Country report

Austrian bathing water quality in 2016

Austria

May 2017

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European Environment Agency

BWD Report For the Bathing Season 2016
Austria

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 Austria.

1. BWD reporting in the season 2016

In 2016 bathing season, 264 bathing waters have been reported in Austria. For each bathing water, five groups of parameters have been delivered[2]:

- *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 Austria in 2016	
Total reported	**264**
Coastal	0
Inland	264
Max season period	**78 days**
Inland	15 Jun to 31 Aug
Samples taken	**1415**
Share of bathing waters with good or excellent water quality	**99 %**
Reporting under Directive 2006/7/EC since	**2010**

The authorities of Austria report data according to the new BWD (2006/7/EC) since the season 2010. The data for the season 2016 were delivered to the European Commission by **22 December 2016**, with additional deliveries on 13 January 2017.

Altogether, **264 bathing waters** have been reported – 1.2% of all bathing waters in Europe. Out of all bathing waters in Austria, none have been newly identified in 2016 season. All bathing waters in Austria are inland. **1415 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/latest/BWQ_2006

The bathing season period was from 15 June to 31 August, with a maximum season span of 78 days[3].

Detailed information on bathing waters is available from national portal at https://www.bmlfuw.gv.at/wasser/wisa/wasserkarten/sonstige_themen/badegewaesser_oesterreich.html .

2. Assessment methodology[4]

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) [5];
- a minimum of four samples per season[6];
- a minimum of one sample per month[7].

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'. 100.0% 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.

[3] If season length in a country varies depending on bathing water, the single longest season per bathing water is indicated, and not the overall count of season days in a country.
[4] The methodology used by the EC and the EEA is described here, while results of assessment by national authorities may differ in individual cases.
[5] A pre-season sample is taken into account at total number of samples per season.
[6] Three samples are sufficient if the season does not exceed eight weeks or the region is subject to special geographical constraints.
[7] 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 shows the statistics of bathing waters according to monitoring requirements.

Table 1: Bathing waters in 2016 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 2016) 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).	264	100.0%
BWs with sampling frequency not satisfied (and are not new, are not subject to changes or were not closed in 2016) These bathing waters exist throughout the last assessment period but have 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.	0	0.0%
BWs that are new, subject to changes or closed in 2016 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 2016	**264**	**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[8];
- new[9];
- changes[10];
- closed[11].

[8] 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).
[9] Classification not yet possible because bathing water is newly identified and a complete set of samples is not yet available.
[10] Classification is not yet possible after changes that are likely to affect the classification of the bathing water.
[11] Bathing water is closed temporarily or throughout the bathing season.

3. Bathing water quality

The results of the bathing water quality in Austria throughout the past period are presented in Figure 2. The previous reports are available on the European Commission's bathing water quality website[12] and the European Environment Agency's bathing water website[13].

3.1 Coastal bathing waters

There are no coastal bathing waters in Austria.

3.2 Inland bathing waters

All existing inland bathing waters were of at least sufficient water quality in 2016. See Appendix 1 for numeric data.

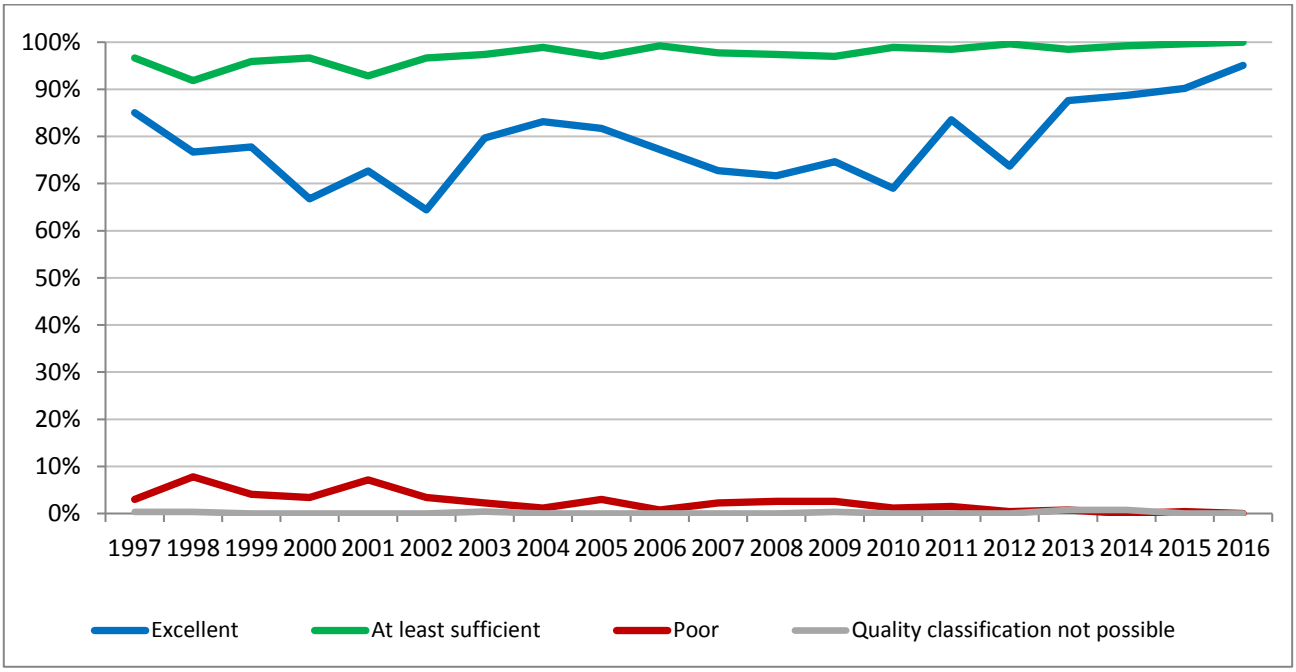


Figure 1: Inland bathing water quality trend in Austria. Note: the "At least sufficient" class also includes bathing waters of "Excellent" quality class, the sum of shares is therefore not 100%.

[12] http://ec.europa.eu/environment/water/water-bathing/index_en.html
[13] http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water

4. Information regarding management and other issues

Information for the public

Monitoring results on bathing water quality are made public through the media (primarily the local press, and occasionally local radio stations) and are also published online on the websites of the federal and provincial governments.

Wastewater treatment

Measures to improve and guarantee the water quality for bathing waters were taken under the 1959 Austrian Water Act, long before Austria became a member of the EU.

Eutrophication effects due to wastewater discharges into a number of Austrian lakes gave rise to remediation programs in the early 1970s. Since then, wastewater has been collected in ring-sewage systems and treated in at least biological wastewater treatment plants. Nowadays almost all treatment plants > 2.000 population equivalents even have a tertiary treatment for phosphorus and/or nitrogen removal as well. The treated effluent is discharged into rivers downstream of the lake in order to keep even the treated wastewater completely out of lakes.

The waste water treatment programs do not only have positive effects on lakes, but also on rivers and groundwater. Wastewater treatment plants must adhere to strict national standards on the removal of nutrients. In the last about 55 years, approximately 45.5 billion Euro have been invested in the sewage systems and wastewater treatment plants. Around EUR 1.5 billion has been invested in restoring water quality in Austrian lakes.

The very stringent standards, which were set by the EU for waste water treatment in sensitive areas, are in place in the entire territory of Austria. With regard to the overall load entering all urban wastewater treatment plants the percentage of reduction by 31 December 2014 was 82% for total nitrogen and 90% for total phosphorus.

The connection to public sewerage and treatment plants increased continuously up to 95% (data status 2014). Furthermore the sewage systems and waste water treatment in small and scattered settlements are continued to be improved, whereas a shift of investments from new building to maintenance and renewal of old-established constructions is visible.

Reduction of diffuse pollution sources

It has proved that compared to point sources the process to reduce pollution from diffuse sources is much more difficult and therefore has shown less progress. Agriculture is a major diffuse pollution source despite the fact that Austria`s almost exclusively organic, family-run farms use relatively low levels of fertilizers compared with many other Member States.

Austria’s national strategies to reduce pollution from diffuse sources are based on:

- Action programme according to the EU Nitrates Directive (91/676/EEC), which is implemented throughout Austrian territory;

- The Austrian Agri-Environmental Program ÖPUL 2015 provides financial incentives of about EUR 420 million a year for area related commitments to encourage environmentally friendly agriculture to help reducing pollution from diffuse sources.

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 Austria from 2013 to 2016

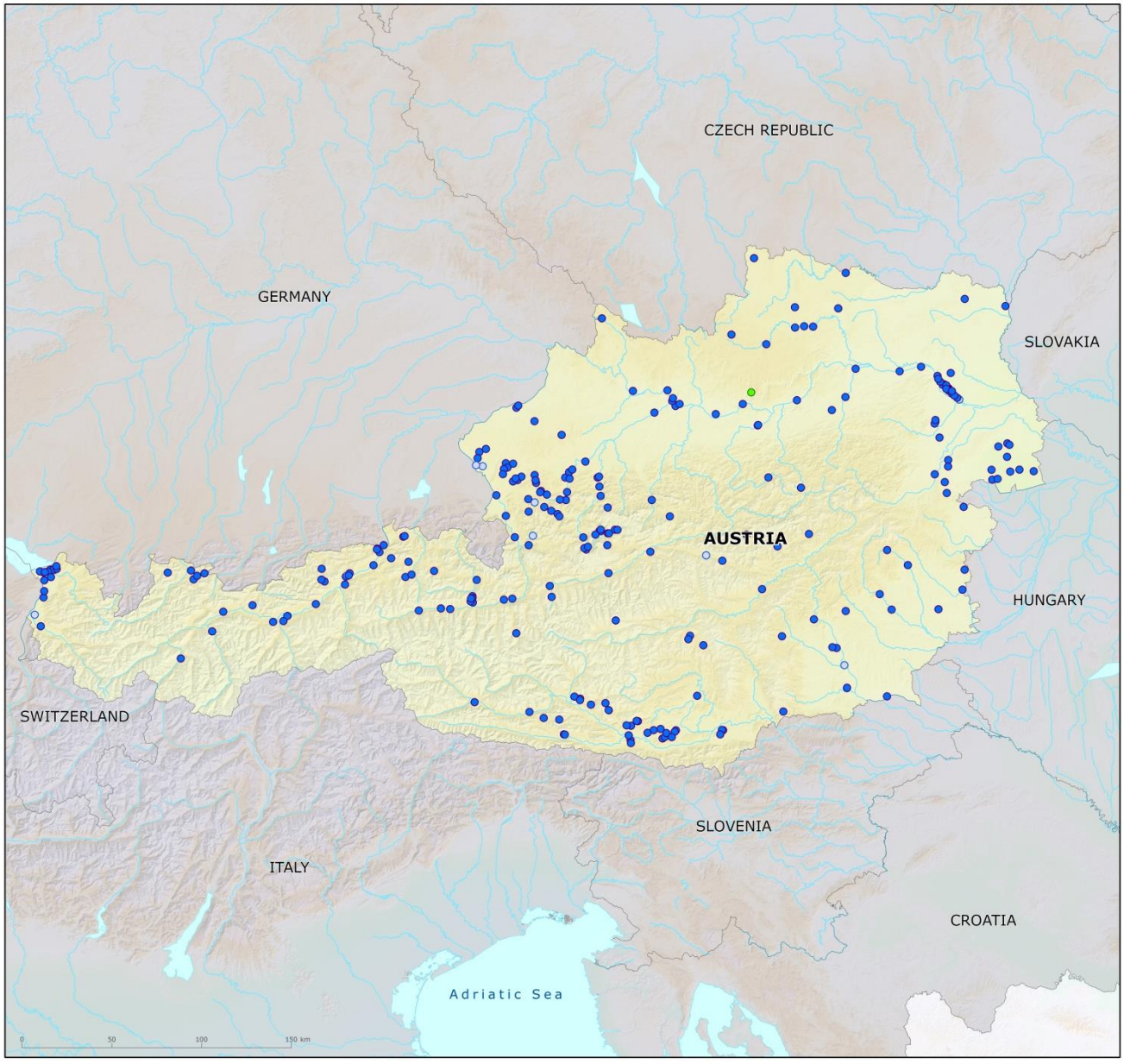
Table 2: Bathing waters in the season 2016 according to quality

		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	
			No	%	No	%	No	%	No	%
Total	2013	266	233	87.6	262	98.5	2	0.8	2	0.8
	2014	266	236	88.7	264	99.2	0	0.0	2	0.8
	2015	265	239	90.2	264	99.6	1	0.4	0	0.0
	2016	264	251	95.1	264	100.0	0	0.0	0	0.0

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 2016 bathing season in Austria



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