

BWD Report For the Bathing Season 2014

Denmark

The report gives a general overview of information acquired from the reported data, based on provisions of the Bathing Water Directive¹. The reporting process is described below, as well as state and trends of bathing water quality in Denmark.

1. BWD reporting in the season 2014

In 2014 bathing season, 1028 bathing waters have been reported in Denmark. For each bathing water, five groups of parameters have been delivered²:

- *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 Denmark in 2014	
Total reported	1028
Coastal	917
Inland	111
Ordinary season period*	92 days
	1 Jun to 1 Sep
Samples taken	8980
Share of bathing waters with good or excellent water quality	93 %
New BWD implemented in	2008
* Could be extended to 15 September upon municipality request	

The authorities of Denmark report data according to the new BWD (2006/7/EC) since the season 2008. The data for the season 2014 were delivered to the European Commission by **17 December 2014**.

Altogether, **1028 bathing waters** have been reported – 4.8% of all bathing waters in Europe. Out of all bathing waters in Denmark, 0.58% have been newly identified in 2014 season. 89% of bathing waters in Denmark are of coastal type; the other 11% are inland. **8980 samples** were taken at bathing waters throughout the season – 9 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/3151#tables>

The ordinary bathing season period was from 1 June to 1 September (92 days altogether). Season duration varies. It is possible to extend the season until the 15 September if the municipality specifically asks for it before the start of the season. The maximum bathing season period was from 1 June to 15 September, i.e. 107 days altogether. 17 bathing waters had an extended bathing season in 2013.

Detailed information on bathing waters is available from national portal at <http://naturstyrelsen.dk/vandmiljoe/badevand/>.

2. Assessment methodology³

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.

The monitoring requirements under the New Bathing Water Directive are:

- taking of a pre-season sample (taken shortly before the start of the bathing season)⁴;
- a minimum of four samples per season⁵;
- a minimum of one sample per month⁶.

The conditions described above must be met for all bathing waters. 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 'sampling frequency not satisfied'. 99.0% of bathing waters met the described monitoring requirements set by the Directive, while the rest did not satisfy monitoring requirements or was either new, changed or closed. Table 1 shows the statistics of bathing waters according to satisfied BWD monitoring requirements.

³ The methodology used by the EC and the EEA is described here, while results of assessment by national authorities may somewhat differ. However, the provisions of the Directive should be followed in any case.

⁴ A pre-season sample is taken into account at total number 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.

Table 1: Bathing waters in 2014 according to compliance with BWD monitoring provisions

	Count	Share of total [%]
BWs with sampling frequency satisfied and are not new, have no changes or were not closed in 2014 These bathing waters have been monitored according to BWD provisions (monitoring frequency satisfied and have pre-season sample. They have been quality-classified (excellent, good, sufficient, poor).	1017	98.9%
BWs with sampling frequency not satisfied and that are not new, have no changes or were not closed in 2014. These bathing waters have not been monitored according to BWD provisions (monitoring frequency not satisfied). They may be quality-classified if there is a reasonable volume of samples available.	4	0.4%
BWs that are new, changed or closed in 2014 These bathing waters are new or have been subject to changes that could affect bathing water quality.	7	0.7%
Total number of bathing waters in 2014	1028	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 are more or less 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, falling in the certain class given in Annex I of the Directive. This 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 samples⁷;
- new⁸;
- changes⁹;
- closed¹⁰.

⁷ Not enough samples have been provided for the 2014 season or throughout the whole assessment period.

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 affecting bathing water quality have been implemented.

¹⁰ Bathing water is closed temporarily or throughout the bathing season.

3. Bathing water quality

The results of the bathing water quality in Denmark for the period of 2011–2014 as reported in the past reporting years and for the bathing season of 2014 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 website¹¹ and the European Environment Agency's bathing water website¹².

3.1 Coastal bathing waters

In Denmark, 97.5% of all existing coastal bathing waters met at least sufficient water quality standards in 2014. See Appendix 1 for numeric data.

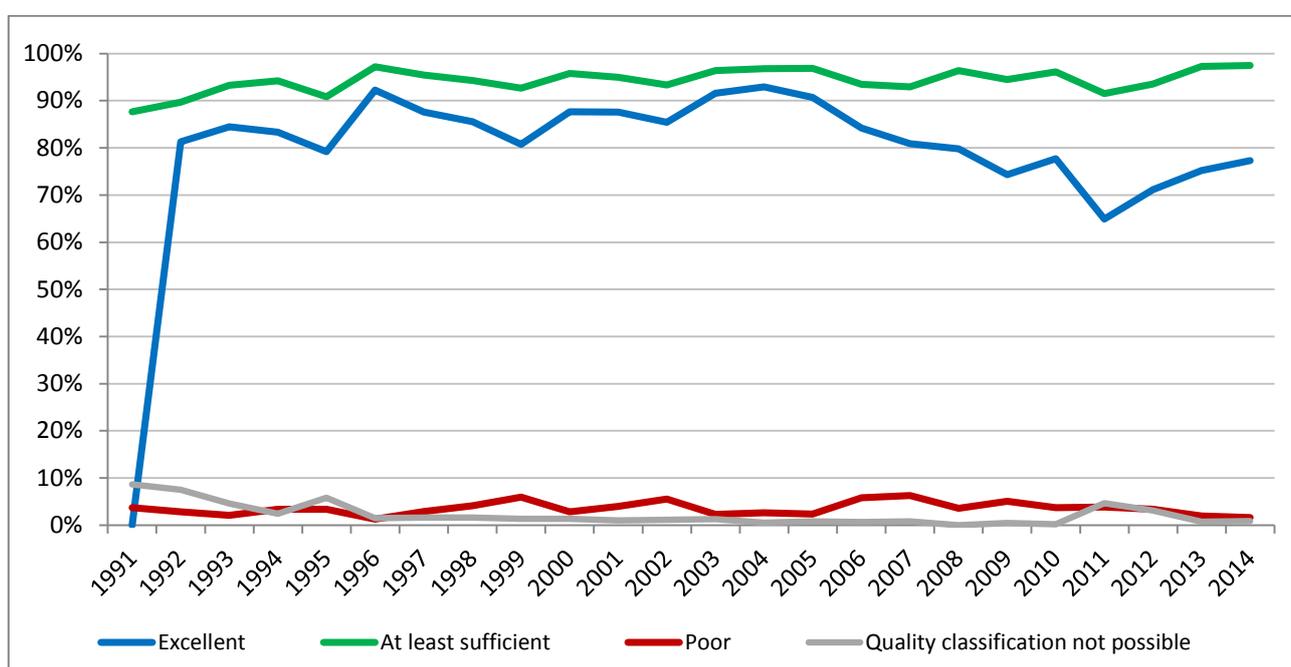


Figure 1: Coastal bathing water quality trend in Denmark. Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

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>

3.2 Inland bathing waters

98.2% of all existing inland bathing waters met at least sufficient water quality in 2014. See Appendix 1 for numeric data.

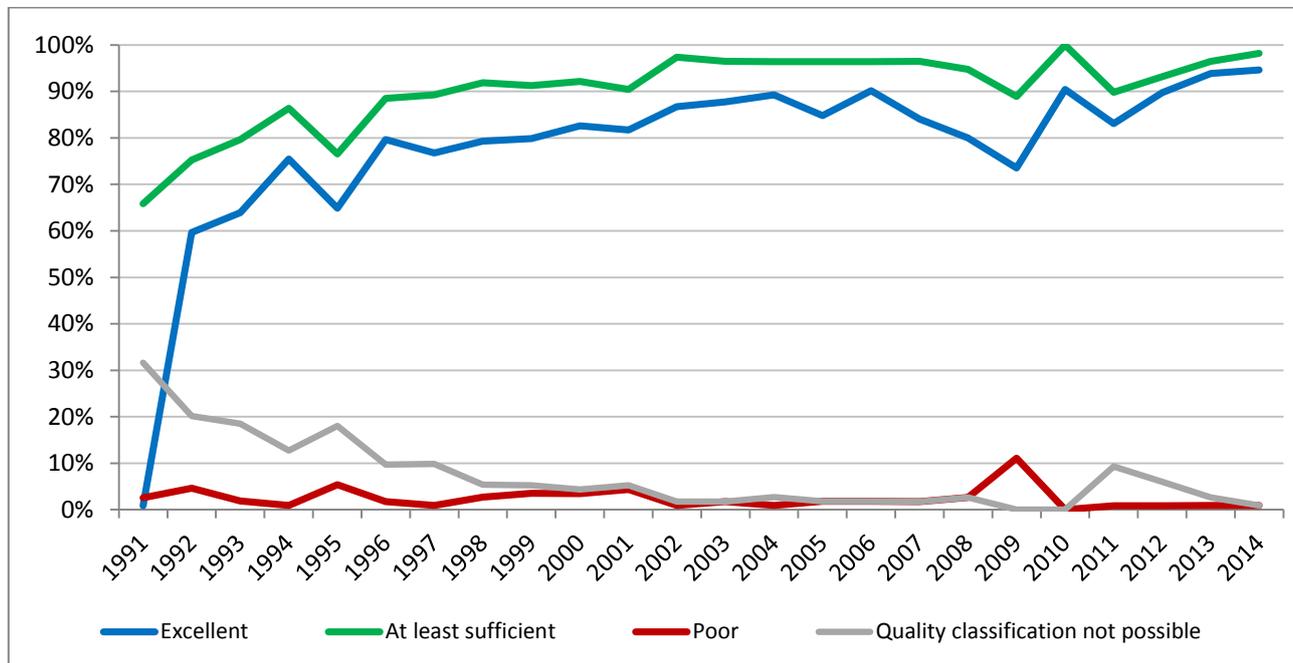


Figure 2: Inland bathing water quality trend in Denmark. Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

4. Information regarding management and other issues

Since 2009, 226 bathing waters (18.7% compared to 2009 season) have been excluded from the monitoring programme in Denmark because they were visited by limited number of people, administrative issues, limited access and identification of new bathing waters with better access. Some were excluded due to water quality reasons. In this period Denmark identified 56 new bathing waters.

5. Bathing water quality assessment presentation in online viewers

The new legislation requires more effective monitoring and 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 beaches and inland sites across Europe. The data on bathing water quality in 2014 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 bathing water's locations and achieved quality.

Citizens have now access to more bathing water information than ever and are encouraged to make full use of disseminated information.

Appendix 1: Results of bathing water quality in Denmark from 2011 to 2014

Table 2: Bathing waters in the season 2014 according to quality

		Total number of bathing waters	Excellent quality or compliant with guide values		At least sufficient quality or compliant with mandatory values		Poor quality or non-compliant		Quality classification not possible: not enough samples /new bathing waters/bathing waters with changes/closed	
			No	%	No	%	No	%	No	%
Coastal	2011	1012	657	64.9	926	91.5	39	3.9	47	4.6
	2012	973	692	71.1	910	93.5	33	3.4	30	3.1
	2013	923	694	75.2	898	97.3	18	2.0	7	0.8
	2014	917	709	77.3	894	97.5	15	1.6	8	0.9
Inland	2011	118	98	83.1	106	89.8	1	0.8	11	9.3
	2012	117	105	89.7	109	93.2	1	0.9	7	6.0
	2013	114	107	93.9	110	96.5	1	0.9	3	2.6
	2014	111	105	94.6	109	98.2	1	0.9	1	0.9
Total	2011	1130	755	66.8	1032	91.3	40	3.5	58	5.1
	2012	1090	797	73.1	1019	93.5	34	3.1	37	3.4
	2013	1037	801	77.2	1008	97.2	19	1.8	10	1.0
	2014	1028	814	79.2	1003	97.6	16	1.6	9	0.9

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 2014 bathing season in Denmark



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: Danish authorities