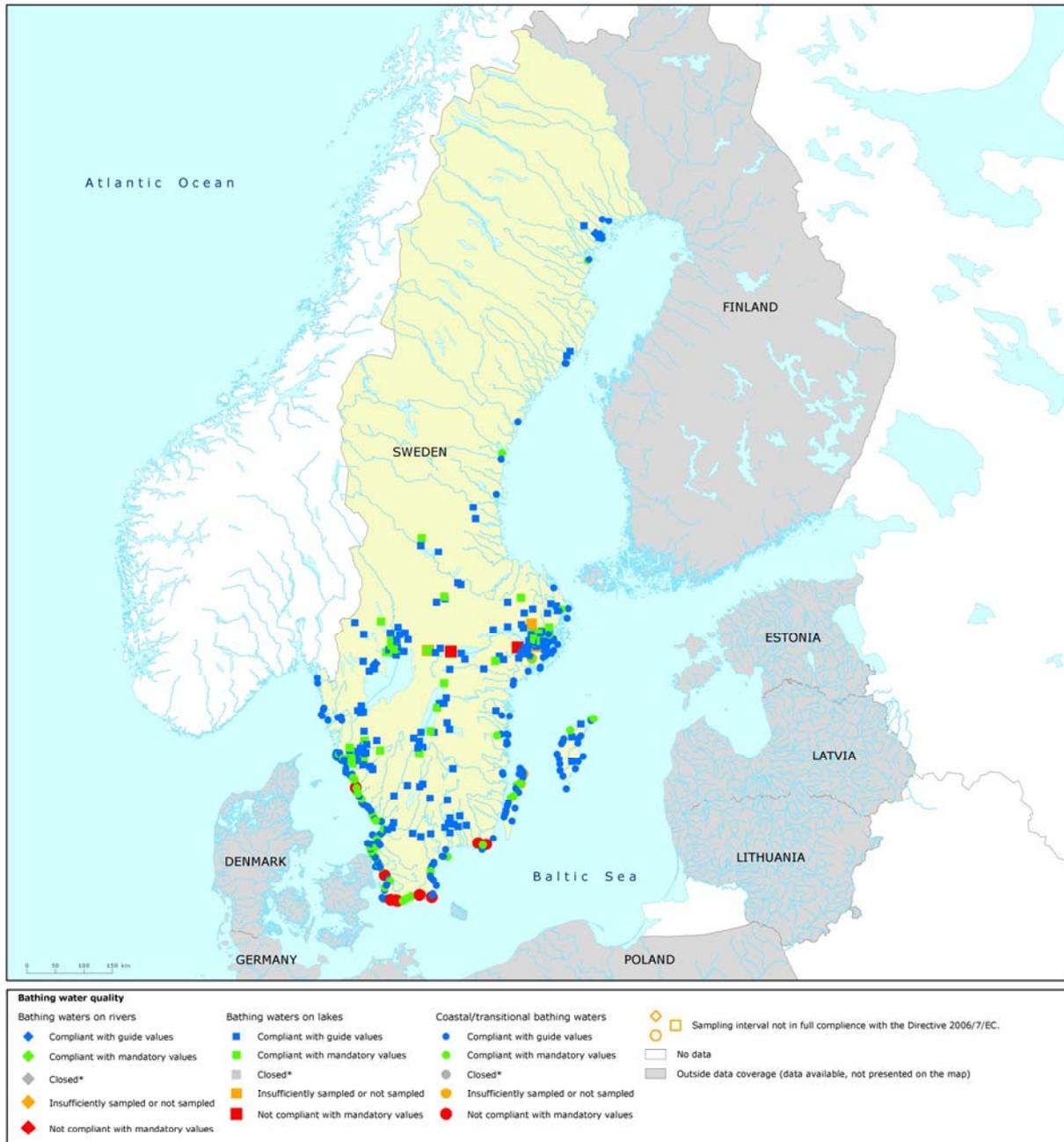
**Table 3: Results of bathing water quality for bathing waters assessed under the Directive 2006/7/EC in Sweden in 2009 and 2010.**

SE												
		Number of bathing waters assessed under 2006/7/EC	Excellent quality		Good quality		Sufficient quality		Poor quality		Closed temporarily or throughout the season	
			number	%	number	%	number	%	number	%	number	%
Coastal bathing waters	2009**	83.8 % out of 259 (217)	134	61.8	67	30.9	13	6.0	3	1.4	0	0.0
	2010*	67.3 % out of 254 (171)	114	66.7	40	23.4	10	5.8	7	4.1	0	0.0
	2010	66.9 % out of 254 (170)	114	67.1	39	22.9	10	5.9	7	4.1	0	0.0
Inland bathing waters	2009**	67.6 % out of 210 (142)	130	91.5	10	7.0	2	1.4	0	0.0	0	0.0
	2010*	32.9 % out of 207 (68)	64	94.1	4	5.9	0	0.0	0	0.0	0	0.0
	2010	30.9 % out of 207 (64)	60	93.8	4	6.3	0	0.0	0	0.0	0	0.0
All bathing waters assessed under 2006/7/EC	2009**	76.5 % out of 469 (359)	264	73.5	77	21.4	15	4.2	3	0.8	0	0.0
	2010*	51.8 % out of 461 (239)	178	74.5	44	18.4	10	4.2	7	2.9	0	0.0
	2010	50.8 % out of 461 (234)	174	74.4	43	18.4	10	4.3	7	3.0	0	0.0

\*Less strict rules applied (41 days taken as a maximum difference between two samples for reporting under Directive 2006/7/EC).

\*\* Numbers taken from the 2009 bathing season report, where the rule "16 (or 12 if bathing season shorter than eight weeks) samples available for the period 2006-2009" has been considered. In the 2010 bathing season report, the rule "four (or three if bathing season shorter than eight weeks) samples per season available for the 2007, 2008, 2009 and 2010 bathing seasons" has been considered.

**Map 1: Bathing waters reported during the 2010 bathing season in Sweden (transition period)**



**Map 2: Bathing waters reported during the 2010 bathing season in Sweden (Directive 2006/7/EC)**



Bathing water quality			
<b>Bathing waters on rivers</b>	<b>Bathing waters on lakes</b>	<b>Coastal/transitional bathing waters</b>	
◆ Excellent quality	■ Excellent quality	● Excellent quality	◇ Sampling interval not in full compliance with the Directive 2006/7/EC.
◆ Good quality	■ Good quality	● Good quality	□ No data
◆ Sufficient quality	■ Sufficient quality	● Sufficient quality	■ Outside data coverage (data available, not presented on the map)
◆ Poor quality	■ Poor quality	● Poor quality	
◆ Closed*	■ Closed*	● Closed*	
◆ Other transition period assessment rules	■ Other transition period assessment rules	● Other transition period assessment rules	

**Note:** \* closed (temporarily or throughout the season)  
 More data on bathing water quality on: <http://www.eea.europa.eu/themes/water/mapviewers/bathing>  
**Source:** National boundaries: GISCO; Large rivers and lakes: EEA, WFD Article 3; Bathing waters data and coordinates: Swedish authorities

#### 4. Important information as provided by the Swedish authorities

To the 2008 bathing season Sweden implemented into the Swedish legislation the New Bathing Water Directive (2006/7/EC) by Regulation SFS 2008:218 and NFS 2008:8 which is now legally binding. The Swedish implementation of the new Directive was also informed to the Commission before the start of the 2008 bathing season.

The Member States have been asked to set their own limit for "large bathing water". In Sweden it was decided that large bathing water is a place visited by at least 200 bathers per day. The responsible communities were asked to re-register their EU bathing waters in regard of this. 470 bathing water were registered with motive (>200 bathers/day), control plan and sampled according to the new rules of the new Directive before the 2008 bathing season.

#### Monitoring and analytical methods

The reported bathing areas have been sampled according to the new Directive given that the maximum days allowed between two samplings are 30 days. The majority of the Swedish counties have a bathing season shorter than eight weeks which gives an allowed minimum frequency of three samples per bathing season.

The analytical methods allowed in Sweden are as follows:

- *Escherichia coli*: MPN or Membrane filtration (ISO 9308-3, ISO 9308-1, SS 028167:2 or Colilert®-18/Quanti-Tray®);
- Intestinal enterococci: MPN or Membrane filtration (ISO 7899-1, ISO 7899-2 or Enterolert-E®/Quanti-Tray®).

#### De-listing of bathing waters

The Swedish authorities reported reasons for de-listing of bathing waters (in Swedish) as follows:

Bathing water identification code	Bathing water name	Commune	Reasons for change
SE0441282000004370	Halvmånen	Landskrona	<i>Kommunen beslutat om minskad skötsel av badplatsen. Kiosken har stängt. Att antalet besökare pga av detta har minskat och bedöms ej överstiga 200 personer per dag.</i>
SE0930884000001430	Juttern, Stjärneviksbadet	Vimmerby	<i>Då man ej når upp till 200 badande i genomsnitt per dag (stort antal badande enligt NFS 2008:8) ansöks härmed om avregistrering som EU-bad.</i>
SE0930884000001433	Nossenbadet	Vimmerby	<i>Då man ej når upp till 200 badande i genomsnitt per dag (stort antal badande enligt NFS 2008:8) ansöks härmed om avregistrering som EU-bad.</i>
SE0A11382000000542	Olofsbo N	Falkenberg	<i>Stranden är inte stor. Vi vill göra en provtagningsplats istället för de två som finns idag. Olofsbo N och S är på samma sandstrand utan något avskiljande emellan.</i>
SE0A11382000000535	Stensjöbadplats	Falkenberg	<i>Önskas avregistreras som EU-bad då besöksantalet rejält understiger 200 badande/dag.</i>
SE0930840000000006	Bläsinge	Mörbylånga	<i>Under 2009 kontrollerades antalet besökande vid 4 tillfällen, max 50-60 besökande vid fint väder.</i>
SE0930840000000010	Sandvik	Mörbylånga	<i>Under 2009 kontrollerades antalet besökande vid 4 tillfällen, max 50-60 besökande vid fint väder.</i>
SE0A21402000000094	Humblebadet, Hopptorn	Partille	<i>Kontrollräkningar av antalet badande föregående säsonger ger 50-70 personer per dag. Antalet badande bedöms aldrig ha överstigit 200 badande per dag, Troligen felaktig registrering.</i>
SE0241883000002573	Möckeln, Österviksbadet	Karlskoga	<i>Lågt besöksantal.</i>

## **Non-complying bathing sites**

None of the Swedish bathing waters have been prohibited for bathing during the 2010 season. One bathing water was affected by short term pollution with replaced sample taken.

Some bathing areas have measured raised concentrations of the indicator organism 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 of the beach and bathing area from birds, mainly geese, this problem is difficult to control but many municipalities work with measures to reduce the number of birds at the bathing area.

## **Information to the public**

The bathing data for the season are reported to the website "Badplatsen", where the public can consult the latest quality assessments. It is also possible to search for previous years' assessments. This website can be accessed via the home page of the Swedish EPA or of the Swedish Institute for Communicable Disease Control (<http://badplatsen.smittskyddsinstitutet.se>).

## **Waste water treatment**

Most Swedish households are connected to a sewage treatment plant. The majority of such plants have both a chemical and biological treatment stage, but do not generally perform disinfection.

## **Treatment of diffuse pollution sources**

Considerable efforts are made to monitor the maintenance of private cesspools and to ensure that an increasing number of them are connected to a treatment plant. 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. Several bathing areas have problems with pollution caused by birds, mainly geese, a source of contamination, which can be difficult to control.

Additional information for some bathing waters in regard to management measures can be obtained from the report of bathing water quality for the 2010 bathing season, table SeasonallInfo, attribute ManMeas (in Swedish) (<http://cdr.eionet.europa.eu/se/eu/colsgtzfa/envtrhgna/SeasonallInfo>).

## **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](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 quality of the bathing water at more than 22 000 coastal beaches and freshwater 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 visualisation of 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 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 bathing water quality from Austria, Belgium, Bulgaria, Croatia, Denmark, France, Germany, Ireland, Italy, Poland, Portugal, Spain, Sweden and Scotland and Northern Ireland was also presented on 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>.