Bathing Water Directive report 2013
Estonia

The report gives a general overview of information acquired from the reported data, based on provisions of the Bathing Water Directive[1]. The reporting process is described below, as well as state and trends of bathing water quality in Estonia.

1. BWD reporting in 2013 season

In 2013 bathing season, 53 bathing waters have been reported in Estonia. For each bathing water, five groups of parameters have been delivered:

- *basic identification data* – including name, location, geographic type of bathing water and availability to bathers;
- *seasonal data* – including season start and end, national quality classification in present season, potential management measures and changes in quality;
- *monitoring results* – disaggregated numerical values of two microbiological parameters – intestinal enterococci and Escherichia coli (also known as E. coli), recorded at each water sample taken;
- *abnormal situation periods* – periods of unexpected situations that have, or could reasonably be expected to have, an adverse impact on bathing water quality and on bathers' health; reporting is optional;
- *short-term pollution periods* – identifiable events that adversely affect water quality by faecal contamination; reporting is optional;

Bathing waters of Estonia in 2013	
Total reported	**53**
Coastal	26
Inland	27
Season period	**91 days**
Coastal	1 Jun to 31 Aug
Inland	1 Jun to 31 Aug
Samples taken	**290**
Share of bathing waters with good or excellent water quality	**85 %**
New BWD implemented in	**2008**

The authorities of Estonia initiated new BWD (2006/7/EC) reporting in 2008 season. The 2013 season data were delivered to the European Commission by **30 December 2013**, with additional deliveries on 2 January 2014 and 12 March 2014.

Altogether, **53 bathing waters** have been reported – 0.2% of all bathing waters in Europe. Out of all bathing waters in Estonia, none have been newly identified in 2013 season. One bathing water has been delisted[2]. 49% of bathing waters in Estonia are of coastal type; the other 51% are inland. **290 samples** were taken at bathing waters throughout the season – five per bathing water on average.

[1] Available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF
[2] Bathing waters which were identified in 2012 season, but not in 2013 season

The bathing season period was from 1 June to 31 August for coastal bathing waters, i.e. 91 days altogether. Inland bathing season period was from 1 June to 31 August, i.e. 91 days.

Short-term pollution events have been reported at four bathing waters.

Detailed information on individual bathing waters is available from national bathing water profiles at http://www.terviseamet.ee/keskkonnatervis/vesi/suplusvesi/suplusvee-kvaliteet.html.

2. Assessment methodology

During the bathing season, water samples are taken and analysed for two bacteria, *Escherichia coli* and intestinal enterococci which may indicate the presence of pollution, usually originating in sewage or livestock waste. The results of the analysis are used to assess the quality of the bathing waters concerned and to provide information to the public on the quality of the water in the bathing sites concerned.

According to the BWD, the bathing water sample dataset should satisfy the following conditions:

- a minimum of one sample per month[3]
- a minimum of four samples per season[4]
- a minimum of 16 samples in total[5]
- four consecutive seasons[6]
- a pre-season sample[7]

The monitoring took place at 98% of total identified bathing waters, while 96% of bathing waters satisfied the described sampling frequency rules set by the Directive. Table 1 shows the share of bathing waters that did not satisfy monitoring frequency, as well as corresponding reasons.

Table 1: Number of assessed bathing waters in 2013

Total number of bathing waters in 2013	Bathing waters with sampling frequency satisfied	Bathing waters with sampling frequency not satisfied			
		Insufficiently sampled	Closed	Not sampled	**Total**
53	51	1	1	0	2

However, in pursue of maximum possible count of bathing waters to be taken into account for statistical purposes, limited number of other bathing waters have been assessed as well. This includes all bathing waters that have set of samples for a competent quality classification, but lack pre-season sample or

[3] The interval between two samples should not exceed 31 + 4 days, provided that the next sampling is done according to the monitoring calendar; exception applies for temporarily closed bathing waters

[4] Three samples if the season does not exceed eight weeks or the region is subject to special geographical constraints

[5] 12 samples if the season does not exceed eight weeks or the region is subject to special geographical constraints

[6] The condition does not apply if the bathing water is newly identified or any changes have occurred that are likely to affect the classification

[7] A pre-season sample is taken into account at total number of samples per season

frequency between sample dates is larger than defined in the directive. However, samples have to be equally distributed throughout the season.

Bathing waters are accordingly classified to one of the BWD quality classes:

- excellent
- good
- sufficient
- poor

The classification is based on pre-defined percentile values for microbiological enumerations, falling in the certain class given in Annex I of the Directive. This defines different limit values for coastal and inland waters.

3. Bathing water quality

The results of the bathing water quality in Estonia for the period of 2010–2013 as reported in the past reporting years and for the bathing season of 2013 are presented in Figure 1 (for coastal bathing waters) and Figure 2 (for inland bathing waters). The previous reports are available on the European Commission's bathing water quality website[8] and the European Environment Agency's bathing water website[9].

3.1 Coastal bathing waters

In Estonia, 88.5% of coastal bathing waters met at least sufficient water quality in 2013. No coastal bathing waters had to be closed during the bathing season. See Appendix 1 for numeric data.

[8] http://ec.europa.eu/environment/water/water-bathing/index_en.html
[9] http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water

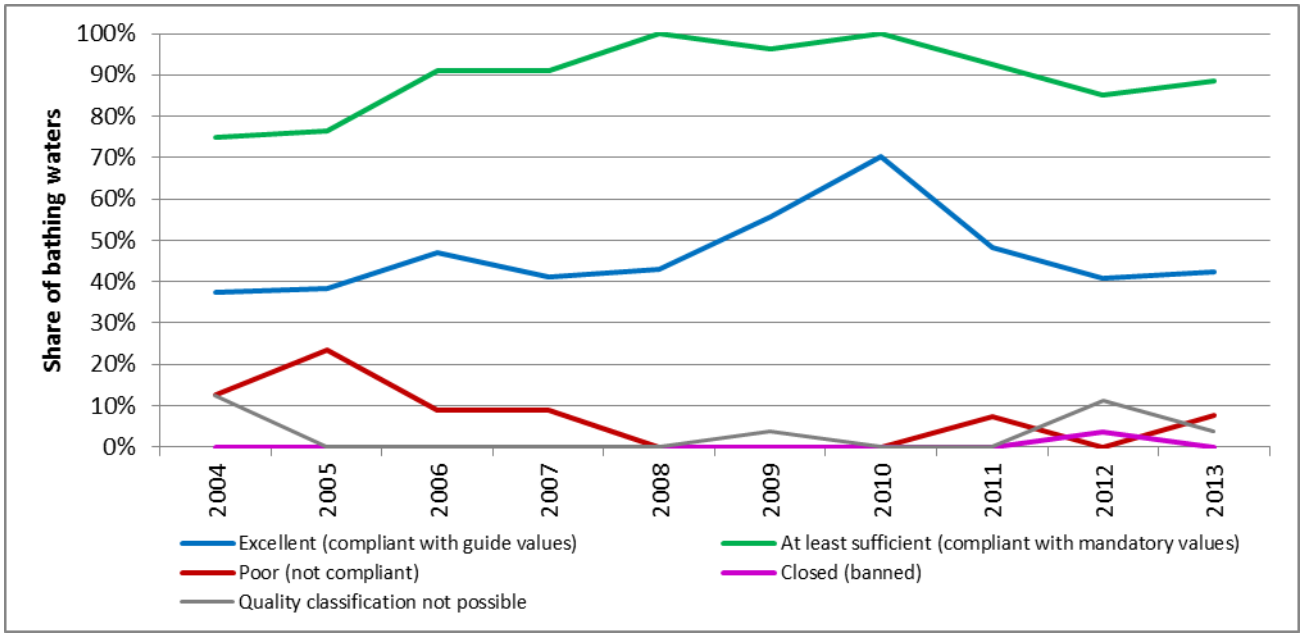


Figure 1: Coastal bathing water quality trend in Estonia. Note: the "At least sufficient" class also includes bathing waters of "Excellent" quality class, the sum of shares is therefore not 100%.

3.2 Inland bathing waters

92.6% of the inland bathing waters met the mandatory water quality in 2013. 3.7% of bathing waters had to be closed during the bathing season. See Appendix 1 for numeric data.

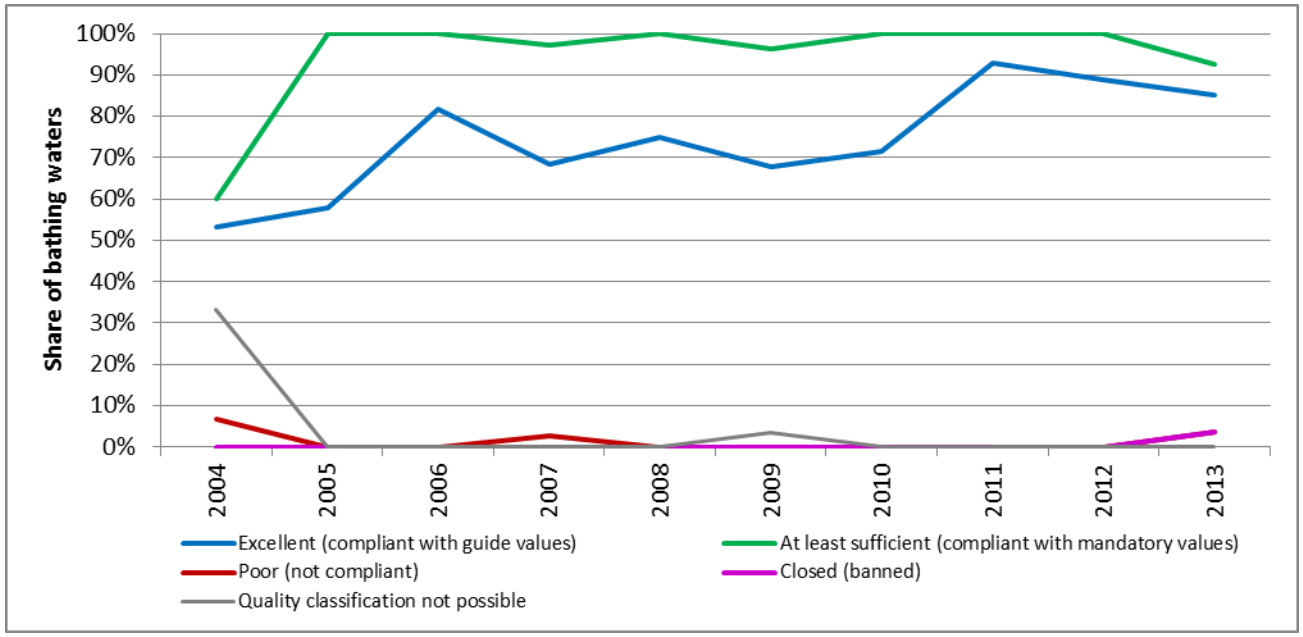


Figure 2: Inland bathing water quality trend in Estonia. Note: the "At least sufficient" class also includes bathing waters of "Excellent" quality class, the sum of shares is therefore not 100%.

4. Information regarding management and other issues

The requirements of Directive 2006/7/EC are promulgated in Estonian law in the Public Health Act, the Water Act, and regulation implementing them. Bathing waters have been under surveillance of the Health Board of Estonia.

Quality and control requirements for bathing water are laid down in the Decree of the Government No. 74 from 3rd April 2008 "Requirements to bathing waters and bathing sites". The regulation establishes requirements for bathing places, bathing water quality, monitoring, classification, quality management and reference methods, also establishes the provision of information to the public. Private or public bodies owning the bathing place are the subject of the regulation.

In accordance to legislation, the Health Board is responsible for arranging bathing water monitoring and doing state supervision, collecting and processing the data on the bathing water quality, advising bathing place owners, informing public and establishing bathing water profiles.

Short-term pollution occurred once at four bathing waters - Vana-Pärnu, Pärnu, Raeküla and Kuressaare. The pollution took place at Kuressaare bathing place in July and at Vana-Pärnu, Pärnu and Raeküla bathing places in August when intestinal enterococci and *E. coli* exceeded national levels. The authorities assume that it happened because of bad weather conditions (strong rain, wind and thunderstorms). The public was informed and bathing was not recommended during this period. Information were posted at beaches and on the Health Board website.

5. 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/interactive/bathing/state-of-bathing-waters), allows users to view the bathing water quality at more than 22 000 coastal beaches and inland sites across Europe. Data is aggregated and visualized on national and station level. Detailed information regarding specific bathing site are given in pop-up windows (can be activated with a click on a selected bathing location) and bathing water profiles which can be opened through hyperlinks in pop-up windows.

The data on bathing water quality in 2013 and previous years can also be viewed in WISE bathing water data viewer, an application prepared by TC Vode (http://bwd.eea.europa.eu/). The WISE bathing water quality data viewer combines text and graphical visualisation, providing a quick overview of the locations of coastal and inland bathing waters, as well as statistics on their quality. Specific bathing water locations can be observed on Google Earth, Google maps or Bing maps.

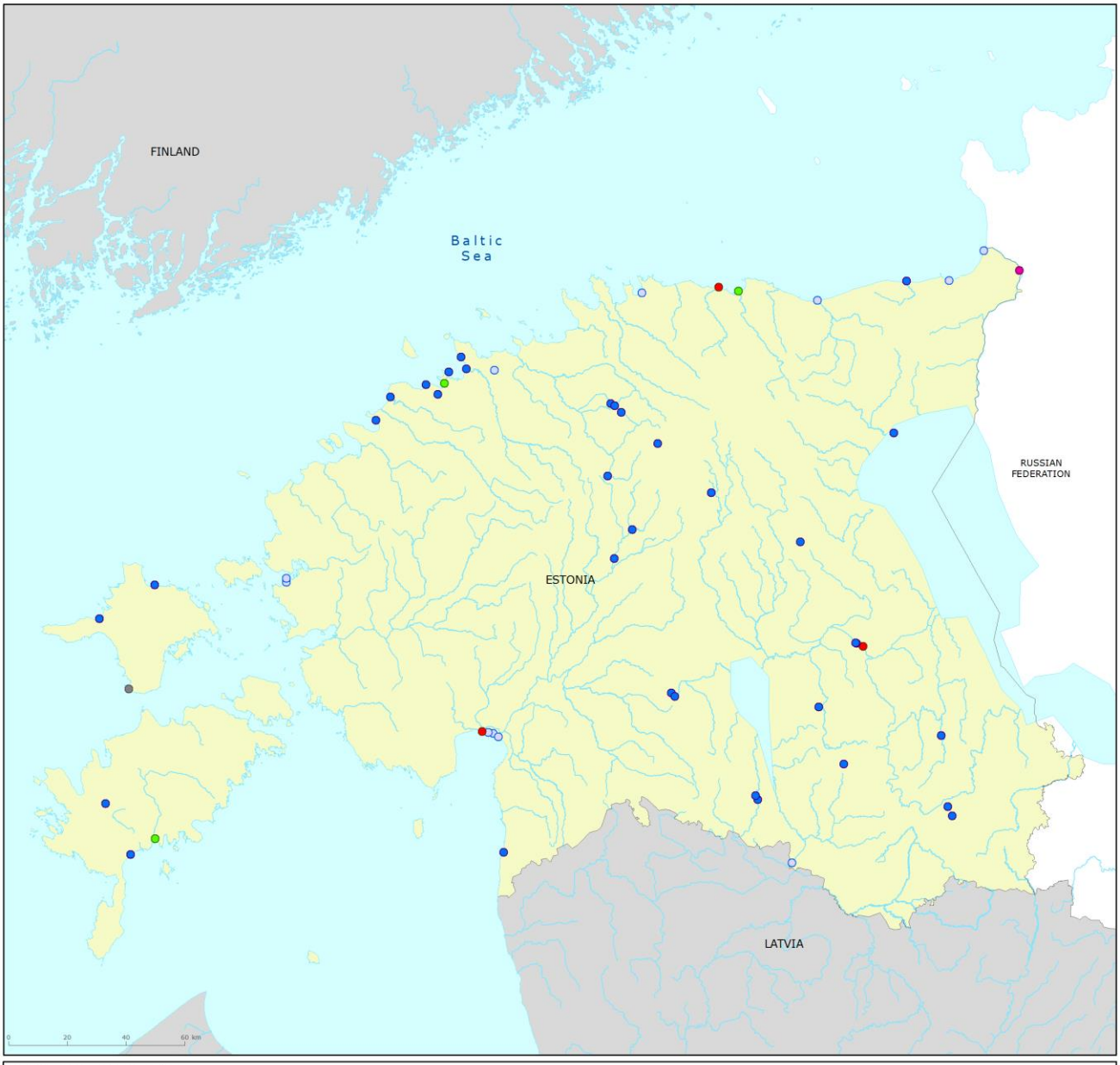
Appendix 1: Results of bathing water quality in Estonia from 2010 to 2013

		Total	Excellent (compliant with guide values)		At least sufficient (compliant with mandatory values)		Poor (not compliant)		Closed (banned)		Quality classification not possible*	
			No	%	No	%	No	%	No	%	No	%
Coastal	2010	0	0	0	27	100.0	0	0.0	0	0.0	0	0.0
	2011	27	13	48.1	25	92.6	2	7.4	0	0.0	0	0.0
	2012	27	11	40.7	23	85.2	0	0.0	1	3.7	3	11.1
	2013	26	11	42.3	23	88.5	2	7.7	0	0.0	1	3.8
Inland	2010	28	20	71.4	28	100.0	0	0.0	0	0.0	0	0.0
	2011	28	26	92.9	28	100.0	0	0.0	0	0.0	0	0.0
	2012	27	24	88.9	27	100.0	0	0.0	0	0.0	0	0.0
	2013	27	23	85.2	25	92.6	1	3.7	1	3.7	0	0.0
Total	**2010**	**55**	**39**	**70.9**	**55**	**100.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
	2011	**55**	**39**	**70.9**	**53**	**96.4**	**2**	**3.6**	**0**	**0.0**	**0**	**0.0**
	2012	**54**	**35**	**64.8**	**50**	**92.6**	**0**	**0.0**	**1**	**1.9**	**3**	**5.6**
	2013	**53**	**34**	**64.2**	**48**	**90.6**	**3**	**5.7**	**1**	**1.9**	**1**	**1.9**

Note: the “At least sufficient” class also includes bathing waters which are of excellent quality, the sum of shares is therefore not 100%. * This includes new bathing waters, bathing waters with changes that affect or could have affected bathing water quality, and bathing waters that do not have enough samples.

Appendix 2: Bathing water quality map

Map 1: Bathing waters reported during the 2013 bathing season in Estonia



Bathing water quality

- Excellent water quality
- Good water quality
- Sufficient water quality
- Poor water quality
- Closed temporarily or throughout the season
- Quality classification not possible: new bathing waters / bathing waters with changes / not enough samples
- No data
- Outside data coverage (data available, not presented on the map)

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