German bathing water quality in 2018

Germany

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Bathing Water Quality in the Season 2018

Germany

Under the provisions of the Bathing Water Directive, 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, Germany identified and reported **2289 bathing waters**, which is 10.3% of all bathing waters in Europe. 11 bathing waters in Germany have been newly identified for the season 2018. Eight bathing waters reported in the preceding seasons have not been reported any more in 2018.

Bathing waters of Germany in the season 2018		Bathing water quality in the season 2018	
Total reported	2289	**Excellent**	2123 (92.7%)
Coastal	366	**Good**	93 (4.1%)
Inland	1923	**Sufficient**	27 (1.2%)
		Poor	6 (0.3%)
Total reported samples	13371	**Not classified**	40 (1.7%)

The bathing waters are quality classified according to the two microbiological parameters (Escherichia coli and Intestinal enterococci) defined in the Bathing Water Directive. 98% of reported bathing waters are in line with the minimum quality standards of the Directive, thus classified "sufficient" or better. Six bathing waters are of "poor" quality.

More detailed information on bathing waters of Germany is available at the national bathing water portal https://www.umweltbundesamt.de/wasserqualitaet-in-badegewaessern.

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 Germany, monitoring calendar for 2018 was not implemented at 17 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.	2272	99.30%
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.	17	0.70%

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.	2242	97.90%
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.	23	1%
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.	9	0.40%
Monitoring gap A bathing water was not monitored for at least one season in the last assessment period. No quality	15	0.70%

classification is made if no samples are reported for the most recent season.		

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 Germany 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.
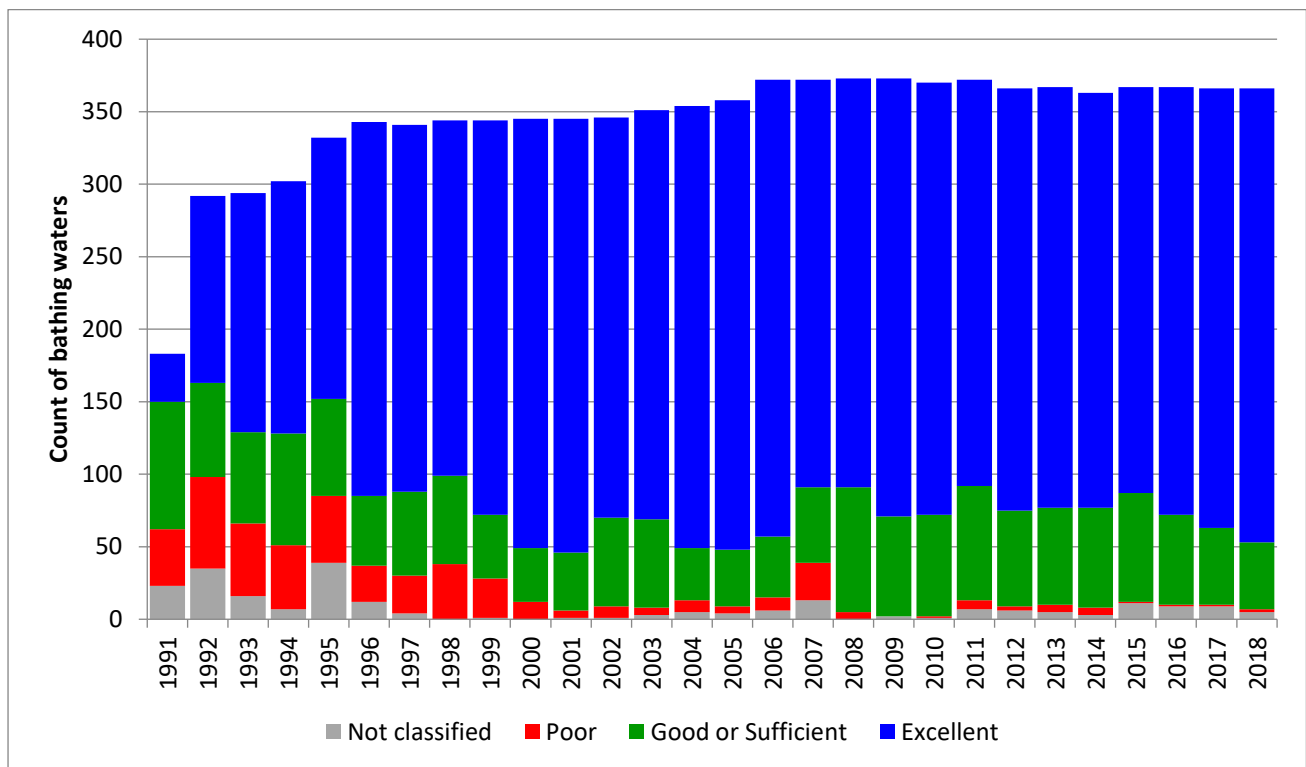

Figure 1: Trend of coastal bathing water quality in Germany. Notes: Each column represents an absolute count of bathing waters in the season. Quality classes "good" and "sufficient" are merged for comparability with classification of the preceding Bathing Water Directive 76/160/EEC.

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 Germany 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.
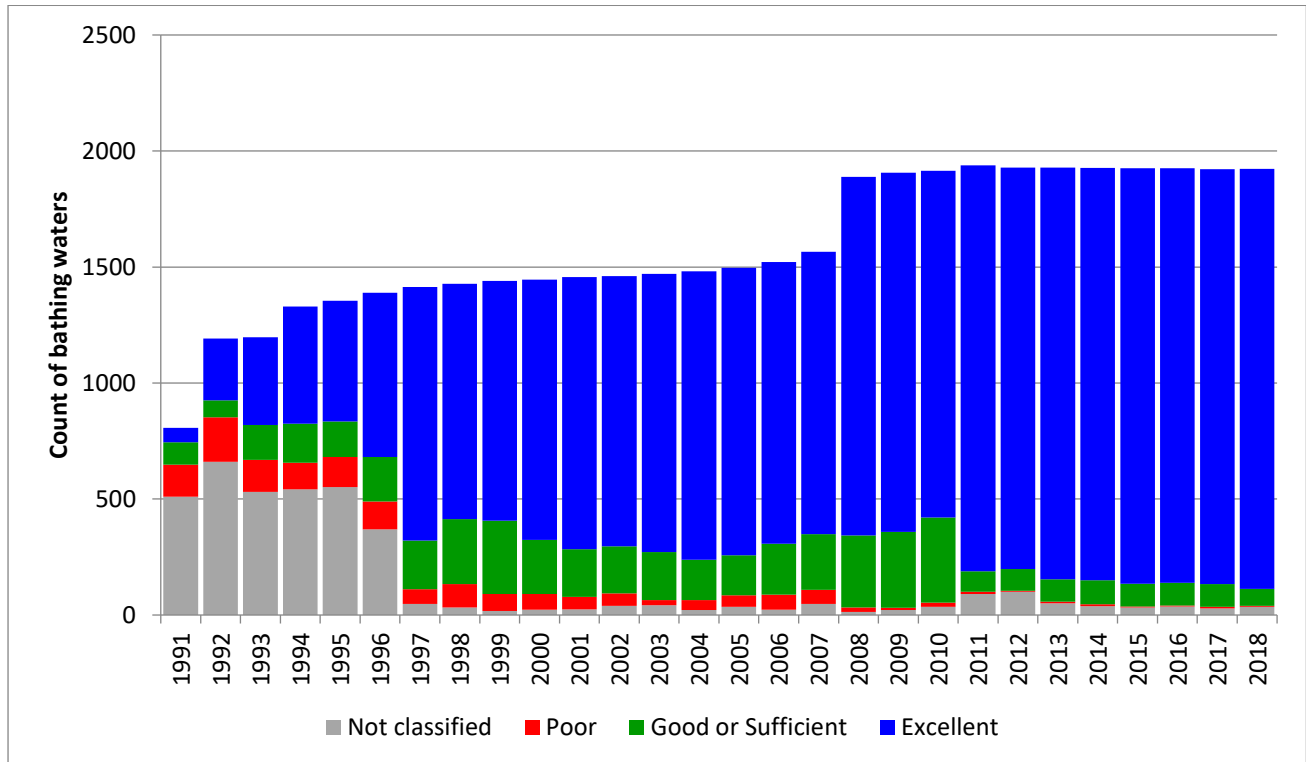

Figure 2: Trend of inland bathing water quality in Germany. Notes: Each column represents an absolute count of bathing waters in the season. Quality classes "good" and "sufficient" are merged for comparability with classification of the preceding Bathing Water Directive 76/160/EEC.

4. Bathing water management in Germany

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.

The quality of bathing water in Germany is regularly monitored by the federal states. The list of bathing waters, bathing water profiles, the results of the quality classes as well as up-to-date data on the water quality in the bathing season 2018 can therefore be found on the websites of the federal states.
The Umweltbundesamt (UBA) helps to protect the bathers from infections caused by pathogens using following measures:

- Assessing infection risk.
- Elaborating scientific bases for the setting of microbiological limit values in the bathing water and sewage sector.
- Developing concepts to recognize and prevent the spread of waterborne diseases.
- Laboratory research and theoretical work on hygienic microbiological questions in the bathing water area to prevent illnesses.
- Developing and standardizing methods for the detection of pathogens in bathing waters and sewage water discharges.
- Coordinating and checking bathing water data from the federal states and making them available to the EU Commission and the public.

For each bathing water, the responsible state authorities regularly update corresponding bathing water profile. In these profiles all sources of pollution that could affect the quality of the water, and indicates potential problems with cyanobacteria are identified. This means that health hazards can be identified in advance and remedial measures can be initiated in a timely manner.

Water quality problems are frequently related to mass proliferation of cyanobacteria. When risk of cyanobacteria is recognized by microscopic analyses, the temporal bathing ban is imposed. The prohibition sign is suspended and replaced by the general advice after the risk is over. During the 2018 season, proliferation of cyanobacteria occurred on more than 40 bathing waters.
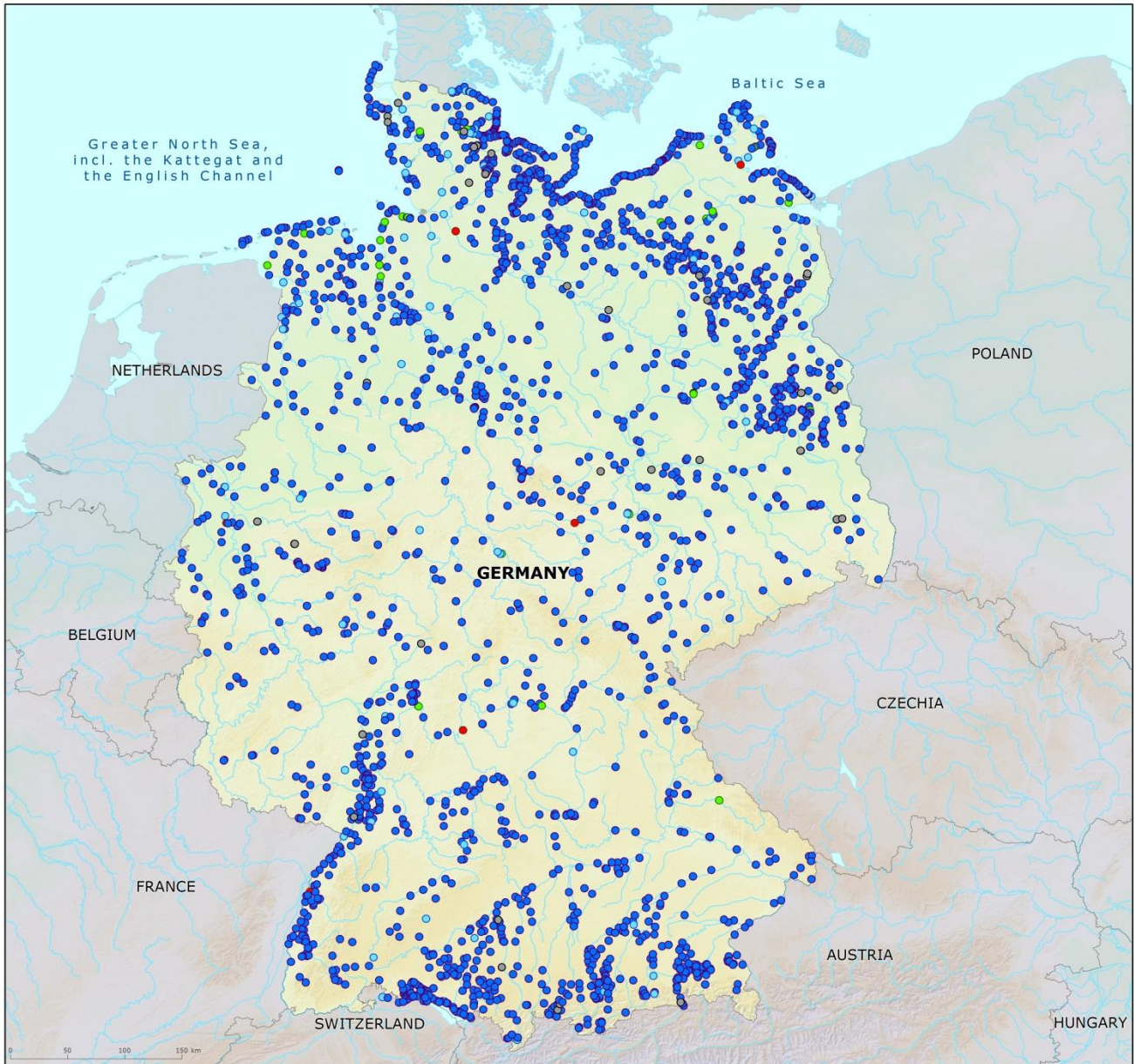
Annex I   Bathing water quality in Germany in 2015–2018

Table 3: Bathing water quality by water category and season

		Total count of bathing waters	Excellent		Good		Sufficient		Poor		Not classified	
			Count	%	Count	%	Count	%	Count	%	Count	%
Coastal	2015	367	280	76.3	62	16.9	13	3.5	1	0.3	11	3.0
	2016	367	295	80.4	51	13.9	11	3.0	1	0.3	9	2.5
	2017	366	303	82.8	39	10.7	14	3.8	1	0.3	9	2.5
	2018	366	313	85.5	30	8.2	16	4.4	2	0.5	5	1.4
Inland	2015	1925	1790	93.0	83	4.3	15	0.8	4	0.2	33	1.7
	2016	1925	1786	92.8	79	4.1	19	1.0	4	0.2	37	1.9
	2017	1921	1787	93.0	82	4.3	16	0.8	7	0.4	29	1.5
	2018	1923	1810	94.1	63	3.3	11	0.6	4	0.2	35	1.8
Total	**2015**	2292	2070	90.3	145	6.3	28	1.2	5	0.2	44	1.9
	2016	2292	2081	90.8	130	5.7	30	1.3	5	0.2	46	2.0
	2017	2287	2090	91.4	121	5.3	30	1.3	8	0.3	38	1.7
	2018	2289	2123	92.7	93	4.1	27	1.2	6	0.3	40	1.7

Annex II   Bathing water quality map

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

Bathing water quality

- Excellent water quality
- Good water quality
- Sufficient water quality
- Poor water quality
- Quality classification not possible

- 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: German authorities; Digital Elevation Model over Europe (EU-DEM): EEA.