Country report

Belgian bathing water quality in 2016

Belgium

May 2017

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European Environment Agency

BWD Report For the Bathing Season 2016
Belgium

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 Belgium.

1. BWD reporting in the season 2016

In 2016 bathing season, 113 bathing waters have been reported in Belgium. 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 Belgium in 2016	
Total reported	**113**
Coastal	42
Inland	71
Max season period	**138 / 107 days**
Coastal	1 Jun to 15 Sep
Inland	1 May to 15 Sep
Samples taken	**2195**
Share of bathing waters with good or excellent water quality	**97 %**
Reporting under Directive 2006/7/EC since	**2010**

The authorities of Belgium 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 **13 (Flanders) and 19 December (Wallonia) 2016**.

Altogether, **113 bathing waters** have been reported – 0.5% of all bathing waters in Europe. Out of all bathing waters in Belgium, none have been newly identified in 2016 season. 37% of bathing waters in

[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

Belgium are of coastal type; the other 63% are inland. **2195 samples** were taken at bathing waters throughout the season – 19 per bathing water on average.

The bathing season period was from 1 June to 15 September for coastal bathing waters, with a season span of 107 days. Maximum inland bathing season period was from 1 May to 15 September, with a maximum season span of 138 days[3]. Season duration varies for inland bathing waters.

Detailed information on bathing waters is available from national portal at
http://aquabact.environnement.wallonie.be/login.do (Wallonia) and
http://www.kwaliteitzwemwater.be (Flanders).

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).	113	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	**113**	**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 Belgium throughout the past period 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[12] and the European Environment Agency's bathing water website[13].

3.1 Coastal bathing waters

In Belgium, all existing coastal bathing waters met at least sufficient water quality standards in 2016. See Appendix 1 for numeric data.

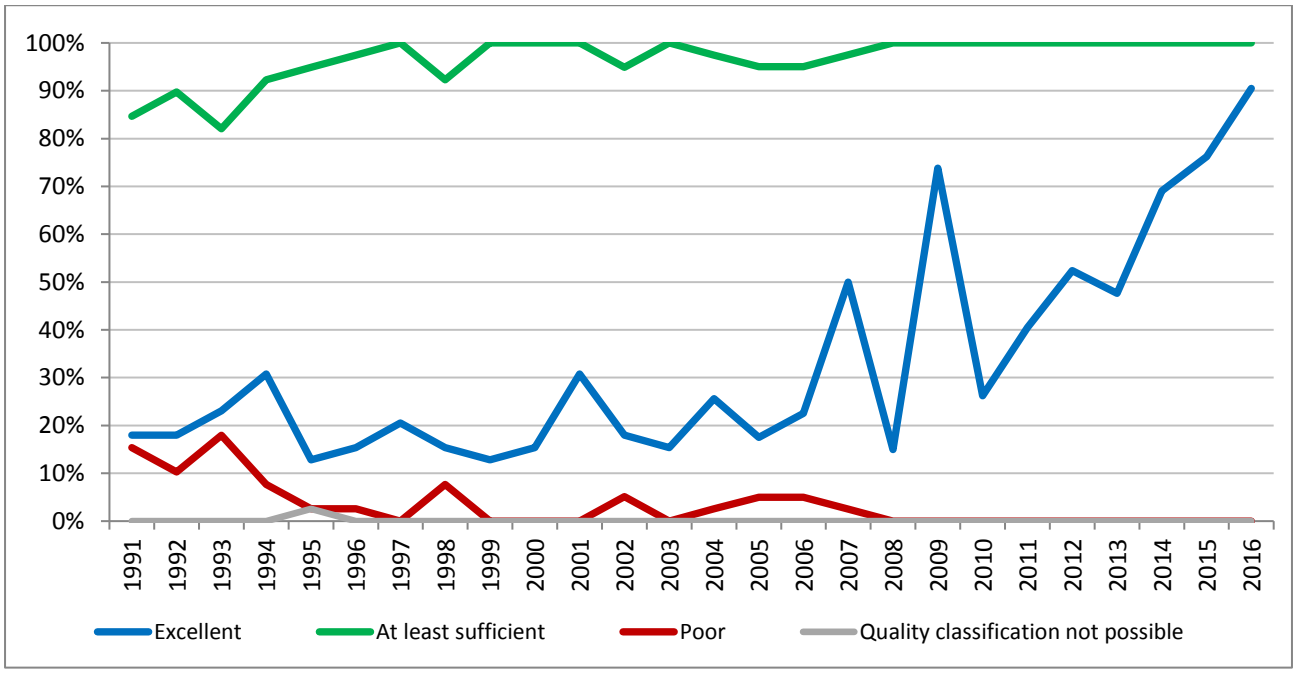


Figure 1: Coastal bathing water quality trend in Belgium. Note: the "At least sufficient" class also includes bathing waters of "Excellent" quality class, the sum of shares is therefore not 100%.

[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

3.2 Inland bathing waters

98.6% of all existing inland bathing waters were of at least sufficient water quality in 2016. See Appendix 1 for numeric data.

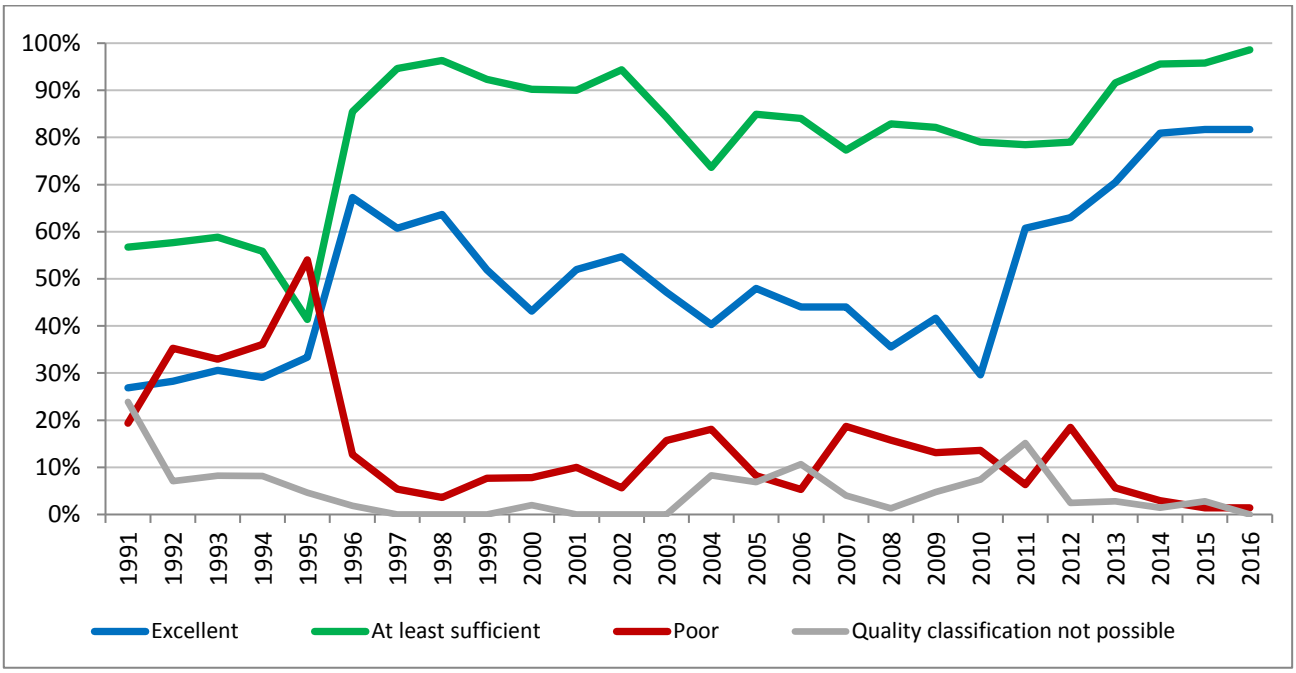


Figure 2: Inland bathing water quality trend in Belgium. Note: the "At least sufficient" class also includes bathing waters of "Excellent" quality class, the sum of shares is therefore not 100%.

4. Information regarding management and other issues

In Flanders the current bathing water quality is displayed on the website www.kwaliteitzwemwater.be where the latest results can be seen during the season. Each bathing water has a detail page and the bathing water profile where the information of bathing water quality in the past four years are available. Boards with bathing water quality information are placed at bathing waters. In case of bathing prohibition, advice against bathing is put on a special plate.

Most of inland sites in Flanders have no connection to the surface waters are therefore only fed by groundwater and rainwater. There are no direct discharges on the Belgian coast in Flanders. Nevertheless, after heavy rainfall, overflows can together with untreated sewage enter the harbor channels of Nieuwpoort, Oostende, Blankenberge and Zeebrugge and thus affect bathing water quality. Modelling study to assess impacts of such overflows and contamination spread was brought into force. Actions intended to minimize the overflow times are proposed on this basis and consultation with various stakeholders (municipalities, sewage infrastructure companies etc.). Projects with aim to reduce the critical overflows are being carried out. Despite the fact that quality of coastal waters have improved, further research is needed since it is still not known how pollution spreads along the coast.

The official list of bathing areas of Walloon region was submitted to the EC before the start of the 2016 bathing season. The website dedicated to bathing waters http://aquabact.environnement.wallonie.be is

updated weekly during the bathing season. It provides the results of the bacteriological analyses for the authorized zones and is regularly consulted by the population, the camping managers and environmental managers. The home page presents complete information, with direct links to a map showing the latest analysis results.

Eight bathing waters have been permanently closed because they are not compliant with the bathing water directive. Additional five bathing waters have been excluded from the monitoring programme before start of 2016 season because they were recognized as unattractive, not visited by a large number of bathers or did not offer enough opportunities for further development. Treatment program for discharges collective and autonomous zone to improve and maintain the bacteriological quality of bathing water has been also implemented in Walloon region. Between 2000 and 2009 a total of € 49 million was provided. The program running between 2010 and 2014 included an additional € 13 million. The program was extended to 2015-2016, with various priority actions to be carried out on non-compliant bathing water for a budget of € 9 million. Three new sewage treatment plants, recently built in the catchments of bathing waters Trois-Ponts, Rendeux and Chiny started to operate before the 2016 bathing season. Wastewater treatment facilities are implemented on almost all camping sites situated upstream of bathing areas. A decree allowing each farmer to get a grant to cover part of the costs associated with the installation of fences and water troughs has also been adopted by Walloon government. In 2016, the Walloon region established a specific program of actions based on the identification of a set of measures specific to the sanitation, agricultural and tourism sector. Implementation of the identified measures should improve the quality of bathing water on a sustainable basis. The action program started in autumn 2016 and will be subject to periodic evaluation.

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 Belgium from 2013 to 2016

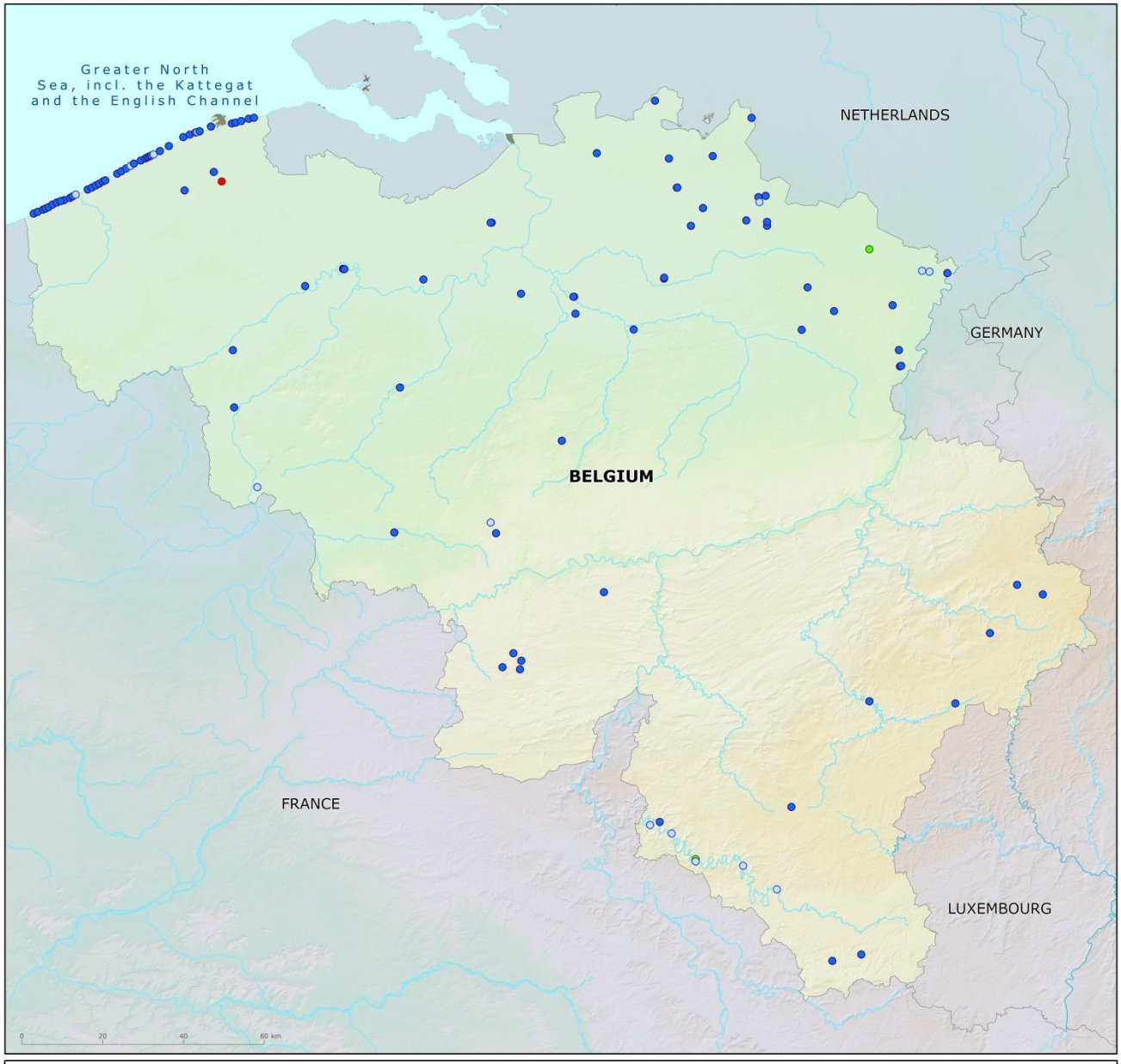
Table 2: Bathing waters in the season 2016 according to quality

		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	%
Coastal	2013	42	20	47.6	42	100.0	0	0.0	0	0.0
	2014	42	29	69.0	42	100.0	0	0.0	0	0.0
	2015	42	32	76.2	42	100.0	0	0.0	0	0.0
	2016	42	38	90.5	42	100.0	0	0.0	0	0.0
Inland	2013	71	50	70.4	65	91.5	4	5.6	2	2.8
	2014	68	55	80.9	65	95.6	2	2.9	1	1.5
	2015	71	58	81.7	68	95.8	1	1.4	2	2.8
	2016	71	58	81.7	70	98.6	1	1.4	0	0.0
Total	**2013**	**113**	**70**	**61.9**	**107**	**94.7**	**4**	**3.5**	**2**	**1.8**
	2014	**110**	**84**	**76.4**	**107**	**97.3**	**2**	**1.8**	**1**	**0.9**
	2015	**113**	**90**	**79.6**	**110**	**97.3**	**1**	**0.9**	**2**	**1.8**
	2016	**113**	**96**	**85.0**	**112**	**99.1**	**1**	**0.9**	**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 Belgium



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