

# Bathing Water Directive report 2013

## Austria

The report gives a general overview of information acquired from the reported data, based on provisions of the Bathing Water Directive<sup>1</sup>. The reporting process is described below, as well as state and trends of bathing water quality in Austria.

### 1. BWD reporting in 2013 season

In 2013 bathing season, 266 bathing waters have been reported in Austria. For each bathing water, five groups of parameters have been delivered:

- *basic 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;

<b>Total reported</b>	<b>266</b>
Coastal	/
Inland	266
<b>Season period</b>	<b>77 days</b>
Coastal	/
Inland	15 Jun to 31 Aug
<b>Samples taken</b>	<b>1417</b>
<b>Share of bathing waters with good or excellent water quality</b>	<b>95 %</b>
<b>New BWD implemented in</b>	<b>2010</b>

The authorities of Austria initiated new BWD (2006/7/EC) reporting in 2010 season. The 2013 season data were delivered to the European Commission by **18 December 2013**, with additional delivery on 9 January 2014.

Altogether, **266 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 and none have been delisted<sup>2</sup> in season 2013. All bathing waters in Austria are inland. **1417 samples** were taken at bathing waters throughout the season – 5 per bathing water on average.

<sup>1</sup> Available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF>

<sup>2</sup> Bathing waters which were identified in 2012 season, but not in 2013 season

The bathing season period was from 15 June to 31 August, i.e. 77 days.

Abnormal situations have been reported at 77 bathing waters. See Chapter 4 for additional information.

Detailed information on individual bathing waters is available from national bathing water profiles at <http://www.ages.at/ages/gesundheit/badegewaesserueberwachung/>.

## 2. Assessment methodology

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.

According to the BWD, the bathing water sample dataset should satisfy the following conditions:

- a minimum of one sample per month<sup>3</sup>
- a minimum of four samples per season<sup>4</sup>
- a minimum of 16 samples in total<sup>5</sup>
- four consecutive seasons<sup>6</sup>
- a pre-season sample<sup>7</sup>

The monitoring took place at 100% of total identified bathing waters, likewise all bathing waters satisfied the described sampling frequency rules set by the Directive (additional two bathing waters are new, sample dataset is still being collected). Table 1 shows the share of bathing waters that did not satisfy monitoring frequency, as well as corresponding reasons.

Table 1: Number of assessed bathing waters in 2013

Total number of bathing waters in 2013	Bathing waters with sampling frequency satisfied	Bathing waters with sampling frequency not satisfied			
		Insufficiently sampled	Closed	Not sampled	Total
266	266	0	0	0	0

<sup>3</sup> The interval between two samples should not exceed 31 + 4 days, provided that the next sampling is done according to the monitoring calendar; exception applies for temporarily closed bathing waters

<sup>4</sup> Three samples if the season does not exceed eight weeks or the region is subject to special geographical constraints

<sup>5</sup> 12 samples if the season does not exceed eight weeks or the region is subject to special geographical constraints

<sup>6</sup> The condition does not apply if the bathing water is newly identified or any changes have occurred that are likely to affect the classification

<sup>7</sup> A pre-season sample is taken into account at total number of samples per season

### **3. Bathing water quality**

The classification is based on pre-defined percentile values for microbiological enumerations, falling in the certain class given in Annex I of the Directive. The Annex defines different limit values for coastal and inland waters.

Bathing waters are accordingly classified to one of the BWD quality classes:

- excellent
- good
- sufficient
- poor

The results of the bathing water quality in Austria for the period of 2010–2013 as reported in the past reporting years and for the bathing season of 2013 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<sup>8</sup> and the European Environment Agency's bathing water website<sup>9</sup>.

#### **3.1 Coastal bathing waters**

There are no coastal bathing waters in Austria.

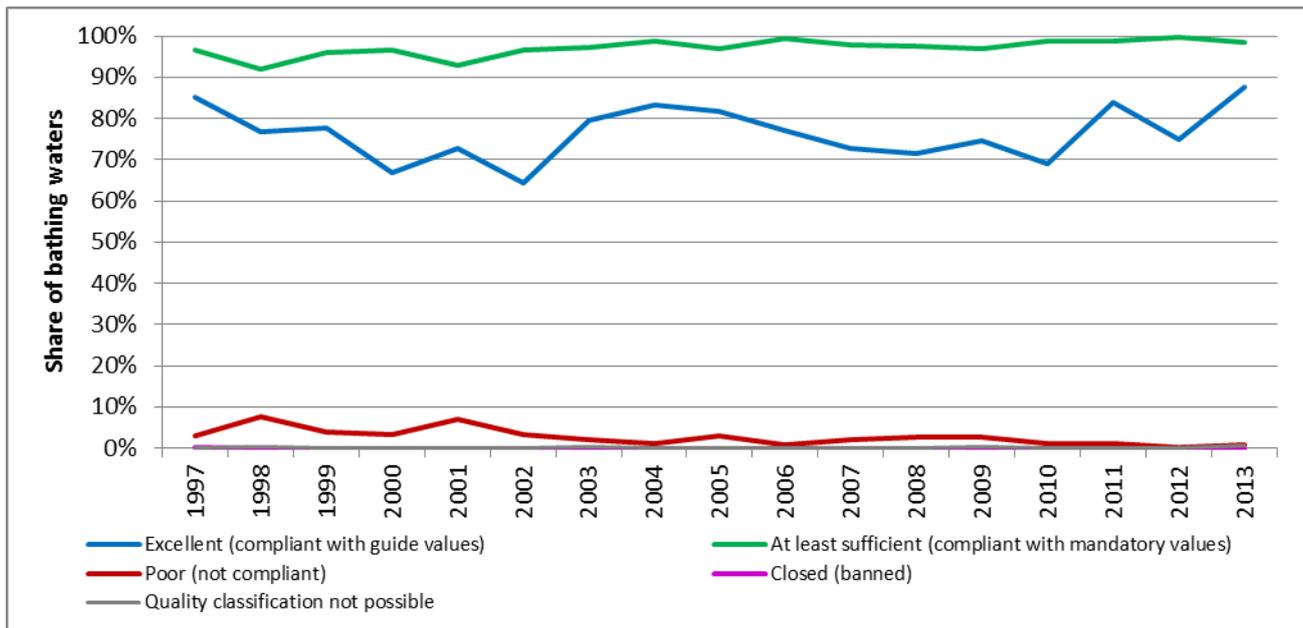
#### **3.2 Inland bathing waters**

98.5% of the inland bathing waters met the mandatory water quality in 2013. No bathing waters had to be closed during the bathing season. See Appendix 1 for numeric data.

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<sup>8</sup> [http://ec.europa.eu/environment/water/water-bathing/index\\_en.html](http://ec.europa.eu/environment/water/water-bathing/index_en.html)

<sup>9</sup> <http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>



**Figure 1: Inland bathing water quality trend in Austria.** Note: the “At least sufficient” class also includes bathing waters which comply with guide values, the sum of shares is therefore not 100%. \* This includes new bathing waters, bathing waters with changes that affect or could have affected bathing water quality, and bathing waters that do not have enough samples.

#### 4. Information regarding management and other issues

Bathing waters of Austria were affected by Central European floods of May and June 2013, as well as floods at the end of June 2013. Altogether, 77 bathing waters were affected in the states of Lower Austria, Salzburg, Vienna. The public was notified on abnormal situation through media.

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 and the Austrian Agency for Health and Food Safety (AGES).

Measures to improve and guarantee the water quality for bathing waters were taken under the 1959 Austrian Water Act, before EU legislation on bathing water protection was implemented.

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 the majority of treatment plants > 2.000 population equivalents have a tertiary treatment for P and/or N 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 national standards on the removal of nutrients. In the last about 50 years, approximately 44 billion EUR have been spent on the sewage system and wastewater treatment plants. Around 1.5 billion EUR has been invested in restoring water quality in Austrian lakes.

After the enlargement and upgrading of the waste water treatment plants of the big cities like Linz, Salzburg, Vienna and Graz, the very stringent standards, which were set by the EU for waste water treatment in sensitive areas, are now observed on the whole territory of Austria. With regard to the overall load entering all urban wastewater treatment plants the percentage of reduction by 31 December 2010 was 80% for total N and 89% for total P. The connection to public sewerage and treatment plants increased continuously up to almost 94% ( data status 2010). Furthermore the sewage systems and waste water treatment in small and scattered settlements continue to be improved.

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 (BMLFUW, 2013).

## **5. Interactive information on bathing water quality in Europe**

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 22 000 coastal beaches and inland sites across Europe. Data is aggregated and visualized on national and station level. Detailed information regarding specific bathing site are given in pop-up windows (can be activated with a click on a selected bathing location) and bathing water profiles which can be opened through hyperlinks in pop-up windows.

The data on bathing water quality in 2013 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 locations of coastal and inland bathing waters, as well as statistics on their quality. Specific bathing water locations can be observed on Google Earth, Google maps or Bing maps.

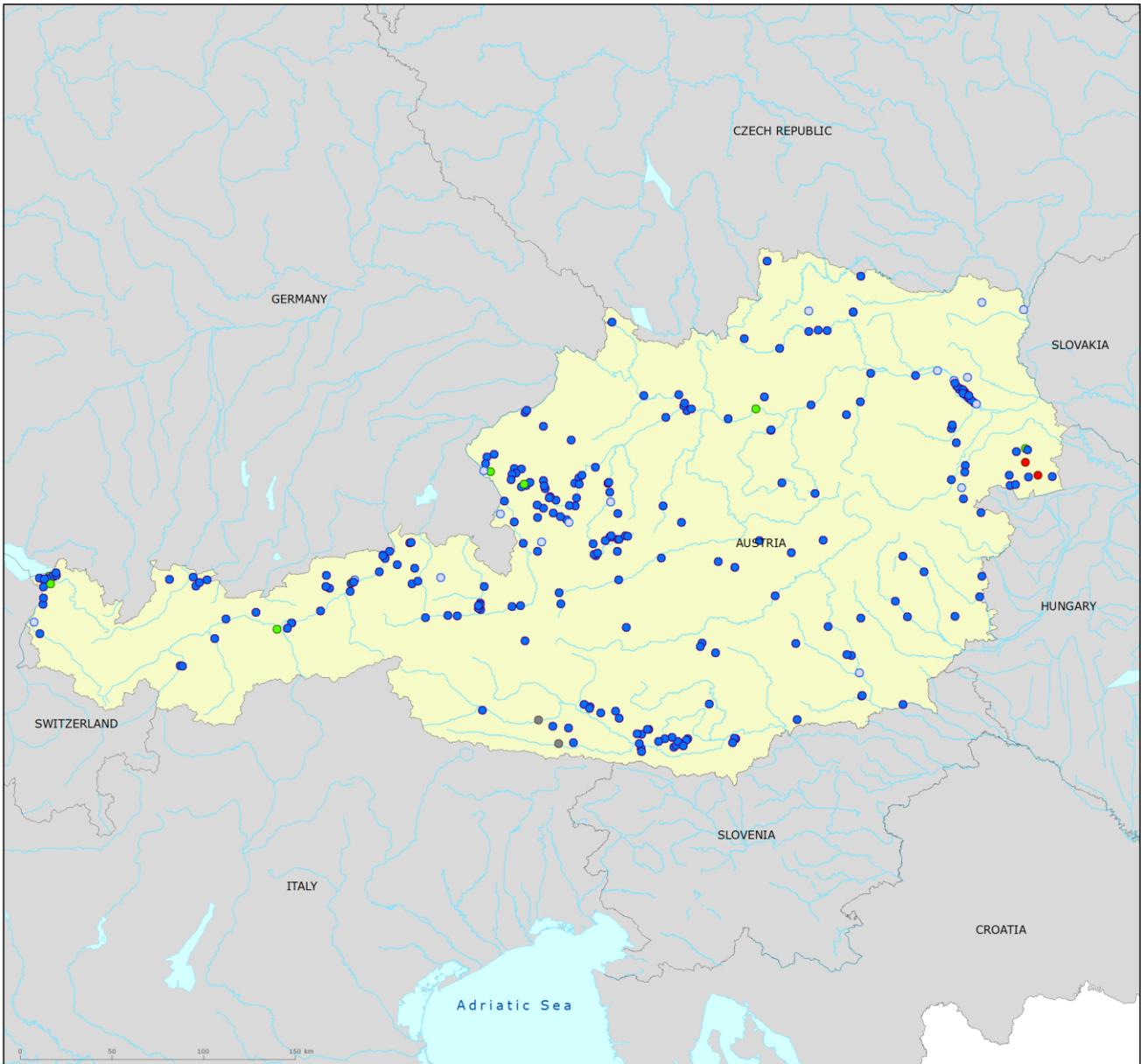
## Appendix 1: Results of bathing water quality in Austria from 2010 to 2013

		Total	Excellent (compliant with guide values)		Good and sufficient (compliant with mandatory values)		Poor (not compliant)		Closed (banned)		Quality classification not possible*	
			No	%	No	%	No	%	No	%	No	%
Total	2010	268	185	69.0	265	98.9	3	1.1	0	0.0	0	0.0
	2011	267	223	83.5	263	98.5	4	1.5	0	0.0	0	0.0
	2012	266	196	73.7	265	99.6	1	0.4	0	0.0	0	0.0
	<b>2013</b>	<b>266</b>	<b>233</b>	<b>87.6</b>	<b>262</b>	<b>98.5</b>	<b>2</b>	<b>0.8</b>	<b>0</b>	<b>0.0</b>	<b>2</b>	<b>0.8</b>

Note: the "At least sufficient" class also includes bathing waters which comply with guide values, the sum of shares is therefore not 100%. \* This includes new bathing waters, bathing waters with changes that affect or could have affected bathing water quality, and bathing waters that do not have enough samples.

## Appendix 2: Bathing water quality map

Map 1: Bathing waters reported during the 2013 bathing season in Austria



### Bathing water quality

- Excellent water quality
  - Good water quality
  - Sufficient water quality
  - Poor water quality
  - Closed temporarily or throughout the season
  - Quality classification not possible: new bathing waters / bathing waters with changes / not enough samples
- No data
- Outside data coverage (data available, not presented on the map)