Finnish bathing water quality in 2017

Finland 🇫🇮

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European Environment Agency

BWD Report For the Bathing Season 2017
Finland

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 Finland.

1.   BWD reporting in the season 2017

In the 2017 bathing season, 299 bathing waters have been reported in Finland. 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 Finland in 2017	
Total reported	**299**
Coastal	77
Inland	222
Max season period	**78 days**
	15 Jun to 31 Aug
Samples taken	**1236**
Share of bathing waters with good or excellent water quality	**93 %**
Reporting under Directive 2006/7/EC since	**2008**

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

Altogether, **299 bathing waters** have been reported – 1.4% of all bathing waters in Europe. Two bathing waters have been newly reported in the recent season. 26% of bathing waters in Finland are of coastal type; the other 74% are inland. **1236 samples** were taken at bathing waters throughout the season – 4 per bathing water on average.

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[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 15 June to 31 August for coastal bathing waters, i.e. 78 days altogether.Season duration varies for coastal bathing waters. Season duration varies depending on the bathing water. Bathing season was for one coastal bathing water and five inland bathing waters shorter in Lapland as well as for one inland bathing water in the municipality of Kuusamo.

Detailed information on bathing waters is available from national portal at http://www.valvira.fi/ymparistoterveys/terveydensuojelu/uimavesi.

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'. 95.0% 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).	284	95.0%
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	13	4.3%

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[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.

not been monitored throughout the period according to provisions for 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.	2	0.7%
Total number of bathing waters in 2017	**299**	**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 Finland 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].

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[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 Finland, 88.3% of all existing coastal bathing waters met at least sufficient water quality standards in 2017. See Appendix 1 for numeric data.
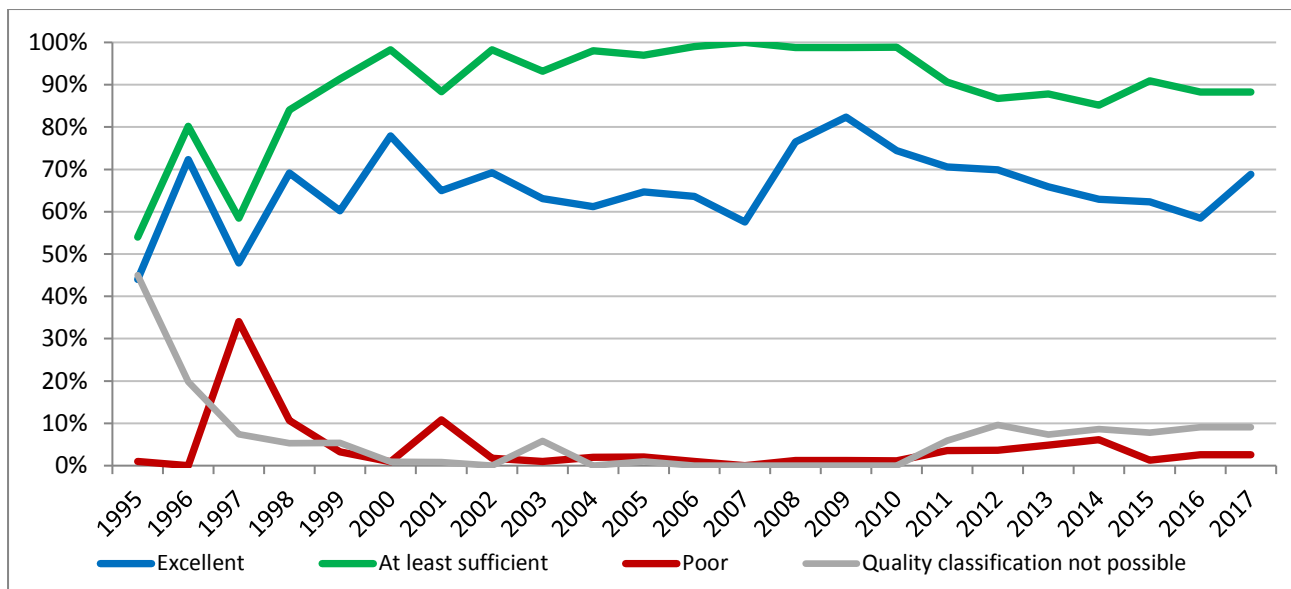
Figure 1: Coastal bathing water quality trend in Finland. Note: the "At least sufficient" class also includes bathing waters of "Excellent" quality class, the sum of shares is therefore not 100%.

3.2 Inland bathing waters

96.4% of all existing inland bathing waters were of at least sufficient water quality in 2017. See Appendix 1 for numeric data.
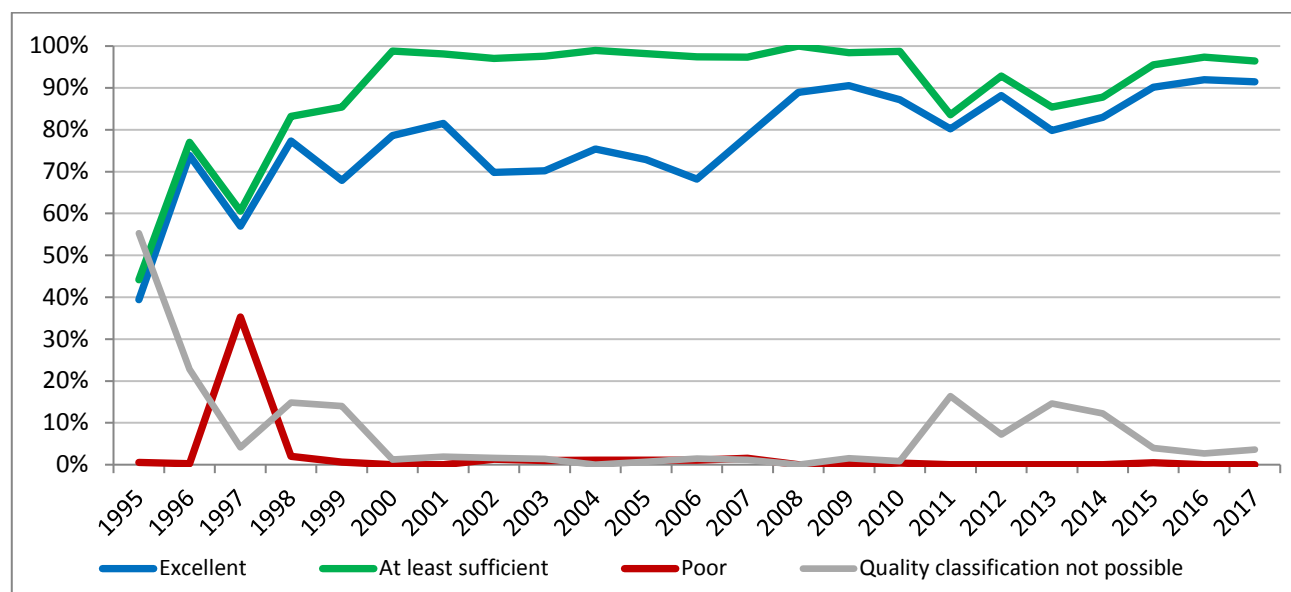
Figure 2: Inland bathing water quality trend in Finland. Note: the "At least sufficient" class also includes bathing waters of "Excellent" quality class, the sum of shares is therefore not 100%.

4.   Information regarding management and other issues

Health protection authorities within municipalities are responsible to monitor bathing water quality in Finland. Besides measurement of bacteria indicating faecal contamination, bathing waters are also inspected for cyanobacteria and blue-green algae. Valvira (National Supervisory Authority for Welfare and Health) controls and coordinates municipal health protection authorities, research methods etc. supervises municipal health protection authorities in controlling compliance with the Health Protection Act. The objective of the Act is to maintain and promote the health of people. In addition, it is aimed at preventing, reducing and removing factors in the environment that might present health hazards. THL (National Institute for Health and Welfare) is responsible for health-related issues, research and reporting under the BWD.

No short-term pollutions have been reported by Finish national authorities for the 2017 bathing season. However, at one bathing place there was additional monitoring because of oil trail at the site; at 14 bathing sites, public information/warning on cyanobacteria in bathing water was given; at two bathing sites, additional monitoring was carried out and public information on high number of intestinal enterococci was given; at two bathing sites, public information/warning on cyanobacteria in bathing water and temporary advice against bathing because of high number of intestinal enterococci and E. coli in bathing water was given (the reasons at both sites were wild animals in bathing water and at one site also storm water).

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.

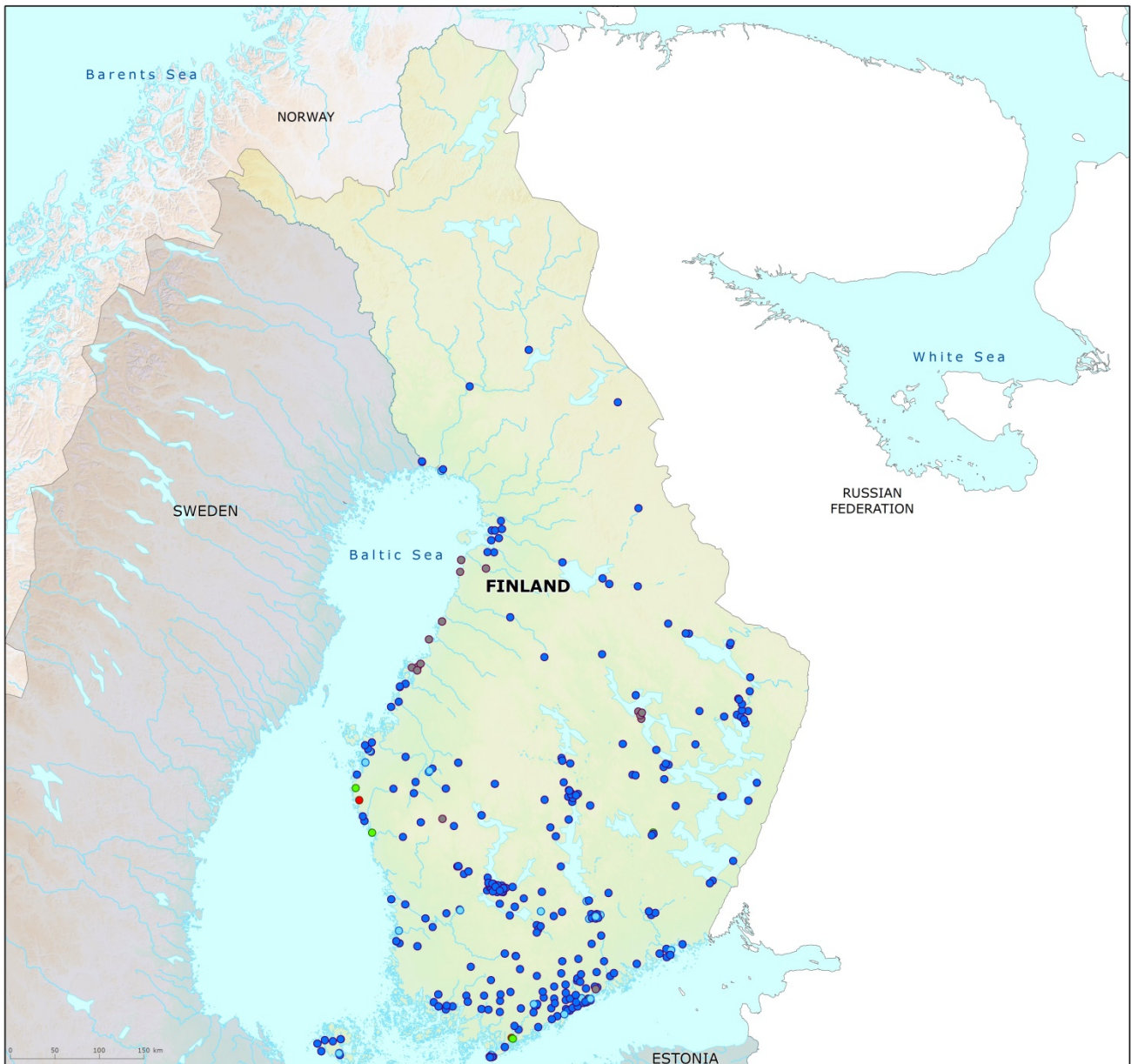# Appendix 1: Results of bathing water quality in Finland from 2014 to 2017

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	81	51	63.0	69	85.2	5	6.2	7	8.6
	2015	77	48	62.3	70	90.9	1	1.3	6	7.8
	2016	77	45	58.4	68	88.3	2	2.6	7	9.1
	2017	77	53	68.8	68	88.3	2	2.6	7	9.1
Inland	2014	229	190	83.0	201	87.8	0	0.0	28	12.2
	2015	224	202	90.2	214	95.5	1	0.4	9	4.0
	2016	224	206	92.0	218	97.3	0	0.0	6	2.7
	2017	222	203	91.4	214	96.4	0	0.0	8	3.6
Total	**2014**	**310**	**241**	**77.7**	**270**	**87.1**	**5**	**1.6**	**35**	**11.3**
	2015	**301**	**250**	**83.1**	**284**	**94.4**	**2**	**0.7**	**15**	**5.0**
	2016	**301**	**251**	**83.4**	**286**	**95.0**	**2**	**0.7**	**13**	**4.3**
	2017	**299**	**256**	**85.6**	**282**	**94.3**	**2**	**0.7**	**15**	**5.0**

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 Finland

Barents Sea

NORWAY

SWEDEN

Baltic Sea

FINLAND

White Sea

RUSSIAN
FEDERATION

ESTONIA

0   50   100   150 km

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)