European Environment Agency

Bathing water results 2010 – Latvia

1. Reporting and assessment

This report gives a general overview of bathing water quality in Latvia during the 2010 bathing season. Latvia has reported under the Directive 2006/7/EC since 2008.

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.

In the assessment of bathing water quality in 2010 the maximum days between two samples considered were 32 days. 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 32 days after the start of the bathing season. 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 32 days.

2. Length of bathing season and number of bathing waters

For all bathing waters the bathing season lasted four months, from 15 May to 15 September 2010.

A total of 47 bathing waters were monitored in Latvia during the 2010 bathing season, of which 33 were coastal (19) or transitional bathing waters (14) and 14 inland bathing waters (two on rivers; 12 on lakes (lakes, reservoirs or ponds)).

With 47 bathing waters Latvia accounts for about 0.2 % 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 42 in 2005 to 46 in 2007 and remained the same till 2009. It decreased afterwards to 33 in 2010, when 13 bathing water were de-listed compared to the previous year. The number of inland bathing waters decreased significantly

from 236 in 2005 to 14 in 2010, when 214 bathing waters were de-listed compared to the previous year.

3. Bathing water quality

The results of the bathing water quality in Latvia for the period 2005-2009 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; 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, for coastal and inland bathing waters separately:

- 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 for the 2009 and 2010 seasons in Latvia for all bathing waters.

Map 1 shows the locations of the reported bathing waters in Latvia. The location of the bathing waters is based on the geographic coordinates reported by the Latvian authorities.

Coastal bathing waters

In Latvia, 97 % of the coastal bathing waters met the mandatory water quality in 2010. This is a decrease of 3 % compared to the previous year. The rate of compliance with the guide values increased from 50 % to 81.8 %. No bathing water was non-compliant with the mandatory value for *Escherichia coli*. One coastal bathing site (3 %) had to be closed during the season.

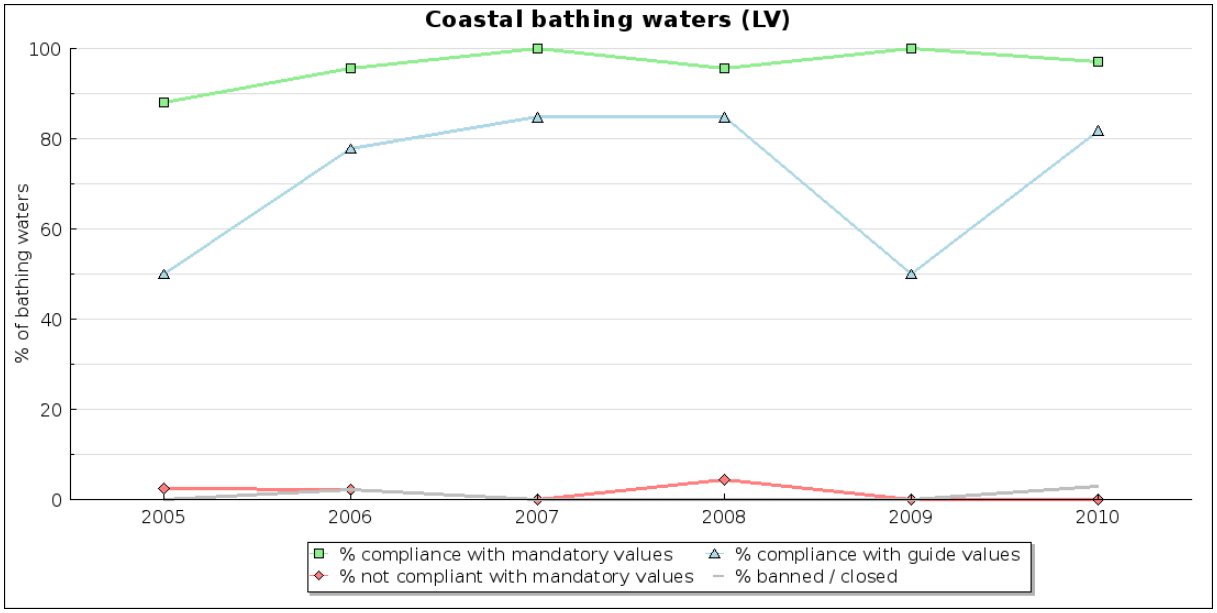
Since 2005, the compliance rate with the guide values increased from 50 % to 81.8 % in 2010. The highest compliance rate was reached in 2007 and 2008 (84.8 %). The compliance rate with the mandatory values was above 95 % since 2006, reaching 100 % compliance in 2007 and 2009. One closed bathing site was reported in 2006 and 2010.

Inland bathing waters

All inland bathing waters met the mandatory water quality in 2010. This is an improvement compared to the previous year, when five bathing waters (2.2 %) were non-compliant with the mandatory value for *Escherichia coli.* The rate of compliance with the guide values increased from 51.3 % to 78.6 %. No bathing water was closed during the season compared to one bathing site (0.4 %) in 2009.

From 2005 onward we see an overall increase in the compliance rate, although it took Latvia till the 2007 bathing season to reach a level of non-compliant inland bathing waters below 5 %. The share of bathing waters that complied with mandatory values in 2005 and 2006 was almost 90%, but in 2010 it increased to 100 %. The guide water quality increased from 53 % in 2005 to 78.6 % in 2010. Meanwhile, it decreased from 78.4 % in 2007 to 51.3 % in 2009. The percentage of closed bathing waters fell below 1 % in 2009, while no bathing water was closed in 2010.

Figure 1: Results of bathing water quality in Latvia from 2005 to 2010



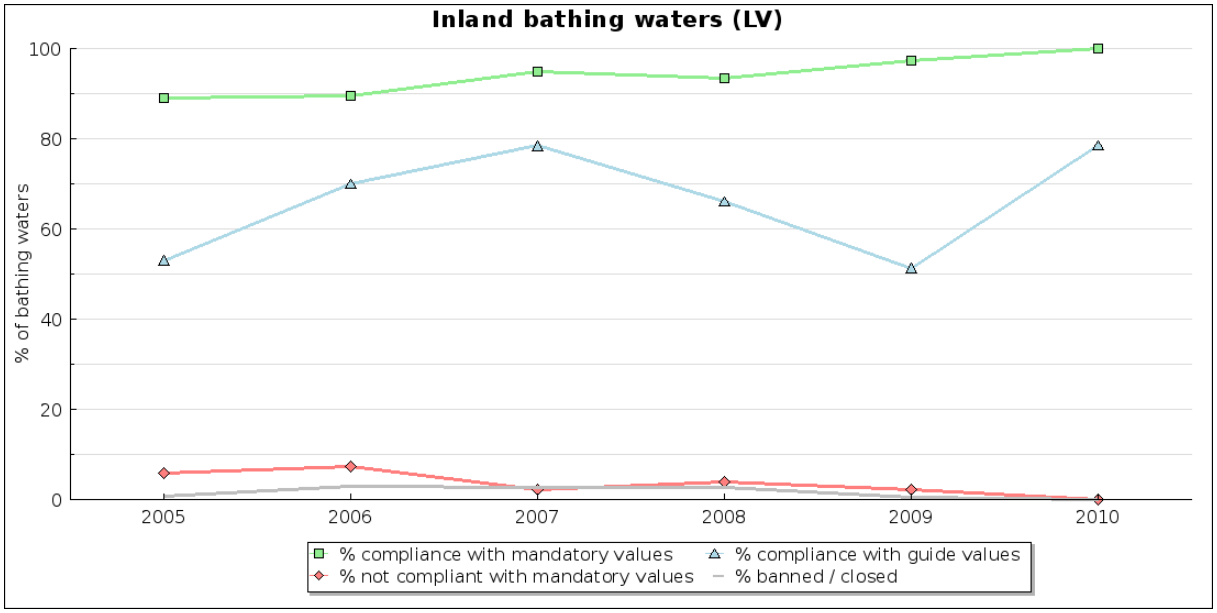


Table 1: Results of bathing water quality in Latvia from 2005 to 2010

LV												
		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	2005	42	21	50.0	37	88.1	1	2.4	0	0.0	4	9.5
	2006	45	35	77.8	43	95.6	1	2.2	1	2.2	0	0.0
	2007	46	39	84.8	46	100.0	0	0.0	0	0.0	0	0.0
	2008	46	39	84.8	44	95.7	2	4.3	0	0.0	0	0.0
	2009	46	23	50.0	46	100.0	0	0.0	0	0.0	0	0.0
	2010	33	27	81.8	32	97.0	0	0.0	1	3.0	0	0.0
Inland bathing waters	2005	236	125	53.0	210	89.0	14	5.9	2	0.8	10	4.2
	2006	230	161	70.0	206	89.6	17	7.4	7	3.0	0	0.0
	2007	232	182	78.4	220	94.8	5	2.2	6	2.6	1	0.4
	2008	230	152	66.1	215	93.5	9	3.9	6	2.6	0	0.0
	2009	228	117	51.3	222	97.4	5	2.2	1	0.4	0	0.0
	2010	14	11	78.6	14	100.0	0	0.0	0	0.0	0	0.0

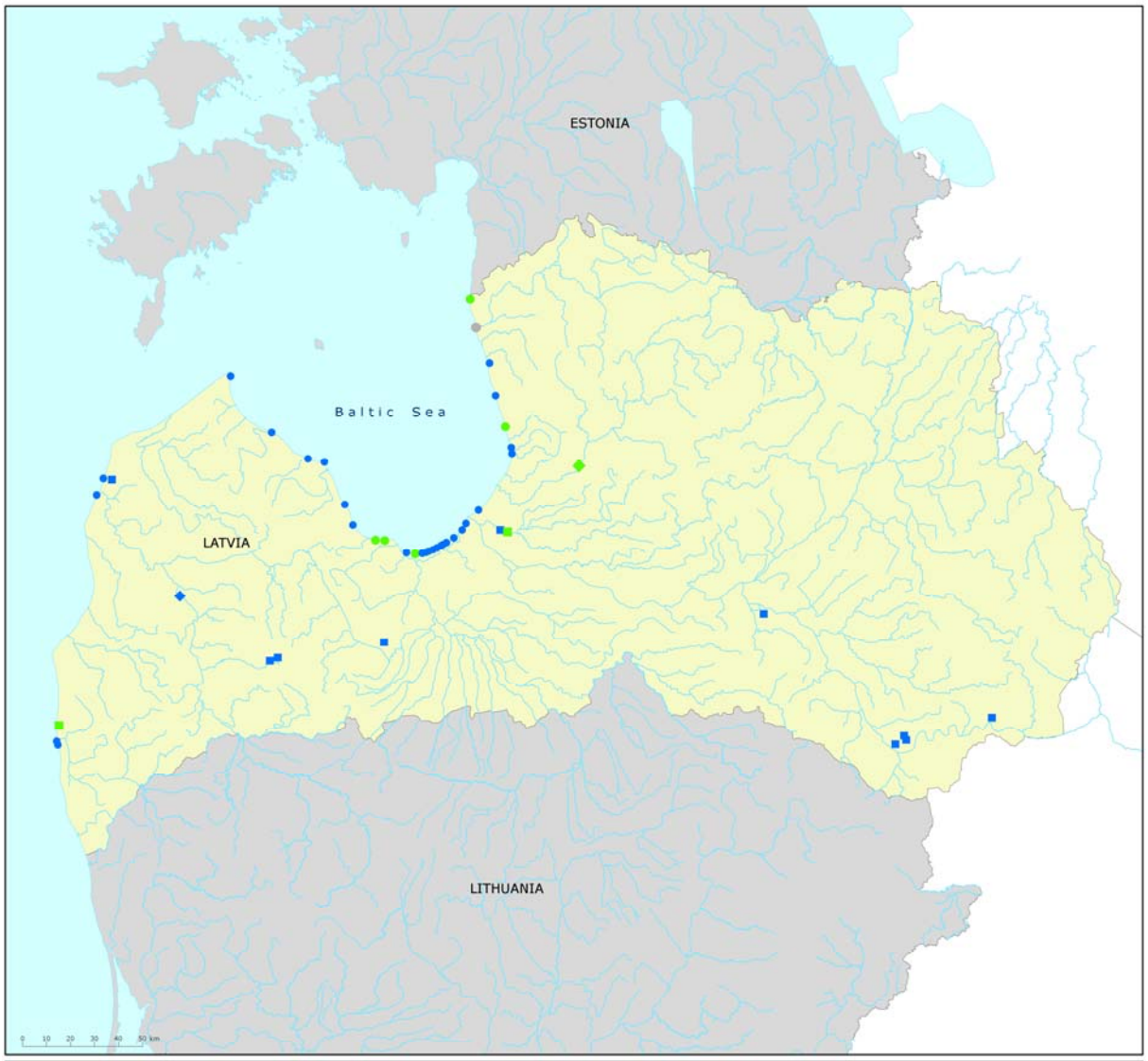
*Bathing waters which were compliant with the guide values were also compliant with the mandatory values for five parameters under the Directive 76/160/EEC (2005-2007) or the mandatory value for *Escherichia coli* (2008-2010).

Table 2: Results of bathing water quality for all bathing waters in Latvia in 2009 and 2010

LV												
		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	274	140	51.1	268	97.8	5	1.8	1	0.4	0	0.0
	2010	47	38	80.9	46	97.9	0	0.0	1	2.1	0	0.0

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

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



Note: * banned or 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. Latvian authorities

4. Important information as provided by the Latvian authorities

Samples were taken from the same places approximately one time per month mostly from the area where the number of swimmers was the biggest.

Drastic delisting and closing of bathing waters in 2010 was performed due to changes in population density during last decade. Many of them are not considered as a bathing site at which large number of people is expected to bathe. For some of them there are other facilitated bathing sites in the vicinity, so the optimisation of monitoring network has been carried out based on the limited resources. Besides, the state territorial reform approved by the end of 2008 has changed the administrative structure of the country and urges to elaborate new regional development plans in which bathing sites must be anticipated, as well. Population is involved in public consultations during the course of development of these plans. So, it can be expected that the number of bathing sites will be increased again in the near future, especially taking into account inhabitants` opinion.

In 2010 one bathing site in Salacgrīva beach was closed for one week in June due to high *E.coli* concentrations detected in the water. The reason for that incident remained unclear (probably, unhygienic behaviour of bathers or accidental spills from wastewater treatment plant not reported officially), so the case was not considered and reported as a short term pollution.

During the 2010 bathing season, information to the public was performed through internet, press releases and mass media. Most bathing waters have information board.

The bathing water quality problems are formally considered in River Basin Management Plans according to Water Framework Directive (2000/60/EC) which have been approved by the end of 2009. Unfortunately, investments needed to improve bathing water quality are not evaluated because the new Bathing Waters Directive (Directive 2006/7/EC) sets new criteria and approach for classification of bathing water quality. Only after the transition period it will be possible to assess the final quality of bathing waters and improvement measures needed.

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 (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 inland bathing 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.