

# Irish bathing water quality in 2016



Ireland 

May 2017

Photo: © Peter Kristensen



# BWD Report For the Bathing Season 2016

## Ireland

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 Ireland.

### 1. BWD reporting in the season 2016

In 2016 bathing season, 140 bathing waters have been reported in Ireland. 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>140</b>
Coastal	131
Inland	9
<b>Max season period</b>	<b>107 days</b>
	1 Jun to 15 Sep
<b>Samples taken</b>	<b>1478</b>
<b>Share of bathing waters with good or excellent water quality</b>	<b>86 %</b>
<b>Reporting under Directive 2006/7/EC since</b>	<b>2011</b>

The authorities of Ireland report data according to the new BWD (2006/7/EC) since the season 2011. The data for the season 2016 were delivered to the European Commission by **21 December 2016**.

Altogether, **140 bathing waters** have been reported – 0.6% of all bathing waters in Europe. Out of all bathing waters in Ireland, 2.14% have been newly identified in 2016 season. 94% of bathing waters in Ireland are of coastal type; the other 6% are inland. **1478 samples** were taken at bathing waters throughout the season – 11 per bathing water on average.

<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/latest/BWQ\\_2006](http://dd.eionet.europa.eu/datasets/latest/BWQ_2006)



The bathing season period was from 1 June to 15 September, i.e. 107 days altogether.

Detailed information on bathing waters is available from national portal at <http://splash.epa.ie>.

## 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'. 97.1% 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.

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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 account at total number 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 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 [%]
<b>BWs with sampling frequency satisfied (and are not new, are not subject to changes or were not closed in 2016)</b> 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).	136	97.1%
<b>BWs with sampling frequency not satisfied (and are not new, are not subject to changes or were not closed in 2016)</b> 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%
<b>BWs that are new, subject to changes or closed in 2016</b> 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.	4	2.9%
<b>Total number of bathing waters in 2016</b>	<b>140</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>.

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<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.

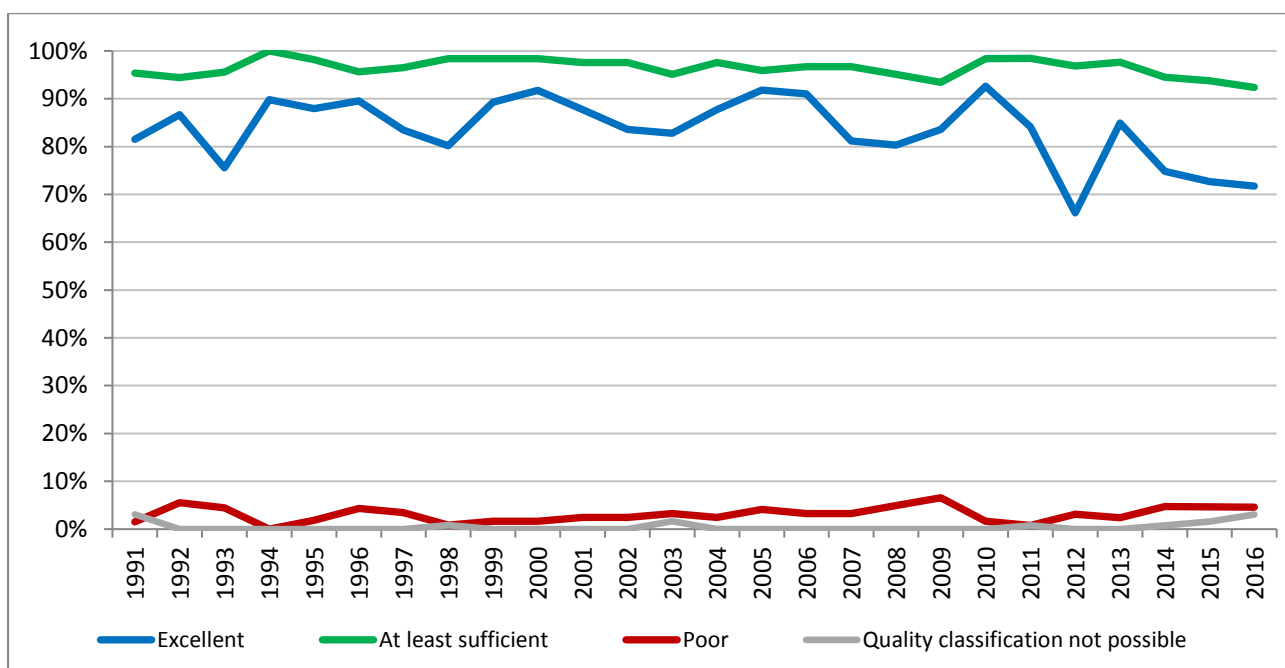
<sup>10</sup> Bathing water is closed temporarily or throughout the bathing season.

### 3. Bathing water quality

The results of the bathing water quality in Ireland 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 Ireland, 92.4% of all existing coastal bathing waters met at least sufficient water quality standards in 2016. See Appendix 1 for numeric data.



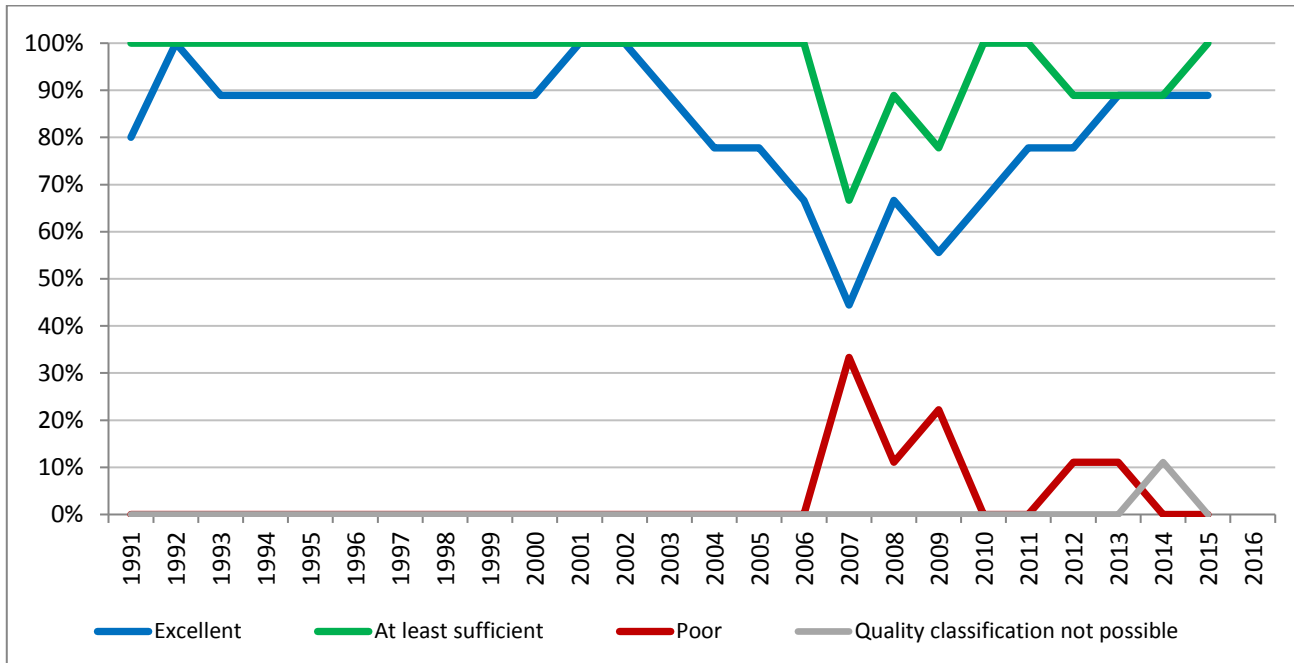
**Figure 1: Coastal bathing water quality trend in Ireland.** Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

<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

All 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 Ireland.** 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

2016 is the third year of the assessment of identified bathing waters in Ireland using data covering a four year period (2013 -2016) rather than assessments based on the past season only. In 2013, quality assessments were made against the transitional (old BW Directive) criteria while from 2014 onwards the criteria used are as set out in Directive 2006/7/EC. The apparent drop in overall quality since 2013 is a reflection of both the transition to the application of stricter criteria coupled with the influence of bathing waters in both New and Changes categories. When these non-assessed waters are excluded there is a generally stable pattern of overall compliance with ca. 95% with the mandatory minimum standard of Sufficient.

Bathing water is sampled and analysed by local authorities but formal assessment is done by the Environmental Protection Agency (the Agency). Data are held in a dedicated Information management system. Incidents and short term pollution (STP) warnings are submitted electronically and this information is conveyed to the public via the national bathing water portal ([splash.epa.ie](http://splash.epa.ie)) and the Agency’s bathing water Twitter™ account. The choice of signage (Advisory or Prohibition) is based on advice from the Health Service Executive (HSE) based on single sample acceptance criteria determined by the Agency and HSE.

2016 saw considerably fewer incidents reported than in 2015: 81 compared to 147. Of these 24 were precautionary STP notifications only two of which showed evidence of pollution having occurred. In total, bathing restrictions were applied over the season affecting 42 of the 140 identified beaches covering a period of 228 days (1.5%). This is significantly more than in 2015 but reflects the greater use by some local authorities of prior warnings of potential STP largely based on expected rainfall. 23 incidents reported were linked to suspected wastewater discharges with a similar number relating to surface water impacts. Management measures for all of those waters rated as being of Poor quality in 2016 have been provided and assessed by the Agency together with updated bathing water profiles where required.

The national water utility, Irish Water, has an extensive capital works program which is targeted at reducing the impacts of wastewater discharges on bathing waters. Two major investments have resulted in much improved water quality at Ardmore and Youghal however at Clifden issues have been identified with storm water impacts despite the commissioning of a new wastewater plant in 2015. Work has now commenced on the Rush agglomeration (north of Dublin) which should see improvements in several of the urban beaches on this section of coast in the coming years.

The Agency's 2016 bathing water report will be available on the website [www.epa.ie](http://www.epa.ie) from mid-May. In addition to providing detailed information on all identified bathing waters, including management actions, a further 77 waters where monitoring is undertaken for the purposes of public health protection are also detailed.

## **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 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 Ireland from 2013 to 2016

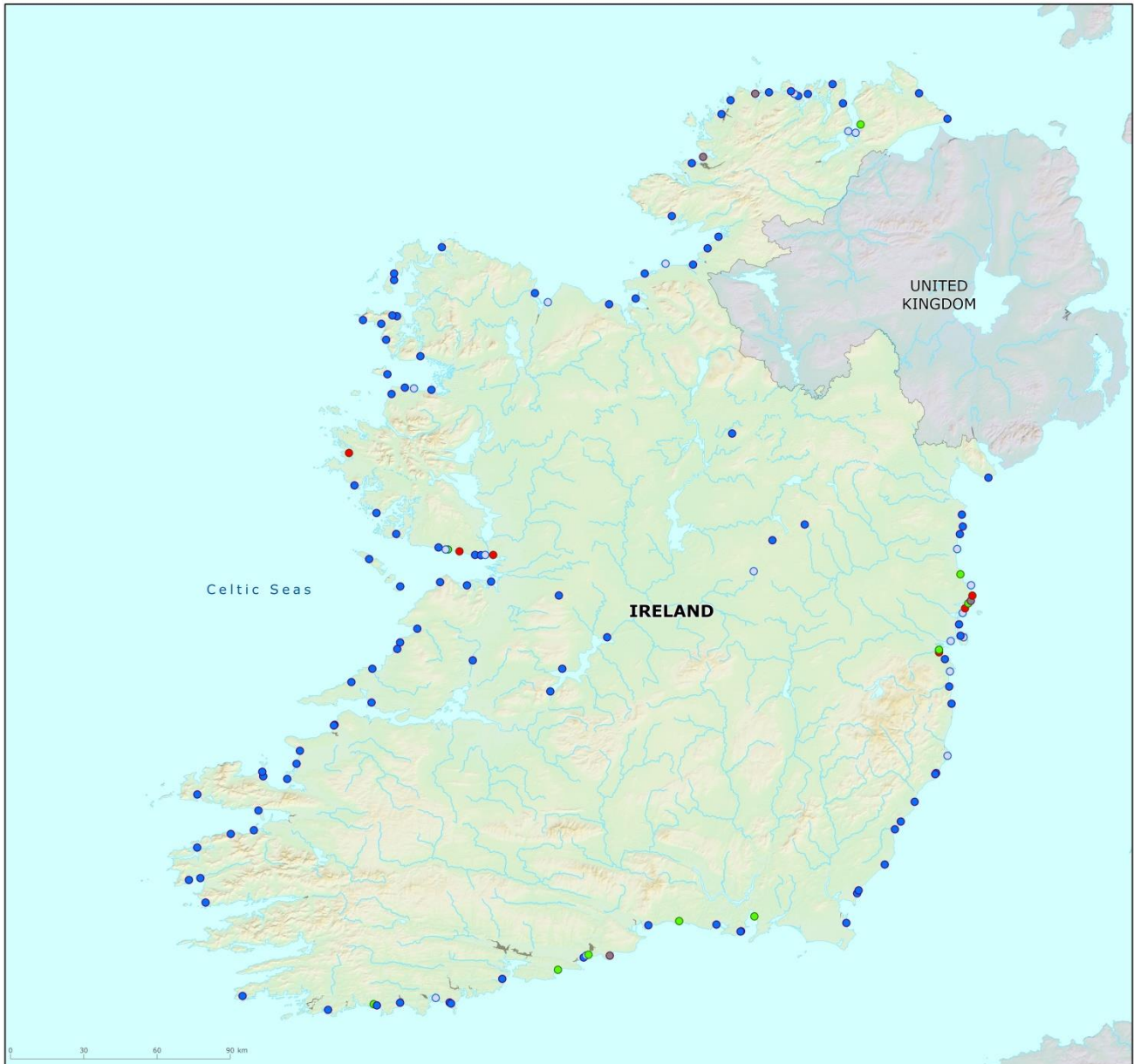
Table 2: Bathing waters in the season 2016 according to quality

		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	126	107	84.9	123	97.6	3	2.4	0	0.0
	2014	127	95	74.8	120	94.5	6	4.7	1	0.8
	2015	128	93	72.7	120	93.8	6	4.7	2	1.6
	2016	131	94	71.8	121	92.4	6	4.6	4	3.1
Inland	2013	9	7	77.8	8	88.9	1	11.1	0	0.0
	2014	9	8	88.9	8	88.9	1	11.1	0	0.0
	2015	9	8	88.9	8	88.9	0	0.0	1	11.1
	2016	9	8	88.9	9	100.0	0	0.0	0	0.0
Total	<b>2013</b>	<b>135</b>	<b>114</b>	<b>84.4</b>	<b>131</b>	<b>97.0</b>	<b>4</b>	<b>3.0</b>	<b>0</b>	<b>0.0</b>
	<b>2014</b>	<b>136</b>	<b>103</b>	<b>75.7</b>	<b>128</b>	<b>94.1</b>	<b>7</b>	<b>5.1</b>	<b>1</b>	<b>0.7</b>
	<b>2015</b>	<b>137</b>	<b>101</b>	<b>73.7</b>	<b>128</b>	<b>93.4</b>	<b>6</b>	<b>4.4</b>	<b>3</b>	<b>2.2</b>
	<b>2016</b>	<b>140</b>	<b>102</b>	<b>72.9</b>	<b>130</b>	<b>92.9</b>	<b>6</b>	<b>4.3</b>	<b>4</b>	<b>2.9</b>

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 Ireland**



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