

# Belgian bathing water quality in 2015



**Belgium** 

May 2016

# BWD Report For the Bathing Season 2015

## Belgium

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 Belgium.

### 1. BWD reporting in the season 2015

In 2015 bathing season, 113 bathing waters have been reported in Belgium. For each bathing water, five groups of parameters have been delivered<sup>2</sup>:

- *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>113</b>
Coastal	42
Inland	71
<b>Max season period</b>	<b>138 / 107 days</b>
Coastal	1 Jun to 15 Sep
Inland	1 May to 15 Sep
<b>Samples taken</b>	<b>2168</b>
<b>Share of bathing waters with good or excellent water quality</b>	<b>94 %</b>
<b>Reporting under Directive 2006/7/EC since</b>	<b>2010</b>

The authorities of Belgium report data according to the new BWD (2006/7/EC) since the season 2010. The data for the season 2015 were delivered to the European Commission by **14 and 18 December 2015**.

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 2015 season. 37% of bathing waters in

<sup>1</sup> Directive BWD 2006/7/EC, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF>

<sup>2</sup> See the BWD Data Dictionary for detailed explanations: <http://dd.eionet.europa.eu/datasets/3294#tables>

Belgium are of coastal type; the other 63% are inland. **2168 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, i.e. 107 days altogether. Maximum inland bathing season period was from 1 May to 15 September, i.e. 138 days. 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<sup>3</sup>

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) <sup>4</sup>;
- a minimum of four samples per season<sup>5</sup>;
- a minimum of one sample per month<sup>6</sup>.

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'. 98.2% 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. Table 1 shows the statistics of bathing waters according to monitoring requirements.

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<sup>3</sup> The methodology used by the EC and the EEA is described here, while results of assessment by national authorities may differ in individual cases.

<sup>4</sup> A pre-season sample is taken into a sum of samples per season.

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

<sup>6</sup> 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: Bathing waters in 2015 according to compliance with BWD monitoring provisions**

	Count	Share of total [%]
<p><b>BWs with sampling frequency satisfied (and are not new, are not subject to changes or were not closed in 2015)</b></p> <p>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).</p>	111	98.2%
<p><b>BWs with sampling frequency not satisfied (and are not new, are not subject to changes or were not closed in 2015)</b></p> <p>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.</p>	0	0.0%
<p><b>BWs that are new, subject to changes or closed in 2015</b></p> <p>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.</p>	2	1.8%
<b>Total number of bathing waters in 2015</b>	<b>113</b>	<b>100%</b>

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<sup>7</sup>;
- new<sup>8</sup>;
- changes<sup>9</sup>;
- closed<sup>10</sup>.

<sup>7</sup> 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).

<sup>8</sup> Classification not yet possible because bathing water is newly identified and a complete set of samples is not yet available.

<sup>9</sup> Classification is not yet possible after changes that are likely to affect the classification of the bathing water.

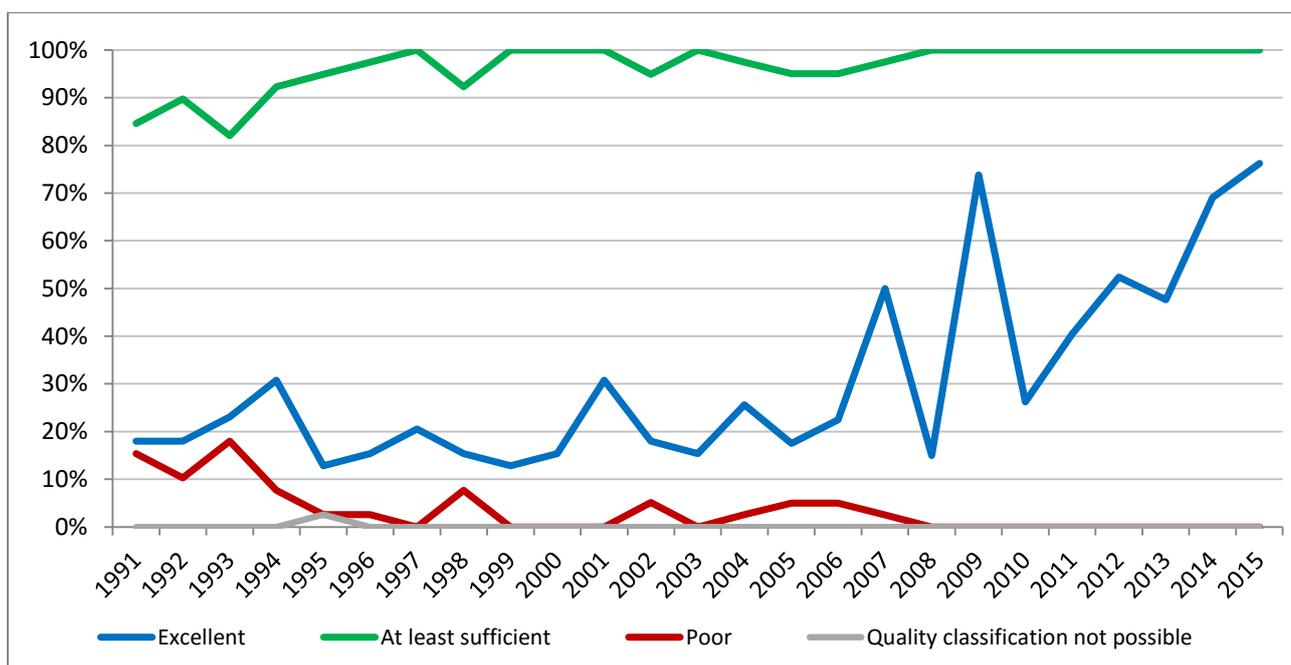
<sup>10</sup> Bathing water is closed temporarily or throughout the bathing season.

### 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<sup>11</sup> and the European Environment Agency's bathing water website<sup>12</sup>.

#### 3.1 Coastal bathing waters

In Belgium, all existing coastal bathing waters met at least sufficient water quality standards in 2015. See Appendix 1 for numeric data.



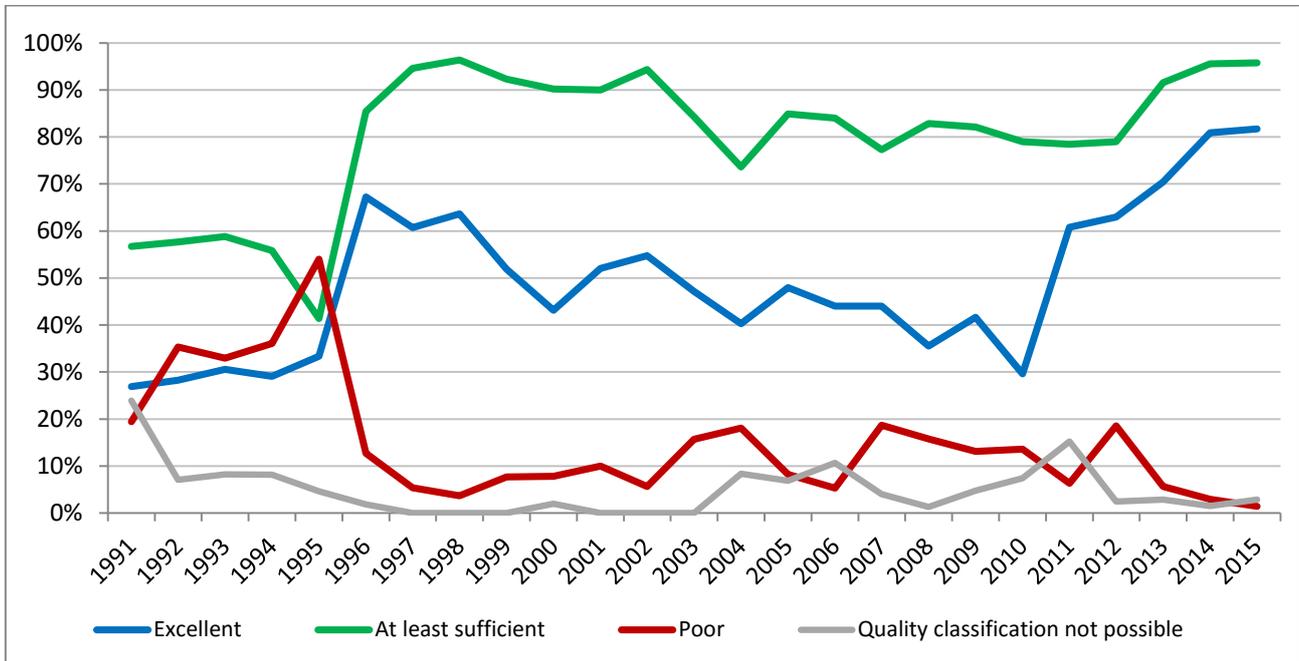
**Figure 1: Coastal bathing water quality trend in Belgium.** Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

<sup>11</sup> [http://ec.europa.eu/environment/water/water-bathing/index\\_en.html](http://ec.europa.eu/environment/water/water-bathing/index_en.html)

<sup>12</sup> <http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>

### 3.2 Inland bathing waters

95.8% of all existing inland bathing waters were of at least sufficient water quality in 2015. 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](http://www.kwaliteitzwemwater.be). Each bathing water has a detail page and the bathing water profile. 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 and 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.). Warnings to bathers are provided if necessary. In 2015, additional measurements were done in order to develop the model further. Some overruns have also been established on the beaches.

The official list of bathing areas of Wallon region was submitted to the EC before the start of the 2015 bathing season. Not prohibited areas were monitored during the 2015 bathing season. 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. 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. Walloon Region has commissioned in the period 2014-2015 commissioned a study using metagenomic analysis to identify the sources of human and livestock pollution. The study was based on exploration of four areas subject to pollution. A major study has been also launched on the area of Neufchâteau in order to develop a decision support system for characterizing microbial flows within watershed, identify the origin of bacteriological contamination and investigate the relative importance of these flows.

## **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](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 beaches 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 2012 to 2015

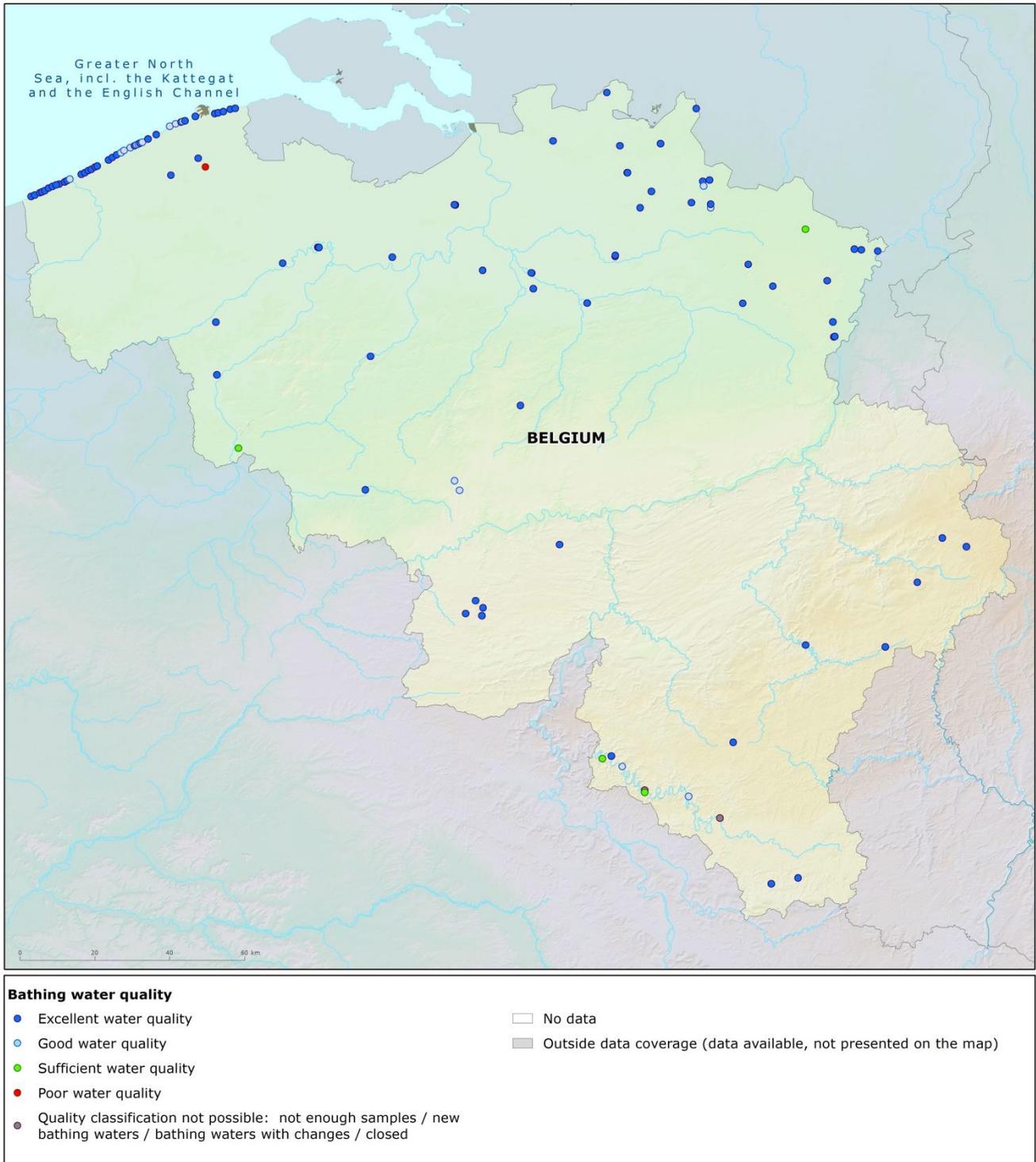
Table 2: Bathing waters in the season 2015 according to quality

		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	2012	42	22	52.4	42	100.0	0	0.0	0	0.0
	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
Inland	2012	81	51	63.0	64	79.0	15	18.5	2	2.5
	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
Total	2012	123	73	59.3	106	86.2	15	12.2	2	1.6
	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

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 2015 bathing season in Belgium**



**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.