Country report

Danish bathing water quality in 2018



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Bathing Water Quality in the Season 2018 Denmark

Under the provisions of the <u>Bathing Water Directive</u>, more than 21 000 bathing waters are monitored in Europe each season. The monitoring data and other information regarding bathing water management are reported to the European Environment Agency by 30 reporting countries in Europe, to be assessed for the annual European report and more detailed national reports.

1. BWD reporting in the season 2018

In the season 2018, Denmark identified and reported **1026 bathing waters**, which is 4.6% of all bathing waters in Europe. Ten bathing waters in Denmark have been newly identified for the season 2018, while the other ten bathing waters were delisted due to lack of bathers.

Bathing waters of Denmark in the se	eason 2018	Bathing water quality in the season 2018			
Total reported	1026	Excellent	897 (87.4%)		
Coastal	910	Good	87 (8.5%)		
Inland	116	Sufficient	20 (1.9%)		
		Poor	14 (1.4%)		
Total reported samples	9002	Not classified	8 (0.8%)		

The bathing waters are quality classified according to the two microbiological parameters (Escherichia coli and Intestinal enterococci) defined in the Bathing Water Directive. 97.8% of reported bathing waters are in line with the minimum quality standards of the Directive, thus classified "sufficient" or better. 14 bathing waters are of "poor" quality.

More detailed information on bathing waters of Denmark is available at the national bathing water portal http://mst.dk/natur-vand/vandmiljoe/badevand/.

2. BWD monitoring

Each bathing water that is identified by the reporting country needs to have a monitoring calendar established before the bathing season. The monitoring calendar requirements can be summarised as follows: (1) a pre-season sample is to be taken shortly before the start of each bathing season; (2) no fewer than four (alternatively, three for specific cases) samples are to be taken and analysed per bathing season; and (3) an interval between sampling dates never exceeds one month.

From the reported data, the assessment also designates effective implementation of the monitoring calendar. In Denmark, monitoring calendar for 2018 was not implemented at 25 bathing waters.

Table 1: Bathing waters in 2018 according to implementation of the monitoring calendar

	Count	Share of total [%]		
Monitoring calendar implemented A bathing water satisfies monitoring calendar conditions listed above.	1001	97.60%		
Monitoring calendar not implemented A bathing water does not satisfy monitoring calendar conditions listed above. They may be quality-classified if enough samples are available in the last assessment period.	25	2.40%		

In addition to the monitoring calendar, management specifics of the last assessment period of four years are also assessed. The status primarily indicates whether the complete dataset of four seasons is available, but also points out the reasons as to why the bathing waters do not have the complete last assessment period dataset. The latter may indicate developing conditions at the site – most importantly, whether the bathing water has been newly identified within the period, or any changes have occurred that are likely to affect the classification of the bathing water.

Table 2: Management specifics in the last assessment period of 2015–2018

	Count	Share of total [%]
Continuously monitored A bathing water has been monitored in each bathing season in the last assessment period.	998	97.30%
Newly identified A bathing water was identified for the first time within the last assessment period. Such status is assigned until the complete four-year dataset is available, i.e. for three years after the first reporting.	27	2.60%
Quality changes A bathing water was subject to changes described in BWD Art. 4.4 within the last assessment period. Such status is assigned until the complete four-year dataset of samples taken after changes took effect is available.	1	0.10%
Monitoring gap A bathing water was not monitored for at least one season in the last assessment period. No quality	0	0%



3. Bathing water quality

3.1 Coastal bathing waters

Coastal bathing waters are situated on the sea or transitional water coastline, with respective parameter thresholds defined in Annex I of the Directive. They are subject to more strict thresholds than the inland bathing waters. Quality trend in Denmark for the period 1990–2018 if historical data are available is shown in Figure 1. Count of bathing waters by quality class for the last assessment period 2015–2018 is given in Annex I.



Figure 1: Trend of coastal bathing water quality in Denmark. Notes: Each column represents an absolute count of bathing waters in the season. Quality classes "good" and "sufficient" are merged for comparability with classification of the preceding Bathing Water Directive 76/160/EEC.



3.2 Inland bathing waters

Inland bathing waters are situated at rivers and lakes, featuring fresh water and with respective parameter thresholds defined in Annex I of the Directive. Quality trend in Denmark for the period 1990–2018 if historical data are available is shown in Figure 2. Count of bathing waters by quality class for the last assessment period 2015–2018 is given in Annex I.



Figure 2: Trend of inland bathing water quality in Denmark. Notes: Each column represents an absolute count of bathing waters in the season. Quality classes "good" and "sufficient" are merged for comparability with classification of the preceding Bathing Water Directive 76/160/EEC.

4. Bathing water management in Denmark

In addition to monitoring data, reporting countries also provide information on bathing water management in the country. The information is used to exchange good practices, discuss issues on the European level, and understand the specifics of implementation of the Directive.

Denmark has one of the EU's longest coastal stretches - the sixth longest - and measurements are made every year at more than 1000 beaches and bathing lakes. During the bathing season, large content of algae which can be nuisance to human and animals can appear due to windy weather conditions. Additional threat is presented by sewer overflows which can occur after a heavy rainfall. Sometimes it can happen so suddenly that the municipality may find it difficult to impose a bathing ban in time.

General information including information on bathing water monitoring, quality, legislation, potential health risks of bathing in natural water bodies, as well as for recommendations on how to reduce the risk is available on the following webpage: <u>https://mst.dk/natur-vand/vandmiljoe/badevand</u>.

Bathing profiles, descriptions of bathing water areas; both in terms of the environment and especially with regard to health risk factors and management measures to ensure the health of bathers, are prepared for each bathing water and can be found on the municipality's websites.

The municipalities are responsible for inspecting bathing waters in Denmark and they publish the current bathing water quality on their websites. If the municipality detects that the bathing water is polluted, the municipality must remedy the pollution or immediately impose advice against bathing or declare temporal bathing prohibition. During 2018 bathing season, 109 short-term pollution occurred on 82 bathing waters.

In 2018, ten new bathing waters have been identified whereas ten bathing sites have been excluded from the monitoring programme since they have not been visited by a large number of bathers for a period. Additional 24 bathing sites have changed name and/or coordinates in 2018.

Annex I Bathing water quality in Denmark in 2015–2018

		Total	Excellent		Good		Sufficient		Poor		Not classified	
		count of bathing waters	Count	%	Count	%	Count	%	Count	%	Count	%
Coastal	2015	918	776	84.5	96	10.5	31	3.4	6	0.7	9	1.0
	2016	921	785	85.2	79	8.6	29	3.1	8	0.9	20	2.2
	2017	915	786	85.9	83	9.1	25	2.7	10	1.1	11	1.2
	2018	910	790	86.8	83	9.1	19	2.1	13	1.4	5	0.5
Inland	2015	110	105	95.5	3	2.7	0	0.0	0	0.0	2	1.8
	2016	115	105	91.3	4	3.5	1	0.9	0	0.0	5	4.3
	2017	114	106	93.0	4	3.5	3	2.6	0	0.0	1	0.9
	2018	116	107	92.2	4	3.4	1	0.9	1	0.9	3	2.6
Total	2015	1028	881	85.7	99	9.6	31	3.0	6	0.6	11	1.1
	2016	1036	890	85.9	83	8.0	30	2.9	8	0.8	25	2.4
	2017	1029	892	86.7	87	8.5	28	2.7	10	1.0	12	1.2
	2018	1026	897	87.4	87	8.5	20	1.9	14	1.4	8	0.8

Table 3: Bathing water quality by water category and season



Annex II Bathing water quality map



Map 1: Bathing waters reported during the 2018 bathing season in Denmark

Source: National boundaries: EEA; Large rivers and lakes: EEA, WFD Article 3; Bathing waters data and coordinates: Danish authorities; Digital Elevation Model over Europe (EU-DEM): EEA.