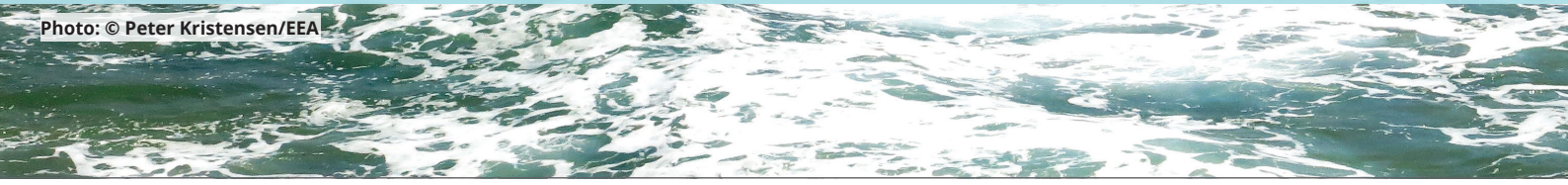
Country report

Estonian bathing water quality in 2017

Estonia

May 2018

Photo: © Peter Kristensen/EEA



European Environment Agency

BWD Report For the Bathing Season 2017
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 the season 2017

In the 2017 bathing season, 54 bathing waters have been reported in Estonia. For each bathing water, five groups of parameters have been delivered[2]:

- *identification data* – including name, location, coastal, inland or transitional type of bathing water and availability to bathers;
- *seasonal data* – including season start and end, national quality classification in the recent season, potential management measures and changes that are likely to affect the classification of the bathing water;
- *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 an event or combination of events impacting on bathing water quality, during which monitoring calendar may be suspended; reporting is optional;
- *short-term pollution periods* – measurable events of microbiological contamination; reporting is optional.

Bathing waters of Estonia in 2017

Total reported	**54**
Coastal	27
Inland	27
Max season period	**92 / 122 days**
Coastal	1 Jun to 30 Sep
Inland	1 Jun to 31 Aug
Samples taken	**261**
Share of bathing waters with good or excellent water quality	**80 %**
Reporting under Directive 2006/7/EC since	**2008**

The authorities of Estonia report data according to the new BWD (2006/7/EC) since the season 2008.

Altogether, **54 bathing waters** have been reported – 0.2% of all bathing waters in Europe. No bathing waters have been newly reported in the recent season. 50% of bathing waters in Estonia are of coastal type; the other 50% are inland. **261 samples** were taken at bathing waters throughout the season – 5 per bathing water on average.

[1] Directive BWD 2006/7/EC, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF

[2] See the BWD Data Dictionary for detailed explanations: http://dd.eionet.europa.eu/datasets/3294#tables

The maximum bathing season period was from 1 June to 30 September for coastal bathing waters, i.e. 122 days altogether.Season duration varies for coastal bathing waters. Maximum inland bathing season period was from 1 June to 31 August, i.e. 92 days.

Detailed information on bathing waters is available from national portal at http://vtiav.sm.ee/index.php/?active_tab_id=SV.

2. Assessment methodology[3]

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, livestock waste, bird faeces etc. 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 water in the bathing sites concerned.

The monitoring requirements under the Directive are:

- taking a pre-season sample (taken shortly before the start of the bathing season) [4];
- a minimum of four samples per season[5];
- a minimum of one sample per month[6].

If these rules are satisfied, the bathing water is categorised as 'sampling frequency satisfied'. If not all monitoring requirements are fulfilled the bathing water is categorised as 'not enough samples'. 92.6% of bathing waters met the described monitoring requirements set by the Directive, while the rest did not satisfy monitoring requirements for different reasons: being new; having changed environmental conditions that might affect water quality classification; closed; not monitored due to legal issues, physical inaccessibility to the site etc. Table 1 shows the statistics of bathing waters according to monitoring requirements.

Table 1: Bathing waters in 2017 according to compliance with BWD monitoring provisions

	Count	Share of total [%]
BWs with sampling frequency satisfied (and are not new, are not subject to changes or were not closed in 2017) These bathing waters have been monitored according to provisions and have complete dataset from the last assessment period. They have been quality-classified (excellent, good, sufficient, poor).	50	92.6%
BWs with sampling frequency not satisfied (and are not new, are not subject to changes or were not closed in 2017) These bathing waters exist throughout the last assessment period but have not been monitored throughout the period according to provisions for	4	7.4%

[3] The methodology used by the EC and the EEA is described here, while results of assessment by national authorities may differ in individual cases.
[4] A pre-season sample is taken into a sum of samples per season.
[5] Three samples are sufficient if the season does not exceed eight weeks or the region is subject to special geographical constraints.
[6] If, for any reason, it is not possible to take the sample at the scheduled date, a delay of four extra days is allowed. Thus, the interval between two samples should not exceed 31 + 4 days.

various individual reasons. They may be quality-classified if there is an adequate volume of samples available for credible classification.		
BWs that are new, subject to changes or closed in 2017 These bathing waters do not have complete dataset for the last assessment period because they are new, have been subject to changes (that are likely to affect the classification of the bathing water) or have been closed. They cannot be quality-classified.	0	0.0%
Total number of bathing waters in 2017	**54**	**100%**

Bathing waters where sampling frequency was not satisfied can still be quality assessed if at least four samples per season (three samples if the season does not exceed eight weeks or the region is subject to special geographical constraints) are available and equally distributed throughout the season. Assessment of bathing water quality is possible when the bathing water sample dataset is available for four consecutive seasons. Bathing waters are accordingly classified to one of the bathing water quality classes (excellent, good, sufficient, or poor).

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

Quality assessment is not possible for all bathing waters. In these cases, they are instead classified as either:

- not enough samples[7];
- new[8];
- changes[9];
- closed[10].

3. Bathing water quality

The results of the bathing water quality in Estonia throughout the past period 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[11] and the European Environment Agency's bathing water website[12].

[7] Not enough samples have been provided throughout the last assessment period (the last four bathing seasons or, when applicable, the period specified in Article 4.2 or 4.4).
[8] Classification not yet possible because bathing water is newly identified and a complete set of samples is not yet available.
[9] Classification is not yet possible after changes that are likely to affect the classification of the bathing water.
[10] Bathing water is closed temporarily or throughout the bathing season.
[11] http://ec.europa.eu/environment/water/water-bathing/index_en.html
[12] http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water

3.1 Coastal bathing waters

In Estonia, 85.2% of all existing coastal bathing waters met at least sufficient water quality standards in 2017. See Appendix 1 for numeric data.

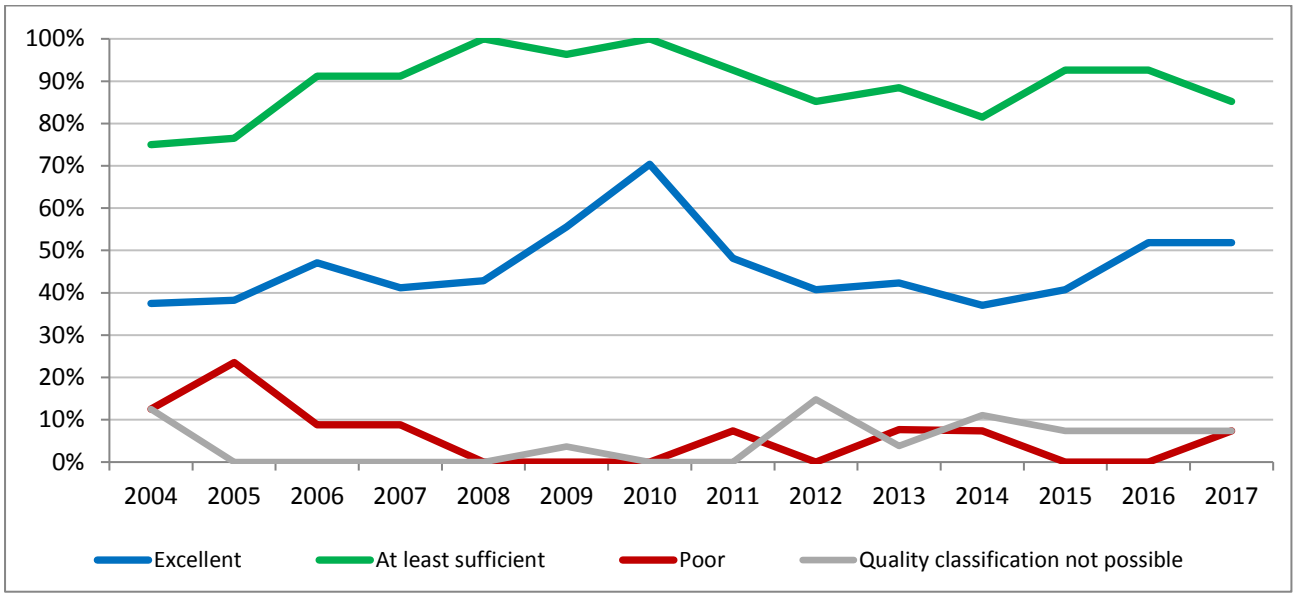


Figure 1: Coastal bathing water quality trend in Estonia. Note: the "At least sufficient" class also includes bathing waters of "Excellent" quality class, the sum of shares is therefore not 100%.

3.2 Inland bathing waters

85.2% of all existing inland bathing waters were of at least sufficient water quality in 2017. See Appendix 1 for numeric data.

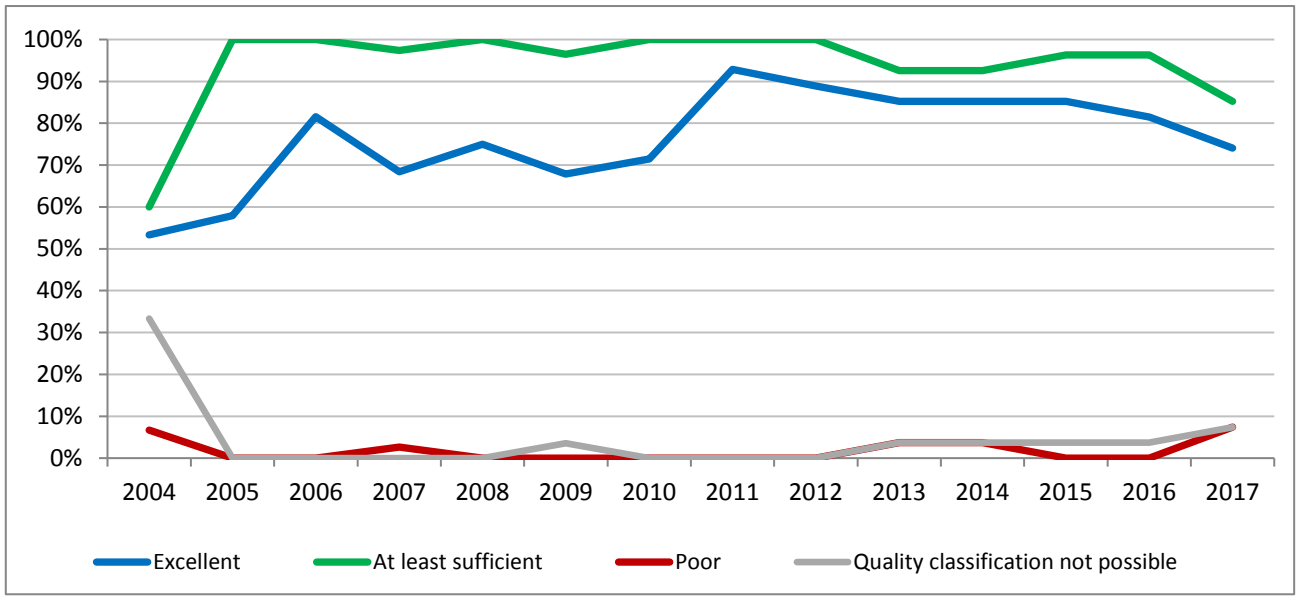


Figure 2: Inland bathing water quality trend in Estonia. Note: the "At least sufficient" class also includes bathing waters of "Excellent" quality class, the sum of shares is therefore not 100%.

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.

Typical management measures implemented on bathing waters include: a monitoring calendar; bathing water quality monitoring; information about quality of bathing water made available on the website of Health Board (http://vtiav.sm.ee/index.php/?active_tab_id=SV), at the bathing place, central newspapers and occasionally on TV or radio; bathing water quality assessment during the season and after the season; bathing water profile made available online.

In the season 2017, two coastal bathing sites and two inland bathing sites, previously classified as "sufficient" of better, were classified as "poor" – Stroomi, Raeküla, Anne kanal and Põlva. There are several potential reasons of pollution, among others cloudy and rainy summer. In Põlva, heavy rainfall rainwater caused the waste water overflow that reached the lake, and also diffuse pollution from town streets and areas around the lake might influence the water quality. In all of the mentioned bathing sites, the owners are trying to identify the causes of pollutions and reasons of poor water quality.

In two other bathing waters (Türi Tehisjärv and Harku rand) there was a cyanobacterial bloom in July (Türi Tehisjärv)/August (Harku rand). Public was informed and bathing was not recommended, especially for children, allergic, elderly people and people with weak health.

5. Bathing water quality assessment presentation in online viewers

The European bathing water legislation focuses on sound management of bathing waters, greater public participation and improved information dissemination. More on the bathing and other water legislation can be found on the European Commission's website: http://ec.europa.eu/environment/water/index_en.htm.

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 21 000 coastal and inland sites across Europe. The WISE bathing water quality data viewer combines text and graphical visualisation, providing a quick overview of the bathing water's locations and achieved quality. Having

access to bathing water information, citizens are encouraged to make full use of it and participate with their comments.

Appendix 1: Results of bathing water quality in Estonia from 2014 to 2017

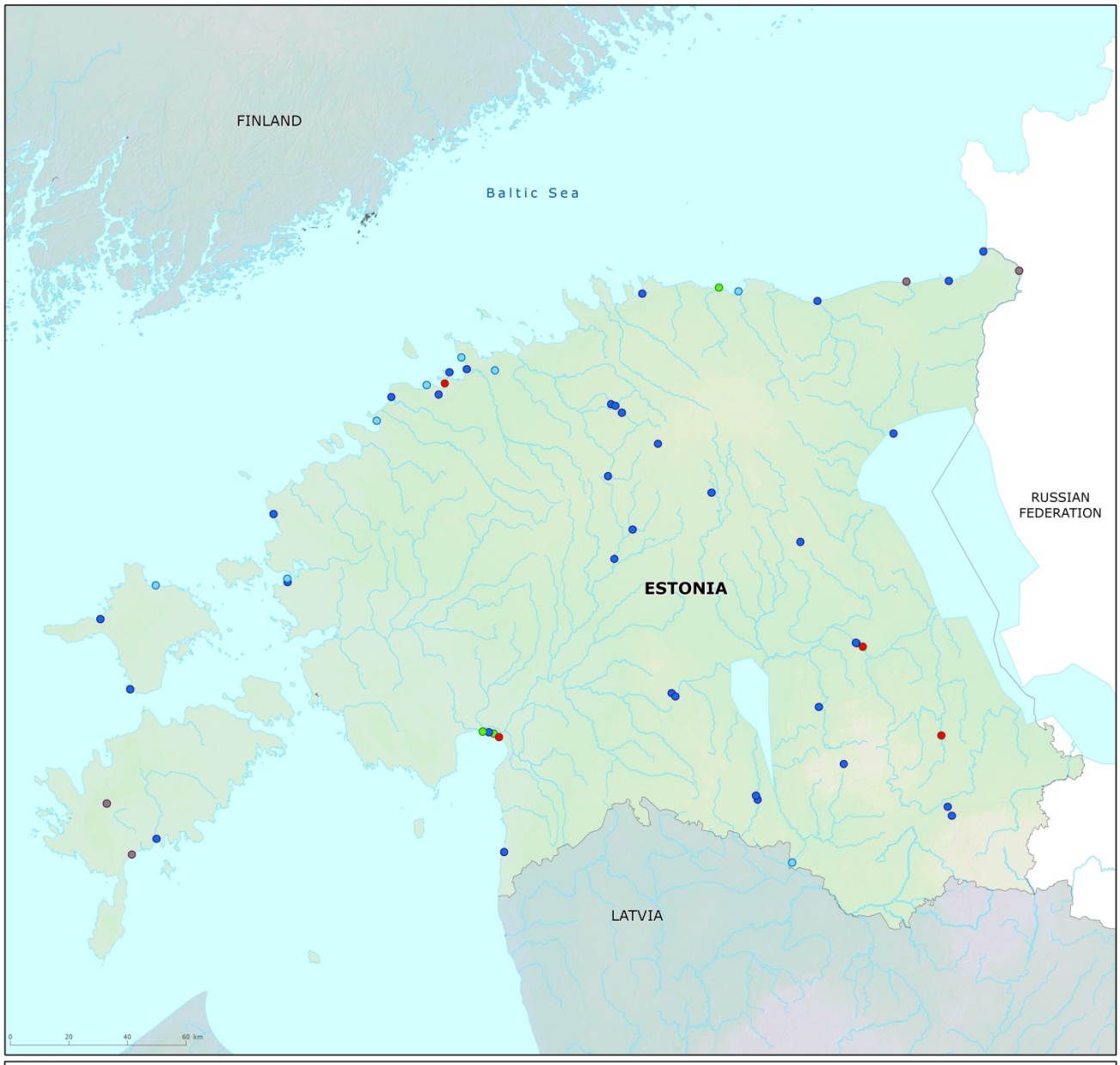
Table 2: Bathing waters in the season 2017 according to quality

		Total number of bathing waters	Excellent quality		At least sufficient quality		Poor quality		Quality classification not possible: not enough samples /new bathing waters/bathing waters subject to changes/closed	
			Count	%	Count	%	Count	%	Count	%
Coastal	2014	27	10	37.0	22	81.5	2	7.4	3	11.1
	2015	27	11	40.7	25	92.6	0	0.0	2	7.4
	2016	27	14	51.9	25	92.6	0	0.0	2	7.4
	2017	27	14	51.9	23	85.2	2	7.4	2	7.4
Inland	2014	27	23	85.2	25	92.6	1	3.7	1	3.7
	2015	27	23	85.2	26	96.3	0	0.0	1	3.7
	2016	27	22	81.5	26	96.3	0	0.0	1	3.7
	2017	27	20	74.1	23	85.2	2	7.4	2	7.4
Total	**2014**	**54**	**33**	**61.1**	**47**	**87.0**	**3**	**5.6**	**4**	**7.4**
	2015	**54**	**34**	**63.0**	**51**	**94.4**	**0**	**0.0**	**3**	**5.6**
	2016	**54**	**36**	**66.7**	**51**	**94.4**	**0**	**0.0**	**3**	**5.6**
	2017	**54**	**34**	**63.0**	**46**	**85.2**	**4**	**7.4**	**4**	**7.4**

Note: the class “At least sufficient” also includes bathing waters which are of excellent quality, the sum of shares is therefore not 100%.

Appendix 2: Bathing water quality map

Map 1: Bathing waters reported during the 2017 bathing season in Estonia



Bathing water quality

- Excellent water quality
- Good water quality
- Sufficient water quality
- Poor water quality
- Quality classification not possible: not enough samples / new bathing waters / bathing waters with changes / closed
- 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; Digital Elevation Model over Europe (EU-DEM): EEA.